

Symantec Visual Cafe Pro Getting Started

Installation and Tour

The software described in this book is furnished under a license agreement and may be used only in accordance with the terms of the agreement.

Copyright Notice

Copyright © 1997 Symantec Corporation.

All Rights Reserved.

The *Symantec Visual Cafe Pro Getting Started* guide is copyrighted and all rights are reserved. Information in this document is subject to change without notice and does not represent a commitment on the part of Symantec Corporation. The document may not, in whole or in part, be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form without prior consent, in writing, from Symantec Corporation.

Trademarks

Symantec Visual Cafe is a trademark of Symantec Corporation. Other brands and their products are trademarks of their respective holders and should be noted as such.

Symantec Corporation
10201 Torre Avenue
Cupertino, CA 95014
408/253-9600

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

SYMANTEC LICENSE AND WARRANTY

The software which accompanies this license (the "Software") is the property of Symantec or its licensors and is protected by copyright law. While Symantec continues to own the Software, you will have certain rights to use the Software after your acceptance of this license. Except as may be modified by a license addendum which accompanies this license, your rights and obligations with respect to the use of this Software are as follows:

• You may:

- (i) use one copy of the Software on a single computer;
- (ii) make one copy of the Software for archival purposes, or copy the software onto the hard disk of your computer and retain the original for archival purposes;
- (iii) use the Software on a network, provided that you have a licensed copy of the Software for each computer that can access the Software over that network;
- (iv) after written notice to Symantec, transfer the Software on a permanent basis to another person or entity, provided that you retain no copies of the Software and the transferee agrees to the terms of this agreement; and
- (v) if a single person uses the computer on which the Software is installed at least 80% of the time, then after returning the completed product registration card which accompanies the Software, that person may also use the Software on a single home computer.

• You may not:

- (i) copy the documentation which accompanies the Software;
- (ii) sublicense, rent or lease any portion of the Software;
- (iii) reverse engineer, decompile, disassemble, modify, translate, make any attempt to discover the source code of the Software, or create derivative works from the Software; or
- (iv) use a previous version or copy of the Software after you have received a disk replacement set or an upgraded version as a replacement of the prior version, unless you donate a previous version of an upgraded version to a charity of your choice, and such charity agrees in writing that it will be the sole end user of the product, and that it will abide by the terms of this agreement. Unless you so donate a previous version of an upgraded version, upon upgrading the Software, all copies of the prior version must be destroyed.

• Sixty Day Money Back Guarantee:

If you are the original licensee of this copy of the Software and are dissatisfied with it for any reason, you may return the complete product, together with your receipt, to Symantec or an authorized dealer, postage prepaid, for a full refund at any time during the sixty day period following the delivery to you of the Software.

• Limited Warranty:

Symantec warrants that the media on which the Software is distributed will be free from defects for a period of sixty (60) days from the date of delivery of the Software to you. Your sole remedy in the event of a breach of this warranty will be that Symantec will, at its option, replace any defective media returned to Symantec within the warranty period or refund the money you paid for the Software. Symantec does not warrant that the Software will meet your requirements or that operation of the Software will be uninterrupted or that the Software will be error-free.

THE ABOVE WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

• Disclaimer of Damages:

REGARDLESS OF WHETHER ANY REMEDY SET FORTH HEREIN FAILS OF ITS ESSENTIAL PURPOSE, IN NO EVENT WILL SYMANTEC BE LIABLE TO YOU FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT OR SIMILAR DAMAGES, INCLUDING ANY LOST PROFITS OR LOST DATA ARISING OUT OF THE USE OR INABILITY TO USE THE SOFTWARE EVEN IF SYMANTEC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

SOME STATES DO NOT ALLOW THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

IN NO CASE SHALL SYMANTEC'S LIABILITY EXCEED THE PURCHASE PRICE FOR THE SOFTWARE. The disclaimers and limitations set forth above will apply regardless of whether you accept the Software.

• U.S. Government Restricted Rights:

RESTRICTED RIGHTS LEGEND. Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subparagraph (c) (1) (ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 or subparagraphs (c) (1) and (2) of the Commercial Computer Software-Restricted Rights clause at 48 CFR 52.227-19, as applicable, Symantec Corporation, 10201 Torre Avenue, Cupertino, CA 95014.

• General:

This Agreement will be governed by the laws of the State of California. This Agreement may only be modified by a license addendum which accompanies this license or by a written document which has been signed by both you and Symantec. Should you have any questions concerning this Agreement, or if you desire to contact Symantec for any reason, please write:

Symantec Customer Service, 175 W. Broadway,
Eugene, OR 97401.

- Addendum for Development Language Products

Because the Software is a Symantec development language product you have a royalty-free right to include object code derived from the libraries in programs that you develop using the Software and you also have the right to use, distribute, and license such programs to third parties without payment of any further fees, so long as a copyright notice sufficient to protect your copyright in the program is included in the graphic display of your program and on the labels affixed to the media on which your program is distributed.

- Copyright and License Information

JAVA(tm) web development products are owned and licensed exclusively by Sun Microsystems, Inc. Copyright (C) 1992-96 Sun Microsystems, Inc. All rights reserved. Java and all Java-based names and logos, including the Coffee Cup and Duke, are trademarks of Sun Microsystems, Inc. and refer to Sun's Java Technologies. Products bearing authorized "JAVA- Compatible" Logo are based upon Sun's JAVA and technology, and are compatible with the API's for such technology.

Sun grants to you ("Licensee") a non-exclusive, non-transferable license to use the Java binary code version (hereafter, "Binary Software") without fee. Licensee may distribute the Binary Software to third parties provided that the copyright notice and this statement appear on all copies. Licensee agrees that the copyright notice and this statement will appear on all copies of the software, packaging, and documentation or portions thereof.

In the event Licensee creates additional classes or otherwise extends the Applet Application Programming Interface (AAPI), licensee will publish the specifications for such extensions to the AAPI for use by third party developers of Java-based software, in connection with licensee's commercial distribution of the Binary Software.

RESTRICTED RIGHTS: Use, duplication or disclosure by the government is subject to the restrictions as set forth in subparagraph (c) (1) (ii) of the Rights in Technical Data and Computer Software Clause as DFARS 252.227-7013 and FAR 52.227-19.

SUN MAKES NO REPRESENTATIONS OR WARRANTIES ABOUT THE SUITABILITY OF THE BINARY SOFTWARE, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. SUN SHALL NOT BE LIABLE FOR ANY DAMAGES SUFFERED BY LICENSEE AS A RESULT OF USING, MODIFYING OR DISTRIBUTING THE BINARY SOFTWARE OR ITS DERIVATIVES.

By downloading, using or copying this Binary Software, Licensee agrees to abide by the intellectual property laws, and all other applicable laws of the U.S., and the terms of this License. Ownership of the software shall remain solely in Sun Microsystems, Inc.

Sun shall have the right to terminate this license immediately by written notice upon Licensee's breach of, or non-compliance with, any of its terms. Licensee shall be liable for any infringement or damages resulting from Licensee's failure to abide by the terms of this License.

The JDK 1.0.2 binary release is based in part on the work of the Independent JPEG Group.

Contents



Chapter 1 Introducing Visual Cafe Pro

What's included	1-1
Java applets and Web browsers	1-2
Java standalone applications	1-4
What is Java?	1-5
What is JDBC?	1-7
The dbANYWHERE three-tier architecture	1-8
Features of the Visual Cafe Pro environment	1-8

Chapter 2 Installing the Software

Installing the software needed for the tour	2-1
Installing Visual Cafe Pro, dbANYWHERE, Sybase SQL Anywhere, and Netscape Navigator Gold	2-2
Setting up the Tutorial database on a dbANYWHERE Workgroup Server	2-3
Installing Symantec classes	2-6
Planning your installation	2-6
System requirements	2-7
Databases supported by dbANYWHERE	2-8
Using the installer	2-9
Starting the dbANYWHERE Workgroup Server	2-10
Stopping the dbANYWHERE Workgroup Server	2-10
Starting Visual Cafe Pro	2-10
Exiting Visual Cafe Pro	2-11
Uninstalling Visual Cafe Pro	2-11
Uninstalling in Windows 95 or Windows NT 4.0	2-11
Uninstalling in Windows NT 3.5x	2-12
Deploying applets and applications	2-12
Setting up dbANYWHERE and the database	2-12
Setting up the client	2-12
Deploying applets on a Web server	2-13
Deploying applications	2-14
Using the Bundler.exe utility	2-15

Chapter 3 Starting the Tour

What you need	3-1
Looking at the Isle de Cafe Web pages	3-2
Starting Visual Cafe Pro	3-2
Opening the project	3-3
Running the applets in your default browser	3-5
Looking at the applets in Visual Cafe Pro	3-8
Looking at the project	3-8
Looking at the applets	3-11
Opening an HTML file	3-13
Running the custom itinerary application	3-14
Looking at the application in Visual Cafe Pro	3-17

Chapter 4 Creating an Applet for the Web Page

Creating and naming the project	4-1
Creating the island map applet	4-4
Gathering the files you need	4-4
Setting the applet properties and adding the map	4-5
Adding the HTML links	4-9
Adding the volcano eruption animation	4-10
Running the applet	4-13
Displaying the applet in a Web browser	4-14
Adding the HTML file to the project	4-14
Adding the applet tag to the HTML file	4-16
Executing the applet within the Web page	4-17

Chapter 5 Creating the Application and Debugging Code

Creating the itinerary application	5-1
Opening and naming the new project	5-2
Gathering the files you need	5-4
Setting the properties of Frame1 and adding the SlideShow component	5-4
Adding the Button components to the frame	5-7
Adding the Amazing Adventures Travel logo	5-9
Adding the labels	5-10
Specifying component interactions	5-13
Setting up the Previous button to display the previous image	5-14
Setting up the Next button to display the next image	5-15
Disabling the Next button at the end of the slide show	5-15
Disabling the Previous button at the start of the slide show	5-16
Making the slide show descriptions appear in the wrapping labels	5-17

Adding custom Java code	5-17
Customizing the menu bar	5-19
Customizing the About dialog	5-19
Customizing the Quit dialog	5-20
Running the application	5-20
Looking at the application in the Hierarchy Editor and the Class Browser	5-23
Debugging	5-24
Debugging the About dialog	5-26
Debugging the Day label	5-29

Chapter 6 Creating Applets with Database Functionality

Creating the online reservations applet	6-1
Using the dbAWARE Project Wizard to create a new project	6-2
Assigning applet properties	6-7
Gathering the files you need	6-7
Designing the package portion of the applet	6-8
Designing the reservation portion of the applet	6-11
Looking at dbNAVIGATOR	6-14
Setting initial record positions	6-15
Making fields uneditable	6-16
Adding component interactions	6-17
Setting up the Send Registration button	6-18
Setting the package ID field	6-18
Calculating the total cost	6-19
Running the applet	6-21
Displaying the applet in a Web browser	6-22
Adding the HTML file to the project	6-22
Modifying the applet tag in the HTML file	6-22
Executing the applet within the Web page	6-23
Creating an administrative applet for online reservations	6-24

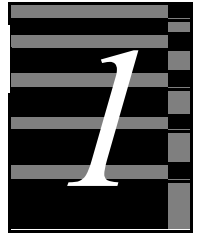
Chapter 7 Support and More Information

Where to get information	7-1
Product updates	7-3
Symantec service and support solutions	7-3
Registering your Symantec product	7-3
Technical support	7-4
StandardCare support	7-4
PriorityCare support	7-5
PremiumCare support	7-6

PremiumCare Gold support	7-6
PremiumCare Platinum support	7-6
Electronic support	7-7
Symantec BBS	7-7
CompuServe	7-7
America Online	7-8
Symantec discussion groups	7-8
Automated fax retrieval system	7-8
Customer service	7-9
Replacing a CD-ROM	7-9
Recovering passwords	7-10
Old version support	7-10
Discontinued product support	7-10
Service and support headquarters	7-11
Worldwide service and support	7-11
International locations	7-12

Glossary

Introducing Visual Cafe Pro



Symantec Visual Cafe Pro is the first Rapid Application Development (RAD) environment for creating Web-hosted Java applets and standalone Java applications that provide powerful database connectivity. It offers a full suite of integrated tools for Java development, including a project manager, form designer, component library, code editor, class browser, interaction wizard, database wizards and navigator, and an integrated graphical debugger coupled with a Java compiler and applet viewer. For many tasks, you don't have to work with raw source code at all.

Whether you are a novice user who wants to quickly create animations for a Web page without touching Java code or a high-powered Java programmer who wants to create sophisticated standalone applications and have control over every line of your code, Visual Cafe Pro is for you.

What's included

The Visual Cafe Pro package includes the following software to meet a variety of your requirements:

- Visual Cafe Pro — A RAD tool you use to design Java applets and applications that can optionally contain database functionality.
- dbANYWHERE Workgroup Server — This middleware gives Java applets and applications running on clients access to a variety of databases. The clients require no special database software.
- Sybase SQL Anywhere standalone version — This small-footprint, relational DBMS solution is ideal for desktop, workgroup, and mobile users and provides multi-platform support.

- Netscape Fastrack Server (if available on your CD) — This easy-to-use, upgradable Web server software lets you create and manage a Web site.
- Netscape Navigator Gold (if available on your CD) — This powerful Web browser facilitates information creation, access, and sharing and includes Web, News, and Mail applications.

Now let's take a closer look at Java and its many advantages.

Java applets and Web browsers

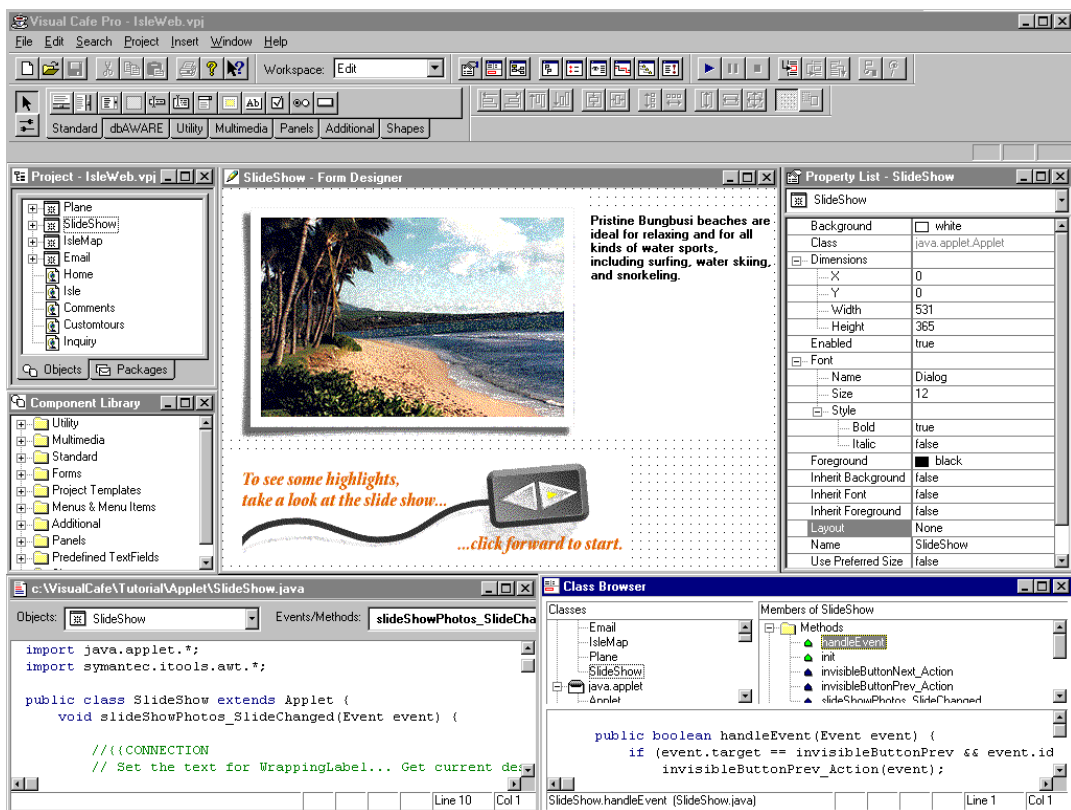
If you've explored the World Wide Web (WWW) with a Java-enabled Web browser, chances are you've run into Java applets such as steaming coffee cups, fireworks, scrolling banners, hotel and airline reservation utilities, or even adventure games. Integrating an applet into a Web page is as simple as adding a graphic: you just add a line of Hypertext Markup Language (HTML) code. When you access a Web page with an applet, the applet code is transferred to your computer and executed by the browser, which reduces the load on the Web server and makes the applet run faster.

Java is becoming very popular on the Internet because it makes Web pages much more appealing and adds more functionality than HTML alone can provide, so most new browser versions support Java. What's more, Java applets are secure since they can't access the file system on the local computer, but they can still read from the Web server. This means that applets are less likely to damage a user's system or send private information back to the Web server.

Java makes it possible for a Web site to include much richer capabilities, such as sound, animation, and the ability to interact real-time with data on the Web, than is currently possible with static text or graphics. You can include new types of data and provide associated Java bytecode programs that know how to process the data on the client computer. For example, if you wanted your applet to display an image that is stored in a format not supported by most browsers, you could incorporate in the applet the ability to handle this graphics format.

With Visual Cafe Pro, it's easy to build Java applets that add dynamic, interactive functionality to your Internet or intranet Web site. You simply create a new project containing a "skeleton" applet, which you use as a

template. You can display the applet in the Form Designer, which enables you to design the applet with graphical tools. To create your user interface, you can drag onto the form a variety of components, such as a button, text field, and even an animation or slide show, then position or resize the components as needed. You assign the component properties in a separate Property List window and add interactions between components with the Interaction Wizard. Visual Cafe Pro automatically creates the Java code for you during this design process. To test the applet, you can run it with Visual Cafe Pro. The figure shows some elements of the Visual Cafe Pro environment.



After your applet is finished, you can optionally add an HTML file to the project. Visual Cafe Pro lets you create and view HTML files directly within its environment, or you can create the file in another environment and add it to a Visual Cafe Pro project.

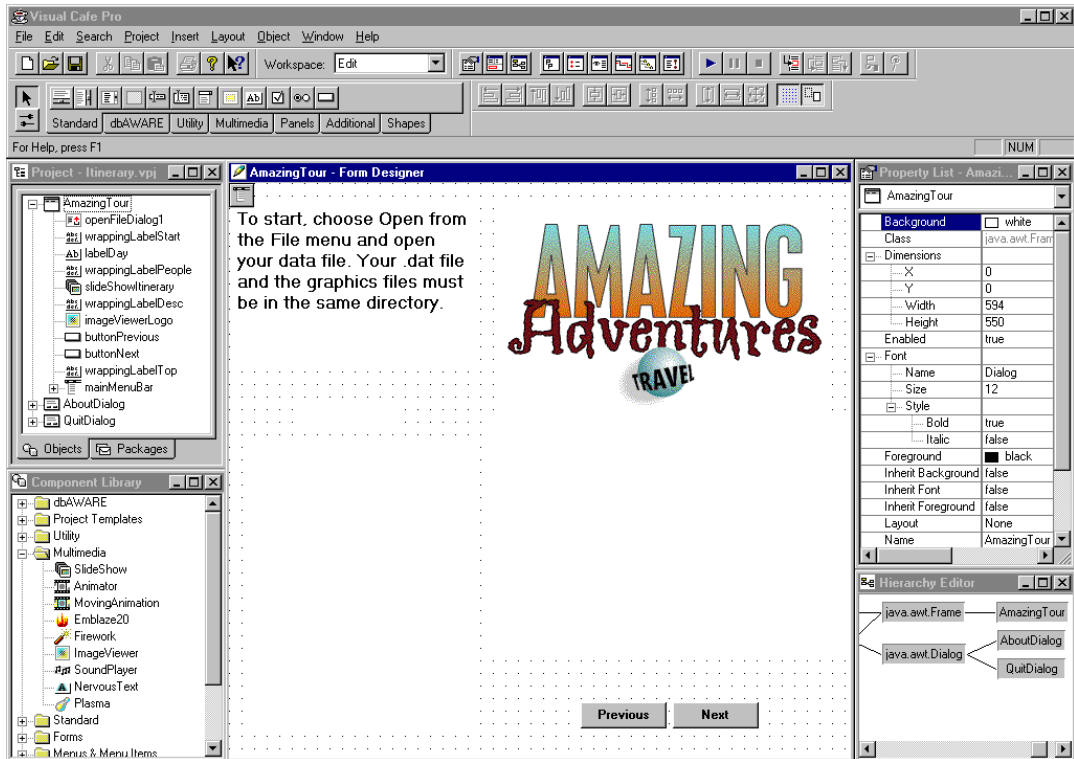
Because of Visual Cafe Pro's extensive library of components, you can develop many applets without manually creating or editing Java code. To program other features, you can manually add Java code with Visual Cafe Pro's Source Editor. For example, you can add more complex custom event handling that can't be created with the Interaction Wizard, add custom data processing, and write your own components then add them to the Visual Cafe Pro Component Library.

Java standalone applications

Java applications are cross-platform, which makes them popular for intranets. A Java application can run on all computers that have Java, so separate applications for each environment aren't needed. Unlike Java applets, Java applications usually have menu bars and can access files on the local computer. This additional functionality lets you implement features in applications that you can't provide in an applet, but it also makes applications less secure than applets. You should be aware of this if you are going to write code to access local storage or any host other than a Web server.

Like other applications, Java applications run standalone without a Web browser. A Java application is like a C++ application, but it's cross-platform and requires a standalone Java virtual machine and supporting files on your computer to run it. For example, you could write a word processor program in Java. Java is free: the Sun Java Developers Kit (JDK), for instance, can be downloaded from the Sun Microsystems Web site, java.sun.com. In the future, Java will be integrated into many operating systems.

Developing a Java application with Visual Cafe Pro is similar to developing an applet. First, you create a project and add all of the elements of your application to it. For your main application window, you can open an application template in the Form Designer, which enables you to design the Java frame with graphical tools. You can drag onto the form a variety of components, then position or resize the components as needed. You assign the component properties in a separate Property List window, including the menu items (the frame can have a menu bar); you can specify interactions between components with the Interaction Wizard. Visual Cafe Pro automatically creates the Java code for you during this design process. The figure shows some of these elements of the Visual Cafe Pro environment.



To test the application, you can run it with Visual Cafe Pro.

What is Java?

Java, developed by Sun Microsystems, was designed for creating applets and applications for Internets, intranets, and any other heterogeneous, distributed network. This language offers the following powerful features, as described in the Java white papers published by Sun:

- **Simple.** Java is similar to C and C++, which many programmers are already familiar with. Some of the more difficult features of C++, including operator overloading, pointers and pointer arithmetic, multiple inheritance, and extensive automatic coercions, were omitted to make programming with Java easier. The Java automatic garbage collection feature reduces bugs by automatically freeing unused memory.

- **Small.** The Java virtual machine is relatively small in size, so it can be downloaded over the Internet and run on computers with little available memory. Many operating systems will include Java in the future.
- **Object-oriented.** Java mimics the object orientation of C++ and includes extensions from Objective C for dynamic method resolution. Some advantages of object-oriented programming include the following:
 - Code is encapsulated in objects, which have a public interface and a private implementation, so you can rapidly develop prototypes and group code into manageable chunks — even for very complex systems.
 - Objects can inherit the characteristics of other objects and override inherited characteristics, so you can easily reuse code, make your code more compact, and fix or update code in one place, which saves time and reduces bugs.
- **Network-ready.** Creating network connections is easier in Java than for C or C++ because Java has built-in routines for dealing with TCP/IP, including HTTP and FTP. These routines make it as easy to open and access objects over the network through URLs as it is to access a local file system.
- **Robust.** Java eliminates problems early by requiring declarations, using static typing, having the compiler perform type checks, and not supporting pointers, which can result in overwriting memory or corrupting data.
- **Secure.** Because there are no pointers, Java applications can't access data structures or private data that they don't have access to. This prevents most viruses from taking hold. Applets, when run within a Web browser on a local computer, can't read or write to the disk, execute programs on this computer, or connect to any other computers except the server they were downloaded from.
- **Architecture-neutral and portable.** The Java compiler generates an architecture-neutral object file format and bytecode instructions, so Java code can run on any computer that has a Java runtime system. *Bytecodes* are instructions that are similar to machine code, but are not platform-specific. During execution, the Java virtual machine either interprets the bytecodes or converts them to machine code. Creating

separate applications for different computer platforms is no longer an issue.

- **High-performance.** Java bytecodes can be translated on the fly to native machine instructions — for example, by a Java-enabled browser. Linking is faster than for C or C++. Once the Java bytecodes are converted to machine code by a Just-In-Time compiler in a Java virtual machine, the performance is comparable to that of C or C++.
- **Multithreaded.** Java code can deal with multiple things happening at once with sophisticated synchronization primitives that are integrated into the language, which makes them easier to use and more robust. Multithreading improves interactive responsiveness and real-time behavior, so is critical to high-performance Java applets because applet execution must continue while various image and binary files are being retrieved from one or more Web servers. In addition, the ability to control the execution of multiple concurrent threads is crucial for deploying real-world Web applications.
- **Dynamic.** New module plug-ins can be added to a Java application with minimal overhead. Java can look up a class definition at runtime from its name.

What is JDBC?

The many advantages of Java make it an excellent choice for use with databases. JDBC provides Java developers with database access that's independent of the database and the connectivity mechanism. Its generic SQL database access framework provides a uniform interface to a variety of different database connectivity modules. Because Visual Cafe Pro is fully compliant with the JDBC application programming interface (API), you can use Visual Cafe Pro to create a single database interface that's compatible with a variety of connectivity solutions. The JDBC design is similar to the Open Database Connectivity (ODBC) standard, so its interface is familiar to many programmers.

The dbANYWHERE three-tier architecture

The three tiers are the client, the dbANYWHERE middleware, and the database residing locally or remotely to dbANYWHERE. The client communicates with dbANYWHERE over a network, such as the Internet, an intranet, or a local area network (LAN). dbANYWHERE makes the database requests and passes the data back to clients; it caches data from the database system and sends only the request subset to a client. The client needs no application or database software other than the standard Java files or a Java-enabled Web browser.

The dbANYWHERE middle tier is easy to manage and secure because you only have to maintain direct database connectivity at this tier. In addition, three-tier systems are cost-effective because the middle tier requires fewer connections than would be required for direct client connections.

The dbANYWHERE Workgroup Server provides heterogeneous access to the most common database engines. This allows applets and applications to maintain live connections to multiple database engines, with the advantages of data buffering, reduced network traffic, and decreased hits on the database engines.

dbANYWHERE supports two interfaces for Java database connectivity: the standard JDBC API and the dbANYWHERE API. The dbANYWHERE API delivers robust functionality for Java applications while making common database operations — including master/detail processing — easier to implement.

