

Beginning Visual Basic



© Lou Tylee, 1999

KIDware
15600 NE 8th, Suite B1-314
Bellevue, WA 98008
(206) 721-2556
FAX (425) 746-4655
<http://www.jetcity.com/~kidware>

Notice

This guide was developed for the course, "Beginning Visual Basic," produced by KIDware, Bellevue, Washington. It is not intended to be a complete reference to Visual Basic. Consult the Microsoft documentation that comes with your particular version of Visual Basic for detailed reference information.

This guide refers to several software and hardware products by their trade names. These references are for informational purposes only and all trademarks are the property of their respective companies.

Lou Tylee
KIDware
(206) 721-2556

Beginning Visual Basic

Contents

1. Introducing Visual Basic

A Story About Bill and Paul.....	1-1
Let's Get Started.....	1-3
Starting Visual Basic.....	1-5
Opening a Visual Basic Project.....	1-9
Running a Visual Basic Project.....	1-13
Stopping a Visual Basic Project.....	1-18
Stopping Visual Basic.....	1-19
Summary.....	1-20

2. The Visual Basic Environment

Review and Preview.....	2-1
Parts of a Visual Basic Project.....	2-2
Parts of the Visual Basic Program.....	2-4
Main Window.....	2-4
Form Window.....	2-5
Toolbox Window.....	2-6
Properties Window.....	2-8
Project Window.....	2-10
Moving Around in Visual Basic.....