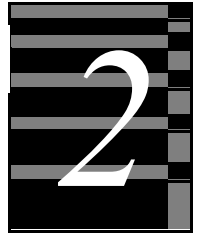
Features of the Visual Cafe Pro environment

Visual Cafe Pro gives you the easy-to-use Java language in a development environment designed to make you highly productive. It includes the following features, which you'll learn more about in the tour:

- Visual, form-based development
- Quick creation of component connections with the Interaction Wizard
- Two-way development, which means the visual tools and Java code always match

- Database connectivity through a three-tier architecture and the JDBC standard
- Support for major database servers
- Database wizards for simplified form development
- Hierarchical view of database cataloging information with the dbNAVIGATOR
- Simplified Java database connectivity through smart dbAWARE components that provide data binding
- Rapid turnaround with fast compilers
- An advanced debugger that includes expression evaluation

Installing the Software



This chapter describes how to install Visual Cafe Pro, dbANYWHERE Workgroup Server, Sybase SQL Anywhere, and Netscape Fastrack Server and Netscape Navigator Gold (if available on your CD). It has the following sections:

- Installing the software needed for the tour
- Planning your installation
- Using the installer
- Starting the dbANYWHERE Workgroup Server
- Stopping the dbANYWHERE Workgroup Server
- Starting Visual Cafe Pro
- Exiting Visual Cafe Pro
- Uninstalling Visual Cafe Pro
- Deploying applets and applications

Installing the software needed for the tour

Before starting the tour, you need to perform the tasks in the following sections:

- Installing Visual Cafe Pro, dbANYWHERE, Sybase SQL Anywhere, and Netscape Navigator Gold
- Setting up the Tutorial database on a dbANYWHERE Workgroup Server
- Installing Symantec classes



The tour is designed with the assumption that all three tiers run locally. In other words, Visual Cafe Pro, a dbANYWHERE Workgroup Server, and a Sybase SQL Anywhere database engine are running on one computer on the local hard drive. If you're working through the tour, you might want to install all of this software on your development computer for the tour. If needed, you can uninstall software later.

If you can't run all of this software on one computer because of system resource limitations, you can still work through the tour. However, in the Chapter 3 section, "Looking at the Isle de Cafe Web pages," you won't be able to view the applet that displays database information unless you modify the applet to use a remote dbANYWHERE Workgroup Server. See a following section, "Planning your installation," for system requirements.

Installing Visual Cafe Pro, dbANYWHERE, Sybase SQL Anywhere, and Netscape Navigator Gold

To use the Visual Cafe Pro database features provided in this tour, you need to have access to the Tutorial database through the dbANYWHERE Workgroup Server and Sybase SQL Anywhere database engine, which are included in your package. You also need a Java-enabled Web browser to complete the tour. You can use the Netscape Navigator Gold browser on the CD or another browser.

To install the software needed for the tour, follow these steps:

- 1** Insert the Visual Cafe Pro CD-ROM in your CD-ROM drive.
Normally, this will start the install program.
- 2** If step 1 didn't start the install program, run Setup.exe.
If you need more instructions on using the installer, see a following section, "Using the installer."
- 3** Install Visual Cafe Pro, the dbANYWHERE Workgroup Server, Sybase SQL Anywhere, and optionally Netscape Navigator Gold.
dbANYWHERE can be installed on the local computer or a remote computer. Sybase SQL Anywhere must be on the same computer as dbANYWHERE. If Visual Cafe Pro and dbANYWHERE are on different computers, the computers must be able to communicate over the network through TCP/IP.

For dbANYWHERE, make sure you install at least the Watcom driver so you can complete the tour.



When installing Sybase SQL Anywhere, let the installer update the registry for you.

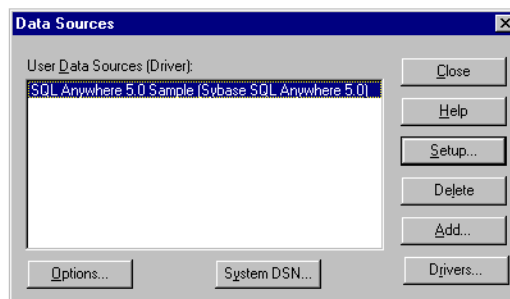
- 4 After installing these products, you *must* reboot the computer.

Setting up the Tutorial database on a dbANYWHERE Workgroup Server

You need to register the Tutorial database file with the 32-bit ODBC Administrator tool included with the SQL Anywhere database engine. Follow these steps:

- 1 Place Tutorial.db (provided with the tour) on the same computer as the dbANYWHERE Workgroup Server.
For example, you could place it in the sqlany50 directory.
- 2 On the computer with dbANYWHERE, start the ODBC Administrator by clicking the Windows Start menu then choosing these menu items in order: Programs, Sybase SQL Anywhere 5.0, then ODBC Administrator. For Windows NT 3.51, you need to run the application ODBCADM.EXE; it's installed in your Windows directory.

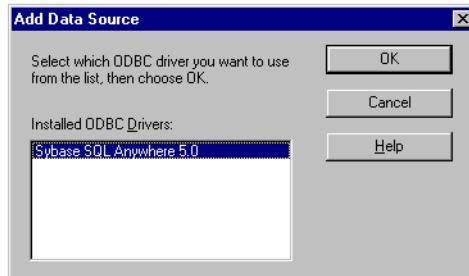
A Data Sources window appears. It displays your registered data sources and drivers.



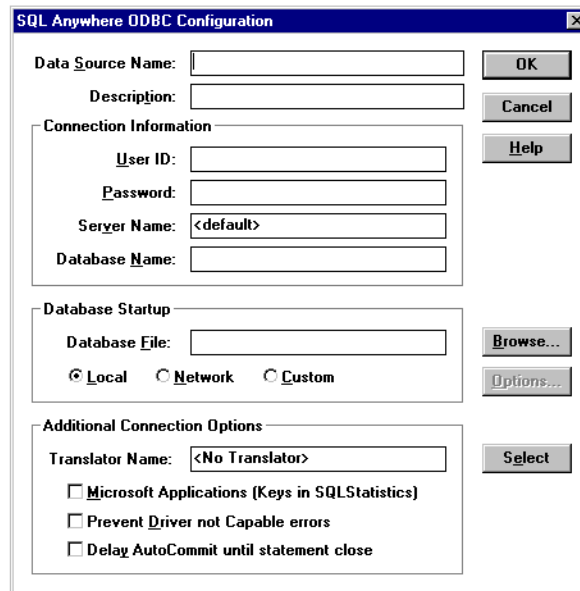
Now you'll add a new data source to this list.

3 Click Add.

The Add Data Source dialog appears.

**4** Select Sybase SQL Anywhere 5.0, then click OK.

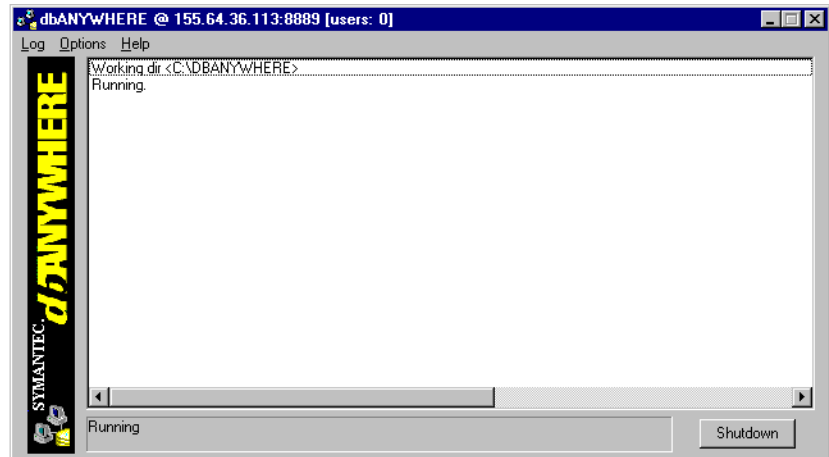
The ODBC Configuration dialog appears.

**5** Type these values in the following fields:

- Data Source Name — **Tutorial**
- User ID — **dba**
- Password — **sql**

- Database Name — **Tutorial**
 - Database File — Location of Tutorial.db, such as
C:\sqlany50\Tutorial.db (you can click Browse to choose a path)
- 6 Click OK.
The Tutorial data source is added to your ODBC configuration. It can now be located by dbANYWHERE.
 - 7 Click Close in the Data Sources window.
 - 8 Restart dbANYWHERE by clicking the Windows Start menu then choosing the following menu items in order: Programs, Symantec dbANYWHERE Workgroup Server, then Symantec dbANYWHERE.

The dbANYWHERE window appears.



Look at the title bar and note the IP address (or host name) and the port number configured for dbANYWHERE. You need this information when you work through Chapter 6, “Creating Applets with Database Functionality.” If dbANYWHERE is running locally, during the tour you can use **localhost** in place of an IP address, as long as your hosts or lmhosts file contains an entry for it (and it usually does by default).

Installing Symantec classes

Make sure the most up-to-date Symantec classes are in your Visual Cafe Pro directory:

- 1 Navigate to the VisualCafePro\Java\Lib directory.
- 2 If you see a Symantec.zip file, delete it.
- 3 Copy Dbaw.zip, Dbaw_awt.zip, and Sql.zip to this directory, if they're not already there.

The rest of this chapter contains more general-purpose install instructions. You can look through them now, or start the tour by going directly to Chapter 3.

Planning your installation

Visual Cafe Pro uses a three-tier architecture to provide database connectivity. During development, you can install Visual Cafe Pro on your development computer. You also need to install this software:

- dbANYWHERE Workgroup Server
 - Install it on the same computer as Visual Cafe Pro.
 - Or install it on a remote computer that can communicate with the development computer through TCP/IP.
- database engine
 - Local database engines must be installed on the same computer as dbANYWHERE.
 - Other database engines can be installed on the same computer as dbANYWHERE or on a remote computer (client software must be installed on the dbANYWHERE computer so it can communicate with the remote database).

System requirements

To run either Visual Cafe Pro alone on a computer, or the dbANYWHERE Workgroup Server alone on a computer (with client software to interface with a remote database), you need:

- IBM personal computer or 100 percent compatible, Intel 486 or above
- 16 Mb RAM; 24 Mb recommended for larger projects
- Windows 95 or Windows NT 3.51 or greater
- CD-ROM drive
- 30 to 40 Mb free hard disk space, depending on configuration and data caching requirements
- VGA; Super VGA recommended
- TCP/IP network software



For Windows NT, 32 Mb RAM is recommended.

To run the dbANYWHERE Workgroup Server and the local database engine on the same computer (without Visual Cafe Pro), you need to meet the requirements listed for Visual Cafe Pro plus:

- 16 Mb RAM; 32 Mb recommended for larger projects
- 50 to 60 Mb free hard disk space, depending on configuration and data caching requirements

To run Visual Cafe Pro, the dbANYWHERE Workgroup Server, and the local database engine on the same computer, you need to meet the requirements listed for Visual Cafe Pro plus:

- 24 MB RAM minimum; 32 Mb recommended
- 50 to 60 Mb free hard disk space, depending on configuration and data caching requirements

To use dbANYWHERE, you need to have access to at least one supported database; see the list of supported databases in the next section for details.

Databases supported by dbANYWHERE

Local databases, such as Sybase SQL Anywhere and MS Access, must be on the dbANYWHERE Workgroup Server computer.

Some databases, such as Microsoft SQL Server and Oracle Server, can run locally or remotely.

Databases that run remote from the dbANYWHERE Workgroup Server computer require that you have client software running for the database, so dbANYWHERE can connect to the remote database. The dbANYWHERE Workgroup Server can connect to the following databases through the native database libraries:

- Microsoft SQL Server 6.x using DB-Library
- Oracle Server 7.x using OCI (Oracle Call Interface), including UNIX workstation versions
- Sybase SQL Server Systems 10.x and 11.x using DB-Library, including UNIX workstation versions
- ODBC, including UNIX workstation versions

dbANYWHERE can use any of these database engines that support Win32 client software, for example, the UNIX workstation version of Oracle Server 7.x.

The dbANYWHERE Workgroup Server provides unlimited connections to Sybase SQL Anywhere and MS Access. For the other databases listed above, dbANYWHERE provides access for the first five active connections only. This means that if five connections are already active (even if the connections are to Sybase SQL Anywhere and MS Access), at that point you can only make connections to Sybase SQL Anywhere and MS Access.

To increase the number of connections available to these databases, you must upgrade to dbANYWHERE Server. Once you have upgraded to this version of the server, you can purchase full licenses for other database drivers.

Using the installer

If Visual Cafe Pro is already installed on your system, refer to the Readme.txt file *before* you begin installation.

To install Visual Cafe Pro, as well as dbANYWHERE, Sybase SQL Anywhere database engine, and Netscape software, follow these steps:

- 1 Read the registration instruction card (in the box). It describes how to register through our Web site, <http://cafe.symantec.com>, so you can obtain technical support, upgrades, and news about special promotions. Use the user ID and password included with your package.
- 2 Insert the CD-ROM in the CD-ROM drive on your system.
- 3 If the installer didn't automatically start and you're running under Windows NT 3.5x, choose File/Run from the Program Managers menu.

If you are running under Windows 95 or NT 4.0, choose Run from the Windows Start menu to display the Run dialog box.

- 4 Type: **drive:\setup.exe**
where *drive* is the CD-ROM drive identifier, and click OK.

- 5 Click the name of the software you want to install.

The install wizard guides you through the installation process; you can select where to install Visual Cafe Pro and which elements to install. Click Next to proceed through the steps.

You can install the following items separately, by clicking the appropriate icon:

- Visual Cafe Pro
- dbANYWHERE Workgroup Server
- Sybase SQL Anywhere standalone version
- Netscape Fastrack Server and Netscape Navigator Gold (if available on your CD)



When installing Sybase SQL Anywhere, let the installer update the registry for you. Also, you need to reboot after installation.

After installation, the installer returns you to the main install window, where you can install other items, if you want to.

- 6 Read the Readme.txt file (on the CD-ROM) *before* you use the software. It contains important last-minute information.

Information on Visual Cafe Pro and dbANYWHERE Workgroup Server is included in this guide and in the online help. Information on other software included with Visual Cafe Pro is described in other publications.

Starting the dbANYWHERE Workgroup Server

You can start the application in any of these ways:

- Double-click the application icon in the Program group.
- In the Start menu of Windows 95 or NT 4.0, choose the application from the Programs menu.
- Run the application (dbaw.exe) from the Run dialog.

The dbANYWHERE window appears.

Stopping the dbANYWHERE Workgroup Server

Close the dbANYWHERE window or click the Shutdown button. If users are connected, you'll be prompted.

Starting Visual Cafe Pro

You can start the application in any of these ways:

- Double-click the Visual Cafe Pro application icon in the Program group.
- In the Start menu of Windows 95 or NT 4.0, choose the application from the Programs menu.
- Run the application (vcafe.exe) or a .vpj file from the Run dialog.

The Visual Cafe Pro environment appears. After you use Visual Cafe Pro, it remembers what windows you had open when you last used the application and opens those windows the next time you run the product.

To use database functionality within Visual Cafe Pro, dbANYWHERE must be installed and running, either locally or on a remote computer, and accessible through TCP/IP. Your local computer must also be configured with TCP/IP connectivity. To locate dbANYWHERE, you must know the IP address (or host name) of the PC it's running on and the port number configured for dbANYWHERE. When dbANYWHERE is running, it displays its IP address and port number. The default port number is 8889. If dbANYWHERE is running locally, you can use **localhost** in place of an IP address, as long as your hosts or lmhosts file contains an entry for it (and it usually does by default).

Exiting Visual Cafe Pro

To exit from Visual Cafe Pro, choose Exit from the File menu. You are prompted if you have unsaved changes.

Uninstalling Visual Cafe Pro

To uninstall Visual Cafe Pro, follow the procedure for your Windows environment (Windows 95 or Windows NT).



Uninstall does *not* remove any files created in the \VisualCafePro directory tree after Visual Cafe Pro is installed (for example, sample projects) or in the Visual Cafe Pro group.

Uninstalling in Windows 95 or Windows NT 4.0

If you are running under Windows 95 or Windows NT 4.0, to uninstall Visual Cafe Pro:

- 1 Choose Settings from the Windows Start menu.
- 2 Choose Control Panel to display the Control Panel window.
- 3 Choose Add/Remove Programs from the Control Panel window.
- 4 Click the Install/Uninstall tab and highlight Visual Cafe Pro.
- 5 Click Add/Remove and follow the instructions on the screen.

Uninstalling in Windows NT 3.5x

If you are running under Windows NT 3.5x, to uninstall Visual Cafe Pro:

- 1** Open the Visual Cafe Program group.
- 2** Double-click the uninstall icon and follow the instructions on the screen.

Deploying applets and applications

Here are some guidelines for deploying applets and applications created with Visual Cafe Pro. This section covers the following topics:

- Setting up dbANYWHERE and the database
- Setting up the client
- Deploying applets on a Web server
- Deploying applications
- Using the Bundler.exe utility

Setting up dbANYWHERE and the database

To deploy applets and applications that use a database, you need to install dbANYWHERE on your Web server. In addition, if you're using a local database, you need to install the runtime version of your database engine (such as Sybase SQL Anywhere) on your Web server. If you're using a remote database, you need to install the client database software provided by your database vendor. For applets, the applet and its supporting class files must also be located on this Web server. The runtime version of Sybase SQL Anywhere is located on the CD in \Sybase\runtime\win95 or \Sybase\runtime\winNT.

Setting up the client

The system requirements for users accessing dbANYWHERE vary, depending on the Java API client they're using. Consult the Java API documentation for details. Note that client database software is not needed for users to connect to dbANYWHERE.

Deploying applets on a Web server

After you complete an applet in Visual Cafe Pro, you are ready to deploy it on a Web site. You need to know how your particular Web site is set up to get your applet up and running. However, here are some guidelines. Because your project can contain more than one applet that appears in related Web pages, these guidelines are for setting up a project that contains one or more applets.

- Create an applet directory on the Web server where you will store your applet files.
- Put all of your applet class files and html files in the applet directory, as they appeared in your Visual Cafe Pro project directory.
- When using graphics files, use relative URLs. Then place your graphics files in the applet directory or a subordinate directory, as it appeared in your project directory.
- Enable your applet to access the Symantec class files it needs. You can place an unzipped Symantec directory (and all subdirectories) in the applet directory or use another method, such as having your classpath point to this directory. For applets that use Visual Cafe Pro database features, you also need to unzip (keeping all subdirectories intact) Dbaw.zip and Dbaw_awt.zip into the Symantec directory in the applet directory and Sql.zip into a Symjava directory in the applet directory; or you can use another method to let your applet access these classes. Instead of placing all of these class files on the Web server, you can use the Bundler.exe utility, described in a following section, to learn exactly what class files an applet uses.
- If your applet uses other class files, you need to provide access to those class files. (Remember that the Web browser should provide access to standard Java class files.)
- For applets using Visual Cafe Pro database features, you need to make sure the Session object refers to the correct dbANYWHERE server.

After you put your applet on a Web site and set it up, make sure you test it from remote computers to check that it works as planned. You can also test it on different operating systems.

Deploying applications

After you complete an application in Visual Cafe Pro, you are ready to deploy it. Requirements for different applications vary. However, here are some guidelines:

- Create an application directory where you will store your application files.
- Put all of your application class files in the application directory, as they appeared in your Visual Cafe Pro project directory.
- When using graphics files, use relative URLs. Then place your graphics files in the application directory or a subordinate directory, as it appeared in your project directory.
- Enable your application to access the Symantec class files it needs. You can place an unzipped Symantec directory (and all subdirectories) in the application directory or use another method. For Visual Cafe Pro applications that use database features, you also need to unzip (keeping all subdirectories intact) Dbaw.zip and Dbaw_awt.zip into the Symantec directory in the application directory and Sql.zip into a Symjava directory in the application directory; or you can use another method to let your application access these classes. Instead of placing all of these class files in the application directory, you can use the Bundler.exe utility, described in a following section, to learn exactly what class files an application uses.
- Your users need to obtain or you need to provide the Java virtual machine and Java class files. The Symantec Java virtual machine must be licensed from Symantec.
- If your application uses other class files, you need to provide access to those class files.
- For applications using Visual Cafe Pro database features, you need to make sure the Session object refers to the correct dbANYWHERE server.
- Tell your users how to start your application. Unless you provide another way, on a PC your users must type at a DOS prompt:

path\java application-name

path\java invokes java.exe, for example, \visualcafe\java\bin\java.

Your application name is the same as the name of the frame for the main application window without the .class extension; it's case-sensitive.

For example:

```
\visualcafe\java\bin\java AmazingTour
```

Make sure you test your application package so it works as planned. You can also test it on different operating systems.

Using the Bundler.exe utility

The Bundler utility enables you to easily figure out which class files are used by your applet or application. After your Java applet or application is finished, enter the following command at the DOS command prompt (make sure that \visualcafe\bin is in your path):

```
Bundler.exe -make -cdb mainclass.cdb -depend listname.dep mainclass.java
```

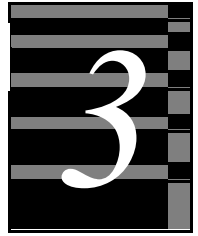
mainclass is the name of the main class Java file in your project.

listname.dep is the file where the list of classes used by your applet or application will be generated. The Bundler also lists the name of the zip file (if any) where the class file was found. This helps you figure out what class files you would need to unzip from each class zip file used by your applet or application. The filename must have a .dep extension.

Even though the java.* class files are logged in this file, you are not actually required to copy those to your Web server for your applets, as they are usually available with most Web browsers.

The Bundler takes the same command line options as the sj command line compiler. As a result, you can add additional class paths, and so on.

Starting the Tour



Imagine that you work for a travel agency, called Amazing Adventures Travel, that's ready to take advantage of the money-making opportunities that the Internet offers. You decide to add Java functionality to a series of Web pages that advertise your upcoming package tours and your custom tour services. To get started, you update the pages for your favorite destination, Isle de Cafe.

In this chapter, you'll look at the Isle de Cafe applets and application, some of which you'll create in the following chapters, plus learn some important Visual Cafe Pro terms and concepts.

What you need

To work through the tour, you need a Java-enabled Web browser, such as Netscape 3.0 or higher. You also need to install the Visual Cafe Pro software, as described in the Chapter 2 section, "Installing the software needed for the tour." Be sure to start the local dbANYWHERE Workgroup Server before working through the tour.

After you meet these requirements, you can start the tour with this chapter. Then work through the following chapters in order:

Chapter 4, "Creating an Applet for the Web Page," shows you how to create an island map applet including an animation and integrate it into a Web page, without needing to program in Java code.

Chapter 5, "Creating the Application and Debugging Code," describes how to create a simple application and how to perform advanced debugging operations. This chapter builds on the previous chapter.

Chapter 6, "Creating an Applet with Database Functionality," shows you how to use many of the Visual Cafe Pro database features.

Looking at the Isle de Cafe Web pages

Your main Isle de Cafe Web page is the most important page. On this page, you need to grab the initial interest of prospective clients, so they remember your company and want to spend some time at your Web site. A Web page with only HTML could potentially be a little boring. You decide to add Java applets so the page becomes dynamic and interactive.

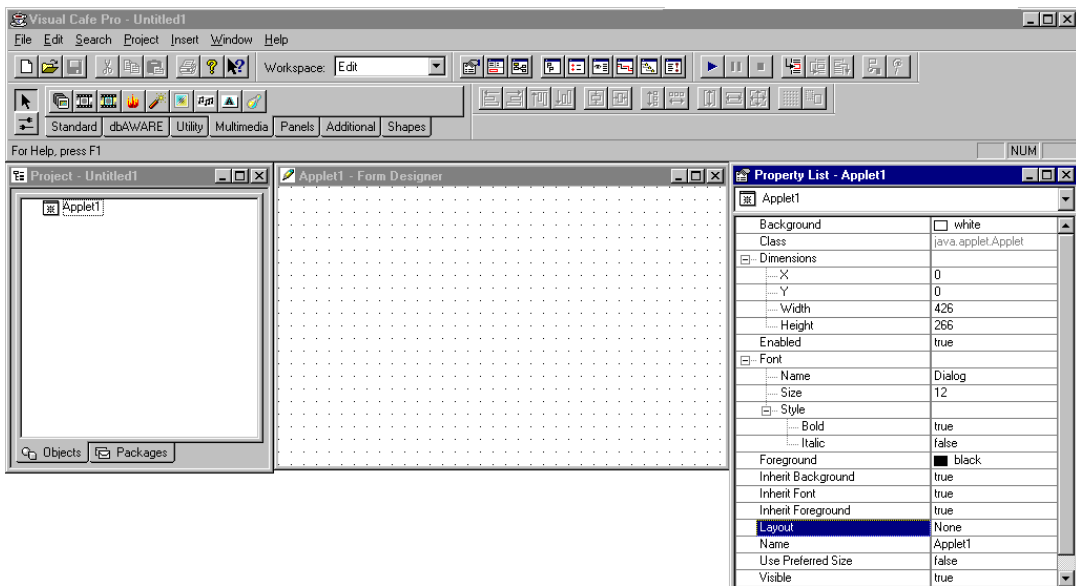
Let's look at the Web pages in a Web browser and identify the elements created with Visual Cafe Pro.

Starting Visual Cafe Pro

You can start the application in any of these ways:

- Double-click the application icon in the program group.
- In the Start menu of Windows 95, choose the application from the Programs menu.
- Run the application or a .vpj file from the Run dialog.

When you first start Visual Cafe Pro, an unnamed project, based on the default applet template, appears. By default, the Project, Form Designer, and Property List windows appear.



Opening the project

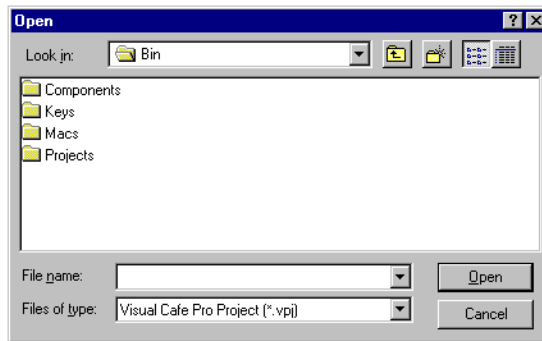
All of the applets and HTML files that make up the Isle de Cafe Web pages are contained within the IsleWeb.vpj project. To look at the project, follow these steps:

- 1 Close any open projects by clicking the Project window, then choosing Close Project in the File menu.

You'll work with the Visual Cafe Pro applet and application templates later in this tour.

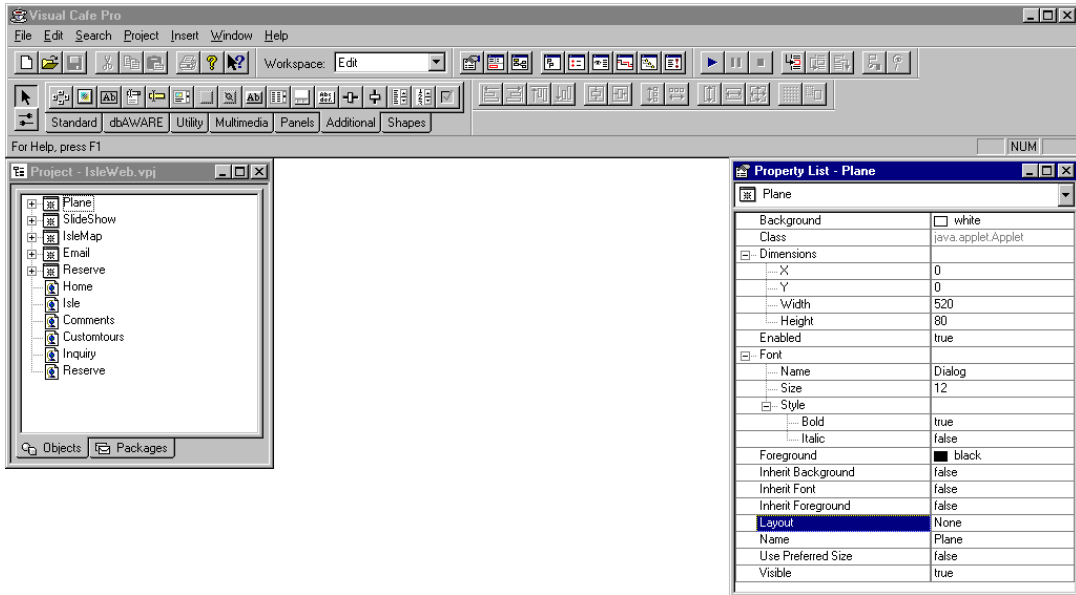
- 2 Choose Open from the File menu.

The Open dialog appears.



- 3 Select the IsleWeb.vpj project in the \VisualCafePro\Tutorial\Applet folder, then click Open.

The project appears.

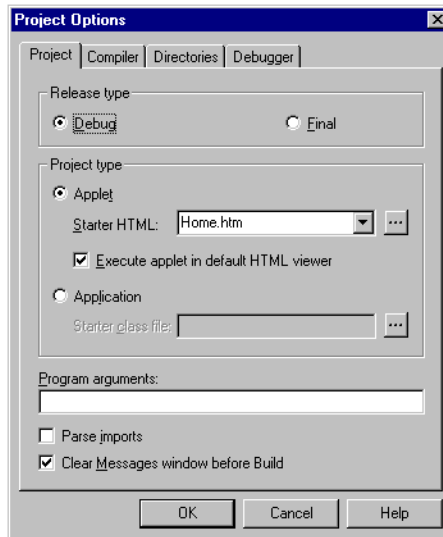


Running the applets in your default browser

Visual Cafe Pro lets you launch the browser from within its environment.

- 1 Choose Options from the Project menu.

The Project Options dialog appears.



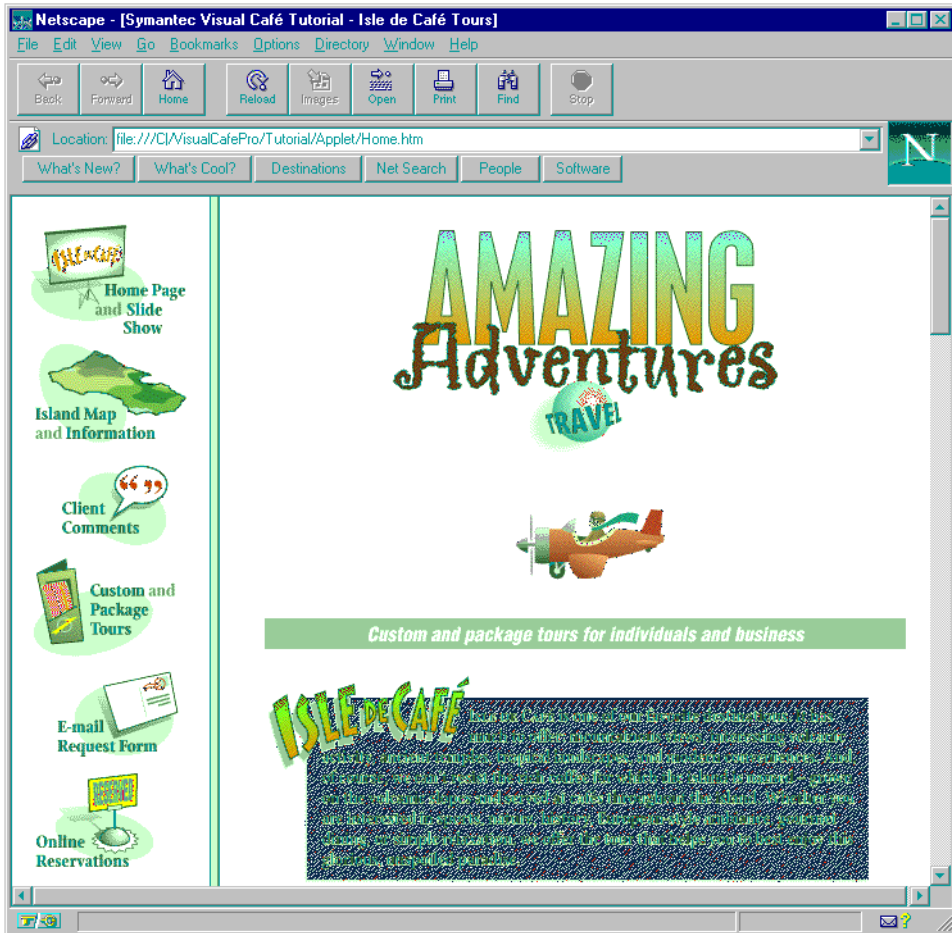
- 2 Make sure Home.htm is in the Starter HTML field and the Execute applet in default HTML viewer option is selected. Then click OK.
- 3 Choose Execute from the Project menu.

Visual Cafe Pro launches your default HTML browser and displays your Web page within it.

The Isle de Cafe home page appears. The pages contain elements that were created with HTML and with Java using Visual Cafe Pro. The Visual Cafe Pro applets on this page are the plane animation created with the Visual Cafe Pro Animator component and the slide show created with the Visual Cafe Pro SlideShow component.



Some early versions of Java-enabled browsers didn't support applets very well. If the applets in the tour don't run properly in your browser, you probably need to upgrade your browser. However, you can first try to load the page multiple times.



On the left of the page are links to the other pages.

You use the plane animation to attract the attention of your Web site guests. You also want your potential customers to get an idea of what Isle de Café offers them, so you include the slide show. The slide show contains photos of Isle de Café that you've collected over the years. Your customers can move back and forward between the photos of the slide show. Next to each photo is a description of the location so your customers know what they're looking at.

- 4 Scroll down to the slide show, then click the Forward button of the slide show (the right triangle) until you've viewed the entire slide show. Also try clicking the Previous button (the left triangle).

- 5 Explore the other Web pages by clicking a link on the left of the page. Make sure you look at all of the pages.

While the main Isle de Cafe Web page is important to capture people's initial interest, once they're interested they may want more in-depth information about the island.

You decide that the best way to present this detailed information is through an island map. On the map, customers can click a location to jump to information about it. This feature was implemented with the ImageViewer and InvisibleHTMLLink components provided with Visual Cafe Pro. You also decide to add an animation, implemented with the Animator component, that draws attention to a main attraction on the island — the ability to safely view an active volcano.

Some additional features you'd like on the Web site include a list of your upcoming package tours, information on the custom tours you can design for clients, an e-mail request form so clients can get additional information, an online reservations form, and some quotes from clients about how much they enjoyed your tours.



The online reservations applet will run properly only if you have a dbANYWHERE Workgroup Server running on the same computer on the local hard drive, the computer has enough system resources, and you've correctly set up the Tutorial database. See Chapter 2 for more information.

It's time to look at these Web page elements in Visual Cafe Pro directly. You can exit your browser or keep it running so you can refer back to the completed Web pages.

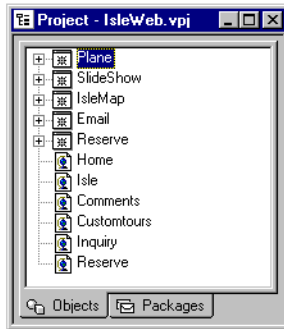
Looking at the applets in Visual Cafe Pro

Now that you've seen how the applets look in your Web pages, let's see how they were created with Visual Cafe Pro.

Looking at the project

The Visual Cafe Pro full-featured project management system and flexible editing and browsing tools let you develop and maintain even the most complex Java applications:

- 1 Look at the items appearing in the Project window.



You'll notice the following applets in the Project window:

- Plane — plane animation
- SlideShow — slide show
- IsleMap — Isle de Cafe map with volcano eruption
- Email — e-mail information form
- Reserve — online reservations utility

And the following HTML files:

- Home — first page
- Isle — page with island map
- Comments — page containing customer comments
- Customtours — page describing custom and package tours
- Inquiry — page with e-mail questionnaire
- Reserve — page with online reservations utility

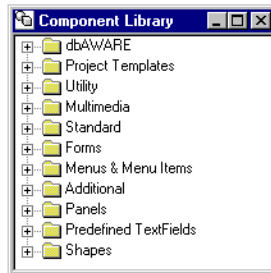
While the Object tab is selected, you're looking at the Object view. The Object view of the Project window shows the embodied objects of a project, including Visual Cafe Pro forms and associated components:

- A Visual Cafe Pro *component* is a user interface (UI) element, such as a button, menu, text box, or container of other components. It's often called a control in C++.
- A Visual Cafe Pro *form* is a Java container — a component that can contain another component. There are two general categories of Java containers: windows and panels. Some types of windows are a frame (which can have a menu bar) and a dialog. A panel is a defined area that can appear in a window, such as an applet that appears in a browser.

The Object view also shows HTML files, if present.

- 2 In the Project window, click the + next to an object to view the components contained by it.
- 3 Choose Component Library from the Window menu.

The Component Library appears.



The Component Library is a repository of components. Visual Cafe Pro provides an extensive library of components, which you can supplement with third-party component plug-ins and your own components. In addition to supporting the complete set of standard Java components, Visual Cafe Pro provides many additional components. For fast access, you can configure the Component Palette to contain your favorite objects:



To add a component to a Visual Cafe Pro form, drag a component from the Component Library window to the Project window or Form Designer, then position and resize it as needed. Or, you can click a component on the Component Palette and draw it on the form. In addition, the Component Library contains forms, so you can drag a form into a Project window to add it to the project. To add an object to the Component Palette so you can get to it more quickly, drag the object from the Component Library to the Palette.

- 4 Close the Component Library window.
- 5 In the Project window, click the Packages tab.

The Package view shows the source files in a project, grouped as *packages*. A Java package is a group of related Java classes and interfaces.

- 6 Click the Object tab to return to Object view.

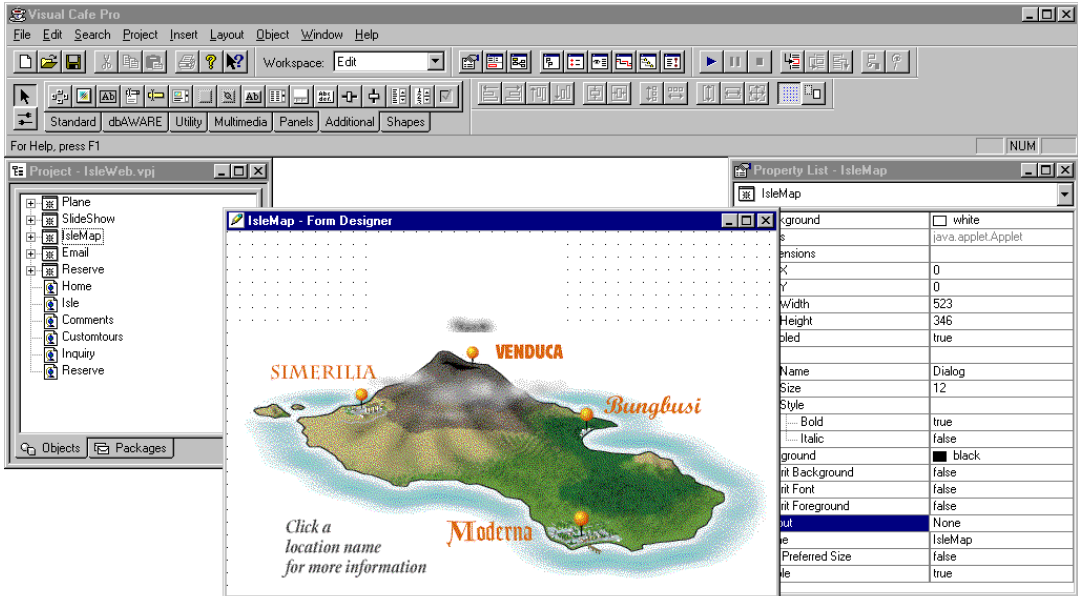
You can double-click a form or file in the Project window to open it. In the following sections, you'll look at the applets and an HTML file in the project.

Looking at the applets

Once the Project is opened, you can look at the applets it contains:

- 1 Double-click the IsleMap applet in the Project window.

The Form Designer appears.



The Form Designer is a true WYSIWYG form layout tool: it lets you edit all types of forms, including applets, windows, message boxes, and dialog boxes. To design the visual interface of your Java applications and applets, you can drag and drop components from the Component Palette or Component Library directly onto your forms. Visual Cafe Pro automatically generates the Java code and changes the code as you make modifications. Several layout managers are available, so you can pick the one that best suits your form, or don't use one at all.

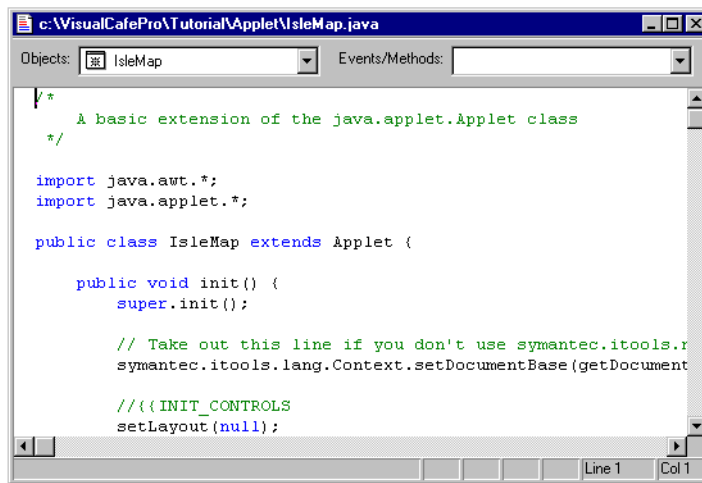
The properties of the components are displayed in the Property List window. To specify the properties of components on a form, you simply fill in fields in the Property List. Visual Cafe Pro updates the component appearance on the form and the Java code for you.

- 2 To look at the properties for the Animator component, choose the component (animatorErupt) from the pull-down menu at the top of the Property List or click the component on the form.

The properties for the Animator component appear in the Property List window.

- 3 To look at the underlying Java source code for the applet, double-click the Form Designer. Or right-click over the IsleMap object in the Project window, then choose Edit Source from the pop-up menu.

The applet source code appears in the Source Editor.



The screenshot shows the Visual Cafe Pro Source Editor window titled "c:\VisualCafePro\Tutorial\Applet\IsleMap.java". The "Objects:" dropdown menu shows "IsleMap" and the "Events/Methods:" dropdown is empty. The code editor displays the following Java code with syntax highlighting:

```
/*  
 * A basic extension of the java.applet.Applet class  
 */  
  
import java.awt.*;  
import java.applet.*;  
  
public class IsleMap extends Applet {  
  
    public void init() {  
        super.init();  
  
        // Take out this line if you don't use symantec.itools.r  
        symantec.itools.lang.Context.setDocumentBase(getDocument  
  
        //{{INIT_CONTROLS  
        setLayout(null);  
    }  
}
```

The status bar at the bottom right indicates "Line 1" and "Col 1".

Visual Cafe Pro supports two-way development by translating Java code into a visual representation and by translating the visual representation in the Form Designer to Java code. Your code and your visual model always match.

The Visual Cafe Pro Source Editor simplifies development with full-color Java syntax and keyword highlighting and an integrated macro language for extending the editor. A single mouse click in a menu navigates you to any declaration inside the Java project. The Form Designer ensures full synchronization between source code and the visual tools. During debugging, you can use the Source window to monitor program execution.

- 4 You can also look at the plane animation by double-clicking Plane in the Project window, the slide show by double-clicking SlideShow, the e-mail questionnaire applet by double-clicking Email, and the online reservations utility by double-clicking the Reserve applet.

Because these are detailed applets, you might want to close each Form Designer window before opening another one.

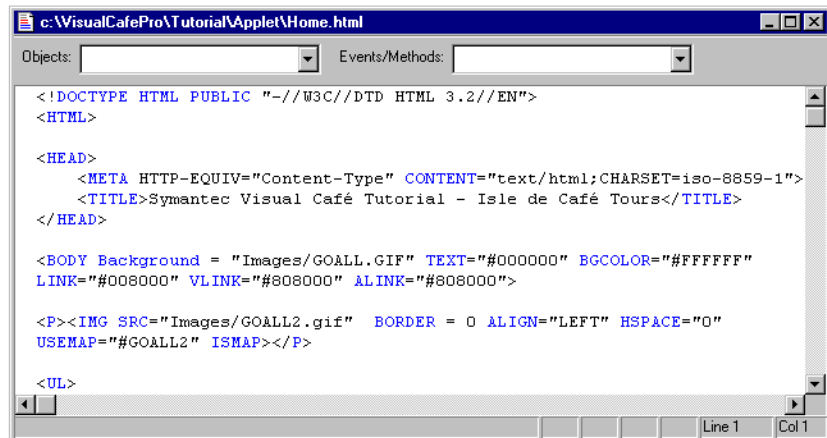
To test your applet, you can run it in the Visual Cafe Pro Applet Viewer. Visual Cafe Pro also lets you run your applets within a browser by launching the browser for you. You'll try these features later in the tour.

Opening an HTML file

An applet runs from an HTML file. Although your project doesn't have to contain the HTML files that the applets run in, it's convenient to include the HTML files in the project. Let's look at an HTML file in this project:

- 1 Double-click Home in the Project window.

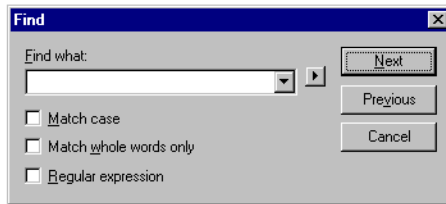
The Source Editor appears.



The HTML file is displayed in this window. You can create and edit HTML code here.

- 2 Choose Find from the Search menu.

The Find dialog appears.



- 3 Type **applet code**, then click Next.

The words are highlighted in the HTML code. This is part of the applet tag that causes the Visual Cafe Pro applet to appear on the Web page. An applet tag has the following basic format:

```
<APPLET code="applet.class" width=pixw height=pixh></APPLET>
```

applet is the name of the applet, *pixw* is the number of pixels for the width, and *pixh* is the number of pixels for the height.

- 4 Choose Find Again from the Search menu.

Another applet tag is highlighted in the HTML file.

- 5 Choose Close Home.htm from the File menu.

The Source Editor closes.

Now let's look at the application. You can close your project by closing the Project window.

Running the custom itinerary application

A large part of your business revenue is generated from designing custom, escorted tours to Isle de Cafe. As you expand your operations onto the WWW, you look at ways to take full advantage of the time-saving aspects of electronic communications.

You decide that a cross-platform Java application would be ideal for distributing custom itineraries to clients for approval. Instead of spending time and money putting together an itinerary on paper — especially one that looks good enough for people purchasing a premium tour — you can put together a polished itinerary in the form of an application. This itinerary is easily modified

as changes are needed and includes photos of the locations the clients will visit.

To run the itinerary application, follow these steps:

- 1 In a DOS window, navigate to the directory containing `AmazingTour.class`.

If you installed in the default location, it should be in the
`\VisualCafePro\Tutorial\Application` directory.

- 2 At the DOS prompt, enter:

```
\visualcafe\java\bin\java AmazingTour
```

Specify a different path if `java.exe` is not in the default Visual Cafe Pro location, `\VisualCafePro\Java\Bin`.

The application appears.



- 3 From the application, open Tour.dat, which is located in the Images directory.

The itinerary appears.



- 4 Press the Next and Previous buttons to look through the itinerary.
- 5 To exit the application, choose Exit from the File menu. Then click Yes in the dialog.

Now let's look at the application in Visual Cafe Pro.

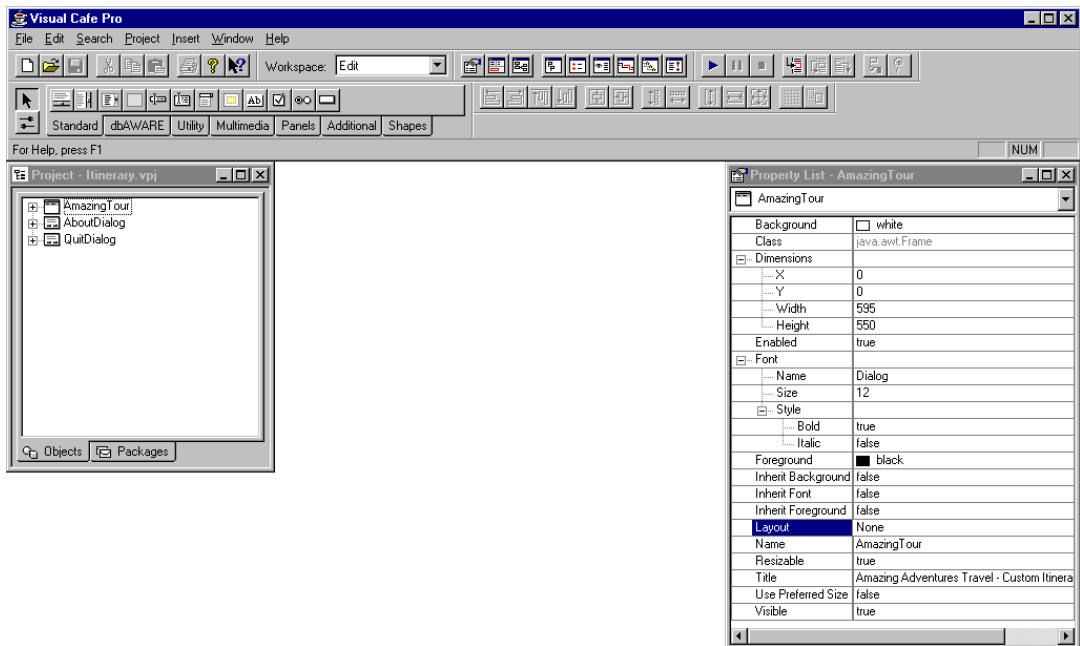
Looking at the application in Visual Cafe Pro

Now that you've seen how the application works, let's see how it was created with Visual Cafe Pro.

To look at the itinerary application in Visual Cafe Pro, follow these steps:

- 1 If you don't have Visual Cafe Pro running, start it now.
- 2 Close any open projects.
- 3 Choose Open from the File menu.
The Open dialog appears.
- 4 Select the Itinerary.vpj project in the
\\VisualCafePro\\Tutorial\\Application folder, then click Open.

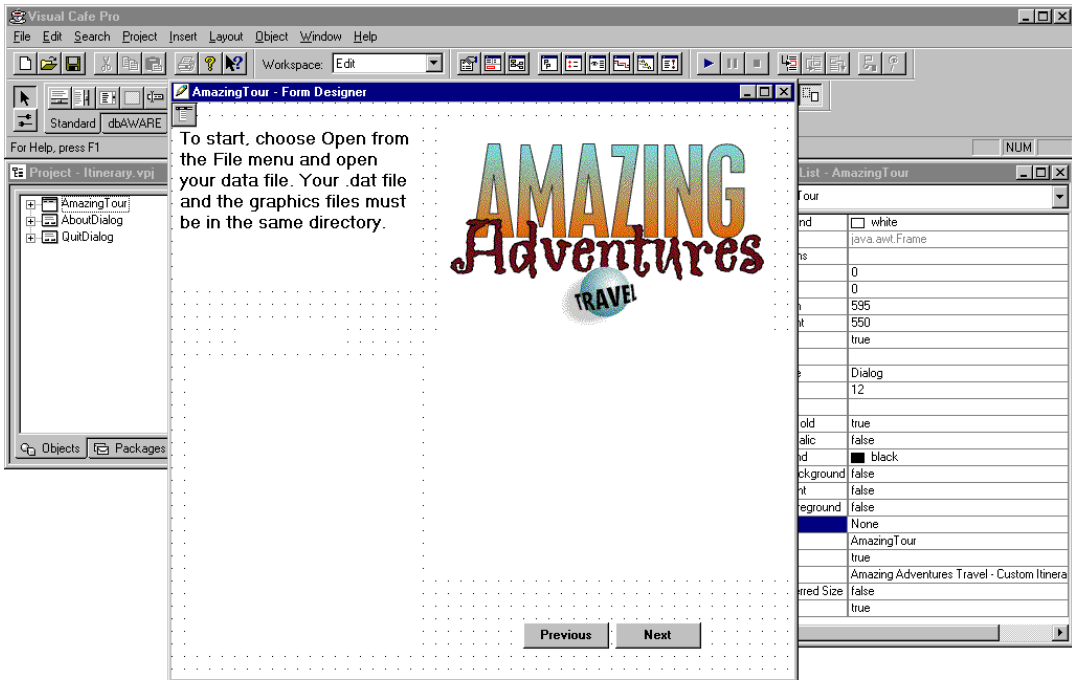
The project appears.



You'll notice the following objects in the Project window:

- AmazingTour — main application window
- AboutDialog — About dialog
- QuitDialog — Quit dialog

- 5 In the Project window, double-click AmazingTour.
The Form Designer appears.



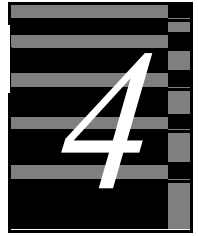
The Project window lists the names of the components on the form. To see the components within AmazingTour, you can click the + next to AmazingTour.

- 6 Close your project by closing the Project window

Visual Cafe Pro lets you launch your application from within its environment so you can test it. You'll try this feature later in the tour.

Now you can continue with the next chapter to build and test one of the applets.

Creating an Applet for the Web Page



This chapter quickly acquaints you with the main features of Visual Cafe Pro by showing you how to create an applet for your Isle de Cafe Web site. This portion of the tour doesn't involve manually creating new Java code; instead, you use the visual design capabilities of Visual Cafe Pro to create your complete applet. In the next chapter, you do work directly with Java code.

To learn how to add applets to your HTML page, work through the following sections in this chapter:

- Creating and naming the project
- Creating the island map applet
- Displaying the applet in a Web browser

Before working through this chapter, you should have completed the previous chapter “Starting the Tour.”



When you first install Visual Cafe Pro, you have the default environment options. If you've changed your environment options since you've installed the product, you might run into variations because of your settings. In particular, make sure the keyboard is set to vcafe. Choose Environment Options from the File menu to view your environment option settings.

Creating and naming the project

The project contains the elements needed in a Web page, a group of related Web pages, or an application, including applets, HTML files, application windows, and so on. To get started quickly, you can use project templates with skeleton applets and applications that you extend with additional functionality. You can also create custom templates and add them to the Component Library, and add your favorite templates to the Component Palette.

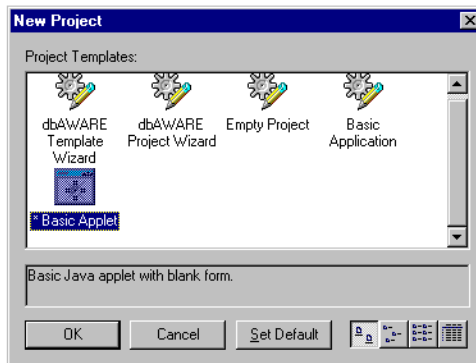
To create the project that will hold the applets and HTML file for your Isle de Cafe Web page:

- 1 Close any open projects by clicking the Project window, then choosing Close Project in the File menu.

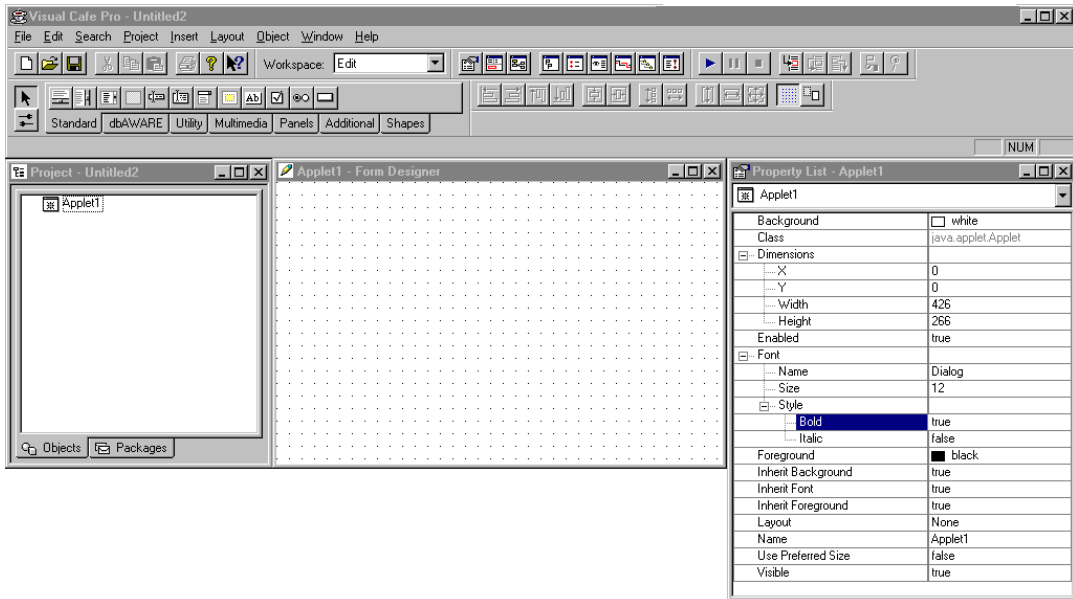
When you first start Visual Cafe Pro, an unnamed project, based on the default project template, appears. Here you'll create a new project so you can see how to choose a template.

- 2 Choose New Project from the File menu.

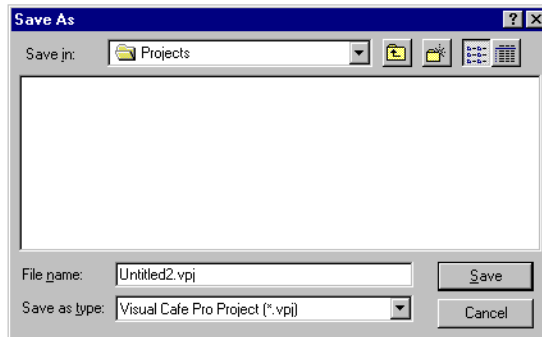
The New Project dialog appears.



- 3 Select the Basic Applet project template. Then click OK.
The Project and Form Designer windows appear.



- 4 Click the Project window, then choose Save As from the File menu.
The Save As dialog appears.



- 5 Create a new directory structure, such as
\\VisualCafePro\\MyApps\\Applet, to hold your applet files.

The project and all of the files contained within it should be in the same directory. For easier project management and to prevent filename conflicts, you should save each project in its own directory.

- 6 Type MyIslePg.vpj in the File name field, then click Save.

The new name appears in the titlebar of the Project window. Visual Cafe Pro Project files have a .vpj extension.

The first time you save a project, all of the files it contains are also saved to the new directory. After you save it once, saving just the project does not save other files, such as applets. Save All does save all files.

Creating the island map applet

To create the applet, work through the following tasks:

- Gathering the files you need
- Setting the applet properties and adding the map
- Adding the HTML links
- Adding the volcano eruption animation
- Running the applet

Gathering the files you need

To construct your Web page, you need an HTML file that your applet will run within and the graphics files that your applet uses. You will copy an HTML file into your project directory. You will copy the graphics files into an Images directory subordinate to the project directory.

Visual Cafe Pro lets you specify URLs that are relative to the applet directory. That way you can move your directory to another location and avoid the problems associated with hardcoded file specifications.

Now you can copy the files:

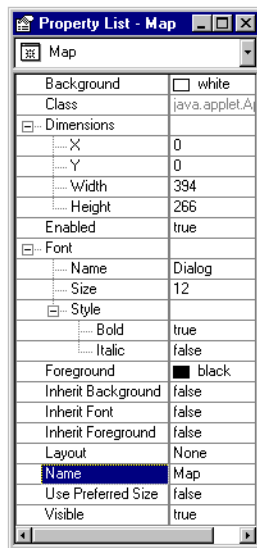
- 1 Copy Isle.htm from the \VisualCafePro\Tutorial\Applet directory to your project directory.
- 2 Create an Images directory in your project directory.
- 3 Copy these files from the \VisualCafePro\Tutorial\Applet\Images directory to your new Images directory:
 - Map.gif
 - erupt01.gif through erupt16.gif
 - Photo_1.gif through Photo_8.gif

- bungbusi.gif
- venduca.gif
- simerili.gif
- moderna.gif
- Goall.gif
- Goall2.gif

Setting the applet properties and adding the map

To start, you need to customize the properties of your form. Then you can add a picture of the island to the form. Follow these steps:

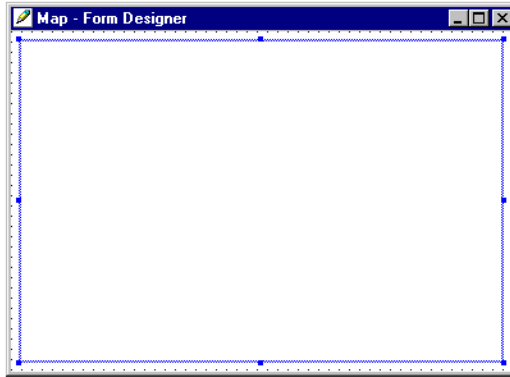
- 1 In the Property List, set the Name property and the Inherit Background, Font, and Foreground properties of Applet1 as follows:



- 2 In the Component Palette, click the Multimedia tab, then click ImageViewer.

ToolTips shows you which button is for the ImageViewer component. Move the cursor over a button until a pop-up message appears.

- 3 Draw a rectangle (about as large as the island map) on the applet form by clicking and dragging the cursor.



You can make the Form Designer window bigger by dragging the right side or bottom of the window. The components are positioned on the window relative to the top and left sides, so this spacing remains the same unless you move the components in the window.

The component you just added to the applet appears in the Project window.

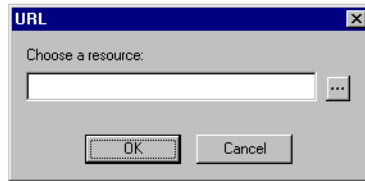


While the component is selected on the form, the Property List displays the properties of this component.

- 4 In the Property List, change the Name property to imageViewMap.

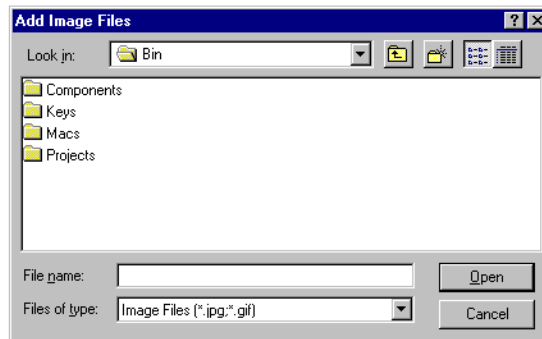
- 5 Double-click the URL property.

A URL dialog appears.



- 6 Click the ... button.

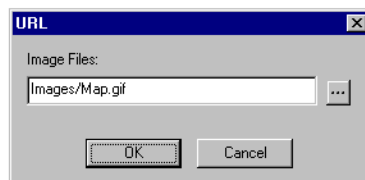
An Add Image Files dialog appears.



- 7 Navigate to your Images directory, select Map.gif, and click Open.

The complete path appears in the URL dialog.

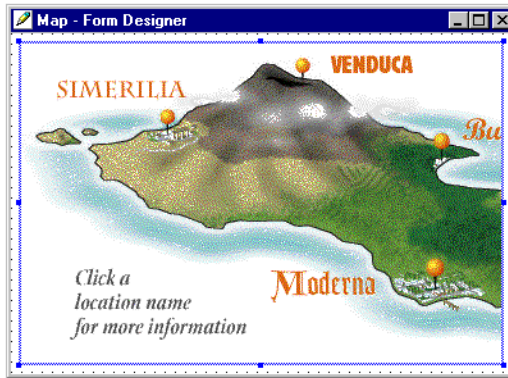
- 8 Delete the first part of the URL, so the only path remaining is Images/Map.gif.



This creates the relative URL.

- 9 Click OK.

The map appears in the Form Designer.



- 10 Resize the form and the component as needed, so you can see the entire image.

When a component is selected and you move the cursor over a square (called a handle) on the edge of a component, the cursor changes to a two-way arrow, which means you can click and drag to resize the component.



When a component is selected and you move the cursor over it, the cursor changes to a four-way arrow, which means you can click and drag the component to another location.



The Form Designer window size represents the applet size. So when you run the applet, it will appear the same size as the window.

- 11 Click the Project or Form Designer window, then choose Save All from the File menu.

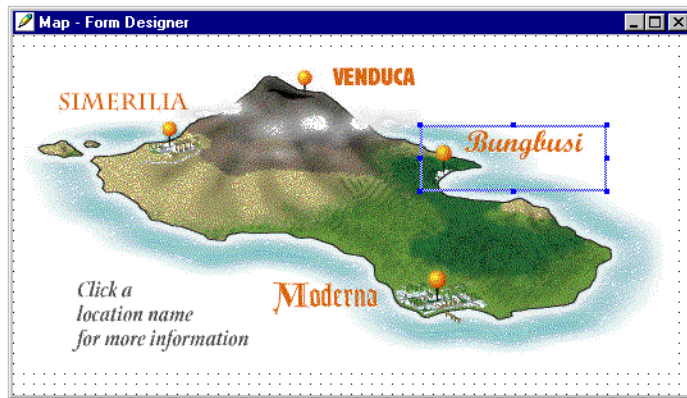
The project and all included files are saved.

Adding the HTML links

Visual Cafe Pro lets you specify clickable areas on the map by drawing InvisibleHTMLLink components on it. These areas are associated with a location in an HTML file, so when the applet runs clicking the area will cause a jump to another location. Follow these steps to add these components:



- 1 In the Component Palette, click Additional, then click InvisibleHTMLLink.
- 2 Draw the component over the image, by clicking and dragging, so it contains the word Bungbusi and the location on the map.



- 3 In the Property List, change the Name property to invisibleHTMLLinkB.
- 4 In the Property List, double-click the HTML Link URL property. An HTML Link URL dialog appears.
- 5 Type **Isle.htm#Bungbusi** in the dialog, then click OK.
- 6 Add InvisibleHTMLLink components for the remaining three locations. Use the following values for the Name and HTML Link URL properties:
 - Venduca — invisibleHTMLLinkV and Isle.htm#Venduca
 - Simerilia — invisibleHTMLLinkS and Isle.htm#Simerilia
 - Moderna — invisibleHTMLLinkM and Isle.htm#Moderna



- 7 Click the Project or Form Designer window, then choose Save All from the File menu.

Now you can add the final component to the applet: an eruption animation.

Adding the volcano eruption animation

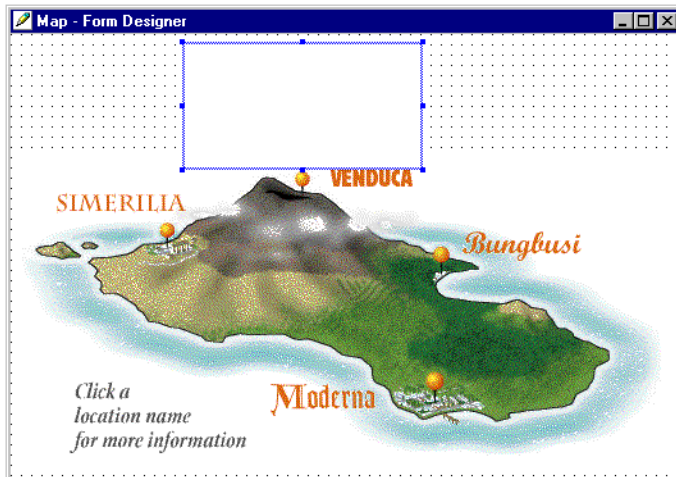
The volcano eruption is an added feature of the island map that should attract attention. Here are the steps to create the animation:

- 1 Resize the form and move the components as needed so you can put the animation above the map.

Shift-click the image and each of the links, then drag to move them. Note that the InvisibleHTMLLink components must be on top of the ImageViewer; otherwise, you won't be able to click them when the applet runs.



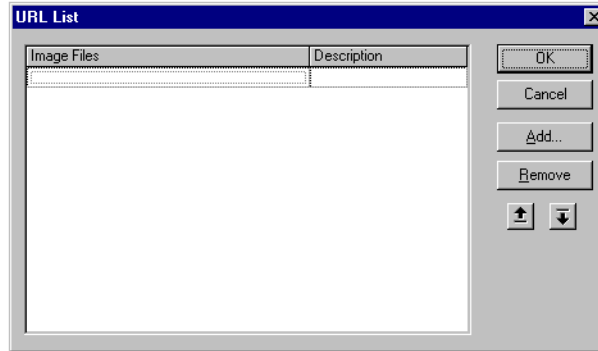
- 2 On the Component Palette, click Multimedia, then click Animator.
- 3 Draw a rectangle (about as large as the eruption) on the applet form by clicking and dragging the cursor.



- 4 In the Property List, set the Name property to animatorErupt.

- 5 In the Property List, double-click the URL List property of the Animator component.

A URL List dialog appears.



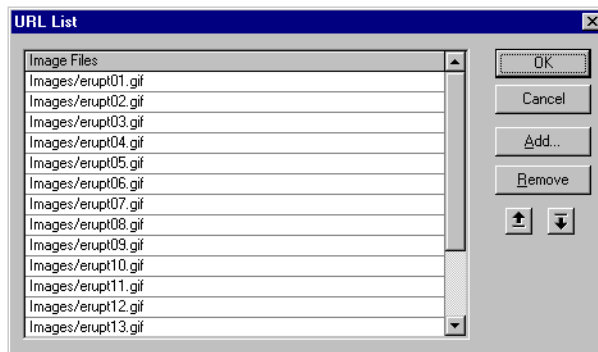
- 6 Click Add, select the erupt01.gif file in the File dialog, then click Open.

A dialog, asking if you want to add the files erupt*.gif, appears.

- 7 Click Yes to add the sequence of files.

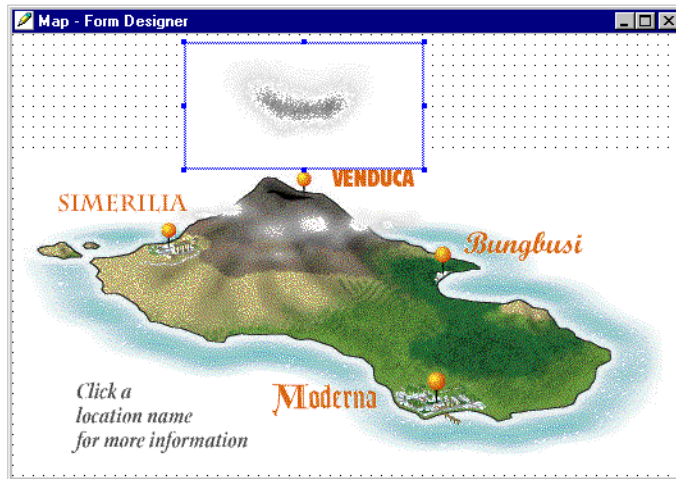
The files appear in the URL List dialog.

- 8 For each file specification, double-click the row then remove the first part of each file specification up to the Images directory.



- 9 Click OK to close the dialog.

An animation picture appears in the Form Designer.



- 10 Resize the Animator component as needed. Move the component until it's positioned where you want it in the applet.
- 11 Click the Project or Form Designer window, then choose Save All from the File menu.

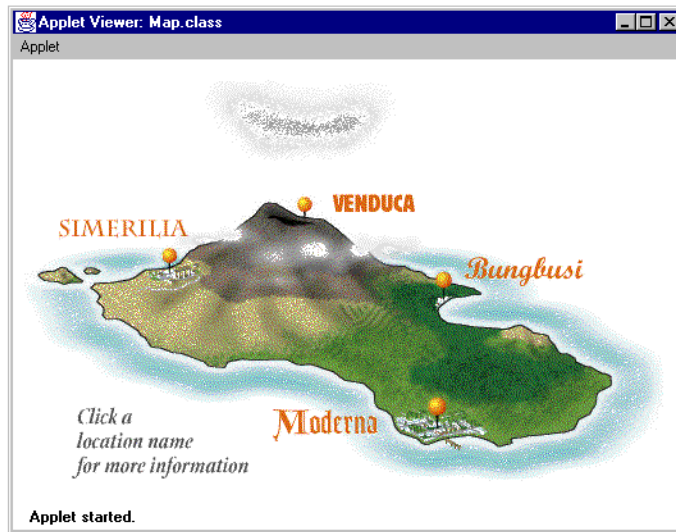
You have completed the animation and the applet, so you can close the Form Designer.

Running the applet

The integrated Applet Viewer enables you to view and test your working Java applets within the Visual Cafe Pro environment. Now that you've created your applet, you can compile it and look at it while it's running:

- 1 Choose Execute from the Project menu to run the applet.

The applet appears in the Applet Viewer. Visual Cafe Pro compiles your applet before displaying it.



When you choose Execute from the Project menu, the Visual Cafe Pro bytecode compiler creates machine-independent bytecode instructions. Then the Symantec Just-In-Time (JIT) compiler translates these instructions into native machine instructions, which Visual Cafe Pro runs for you. The machine instructions are stored temporarily in memory — no native executable is generated.

Visual Cafe Pro's native bytecode compiler currently builds Java programs several times faster than the standard Sun Java compiler. The compiler also provides improved code optimizations and shows detailed error information in the Messages window. You can double-click an error message in this window to go to the line in the code where the error was generated.

The enhanced JIT compiler has superior execution speed, too. To start, it provides immediate applet and application execution by converting

bytecodes on-the-fly to native code as needed. When compilation is complete, the JIT compiler seamlessly starts executing the native code.

- 2 Choose Quit from the Applet menu.

The Applet Viewer window closes.

- 3 Click the Project or Form Designer window, then choose Save All from the File menu.

Displaying the applet in a Web browser

To test your applet, you need to view it in a Web browser. This is the only way to try your HTML links. You will work through the following procedures to do so:

- Adding the HTML file to the project
- Adding the applet tag to the HTML file
- Executing the applet within the Web page

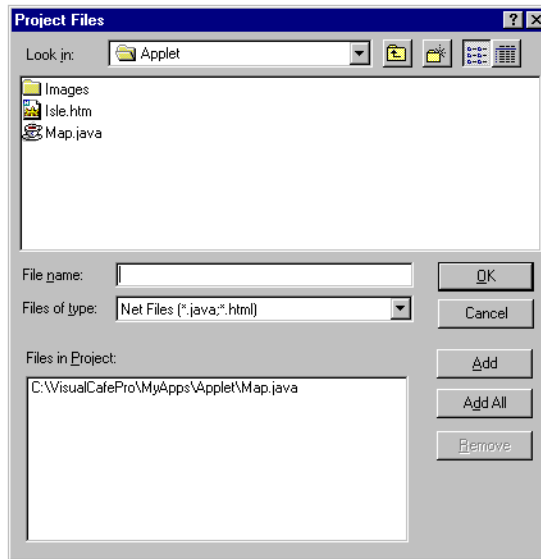
Adding the HTML file to the project

You can add HTML files to your project as an organizational tool, but it isn't required to run an applet in a Web page. Visual Cafe Pro lets you create HTML files in the Source window, or you can import existing HTML files into a project. You already have your HTML file, so you can just add it.

Follow these steps to add the file to the project:

- 1 From the Insert menu, choose Files into Project.

The Project Files dialog appears.

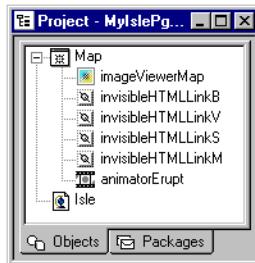


- 2 In the Project Files dialog, select Isle.htm in your project directory, then click Add.

The file appears in the Files in Project list.

- 3 Click OK to add the file to the project.

The file appears in the Project window.

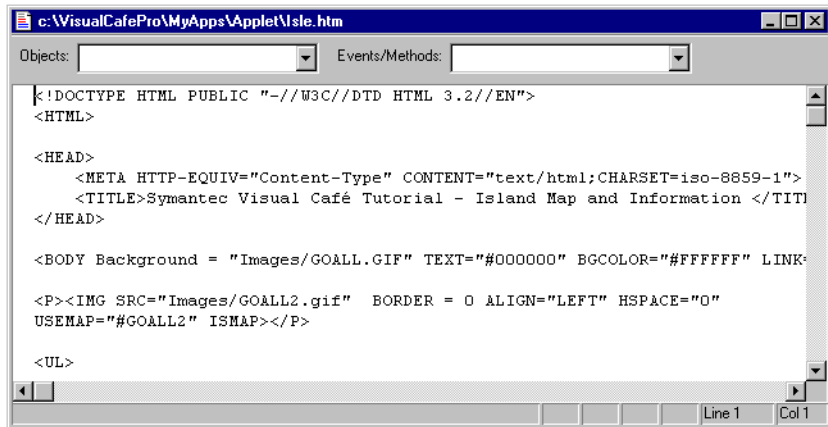


Adding the applet tag to the HTML file

Now you're ready to add the applet you created in Visual Cafe Pro to the HTML file:

- 1 To look at Isle.htm, select it in the Project window, then choose Edit Source from the Object menu. Or double-click Isle.htm.

The Source window appears. It contains the contents of Isle.htm. You can edit the code in this window.



- 2 Find the following applet tag in the file:

```
<APPLET CODE="IsleMap.class" WIDTH=594 HEIGHT=349
ALIGN=center>
```

```
<blockquote>
```

```
<hr>
```

If you were using a Java-enabled browser, you would see an island map and volcano eruption instead of this paragraph.

```
<hr>
```

```
</blockquote>
```

```
</APPLET>
```

This tag causes the applet to run within the Web page. If the browser isn't Java-enabled, the text displays instead. When you create an HTML document and want to include an applet, you need to add an applet tag.

- 3 Change the name to Map.class.

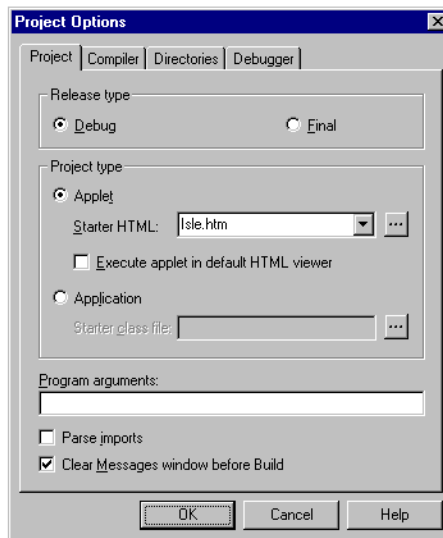
- 4 If different, change the width and height in the applet tag so it matches the width and height in the Property List for your Map applet.
- 5 Close the Source window, then save any changes.

Executing the applet within the Web page

Visual Cafe Pro lets you run the applet directly within the Web page using your default Web browser. Follow these steps:

- 1 Choose Options from the Project menu.

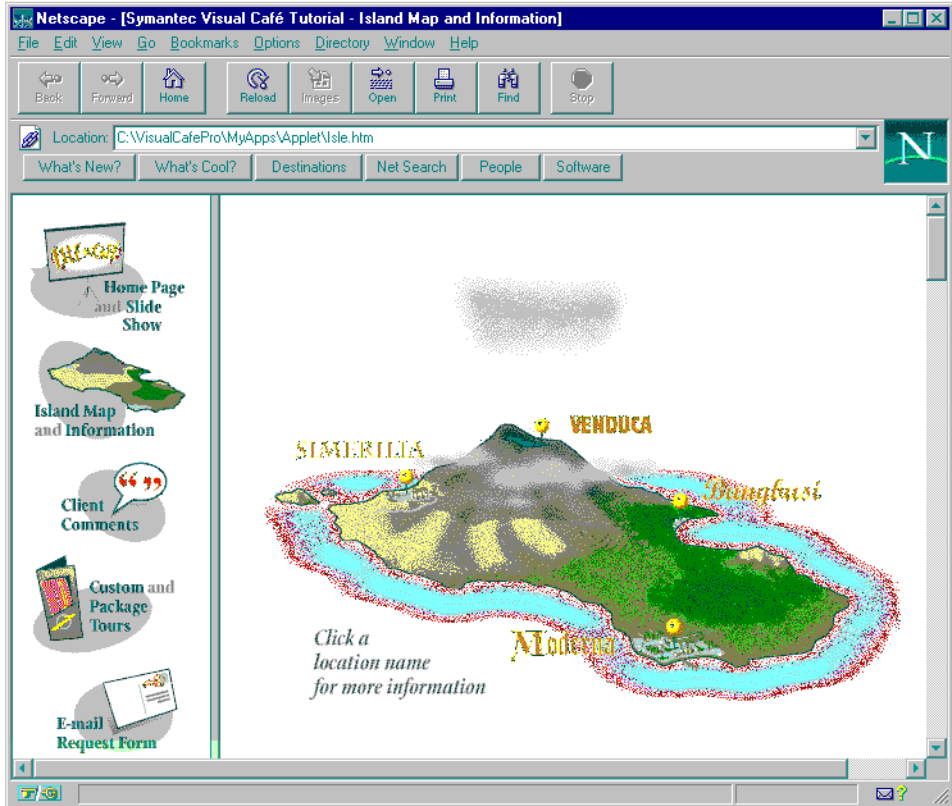
The Project Options dialog appears.



- 2 Specify Isle.htm as your Starter HTML and select Execute applet in default HTML viewer. Then click OK.

- 3 Choose Execute from the Project menu to run the applet.

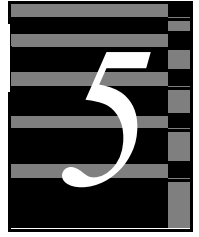
Visual Cafe Pro launches your default HTML browser and displays your Web page within it.



- 4 Try out your applet.
- 5 Exit your browser.
The browser window closes.
- 6 Click the Project or Form Designer window, then choose Save All from the File menu.

If your applet works properly in the Web browser, you have completed the applet. Continue with the next chapter to create the application.

Creating the Application and Debugging Code



This chapter builds on the previous chapter, “Creating an Applet for the Web Page.” It teaches you some advanced features that you may want to use particularly if you have more programming experience and want to take advantage of all the diverse capabilities of Visual Cafe Pro. In this chapter, you create the custom itinerary application that your clients can use to view their custom tour itineraries. You also try some of Visual Cafe Pro’s debugging features.

Creating the itinerary application

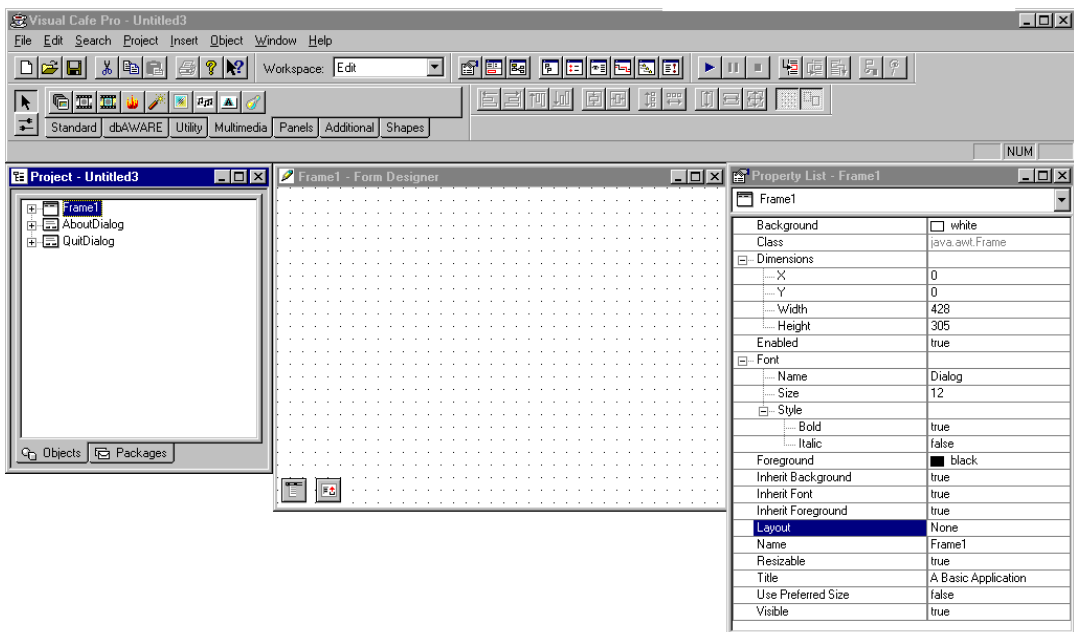
To create the itinerary application, work through the following tasks:

- Opening and naming the new project
- Gathering the files you need
- Setting the properties of Frame1 and adding the SlideShow component
- Adding the Button components to the frame
- Adding the Amazing Adventures Travel logo
- Adding the labels
- Specifying component interactions
- Adding custom Java code
- Customizing the menu bar
- Customizing the About dialog
- Customizing the Quit dialog
- Running the application

Opening and naming the new project

You should create a separate project for your application and save it in its own directory. Follow these steps:

- 1 Close any open projects.
- 2 Choose New Project from the File menu.
The New Project dialog appears.
- 3 Select the Basic Application project template. Then click OK.
The Project and Form Designer windows appear.

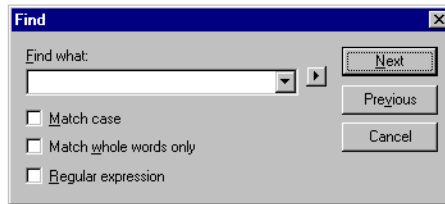


A standard application project contains a Java frame (a special kind of window) with a predefined menu bar, an About dialog, and a Quit dialog. Two objects already included in Frame1 are `mainMenuBar` and `openFileDialog1`, which are represented by icons on the Form Designer. (The display of these icons may be different than shown here, due to software enhancements.) If you select an icon on the Form Designer, it is identified in the Property List.

- 4 Double-click the Form Designer.
The Source window appears.

- 5 Choose Find from the Search menu.

The Find dialog appears.



- 6 Type **void main**, then click Next.

The word is highlighted in the Java code. When you use the frame in the application template, it's already set to be the main application window. If you do not use the frame in the template, you need to add the main and show methods to your main application window.

- 7 Click the Project window, then choose Save As from the File menu.

The Save As dialog appears.

- 8 Create a new directory structure, such as
\\VisualCafePro\\MyApps\\Application, to hold your application files.

The project and all of the files contained within it should be in the same directory. For easier project management and to prevent filename conflicts, you should save each project in its own directory.

- 9 Navigate to your project directory, type MyIslePr.vpj in the File name field, then click Save.

The new name appears in the titlebar of the Project window, and all the files in the project are saved to this directory.

Gathering the files you need

To use relative URLs, you will store your graphics files in a directory subordinate to the project directory as follows:

- 1 Copy the \VisualCafePro\Tutorial\Application\Images directory.
- 2 Paste the directory in your project directory.

The Images directory contains the following files:

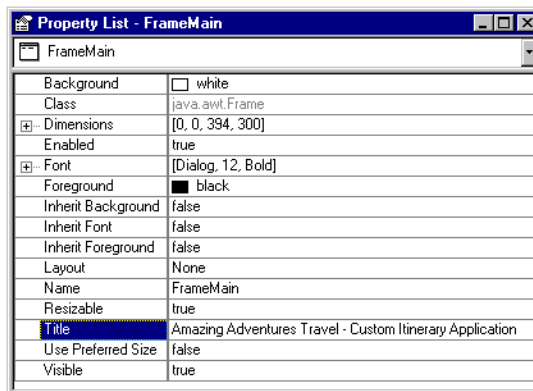
- Logo.gif
- Photo_1.gif through Photo_8.gif
- Tour.dat

Setting the properties of Frame1 and adding the SlideShow component

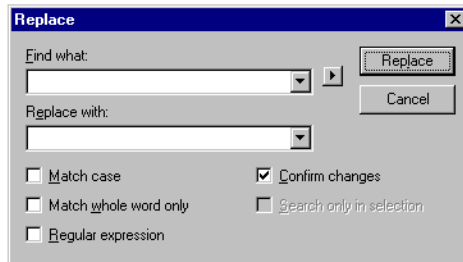
The user interface of your application can be put together quickly with the SlideShow component, which associates a picture with text and allows you to navigate through sequential photos with button clicks.

Follow these steps to add the SlideShow component to the frame and set its properties:

- 1 Set the Frame1 properties, including Name, Title, and Inherit Background, Font, and Foreground, as follows:



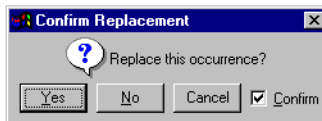
- 2 Click the Source window, then choose Replace from the Search menu.
The Replace dialog appears.



- 3 Type **Frame1** in the Find what field and **FrameMain** in the Replace with field, then click Replace.

Part of the code in the template is custom code that would not be automatically created by Visual Cafe Pro, such as in the Form Designer. Visual Cafe Pro only updates class names in code that it generates automatically. So you need to make sure the name change you made in the Property List takes effect. The fastest way is just to replace all occurrences of Frame1.

A Confirm Replacement dialog appears.

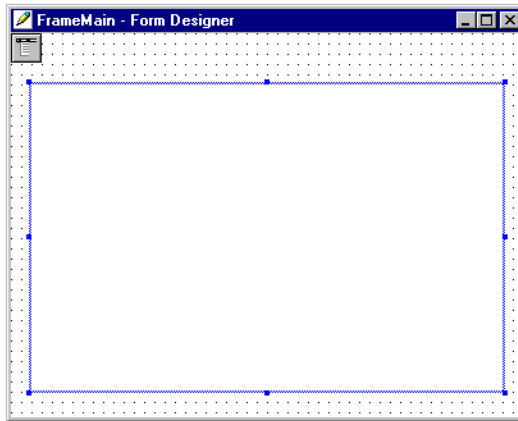


- 4 Click Yes.
The name is replaced.
- 5 Close the Source window.



- 6 On the Component Palette, click Multimedia, then click SlideShow. ToolTips shows you which button is for the SlideShow component. Move the cursor over a button until a pop-up message appears.

- 7 Draw a rectangle (about as large as the photos) on the form by clicking and dragging the cursor.



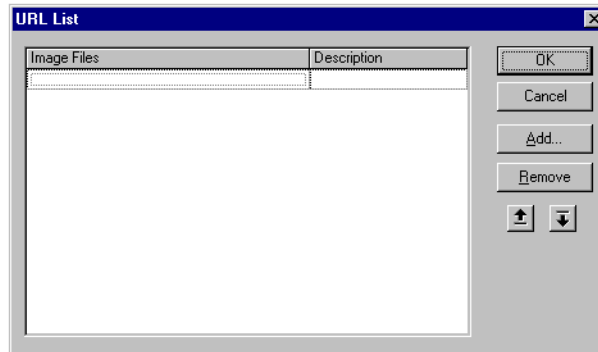
While the component is selected on the form, the Property List displays the properties of this component. The Project window shows the new component.



- 8 In the Property List, change the Name property to `slideShowItinerary`.
- 9 Resize the slide show until it's approximately 340 pixels in width by 235 pixels in height by typing in the Property List.

- 10 In the Property List, double-click the URL List property of the SlideShow component.

The URL List dialog appears. Normally, you would enter photo names and text descriptions here, but for your application you will read in a file that sets these properties at runtime.



- 11 Click Cancel.
- 12 Click the Project or Form Designer window, then choose Save All from the File menu.

Adding the Button components to the frame

The slide show is controlled by button clicks. You need to add the buttons and set their properties:

- 1 Resize the Form Designer window so two buttons can fit under the SlideShow component. Move the component until it's positioned where you want it in the frame.

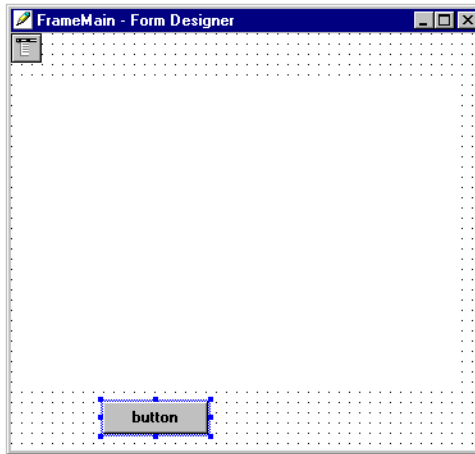
You can make the Form Designer window bigger by dragging the right side or bottom of the window. The components are positioned on the window relative to the top and left sides, so this spacing remains the same unless you move the components in the window.

The Form Designer window size represents the Java frame container size. The frame size is the same as the window size. So when you run the application, it will appear the same size as the window.

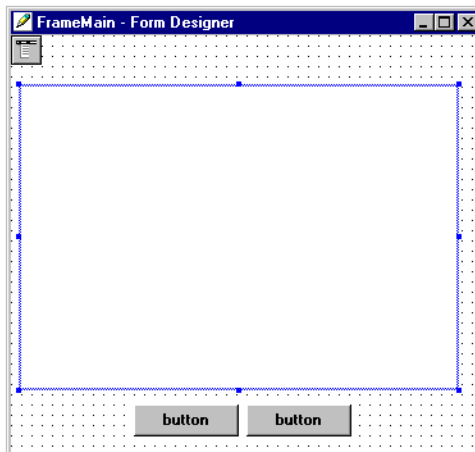


- 2 While the Form Designer is the active window, click the Standard tab on the Component Palette, then click Button.

- 3 Draw a button under the SlideShow component by clicking and dragging.

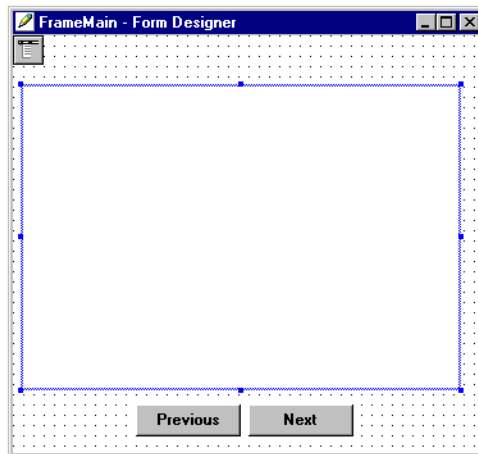


- 4 To copy and paste this button, choose Copy from the Edit menu, then choose Paste from the Edit menu. You can also choose these menu items from the pop-up menu that appears when you right-click. A second button appears.
- 5 Position the buttons under the SlideShow component as follows:



- 6 Select the button on the left, then set the following properties:
 - Name — buttonPrevious
 - Label — Previous
 - Visible — false (because you don't want the button to appear until you load a data file)
- 7 Select the button on the right, then set the following properties:
 - Name — buttonNext
 - Label — Next
 - Visible — false

The buttons now both have names.



- 8 Click the Project or Form Designer window, then choose Save All from the File menu.

Adding the Amazing Adventures Travel logo

Now you can add your company logo:

- 1 In the Property List, resize FrameMain to 600 pixels in width and 530 pixels in height.

The form size changes.
- 2 Shift-click the SlideShow component, then each button, to select them.
- 3 Drag the components to the bottom right corner of the form.



- 4 In the Component Palette, click Multimedia, then click ImageViewer.
- 5 On the form, draw a rectangle above the SlideShow component (a little less wide than the slide show) by clicking and dragging the cursor.
- 6 In the Property List, change the Name property to imageViewLogo.
- 7 Double-click the URL property.
A URL dialog appears
- 8 Click the ... button.
An Add Image Files dialog appears.
- 9 Navigate to your Images directory, select Logo.gif, and click Open.
- 10 To create a relative URL, delete the file specification so it displays just Images/Logo.gif. Then click OK in the URL dialog.
The logo appears in the Form Designer.



- 11 Click the Project or Form Designer window, then choose Save All from the File menu.

Adding the labels

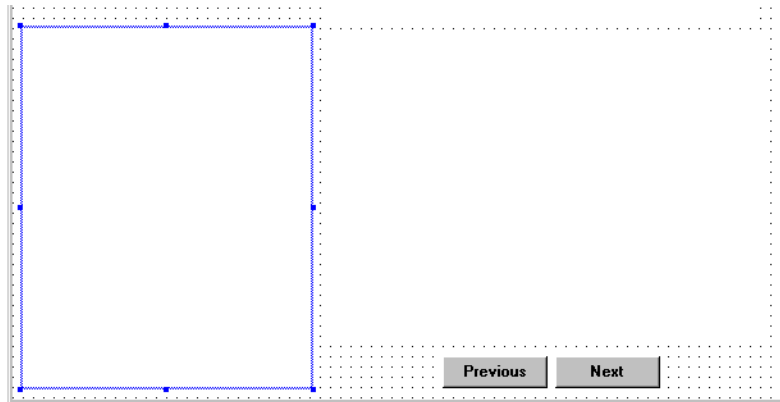
Your application displays text, so you need to add text fields to the form. Follow these steps:



- 1 In the Component Palette, click the Additional tab, then click WrappingLabel.

- 2 Draw a text box to the left of the SlideShow component.

The dimensions can be about 240 pixels in width by 225 pixels in height.

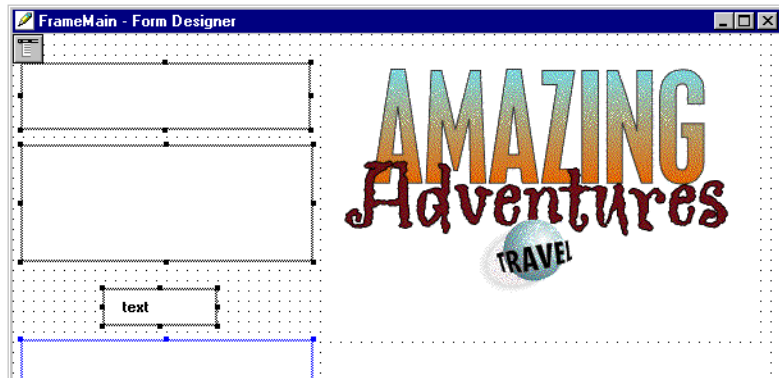


- 3 In the Property List, set the following properties:

- Name — wrappingLabelDesc
- Font Size — 14
- Font Style — Bold false



- 4 To the left of the picture, draw two WrappingLabel components and underneath a Label component (in the Standard tab of the Component Palette) as shown.



- 5 In the Property List, set the properties of the top WrappingLabel component as follows:

- Name — wrappingLabelTop
- Font Size — 16
- Text Alignment — ALIGN_CENTERED
- Text — Custom Itinerary for

To display the properties in the Property List for this component, either select the component on the form or choose it from the drop-down list in the Property List window.

- 6 Set the properties of the middle WrappingLabel component as follows:

- Name — wrappingLabelPeople
- Font Size — 24
- Text Alignment — ALIGN_CENTERED

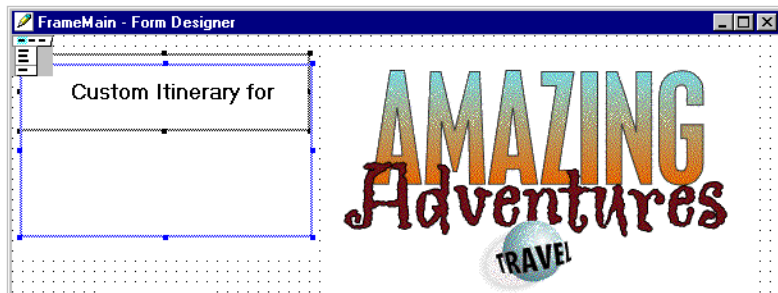
- 7 Set the properties of the Label component as follows:

- Name — labelDay
- Font Size — 16
- Font Style — Italic true
- Alignment — CENTER

Also, delete the text in the Text field.



- 8 Now draw a WrappingLabel component over the top two labels as follows:



- 9 Set the properties of the new WrappingLabel component as follows:
 - Name — wrappingLabelStart
 - Font Size — 16
 - Text — To start, choose Open from the File menu and open your data file. Your .dat file and the graphics files must be in the same directory.
- 10 Select wrappingLabelStart on the Form Designer, then choose Bring to front from the Layout menu.

This ensures that the label is on top of the other labels. Because the labels overlap, an easy way to select wrappingLabelStart is to choose it from the Property List drop-down menu.
- 11 Click the Project or Form Designer window, then choose Save All from the File menu.

Specifying component interactions

One of the most powerful features of Visual Cafe Pro is the ability to create interactions between components. The Interaction Wizard lets you graphically build relationships between components, or between a component and itself (for example, double-clicking an item in a list box could remove the item from the list box and add it to another list box). These relationships specify the actions to take when an event is triggered on a component. For example, in a slide show, a button click could cause the next photo to be displayed. Visual Cafe Pro automatically generates the necessary Java code for the specified relationship.

In the following sections you specify interactions between components on the application form:

- Setting up the Previous button to display the previous image
- Setting up the Next button to display the next image
- Disabling the Next button at the end of the slide show
- Disabling the Previous button at the start of the slide show
- Making the slide show descriptions appear in the wrapping labels

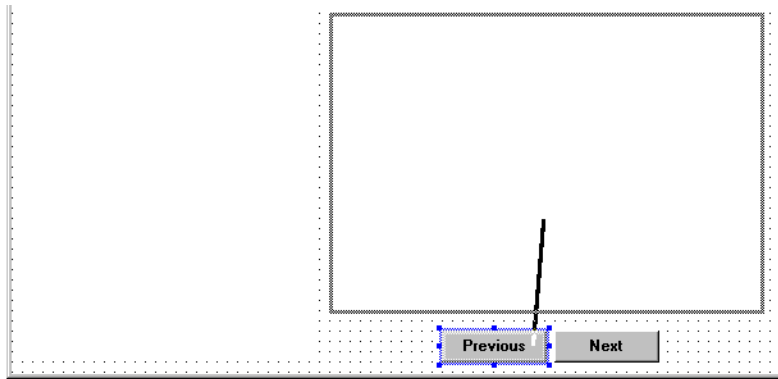
Setting up the Previous button to display the previous image

Here you set up an interaction between the Previous button and the SlideShow component so that a button click causes the previous image to be displayed.

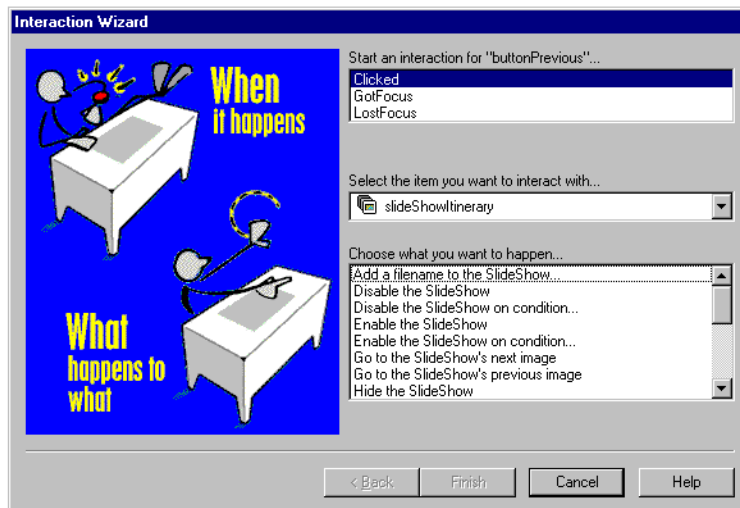
Follow these steps:



- 1 Click the Interaction Wizard button, then click the Previous button and drag a line to the SlideShow component.



The Interaction Wizard appears.



- 2 Select the following items:

Start an interaction for “buttonPrevious”: Clicked

Select the item you want to interact with: `slideShowItinerary`

Choose what you want to happen: Go to the SlideShow’s previous image

- 3 Click Finish.

Setting up the Next button to display the next image

Here you set up an interaction between the Next button and the SlideShow component so a button click causes the next image to be displayed:



- 1 Click the Interaction Wizard button, then click the Next button and drag a line to the SlideShow component.

The Interaction Wizard appears.

- 2 Select the following items:

Start an interaction for “buttonNext”: Clicked

Select the item you want to interact with: `slideShowItinerary`

Choose what you want to happen: Go to the SlideShow’s next image

- 3 Click Finish.

Disabling the Next button at the end of the slide show

When you’re at the last picture, you want to indicate that by disabling the Next button:



- 1 Click the Interaction Wizard button, then click the SlideShow component and drag a line to the Next button.

The Interaction Wizard appears.

- 2 Select the following items:

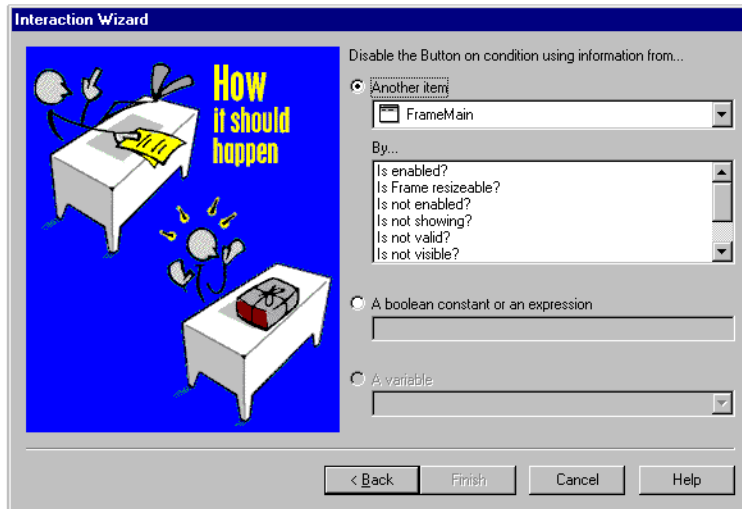
Start an interaction for “slideShowItinerary”: SlideChanged

Select the item you want to interact with: `buttonNext`

Choose what you want to happen: Disable the Button on condition

- 3 Click Next.

The second page of the dialog appears.



- 4 While Another item is selected, choose slideShowItinerary and select Is at the last image?
- 5 Click Finish.

Disabling the Previous button at the start of the slide show

When you're at the first picture, you want to indicate that by disabling the Previous button:



- 1 Click the Interaction Wizard button, then click the SlideShow component and drag a line to the Previous button.

The Interaction Wizard appears.

- 2 Select the following items:

Start an interaction for "slideShowItinerary": SlideChanged

Select the item you want to interact with: buttonPrevious

Choose what you want to happen: Disable the Button on condition

- 3 Click Next.

The second page of the dialog appears.

- 4 While Another item is selected, choose slideShowItinerary and select Is at the first image?

- 5 Click Finish.
- 6 Click the Project or Form Designer window, then choose Save All from the File menu.

Making the slide show descriptions appear in the wrapping labels

You need to set up an interaction between the SlideShow component and a WrappingLabel component so the descriptive text associated with a picture displays in the text field. Follow these steps:



- 1 Click the Interaction Wizard button, then click the SlideShow component and drag a line to the wrappingLabelDesc component.
The Interaction Wizard appears.

- 2 Select the following items:
Start an interaction for “slideShowItinerary”: SlideChanged
Select the item you want to interact with: wrappingLabelDesc
Choose what you want to happen: Set the text for WrappingLabel

- 3 Click Next.
The second page of the dialog appears.
- 4 While Another item is selected, choose slideShowItinerary and select Get current description.
- 5 Click Finish.

Now it's time to add the custom code. You can close the Form Designer if you want.

Adding custom Java code

Java code, including complete applets and applications, that was not created in Visual Cafe Pro can be added to a project. If the code contains visual aspects, Visual Cafe Pro translates the code into a visual representation that's displayed in the Form Designer.

Visual Cafe Pro has many features to assist you with creating new Java code. For example, when you want to handle an event for a component, the Source Editor helps you. Select the component in the Object pull-down menu, then select the event you want to handle from the Events/Methods pull-down

menu. Visual Cafe Pro creates a method for that event and puts a call to that method in the event handler. You fill in the body of the method.

Now that Visual Cafe Pro has created the main portion of your program, you can add custom code to read data from a file at runtime and to increment the Day label.

The data file is a text file in the following format:

```
client_names  
number_of_pictures  
picture1_filename  
picture1_text  
picture2_filename  
picture2_text  
...
```

Here's an easy way to add the code:

- 1 Choose Open from the File menu, and open
 \VisualCafePro\Tutorial\Application\AmazingTour.java.
 The file appears in the Source window. The custom code is identified by
 comments directly in the code.
- 2 In the Project window, click FrameMain, then right-click. Choose
 Edit Source from the pop-up menu.
 FrameMain.java appears in another Source window.
- 3 Copy the custom code from AmazingTour.java into your application.
 You can search for the words “Custom code” in AmazingTour.java to
 find the code quickly. There are several places where you need to copy
 the code. Make sure you insert the code into your application directly
 under the same line that appeared above it in AmazingTour.java.
- 4 When you're finished, click the FrameMain Source window and
 choose Save All. Then close the Source windows.

Customizing the menu bar

Follow these steps to modify the default menu bar in the application:

- 1 In the Project window, display the contents of mainMenuBar (subordinate to FrameMain) by clicking the +.



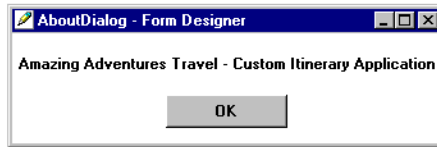
- 2 Select Edit, then choose Delete from the Edit menu.
- 3 Display the contents of the File menu, then delete New, Save, and SaveAs.
- 4 Click the Project window, then choose Save All from the File menu.

Customizing the About dialog

The About dialog is included as part of the application template. Follow these steps to modify it:

- 1 Double-click the AboutDialog object in your project.
The Form Designer appears.
- 2 Change the properties as follows:
 - Inherit Font — false
 - Inherit Background — false
 - Inherit Foreground — false
- 3 Click the Label component in the Form Designer.
- 4 In the Property List, click the Text property value to highlight it, then type **Amazing Adventures Travel - Custom Itinerary Application**.
The text appears in the Label.

- 5 Click the Form Designer, then resize and reposition the label, button, and form as needed.



- 6 Click the Project or Form Designer window, then choose Save All from the File menu.

The About dialog is saved in the project.

- 7 Close the Form Designer for the About dialog.

Customizing the Quit dialog

The Quit dialog is also included as part of the application project template. Follow these steps to modify it:

- 1 Double-click the QuitDialog object in your project.
The Form Designer appears.
- 2 Change the properties as follows:
 - Inherit Font — false
 - Inherit Background — false
 - Inherit Foreground — false
- 3 Click the Project or Form Designer window, then choose Save All from the File menu.
The Quit dialog is saved in the project.
- 4 Close the Form Designer for the Quit dialog.

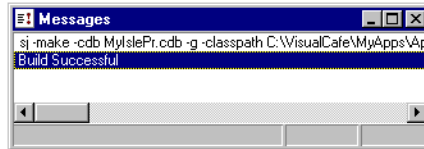
Running the application

Now that you've specified the user interface and other aspects of your application, you're ready to run it. This is how you run the application from within Visual Cafe Pro:

- 1 Choose Messages from the Window menu.
The Messages window appears.

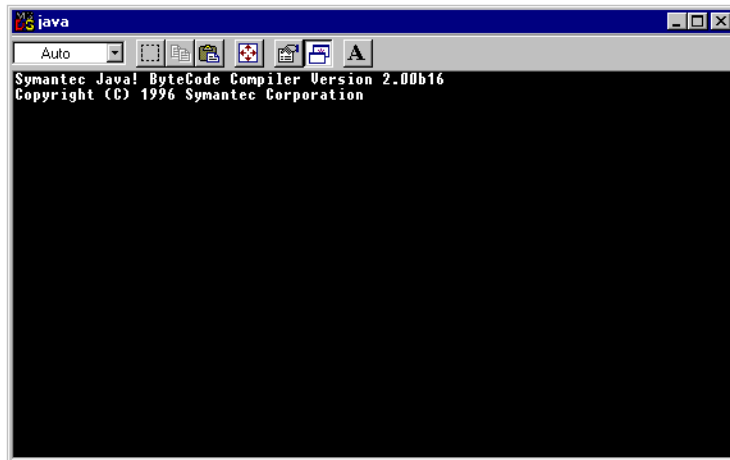
- 2 Choose Execute from the Project menu to run the application.

Visual Cafe Pro compiles your application before displaying it. Any warning or error messages appear in the Message window.



You can double-click an error message in this window to go to the line in the code where the error was generated.

Println statements and certain errors are displayed in the java window.



Then the application appears.



- 3 Open the data file in the Images directory, and click the Next and Previous buttons to verify your application works as planned.



- 4 Close the application.
- 5 Click the Project or Form Designer window, then choose Save All from the File menu.
- 6 Make adjustments in the Form Designer as needed. Then execute the application again. Repeat until the application looks the way you want it.

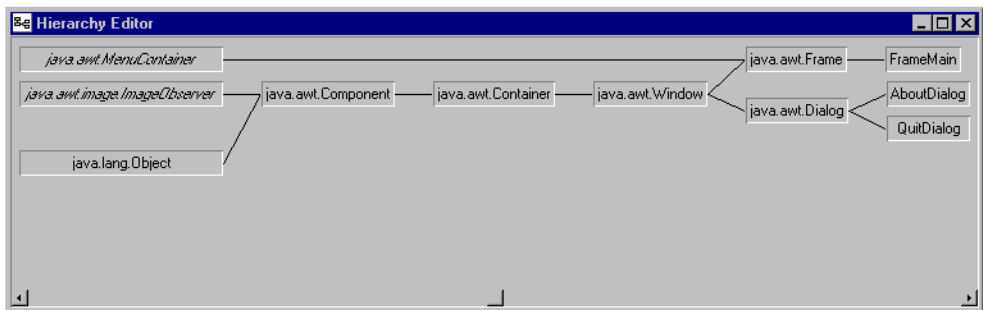
If the application works as planned, you have completed it.

Looking at the application in the Hierarchy Editor and the Class Browser

Visual Cafe Pro has special object programming tools that make it easy to understand and manage Java classes. Let's take a look at your application in the Hierarchy Editor and Class Browser:

- 1 While your application project is open, choose Hierarchy Editor from the Window menu.

Your application appears in the Hierarchy Editor.



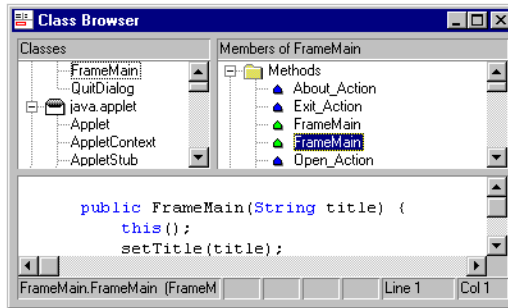
The Hierarchy Editor lets you visually learn, modify, and extend the Java class hierarchy for an applet or application. Drag and drop to instantly edit the hierarchy structure — both the visual model and the source code.

- 2 Right-click, then choose View Imports from the pop-up menu.

The Hierarchy Editor now shows all Java classes.

- 3 In the Hierarchy Editor, double-click a class to navigate to a class definition in the Class Browser. Then select a member in the upper right list.

The Class Browser shows the code associated with the class member.



The three-pane Class Browser lists the classes in your project, and shows each method and data member contained within a class, all of which are individually editable to make you more productive. For example, when you click a class in the upper left pane, its methods and data members appear in the upper right pane. When you click a method, that implementation of the method is extracted from the source file and displayed in the lower pane where you can edit it. This makes it easy to navigate to the areas you want to edit — no matter how large the source file — and reduces the possibility of accidentally editing code outside the scope of the selected object.

Color syntax highlighting makes your Java source more readable. The Class Browser also has an incremental search feature when you have a class selected: as you type the name of a class, the list of matching objects is refined until you have automatically selected the class you want.

Visual Cafe Pro reads your Java source code so the Hierarchy Editor and Class Browser always contain the most up-to-date information.

- 4 Close the Class Browser and Hierarchy Editor.

Debugging

The integrated graphical debugger provides source-level debugging and lets you browse data and manipulate calls and threads. You can modify a variable value and continue debugging without reloading. The Source window shows ValueTips so you can quickly view variable values.

While debugging, you can either step through each line of source code one at a time (including sublevel method code, when available) or step over the execution of method calls, which causes the debugger to execute all method code then pause on the line following the method call.

The debugger includes the following windows:

- Breakpoints window — The breakpoints for the entire project appear in this window. You can set simple breakpoints that stop execution at a certain line or method, or conditional breakpoints based on an expression.
- Threads window — You can pause individual threads, which causes their execution to cease temporarily while all other threads continue to execute, and resume them. This helps you check for and resolve thread synchronization errors, where more than one thread is in contention for the execution of a method. Double-clicking a thread in this window updates the Calls window, so it reflects the chain of execution for the thread, and the Variables window, so it reflects the scoping level of the thread.
- Calls window — All code modules and methods executed by a thread, and the current execution point and return points for each called method, appear in this window. This view is useful for following the flow of the code, for example.
- Watch window — In this window, you can specify variables and expressions that you want to watch continuously while debugging your program. The values update when you pause execution or step through code. You can also examine the contents of a class member or variable. To watch all the variables accessible to a method, drag the variable from the Variables window to the Watch window. To modify a variable value, you can enter it and continue debugging without having to stop and restart the debug session.
- Variables window — This window incorporates a tree view so you can collapse and expand the various scopes and to make it easy to examine the values of both simple and complex data types, such as arrays. It automatically displays the local and global variables and objects that are local to the current method, and the variables that are members of the current object. You can edit variable values.

All of the debugger windows have resizable columns so you can create the most readable display.

Visual Cafe Pro also lets you debug an applet or application that's running on another computer. One computer displays the debug windows while an applet or application runs on a remote computer.

Working with the debugger is divided into the following sections:

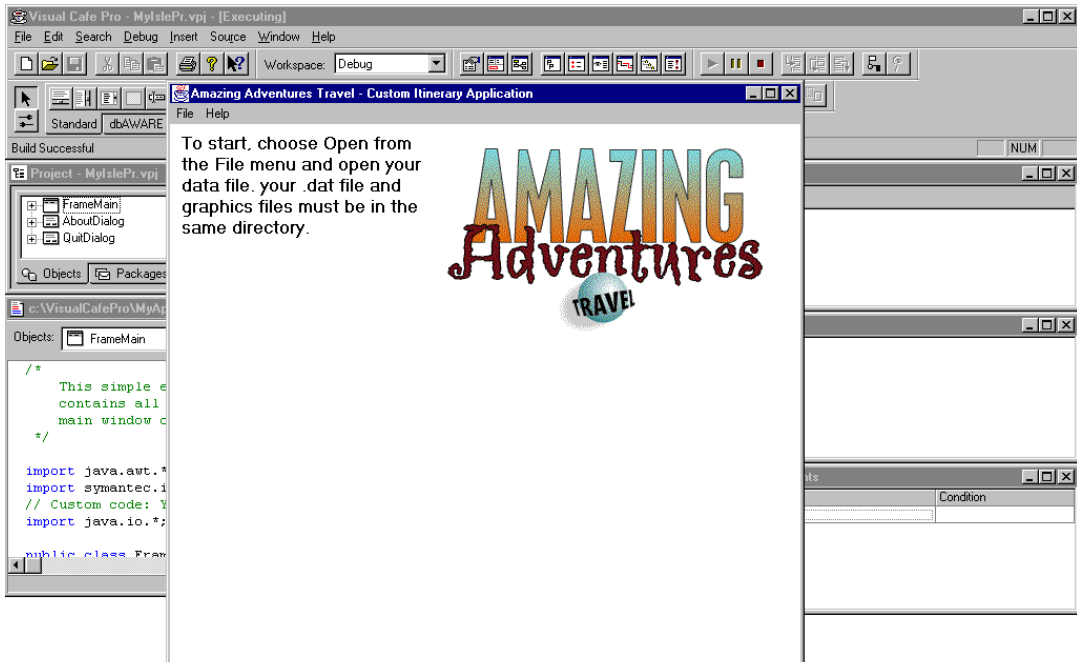
- Debugging the About dialog
- Debugging the Day label

Debugging the About dialog

Although the About dialog works properly in your application, here you can explore some debugging features by working with the About dialog code:

- 1 While your application project is open, choose Run in Debugger from the Project menu.

Visual Cafe Pro compiles your program and displays several debugger windows. Then it displays your application.



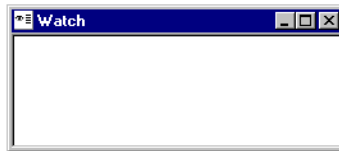


When your application is running, “Executing” appears in the titlebar of the Visual Cafe Pro main window. Realize that when your application is paused, it cannot redraw its window, so the application may pick up the contents of other windows when you move them.

The Variables, Calls, and Breakpoints windows should be displayed. If they aren’t, open the window by choosing it in the Window menu.

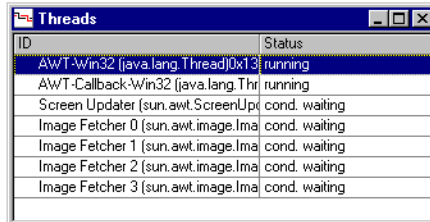
- 2 If it’s not already open, open `FrameMain` in the Source window.
- 3 Choose Watch from the Window menu.

The Watch window appears.



- 4 Choose Threads from the Window menu.

The Threads window appears.



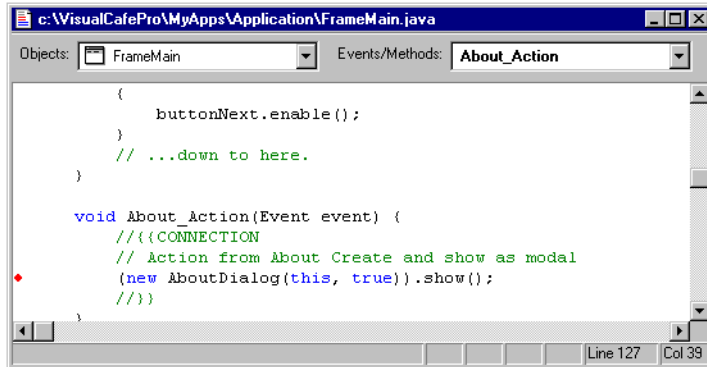
The window shows the standard Java AWT threads. There are no other threads used in this application.

- 5 From the Events/Methods drop-down menu in the Source window, choose `About_Action`.

The `About_Action` method appears in the window.

- 6 Click the line with the show method, right-click, then choose Set Breakpoint from the pop-up menu.

A red triangle indicates a breakpoint was set.



Notice the breakpoint in the Breakpoints window.

- 7 In your application, choose About from the Help menu.
The breakpoint is triggered. The Source window appears and the breakpoint line is highlighted. Variables and their values at this point in the code appear in the Variables window; the current call stack appears in the Calls window. The titlebar of the Visual Cafe Pro main window displays [Paused].
- 8 Choose Step Into from the Debug menu.
Another Source window appears. It displays AboutDialog.java.
- 9 Choose Step Over from the Debug menu.
The next call is highlighted.
- 10 Choose Step Out from the Debug menu.
You return to the FrameMain.java file.
- 11 Right-click over the breakpoint, then choose Clear Breakpoint from the pop-up menu.
The breakpoint is removed.
- 12 Choose Continue from the Debug menu.
Now you can click OK in the About dialog.
- 13 Choose Open from the File menu and open Tour.dat.
The data appears in the application.

- 14 Click the FrameMain Source window.
- 15 Choose `handleEvent` from the Events/Methods menu.
The event handler appears.
- 16 Set a breakpoint at `handleEvent`.
The breakpoint appears on the next line of code.
- 17 Click the application window.
The breakpoint is triggered.
The Visual Cafe Pro debugger lets you dynamically set breakpoints while the program runs for more powerful debugging. The event handler is a useful place to put a breakpoint, because in the Breakpoints window you can disable the breakpoint by deselecting the checkbox and enable it with a condition for particular types of events.
- 18 Clear the breakpoint, then choose Continue from the Debug menu.
The application appears.
- 19 Close the Source window displaying `AboutDialog.java`.

Debugging the Day label

Continue exploring the debugger with these steps that examine the Day label code:

- 1 If not already open, open the Source window for your FrameMain application.
- 2 Choose `buttonNext_Clicked` from the Events/Methods menu.
Under `buttonNext_Clicked`, you'll see this method:
`slideShowItinerary.nextImage`. The method is activated when the Next button is clicked.
- 3 Set a breakpoint at `nextImage`.
A breakpoint symbol appears next to the code.
- 4 In your application window, click the Next button.
The breakpoint is activated. The Source window appears with the breakpoint highlighted.
- 5 Look at the variables in the Variables window.
The Variables window shows the variables and their values at this breakpoint.

- 6** Click the + next to **this**.

The variables associated with the object appear.

- 7** Type **this.day**.

The dayCount variable row is highlighted. This is the variable that sets the Day value.

- 8** Drag dayCount from the Variables window to the Watch window.

dayCount appears in the Watch window. You can drag the variables you want to watch closely, no matter where they are in the Variables window hierarchy, to this window.

- 9** Drag fileName (under dayCount) to the Watch window.

fileName appears in the Watch window.

- 10** Scroll down in the Variables window, and click the + next to wrappingLabelDesc.

The variables associated with this component appear. You can resize columns for a more readable display.

- 11** Drag one of the wrappingLabelDesc variables, text, to the Watch window.

The variable appears in the Watch window.

- 12** Choose Continue in the Debug menu.

- 13** Click the Next button in the application.

The breakpoint is triggered. The Day and text values change in the Watch window.

- 14** In the Calls window, double-click handleEvent.

The portion of code called in the event handler appears in the Source window.

- 15** In the Calls window, double-click buttonNext_Clicked.

You return to the original breakpoint position.

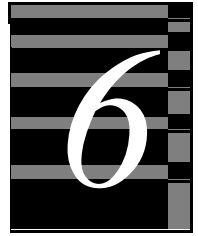
- 16** Deselect the checkbox in the Breakpoints window to deactivate the breakpoint.

- 17** In the Watch window, click the dayCount row, then click the Value field and change the value to 2 less than its current value.

- 18 In the Source window, highlight the `dayCount` variable under the breakpoint, and leave the cursor there.
ValueTips show that the value has changed.
- 19 Choose Continue from the Debug menu.
- 20 Press the Previous and Next buttons.
Notice what has happened to the Day value in your application.
- 21 In the Breakpoints window, select the breakpoint checkbox, then click the Next button in the application.
The breakpoint is triggered.
- 22 In the Breakpoints window, enter the following in the Condition field:
`dayCount == 0`
Now the breakpoint triggers only when `dayCount` is zero.
- 23 Choose Continue from the Debug menu.
- 24 Press the Previous and Next buttons until the breakpoint is triggered.
- 25 Clear the breakpoint, then choose Stop from the Debug menu.
The debugger windows close.

Continue with the next chapter to learn about some database features of Visual Cafe Pro.

Creating Applets with Database Functionality



This chapter showcases some Visual Cafe Pro database features. Here you create an online reservation applet that your clients can use to sign up for your package tours and an administrative applet to keep track of your reservations. To create your applets, you work through the following tasks:

- Creating the online reservations applet
- Displaying the applet in a Web browser
- Creating an administrative applet for online reservations

Before beginning, make sure you've installed the dbANYWHERE Workgroup Server and the Sybase SQL Anywhere database engine as described in the Chapter 2 section, "Installing the software needed for the tour."

Creating the online reservations applet

Now you'll create an online reservations applet that your clients can use to browse through package tours and reserve a spot in a tour. The packages are kept in one database table, and the reservations in another table. You work through these tasks to create the applet:

- Using the dbAWARE Project Wizard to create a new project
- Assigning applet properties
- Gathering the files you need
- Designing the package portion of the applet
- Designing the reservation portion of the applet
- Looking at dbNAVIGATOR
- Setting initial record positions
- Making fields uneditable
- Adding component interactions
- Running the applet

Using the dbAWARE Project Wizard to create a new project

Visual Cafe Pro has several wizards that help you set up applets and applications that are database-aware. The wizards step you through complicated processes and let you create new forms over existing database tables, add database connectivity to existing forms, define master/detail joins, and create tables and forms from predefined templates.

Here's how you use the Project Wizard when you're creating a new project for an applet:

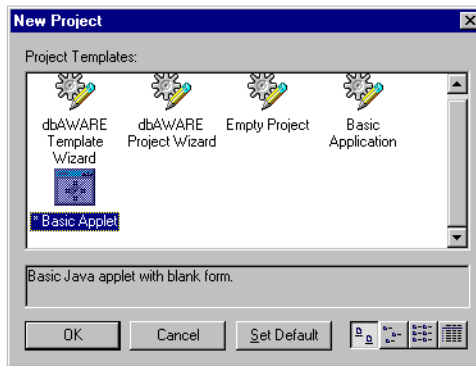
- 1 Make sure the dbANYWHERE server is running.



If you don't set up your system as described in the Chapter 2 section, "Installing the software needed for the tour," you may not be able to successfully complete this chapter.

- 2 Close any open projects.
- 3 Choose New Project from the File menu.

A New Project dialog appears.



- 4 Select the dbAWARE Project Wizard, then click OK.
The dbAWARE Project Wizard appears.



- 5 Click Next.
The Choose Project Type page appears. Here is where you choose whether you want to create an applet or application.
- 6 Select Applet, then click Next.
The Choose a dbANYWHERE Server page appears.
- 7 Type the name of your dbANYWHERE server in the dbANYWHERE Server Name field.

The screens in this tour will show the server name **dba**.

- 8 If dbANYWHERE is local, you can use the default host name and port number. If dbANYWHERE is on a remote computer, type the host name or IP address, and the port number, in the fields.

When dbANYWHERE is running, it displays its IP address and port number in its window; the default port number is 8889. (Remember, if you use **localhost** for the host name, you must change the URL property for the Session object before deploying an applet or application.)

- 9 Click Next.

The Choose a Data Source page appears.



If a “Server not responding” message appears, dbANYWHERE is not running. You need to start it.

- 10 For the Data Source Name, choose Tutorial from the pull-down menu. Then click Next.

You’re asked for a user name and password.

- 11 Type **dba** for the user name then type **sql** for the password, and click OK.

The Choose a Database Table page appears.



If the system seems to be waiting for a response, you could have a problem with low resources. The dbANYWHERE Workgroup Server has issued a request for the Sybase SQL Anywhere engine to start, but the engine has not fully started. Eventually, you receive a “Timed out” message. If you do, press the Next button again to retry the connection to the database engine, because the extra time may have allowed the database engine to start. Otherwise, you probably need to increase your system resources.

- 12 Select DBA.packages. Then click Next.

This lets you build a form that contains information on travel packages.

The Choose Database Columns page appears.

- 13 Make sure the checkboxes for all columns are selected. Then click Next.

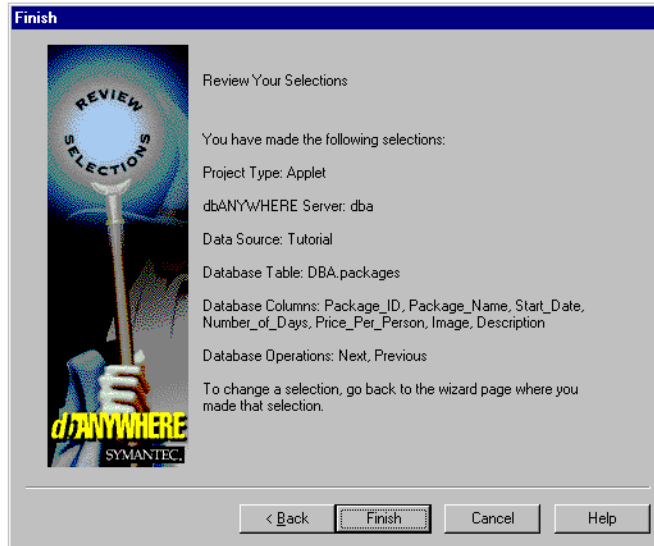
The Choose Components and Labels page appears.

- 14 In the Label fields, replace each underscore () with a blank space. Clear the label field for the Image column, because you don’t need an identifier for the image. Then click Next.

The Choose Database Operations page appears.

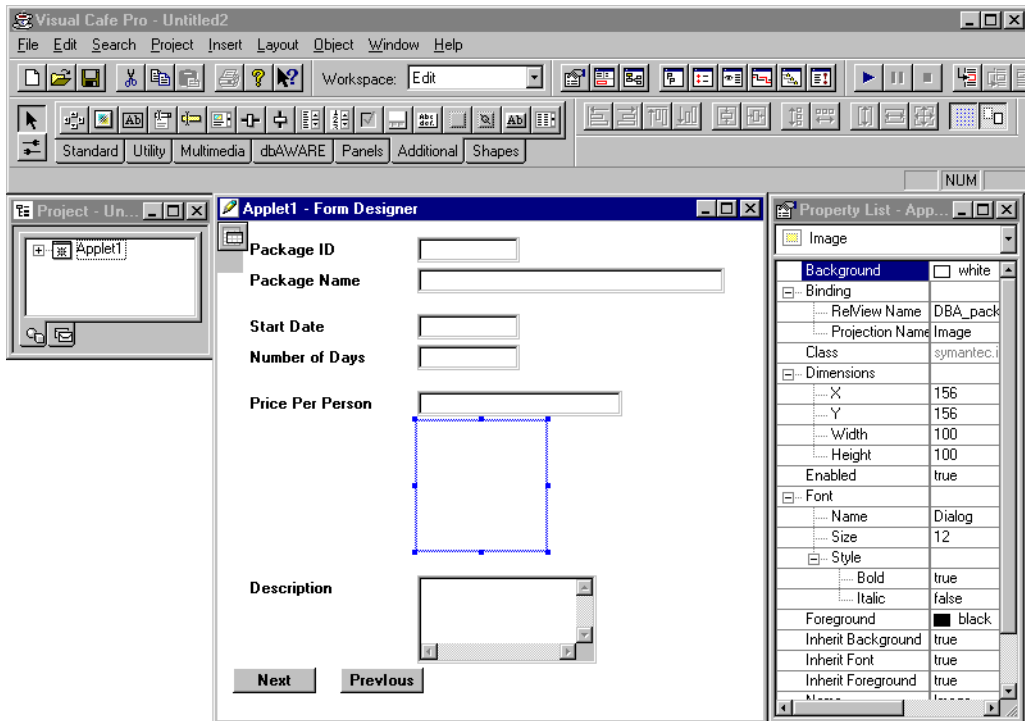
- 15 Select Move to the next record and Move to the previous record. For the latter, change the Text field from Prev to Previous. Then click Next.

A summary of your selections appears.



- 16** Look over your selections. If they look correct, click Finish. If you need to change something, click Back and change what you need to, then return to this window and click Finish.

The new project appears. It contains an automatically generated form with the fields you selected. (You have to click the ImageViewer component to see where it is.)



- 17** Click the Project window, then choose Save As from the File menu.

The Save As dialog appears.

- 18** Create a new directory structure, such as
 \VisualCafePro\MyApps\AppletDb, to hold your applet files.

The project and all of the files contained within it should be in the same directory. For easier project management and to prevent filename conflicts, you should save each project in its own directory.

- 19** Navigate to the new project directory, type Reserve.vpj in the File name field, then click Save.

The new name appears in the titlebar of the Project window.

Assigning applet properties

Follow these steps:

- 1 Select Applet1 in the Project window.
The properties of Applet1 appear in the Property List.
- 2 In the Property List, set the Name property to **Reserve**.
- 3 Set the Inherit Background, Font, and Foreground properties to false.
- 4 Click the Project or Form Designer window, then choose Save All from the File menu.

The project and all included files are saved.

Gathering the files you need

To construct your Web page, you need an HTML file that your applet will run within and the graphics files that your applet uses. You will copy an HTML file into your project directory. You will copy the graphics files into an Images directory subordinate to the project directory.

Copy the files as follows:

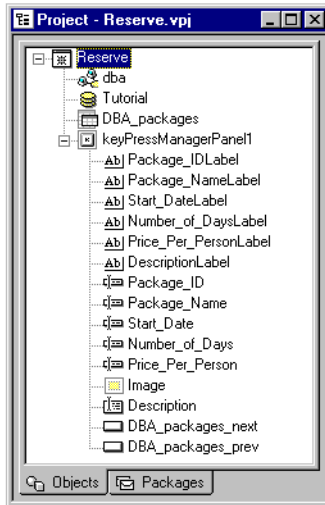
- 1 Copy Reserve.htm from the \VisualCafePro\Tutorial\Applet directory to your project directory.
- 2 Create a new Images directory in your project folder.
- 3 Copy the following files from the \VisualCafePro\Tutorial\Applet\Images directory to the Images directory in your project directory:
 - reserv.gif
 - register.gif
 - goall.gif
 - goall2.gif

Now you're ready to design your form.

Designing the package portion of the applet

Visual Cafe Pro has put the fields you need on the form, so now you can arrange them:

- 1 Look at the objects in the Project window (click the + next to Reserve and keyPressManagerPanel1).



The first three objects under the Reserve applet are invisible objects:

- dba — A Session object indicating the dbANYWHERE server you're connected to through sockets.
- Tutorial — A ConnectionInfo object showing the database you're connected to. It includes a default user name and password, which you can remove. This object supports multiple queries and updates simultaneously, reducing database resource requirements.
- DBA_packages — A RelationView object showing a view of the Tutorial database (DBA.packages); a name in the Project window can't contain a period (.), so an underscore (_) is used instead. This object provides a simple, property-driven solution for defining database queries and updates, and for manipulating data and result sets.

Their icons appear in the upper left corner of the Form Designer window.

The `KeyPressManagerPanel1` object contains all of the visual components that have been added to the form. This panel lets users use the Tab and Backtab keys to move between fields. The Label components are the labels for the fields of the same name (minus the word Label). The Next and Previous buttons are also in the list. New visual components go into the same container.

The fields themselves are database-aware (`dbAW ARE`). `dbAW ARE` components provide database connectivity and facilitate the binding to database columns. Java forms built with these components communicate with databases through the `dbANYWHERE` API. This provides advantages such as three-tier data buffering, optimistic concurrency, reduced network traffic, less complicated client software, scrolling cursors, and more.

Because the applet uses a layout manager of `CardLayout`, you need to add new components to the `KeyPressManagerPanel`, not to the applet itself. The tab order of the fields is determined by the order of the components in the list.

- 2 Click the Form Designer window. In the Layout menu, deselect Invisibles so you can lay out your applets without the invisible object icons getting in the way.

The icons in the upper corner, corresponding to the `dba dbANYWHERE` server, Tutorial database, and `DBA_packages` table objects, disappear.

- 3 Move the items on the form so they appear like this:

The screenshot shows a window titled "Reserve - Form Designer". Inside, there is a form layout. On the left, there is a large rectangular area with a blue dotted border, likely a container for a list or grid. To the right of this area, there are several input fields and a text area. The fields are labeled: "Package Name", "Package ID", "Start Date", "Number of Days", and "Price Per Person". Below these is a "Description" label followed by a text area with a vertical scrollbar. At the bottom of the form, there are two buttons: "Previous" and "Next".

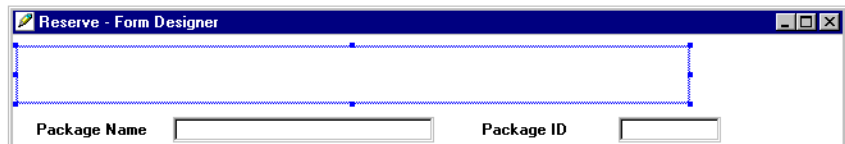
You need to leave room at the top for a banner. You can click then shift-click to move more than one item at once. (Control-click clones an item, so be careful not to accidentally use it.) You can resize the window by dragging the right or bottom sides.



- 4 In the Component Palette, click the Multimedia tab, then click ImageViewer.

ToolTips shows you which button is for the ImageViewer component. Move the cursor over a button until a pop-up message appears.

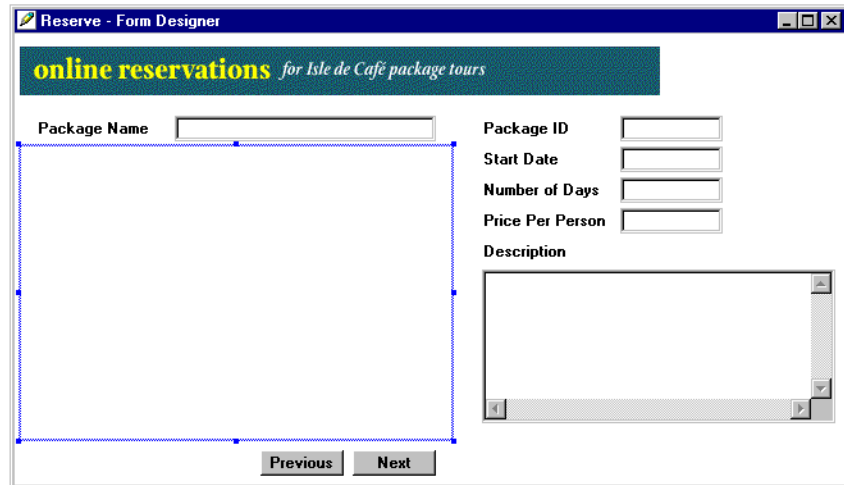
- 5 Draw a rectangle across the top of the applet form by clicking and dragging the cursor.



- 6 In the Property List, change the Name property to imageViewPackage and set the Center Mode property to false.
- 7 Double-click the URL property.
A URL dialog appears.
- 8 Click the ... button.
An Add Image Files dialog appears.
- 9 Navigate to your Images directory, select Reserv.gif, and click Open.
The complete path appears in the dialog.
- 10 Delete the first part of the URL, so the only path remaining is Images/Reserv.gif.
This creates the relative URL.

- 11 Click OK.

The banner appears in the Form Designer. Reposition it as needed.



- 12 Click the Project or Form Designer window, then choose Save All from the File menu.

The project and all included files are saved.
- 13 Close your project.
- 14 Copy your entire project directory. You could name the new directory \VisualCafePro\MyApps\AppAdmin.

You'll use these files later when you create an administrative page for your database.
- 15 Reopen your project by choosing Reserve.vpj from the File menu.

Now you can create the lower half of your applet form.

Designing the reservation portion of the applet

The lower portion of the applet lets users make reservations.

- 1 In the Project window, click keyPressManagerPanel1.

This ensures that new components are added to this panel.
- 2 Choose Add Table Wizard from the Insert menu.

The dbAWARE Project Wizard appears.

- 3** Click Next.

The next page appears.

- 4** Type **dba** in the dbANYWHERE Server Name field or choose it from the pull-down menu.

- 5** The correct host name and port number should appear. If not, type the host name or IP address, and the port number, in the fields.

When dbANYWHERE is running, it displays its IP address and port number in its window; the default port number is 8889.

- 6** Click Next.

- 7** Choose Tutorial for the Data Source Name. Then click Next.

You are asked for a user name and password only if you're not still logged in. Type **dba** for the user name then type **sql** for the password, and click OK.

- 8** Select DBA.registration. Then click Next.

- 9** Make sure the checkboxes for all columns are selected, except for Registration_ID. Then click Next.

- 10** In the Label fields, delete each occurrence of "Customer_" and replace each remaining underscore (_) with a blank space. Then click Next.

- 11** Select Undo changes and change the Text field to **Clear**.

- 12** Select Save changes and change the Text field to **Send Registration**. Then click Next.

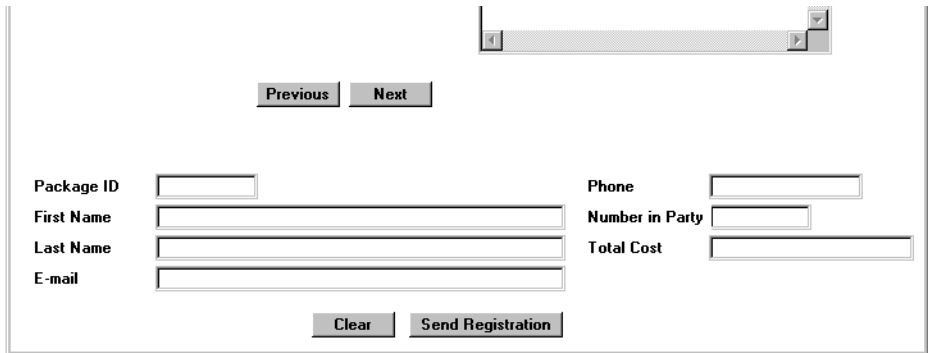
The Master View page appears.

- 13** Click Next.

- 14** Look over your selections. If they look correct, click Finish. If you need to change something, click Back and change what you need to, then move to this window and click Finish.

The new fields appear on the same form in the lower half of the Form Designer.

- 15 Arrange the fields as follows:

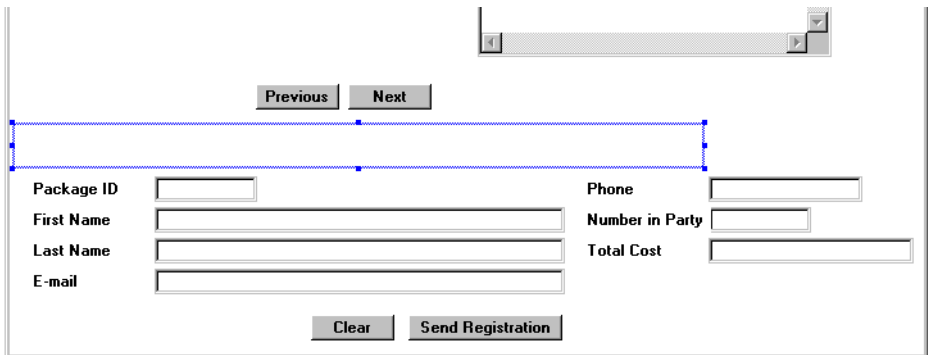


The screenshot shows a web form layout within a window. At the top right is a scroll bar. Below it are two buttons: "Previous" and "Next". The form fields are arranged in two columns. The left column contains: "Package ID" with a single-line text box, "First Name" with a single-line text box, "Last Name" with a single-line text box, and "E-mail" with a single-line text box. The right column contains: "Phone" with a single-line text box, "Number in Party" with a single-line text box, and "Total Cost" with a single-line text box. At the bottom center are two buttons: "Clear" and "Send Registration".



- 16 In the Component Palette, click the Multimedia tab, then click ImageViewer.

- 17 Draw a rectangle underneath the Previous and Next buttons by clicking and dragging the cursor.



This screenshot is identical to the previous one, but with a blue dashed rectangle drawn horizontally below the "Previous" and "Next" buttons, spanning the width of the form area.

- 18 In the Property List, change the Name property to imageViewReg and set the Center Mode property to false.
- 19 Double-click the URL property.
A URL dialog appears.
- 20 Click the ... button.
An Add Image Files dialog appears.
- 21 Navigate to your Images directory, select Register.gif, and click Open.
The complete path appears in the dialog.

- 22** Delete the first part of the URL, so the only path remaining is Images/Register.gif.

This creates the relative URL.

- 23** Click OK.

The banner appears in the Form Designer. Reposition it as needed.

The screenshot shows a web form titled "register for this tour here" in a yellow header bar. The form contains several input fields arranged in two columns. The left column has labels "Package ID", "First Name", "Last Name", and "E-mail" next to their respective text input boxes. The right column has labels "Phone", "Number in Party", and "Total Cost" next to their respective text input boxes. At the bottom of the form, there are two buttons: "Clear" and "Send Registration".

- 24** Click the Package ID field on the second part of your form (Package_ID2).

- 25** In the Property List, change the Text property to **780**.

This initializes the field to display the first tour package ID. Alternatively, you could write Java code that took the first Package ID number from the database and placed it in the registration Package ID field on initialization.

- 26** Click the Project or Form Designer window, then choose Save All from the File menu.

The project and all included files are saved.

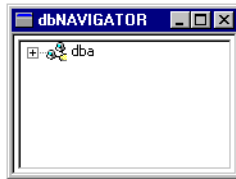
Looking at dbNAVIGATOR

The dbNAVIGATOR provides a hierarchical view of database cataloging information (known as meta-data). This view shows you dbANYWHERE servers and available databases, as well as the tables and columns in each database. You can use dbNAVIGATOR to drop fields on a form and add fields after you've run the Project Wizard.

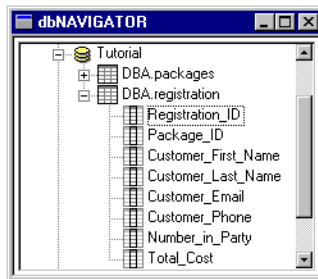
Let's take a look at the dbNAVIGATOR display for the Tutorial database:

- 1 From the Window menu, choose dbNAVIGATOR.

The dbNAVIGATOR window appears.



- 2 Click the + to open dba, then the Tutorial database, then the DBA.registration table in the Tutorial database.



You can drag fields from the dbNAVIGATOR to the keyPressManagerPanel1 object in the Project window to add them to a form. Both a field and a label are added. Because you've already added all of the fields you need, you don't need to drag a field.

- 3 Close the dbNAVIGATOR window.

Setting initial record positions

The packages information should start at the first record, while the registration information should start at a new record:

- 1 Choose DBA_packages from the Property List pull-down menu.
The properties for this object appear.
- 2 Set the Initial Record Position property to First.
- 3 Choose DBA_registration from the Property List pull-down menu.
The properties for this object appear.
- 4 Set the Initial Record Position property to New.

Making fields uneditable

All of the packages fields and the following registration fields should not be editable by a user:

- Package ID
- Total Cost

Follow these steps for each field:

- 1 Click the field in the Form Designer.
- 2 In the Property List, set the Editable property to false.

The field is now uneditable. To indicate this, you'll change the background to gray.

- 3 For the Background property, choose gray.

The gray color appears as the background color.



When you finish with the fields, your form should look like this:

The screenshot shows a window titled "Reserve - Form Designer". Inside, there's a header bar with the text "online reservations for Isle de Café package tours". Below this, the form is divided into two main sections. The top section contains fields for "Package Name", "Package ID", "Start Date", "Number of Days", "Price Per Person", and a "Description" area with a text box. Below these fields are "Previous" and "Next" buttons. The bottom section is highlighted with a yellow background and contains the text "register for this tour here". This section includes fields for "Package ID", "First Name", "Last Name", "E-mail", "Phone", "Number in Party", and "Total Cost". At the bottom of this section are "Clear" and "Send Registration" buttons.

Save your project by clicking the Project or Form Designer window, then choosing Save All from the File menu.

Adding component interactions

You need to add the following component interactions to your applet:

- Setting up the Send Registration button
- Setting the package ID field
- Calculating the total cost

Setting up the Send Registration button

Whenever a record is saved, you want to get a new record so a user can register again:

- 1 Select the Send Registration button and right-click.
A pop-up menu appears.
- 2 Choose Add Interaction.
The Interaction Wizard appears.
- 3 Select the following items:
Start an interaction for “DBA_registration_saveMultiView”: Clicked
Select the item you want to interact with: DBA_registration
Choose what you want to happen: getNewRecord
- 4 Click Finish.
- 5 Click the Project or Form Designer window, then choose Save All from the File menu.

Setting the package ID field

You need to set the package ID field when the following buttons are clicked:

- Clear
- Send Registration
- Previous
- Next

Create the interaction for each button as follows:



- 1 Click the Interaction Wizard button, then click the button and drag a line to the Package ID field on the registration form.

register for this tour here

Package ID	<input type="text"/>	Phone	<input type="text"/>
First Name	<input type="text"/>	Number in Party	<input type="text"/>
Last Name	<input type="text"/>	Total Cost	<input type="text"/>
E-mail	<input type="text"/>		

The Interaction Wizard appears.

- 2 Select the following items:

Start an interaction for “*button*”: Clicked

Select the item you want to interact with: Package_ID2

Choose what you want to happen: Set the text for TextField

- 3 Click Next.

The second page of the dialog appears.

- 4 While Another item is selected, choose Package_ID and select Get the contents of the TextField.

- 5 Click Finish.

Save your project by clicking the Project or Form Designer window, then choosing Save All from the File menu.

Calculating the total cost

The total cost should be calculated after a user enters the number of people. It should be updated when Previous or Next is clicked, because the price might change.

Calculating the cost when the Number in Party field changes

Follow these steps:



- 1 Click the Interaction Wizard button, then click the Number in Party field and drag a line to the Total Cost field on the registration form.

The Interaction Wizard appears.

- 2 Select the following items:

Start an interaction for “Number_in_Party”: LostFocus

Select the item you want to interact with: Total_Cost

Choose what you want to happen: Set the text for TextField

- 3 Click Next.

The second page of the dialog appears.

- 4 While A String constant or an expression is selected, deselect Add quotes and type the following line:

```
String.valueOf(Float.valueOf(Price_Per_Person.getText()).floatValue() *
Float.valueOf(Number_in_Party.getText()).floatValue())
```

- 5 Once you've typed it in, copy the entire line.

You'll paste it later.

- 6 Click Finish.

- 7 Click the Project or Form Designer window, then choose Save All from the File menu.

Calculating the cost when the package changes

For the Previous button and the Next button, set up the cost calculation as follows:



- 1 Click the Interaction Wizard button, then click the button and drag a line to the Total Cost field on the registration form.

The Interaction Wizard appears.

- 2 Select the following items:

Start an interaction for “*button*”: Clicked

Select the item you want to interact with: Total_Cost

Choose what you want to happen: Set the text for TextField

- 3 Click Next.

The second page of the dialog appears.

- 4 While A String constant or an expression is selected, deselect Add quotes and paste the following line:

```
String.valueOf(Float.valueOf(Price_Per_Person.getText()).floatValue() *
    Float.valueOf(Number_in_Party.getText()).floatValue())
```

- 5 Click Finish.

Save your project by clicking the Project or Form Designer window, then choosing Save All from the File menu.

Now you're ready to run the applet.

Running the applet

You can compile your applet and look at it while it's running in the Applet Viewer:

- 1 Choose Execute from the Project menu to run the applet.

The applet appears in the Applet Viewer. Visual Cafe Pro compiles your applet before displaying it.

Applet Viewer: Reserve.class

Applet

online reservations *for Isle de Café package tours*

Package Name

Package ID

Start Date

Number of Days

Price Per Person

Description

Dine on the creations of top chefs and learn their culinary secrets. Learn to prepare Isle de Café ethnic specialties.

register for this tour here

Package ID

First Name

Last Name

E-mail

Phone

Number in Party

Total Cost

- 2 Try out your applet to make sure it works.
- 3 Choose Quit from the Applet menu.
The Applet Viewer window closes.
- 4 Click the Project or Form Designer window, then choose Save All from the File menu.

Displaying the applet in a Web browser

Now you can test your applet in a Web browser.

Adding the HTML file to the project

Follow these steps to add the file to the project:

- 1 From the Insert menu, choose Files into Project.
The Project Files dialog appears.
- 2 In the Project Files dialog, select Reserve.htm in your project directory, then click Add.
The file appears in the Files in Project list.
- 3 Click OK to add the file to the project.
The file appears in the Project window.



Modifying the applet tag in the HTML file

Now you're ready to add the applet you created in Visual Cafe Pro to the HTML file:

- 1 To look at Reserve.htm, select it in the Project window, then choose Edit Source from the Object menu. Or double-click Reserve.htm.
The Source window appears.

- 2 Find the applet tag in the file:

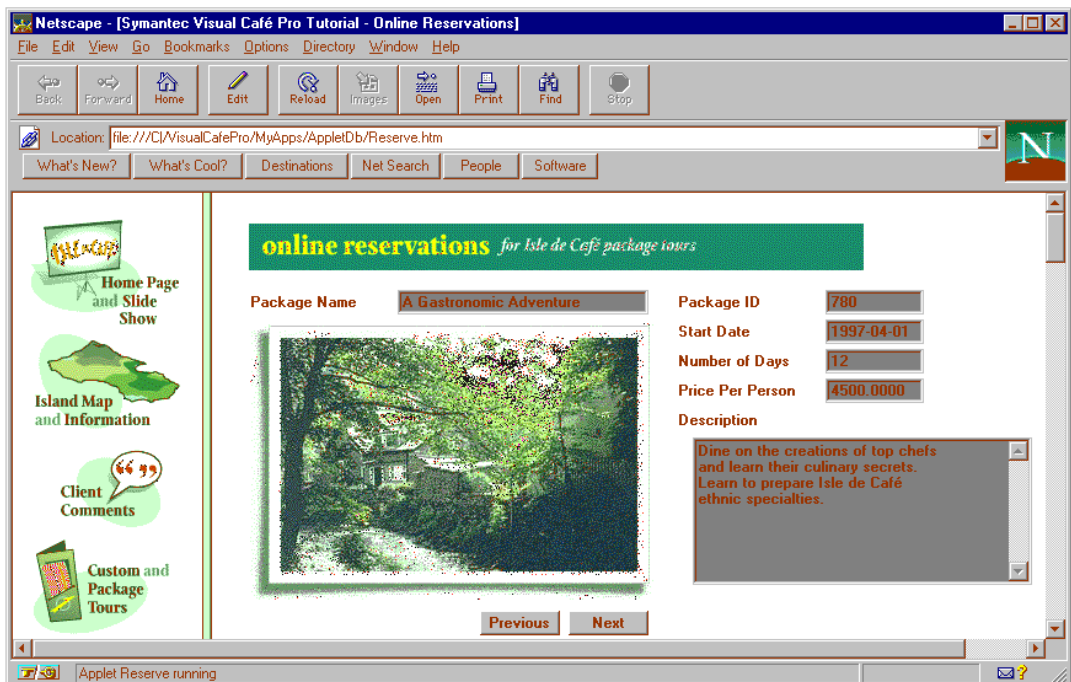
```
<APPLET CODE="Reserve.class" WIDTH=713 HEIGHT=533>
```
- 3 If different, change the width and height in the applet tag so it matches the width and height in the Property List for your Reserve applet.
- 4 Close the Source window.

Executing the applet within the Web page

Follow these steps to run the applet directly within the Web page using your default Web browser:

- 1 Choose Options from the Project menu.
 The Project Options dialog appears.
- 2 Specify Reserve.htm as your Starter HTML and select Execute applet in default HTML viewer. Then click OK.
- 3 Choose Execute from the Project menu to run the applet.

Visual Café Pro launches your default HTML browser and displays your Web page within it.



- 4 Try out your applet.
- 5 Exit your browser.
The browser window closes.
- 6 Click the Project or Form Designer window, then choose Save All from the File menu.

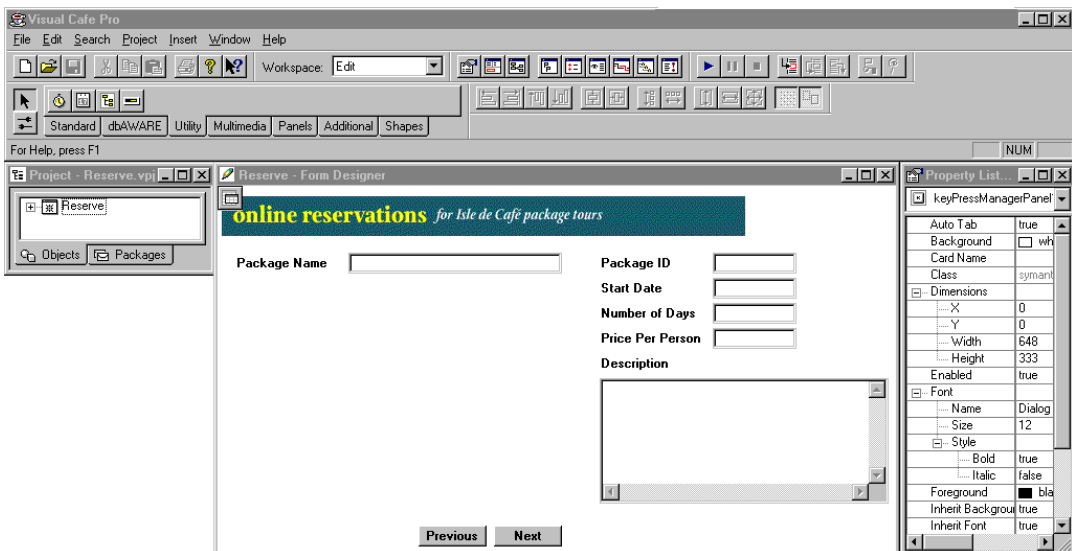
If your applet works properly in the Web browser, you have completed the applet. Continue with the next section to create the administrative applet.

Creating an administrative applet for online reservations

You can quickly create an administrative applet so you can manage and view the reservations in DBA.registration. The applet should require a password for security. Follow these steps:

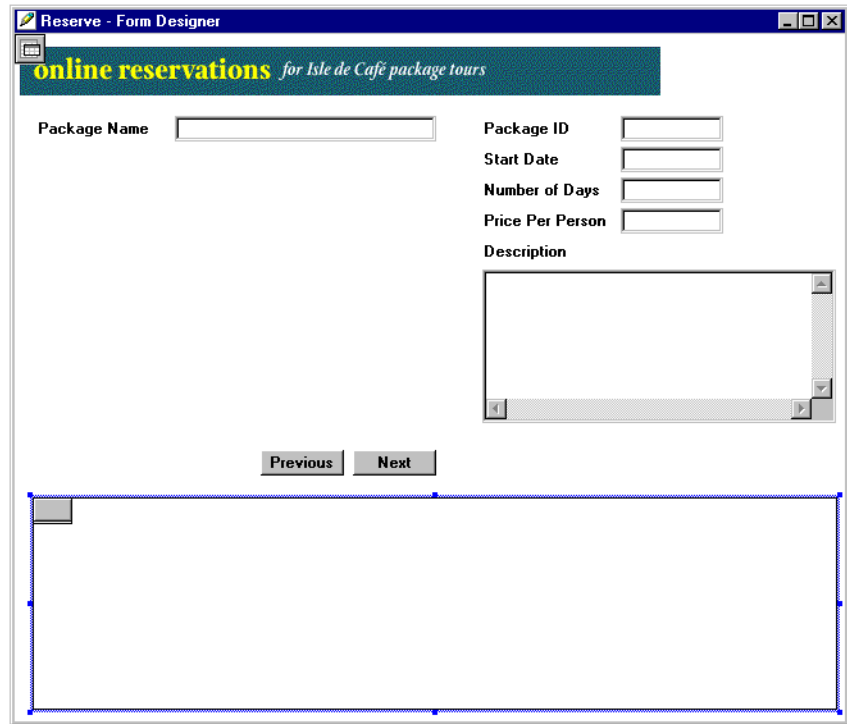
- 1 Close any open projects.
- 2 Open the project you saved in your AppAdmin project directory.

The project appears.



- 3 Add more space to the bottom of the form.
- 4 In the Component Palette, click dbAWARE then click Grid.

- 5 Draw the grid on the bottom of the form:



- 6 In the Property List, set RelView Name to **DBA_registration**.
- 7 Choose dbNAVIGATOR from the Window menu.
The dbNAVIGATOR window appears.
- 8 Under the Tutorial database, look for DBA.registration.
- 9 Drag DBA.registration to the Reserve applet in the Project window.
The object is added to the project. You can reposition its location in the list by dragging it. This object should be positioned before keyPressManagerPanel1.

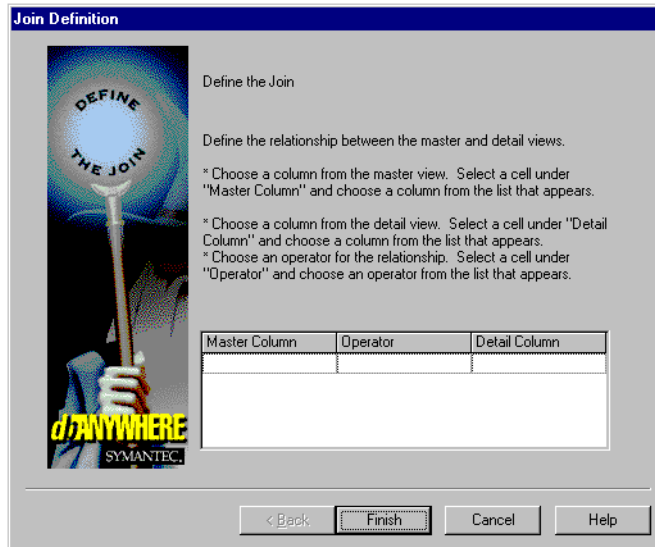


- 10 Select DBA_registration in the Project window. In the Property List, type **DBA_packages** for the Parent RelationView property.

This specifies the name of the table you want to join with the registration table.

- 11 Click the Join Columns property, then the ... button.

The Join Definition wizard appears.



- 12 To define the master/detail relationship between the columns, choose Package_ID in the Master Column and Detail Column fields. Choose = in the Operator field. Then click Finish.

Now let's see if the applet runs.

- 13 Choose Execute from the Project menu.

The applet appears in the Applet Viewer.

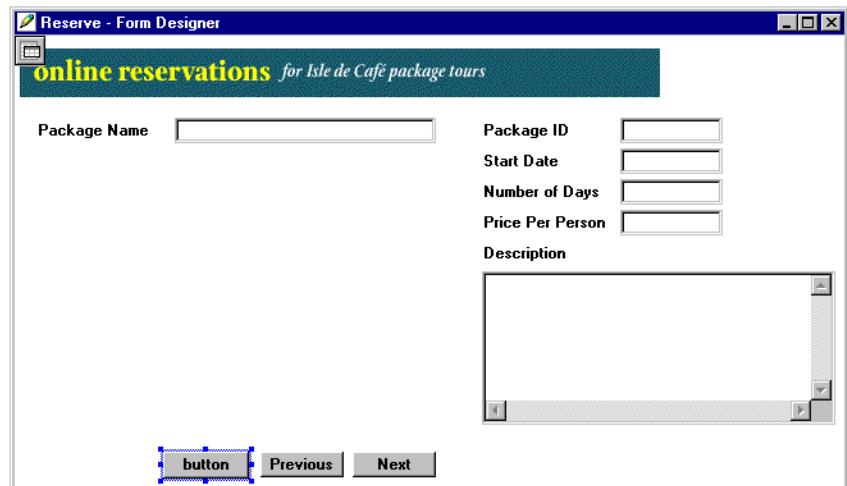
- 14 Try out the applet to make sure it works. Then close the Applet Viewer.

When you click Next or Previous, the list in the grid updates. You can resize the columns in the grid for the best display.

- 15 In the Property List, choose the Tutorial object from the pull-down menu.

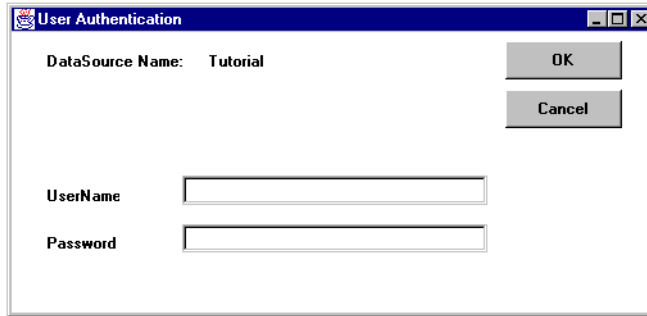
The properties for this object are displayed.

- 16 Delete the values for the Password and User Name properties.
Now you'll have to type them in to access the applet.
For convenience, you decide that you want a First button that places you at the first record in DBA.packages. You add that next.
- 17 In the Component Palette, click Standard then the Button component.
- 18 Draw a button on your form.



- 19 In the Property List, change the Label property to **First**.
The name changes on the button.
- 20 Select the First button and right-click.
A pop-up menu appears.
- 21 Choose Add Interaction.
The Interaction Wizard appears.
- 22 Select the following items:
Start an interaction for "button1": Clicked
Select the item you want to interact with: DBA_packages
Choose what you want to happen: first
- 23 Click Finish.
Let's try the applet again.

- 24** Choose Execute from the Project menu.
A User Authentication dialog appears.



- 25** Type **dba** in the User Name field and **sql** in the Password field. Then click OK.

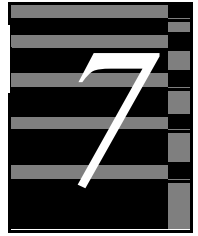
The applet appears in the Applet Viewer.

- 26** Test the First button.
27 Close the Applet Viewer.

You can also test the applet in a browser.

If your applet works, you have completed the Visual Cafe Pro tour and learned about many important Visual Cafe Pro features. Now you're ready to build your own applets and applications. For more in-depth information, explore the online documentation and help provided with Visual Cafe Pro.

Support and More Information



This chapter describes where to get more information on Java and Visual Cafe Pro. It has the following sections:

- Where to get information
- Product updates
- Symantec service and support solutions
- Registering your Symantec product
- Technical support
- Electronic support
- Customer service
- Service and support headquarters
- Worldwide service and support



The URLs listed in this chapter may change since publication.

Where to get information

Visual Cafe includes the following documentation:

Title	To find it ...
Visual Cafe help	<p>Choose Help Topics from the Help menu.</p> <p>Choose a menu command, then press F1 to see a description.</p> <p>Press F1 in any dialog box or window to display help for that option.</p> <p>Press Shift+F1, then choose the item for which you need help.</p>

Title	To find it ...
Visual Cafe User's Guide	Choose User's Guide from the Help menu.
Visual Cafe Samples	Go to the c:\VisualCafePro\samples directory (if Visual Cafe Pro is installed in the default destination). You need to use the custom install to install these samples.
Database API Specifications	Choose Database API Reference from the Help menu.
Sun Microsystems Java API Specifications	Choose Java API Reference from the Help menu. Highlight a keyword in an Editor window and press F1 for a description.
Sun Microsystems Java Language Specifications	Choose Java Language Reference from the Help menu. Highlight a keyword in an Editor window and press F1 for a description.

To find the most up-to-date information about Sun Java and Visual Cafe:

For information about...	See...
Sun Microsystem's Java	http://java.sun.com
Symantec Internet Tools	http://cafe.symantec.com
Symantec Technical Support	See the section "Symantec service and support solutions" in this chapter. For technical support telephone numbers, see the section "Service and support headquarters" in this chapter.

A commercially available book that you might find useful is *Hooked on Java*, by Arthur van Hoff and others (Addison-Wesley; ISBN 0-201-48837-X); for more information about this book, see <http://www.aw.com/devpress/java/index.html>).

Product updates

Check the Symantec Web site (cafe.symantec.com) for updates to Visual Cafe. After you have registered your copy of Visual Cafe, you can use your login name and password to download patches and minor updates to your current version. If you bought your product in a box, the user ID and password are included with your package. If you bought your product online, the user ID and password are displayed to you on the screen.

Symantec service and support solutions

Symantec is committed to excellent service worldwide. Our goal is to provide you with professional assistance in the use of our software, wherever you are located.

Technical Support and Customer Service solutions vary by country. If you are outside the United States or Canada, please refer to the Worldwide Service and Support section at the end of this chapter.

Registering your Symantec product

If you have ordered the product online, you are automatically registered through Customer Service. In addition, you can use the toll-free fax number listed below to register your product, or register on the Customer Service Home Page under Service and Support at www.symantec.com.

If your address changes, you can mail or fax your new address to Customer Service. Please send it to the attention of the Registration Department.

Symantec Corporation
Attn: Registration Dept.
175 W. Broadway
Eugene, OR 97401

(800) 800-1438 Fax

You can also change your address on the Customer Service Home Page under Service and Support at www.symantec.com.

Technical support

Symantec's Technical Support department offers expanded support options designed for your individual needs and to help you get the most out of your software investment.

The phone numbers listed in the "Service and support headquarters" section are for support in North America. If you are outside the United States or Canada, please call the local Symantec office or distributor in your area, or refer to the information provided at the end of this chapter.

Symantec now offers different types of technical support services for you to choose from, which are described below. You are given StandardCare Support by purchasing the product and then can choose from Symantec's PriorityCare and PremiumCare services to extend your level of support.

For the most current information on Symantec Support Solutions, please call our automated fax retrieval service, located in the United States, at (800) 554-4403 or (541) 984-2490, and request document 070. Alternatively, visit Symantec on the World Wide Web at www.symantec.com.

StandardCare support

All registered users of Symantec products are entitled to these services at no charge:

- Unlimited calls for 90 days (from the date of the first call) for installation assistance, configuration, and general usage questions. The phone number is (541) 465-8470.
- Unlimited technical assistance through CompuServe and America Online. These forums offer electronic access to our technical support staff, libraries of sample files, technical notes, and bulletins. You will also find a rich interaction and information exchange with other users of Symantec software.
- Unlimited use of Symantec's Bulletin Board System (BBS). This download BBS is kept updated with sample files and product technical notes for quick and easy electronic access.
- Unlimited use of the Symantec Discussion Groups available from the Service and Support section on www.symantec.com. These forums offer electronic access to our professional technical support staff, the

Symantec knowledge base, FAQs, and announcements. The news server is at service.symantec.com.

- Unlimited access to company information through the Internet. With a Web browser such as Netscape, you get the latest company news by entering the URL for Symantec's home page: www.symantec.com.

The Web site include links to our anonymous FTP site, where you can download the latest software patches and drivers for Symantec products. You can also FTP directly to the site by entering: [ftp.symantec.com](ftp://ftp.symantec.com). A user ID and password is required.

- Unlimited use of Symantec's automated fax retrieval system for instant printouts of technical notes, bulletins, product literature, and general information by fax.
- StandardCare Support is available Monday through Friday, 7:00 a.m. to 4:00 p.m. Pacific Time.

For your first 90 days of free technical support, please refer to the StandardCare Support (541) phone number in the "Service and support headquarters" section.

PriorityCare support

All registered users of Symantec products are entitled to these services on a "pay-as-you-go" basis:

- The PriorityCare 800-number is charged to your VISA, MasterCard, or American Express on a per incident basis.
- The PriorityCare 900-number is charged to your telephone bill on a per minute basis. (As of this writing, the charge is \$2 per minute, and an equivalent 900-number service is not available outside the United States.)
- Average hold time will be kept to a minimum.
- PriorityCare Support is available Monday through Friday, 6:00 a.m. to 5:00 p.m. Pacific Time.

To use the PriorityCare 800- and 900-number services, please refer to those numbers in the "Service and support headquarters" section.

PremiumCare support

All registered users of Symantec products are entitled to these services on an annual subscription basis:

PremiumCare Gold support

- Support for one year for up to ten incidents per year for any Symantec desktop product, with an option to add more incidents.
- Priority support on a toll-free 800 line.
- Average hold time will be kept to a minimum.
- Unlimited electronic mail support is provided with a 24-hour response time on working days. The PremiumCare Gold Support is available for Visual Cafe for Windows owners at support_javawin@symantec.com and for Visual Cafe for Macintosh owners at support@devtools.symantec.com. Please include your subscription ID with any e-mail.
- PremiumCare Gold Support is available Monday through Friday, 6:00 a.m. to 5:00 p.m. Pacific Time.

PremiumCare Platinum support

- Unlimited calls on a toll-free 800 line.
- Average hold time will be kept to a minimum.
- A Support Center Manual with troubleshooting, installation, configuration, and usage information.
- Quarterly updates of technical notes and bulletins.
- Instant access to senior support staff.
- Automatic updates of inline software revisions. (Inline software revisions do not include version upgrades.)
- After hours and weekend support is also available to PremiumCare Platinum customers for an additional fee.
- PremiumCare Platinum Support is charged on an annual subscription basis per product family. The annual fee is for two subscribers; other subscribers can be added on a per person basis.
- PremiumCare Platinum Support is available Monday through Friday, 6:00 a.m. to 5:00 p.m. Pacific Time.

- Electronic support for Visual Cafe for Windows owners at support_javawin@symantec.com and for Visual Cafe for Macintosh owners at support@devtools.symantec.com.

To order PremiumCare Gold or Platinum support, please contact Customer Service or your Symantec sales representative.

Electronic support

Technical information is available 24 hours a day on electronic bulletin board systems (BBSs). Symantec provides access to its own Symantec bulletin board system, and maintains the Symantec forums on CompuServe and America Online.

Symantec BBS

The Symantec BBS provides a Customer Service forum, shareware and public-domain software, "Frequently Asked Questions" (FAQs), and support forums where you can exchange tips and information with other users. Settings for the Symantec bulletin board are: 8 data bits, 1 stop bit, and no parity.

300- through 14,400-baud modems (541) 984-5366

300- through 28,800-baud modems (541) 484-6669

CompuServe

You can exchange information and ideas with Symantec representatives and with other users of Symantec products on the CompuServe bulletin board.

To access the Symantec forums on CompuServe, type:

GO SYMANTEC at any ! prompt.

For additional information, or to subscribe in the United States and Canada, please call CompuServe at (800) 848-8199. Outside the United States and Canada, please call (1) (614) 718-2800. Check with CompuServe for data communications settings.

America Online

To access the Symantec bulletin board on America Online, type keyword:

SYMANTEC

For additional information, or to subscribe in the United States and Canada, please call America Online at (800) 227-6364. Check with America Online for data communications settings.

Symantec discussion groups

Use your Web browser to go to <http://www.symantec.com> and go to the Service and Support section. Here you can review the Frequently Asked Questions, search the Symantec Knowledge Base for known solutions to problems previously encountered, or post your own query to a support newsgroup.

Symantec representatives are ready to answer your questions via our support discussion groups. All messages posted will receive a response from a Symantec representative within 48 hours. The discussion groups are similar to electronic bulletin boards where you post a message and then return later to find an answer. These support forums are in Usenet newsgroup (Internet news) format and require that you have a newsreader available.

You can FTP directly to this site to download technical notes and software patches at: <ftp.symantec.com>. You can also use the news server, <service.symantec.com>.

Automated fax retrieval system

Symantec's automated fax retrieval system can be used 24 hours a day to receive product information on your fax machine. You can call from any touch tone phone to receive an index listing of both Technical Support and Customer Service documents available, then have any of these specific documents faxed to you.

To receive technical application notes and samples of "how tos," please call our Technical Support fax retrieval number, and choose Option 2.

You can receive general product information, data sheets, and product upgrade order forms from our Customer Service fax retrieval number.

- Technical Support:(541) 984-2490
- Customer Service:(800) 554-4403

In addition, you can receive a listing of Symantec offices and worldwide service and support partners by calling the Technical Support fax retrieval number, choosing Option 2, and requesting Document 1400.

Customer service

Symantec's Customer Service department builds and maintains long-lasting customer relations through consistent, expert service. Our Customer Service department is available to help you:

- Order an upgrade.
- Subscribe to the technical support solution of your choice.
- Fulfill your request for product literature or demonstration disks.
- Find out about dealers and consultants in your area.
- Replace missing or defective pieces (disks, manuals, etc.) from your package.
- Get status on an order or a return.
- Update your product registration with address or name changes.
- Replace lost passwords or user IDs.

You can reach Customer Service at (800) 441-7234 or under the Service and Support section at www.symantec.com. For specific questions about how to use your Symantec software, please contact Technical Support.

Replacing a CD-ROM

If the Visual Cafe CD-ROM is damaged or unusable, you can obtain a replacement.

To receive a replacement or refund for a product purchased through a reseller, please visit or contact the authorized dealer from whom you purchased the product.

If you ordered the product or upgrade directly from Symantec and wish to receive an replacement or refund in accordance with our 60-day money back guarantee, please return your CD-ROM and a letter including a brief explanation for the return. Please send by traceable means, such as UPS or FEDEX, to:

Symantec Corporation
ATTN: RMA Dept.
175 West Broadway
Eugene, OR 97401

Recovering passwords

If your user ID and password become inoperative, send a message to Customer Service at custserv@symantec.com with your name, address, daytime phone number, ID, and password and we will resolve the situation for you within 24 to 48 hours. Type **Cafe 1.5 DL Reset** in the subject field of the message.

If you have lost your Visual Cafe Pro ID, send a message to Customer Service at custserv@symantec.com. If your information does not appear in our registration database, we will provide additional avenues so you can verify ownership of the product.

Old version support

When a new version of this software is released, registered users may receive upgrade information through electronic mail or the postal service. After the release of the new version, telephone support will be provided for the previous version for 6 months. Technical information for the older versions may still be available on the electronic services and automated fax retrieval system.

Discontinued product support

When Symantec announces that a product will no longer be marketed or sold, telephone support will be discontinued 60 days later. Support will only be available for discontinued products through services such as our automated fax retrieval system or through documentation posted on electronic services

such as the World Wide Web, Symantec BBS, CompuServe or America Online.

Service and support headquarters

Symantec's service and support headquarters for North America is at the following location.

Symantec Corporation 175 W. Broadway Eugene, OR 97401	(800) 441-7234 (USA & Canada Customer Service) (541) 334-6054 (all other locations) Fax (541) 984-8020
	For Visual Cafe technical support, please call the following numbers: StandardCare Support (541) 465-8470 PriorityCare 800 Support (800) 927-4014 PriorityCare 900 Support (900) 646-0004 or post a message in the Visual Cafe Discussion Group at http://www.symantec.com/techsupp/index.html .

Worldwide service and support

Symantec provides technical support and customer service worldwide. Services vary by country and include International Partners (IPs) who represent Symantec in regions where there is no Symantec office. Most IPs provide customer service and technical support for Symantec products in your local language, as close to your home or office as possible.

If your country is not listed in the International Locations section below, please call our Technical Support automated fax retrieval service, located in the United States, at (541) 984-2490, choose Option 2, and request Document 1400.

International locations

European headquarters

Symantec Europe Ltd. Tel. (31) (71) 535 3111
Kanaalpark 145 Fax (31) (71) 535 3150
2321 JV Leiden
The Netherlands

Customer Service Tel. (31) (71) 535 3294

Technical Support - Dutch Tel. (31) (71) 579 4407
French PC/Mac Tel. (33) (1) 41 38 69 80
French Mac Tel. (33) (1) 41 38 69 81
German Tel. (49) (211) 9917 110
English Tel. (44) (1628) 788 580
Other Countries Tel. (31) (71) 579 4425
Fax (31) (71) 535 3153

International BBS (up to 14.4 baud) Tel. (31) (71) 535 3169
Automated fax retrieval (24 hrs.) Tel. (31) (71) 535 3255

Asia/Pacific Rim region

Symantec Australia Pty. Ltd. Tel. (61) (2) 9850 1000
408 Victoria Road Fax (61) (2) 9850 1001
Gladesville, NSW 2111
Australia
Technical Support Tel. (61) (2) 9879 6577
Fax (61) (2) 9879 6594
BBS Tel. (61) (2) 9879 6322
Automated fax retrieval (24 hrs.) Tel. (61) (2) 9817 4550

Mexico

Symantec Mexico Tel. (52) (5) 545 1234
Rubén Darío No. 36, Piso 2, OFNA 6 Fax (52) (5) 531 2252
Colonia Chapultapec Polanco
11560 México, D.F.

Technical Support

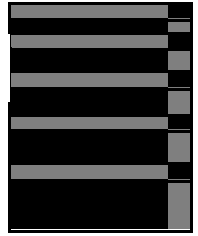
For Technical Support call the automated fax retrieval service, located in the United States, at (541) 984-2490, and request Document 1400.

Japan

Symantec Japan, Inc.
Pine Bldg. 6F
3-1-2, Shibuya, Shibuya-ku
Tokyo 150 JAPAN
Phone: (81)03-3498-1118
Fax: (81)03-3498-1124

Every effort has been made to ensure the accuracy of this information. However, the information contained herein is subject to change without notice. Symantec Corporation reserves the right for such change without prior notice.

Glossary



Applet

An applet is a program that can be added to a Web page and run by Java-enabled Web browsers (or the Applet Viewer). Java applets are secure because they can't access the file system on the local computer, but they can still read from the Web server. This means that applets are less likely to damage a user's system or send private information back to the Web server. (While an applet usually doesn't have a menu bar, it can create a Java frame that has a menu bar.)

Application

A Java application is standalone and cross-platform: it can run on all computers with a standalone Java virtual machine and supporting files (which, for instance, you can obtain from the Sun JDK at java.sun.com), so separate applications for each environment aren't needed. Java applications can have menu bars and access files on the local computer. A Java application is like a C++ application, but it's cross-platform and you need a Java virtual machine to run it. For example, you could write a word processor program in Java. A Java frame is a good base class for a main application window: it can exist by itself, contain components and menus, and can show dialogs and windows.

Bytecode

Bytecodes are instructions that are similar to machine code, but are machine-independent. During execution, the Java virtual machine either interprets the bytecodes with a Java interpreter or converts them to machine code (stored temporarily in memory) with a Just-In-Time compiler.

Class

A class is a collection of attributes and methods that defines the implementation of a particular kind of object. A class definition defines instance variables and methods, and specifies the interfaces the class implements and the immediate superclass of the class.

Component

A Visual Cafe Pro component is a user interface (UI) element, such as a button, menu, text box, or container of other components. It is any visual object that can appear on the Form Designer. It includes more components than those that inherit from the Java Component class; it is often called a control in C++. Components, except for invisible objects, have a screen position, a size, and a foreground and background color. They are either enabled or disabled and can handle events. To create your user interface, you can drag onto a form a variety of components from the Component Library or the Component Palette; you assign the component properties

in a separate Property List window, and add interactions between components with the Interaction Wizard. Visual Cafe Pro automatically creates the Java code for you during this design process. See also *event*, *form*, *invisible object*, *object*, and *visual object*.

Container

A container is a component that can contain another component. There are two general categories of Java containers: windows and panels. Some types of windows are a frame (which can have a menu bar) and a dialog. A panel is a defined area that can appear in a window, such as an applet that appears in a browser. In Visual Cafe Pro, a container is called a *form*.

Dialog

A dialog is a simple window with a title bar that can receive and process input from a user. Dialogs cannot be used by applets, and are not suitable for use as a main window for an application. Dialogs can contain components, but not menus. Use dialogs for temporary windows. See also *component* and *container*.

Data source

A data source is a source of data, usually a database.

Database template

A database template is an empty database table with predefined columns. Each template is designed for a specific type of information.

Event

An event is an action, initiated by a user or a program, to which an object can respond. Events are typically user actions that the program can capture and respond to. Examples of events include mouse clicks, key presses, and mouse movements.

Form

A Visual Cafe Pro form is a Java container — a component that can contain another component. There are two general categories of Java containers: windows and panels. Some types of windows are a frame (which can have a menu bar) and a dialog. A panel is a defined area that can appear in a window, such as an applet that appears in a browser.

Frame

A Java frame is a general-purpose application window to which you can add components and menus. See also *component* and *container*.

Interaction

An interaction is a relationship that you define between components resulting in Visual Cafe Pro–generated code. You can create an interaction between components on one form, or between a component on one form and a top-level form component (such as having a button click open another form). An interaction consists of one or more components, a trigger event, and an action. For example, you can connect a button (the trigger component) to a text box (the action component) so that when the user clicks on the button (the trigger event), the associated text box is enabled for user input (the action).

Invisible object

Invisible objects are components that are visible during form design and invisible at runtime. An example of an invisible object is a menu bar. Invisible objects are a subset of the visible objects. See also *visible object*.

Java Virtual Machine

The Java Virtual Machine (Java VM) contains a bytecode translator that converts the downloaded binary Java files into instructions to be executed by the client machine. The Java VM also contains the library routines that are called by a Java applet.

Join

A join is a definition of a master/detail relationship. Only detail views have joins. The Join properties for a detail RelationView define a join.

Layout Manager

The layout is a property of container objects that automatically arranges components within the container so that they display well on different platforms and screens, and at different resolutions.

Master/detail relationship

This is a relationship between a master view and a detail view. The join of the detail view defines the relationship.

Method

A method is a procedure that is defined as part of an object and acts on an object that is based on that object. It is a collection of statements that perform a complex operation. When a method is called, the instructions in the method are performed and the result is returned to the statement that made the call.

Non-visual object

A non-visual object in Visual Cafe Pro is a class defined in source code only. See also *invisible object*, *object*, and *visual object*.

Object

An object can be a visual object or non-visual object. The Objects view in the Project window shows visual objects only. The Package view in the Project window shows visual and non-visual objects as a list of source files. See also *invisible object*, *non-visual object*, and *visual object*.

Package

A Java package is a group of related Java classes and interfaces. It is both a way of organizing code and a library of code. You can view the source files and packages of a project in the Package view of the Project window.

Panel

A Java panel is a general-purpose container that can be added to another container. A panel has no visible border and can be used to break up windows into logical regions. See also *component* and *container*.

Project

For an application, a Visual Cafe Pro project is a collection of objects that make up the application. For applets, a Visual Cafe Pro project is a collection of objects that make up an applet or a group of related applets; it optionally contains one or more HTML files that the applets run in.

Property

A property is a named attribute of a component. Properties define component characteristics such as the size, color, label, and state — for example, enabled or disabled.

RelationView

This is a Visual Cafe Pro component that represents a view of data that's defined by an SQL statement.

Visual object

In Visual Cafe Pro, a visual object (also called a component) is a class defined by both a visual element (which can be displayed in the Form Designer) and source code. Types of visual objects are a form (such as a window or dialog), database, and applet. A visual object can contain other visual objects. Visual objects can have associated properties, events, and methods. See also *component*, *invisible object*, *non-visual object*, and *object*.

View

A view is a virtual database table that exists only in memory.

Window

A Java window, which is based on the Window class, is an area that has no borders and no menu bar. See also *component* and *container*.

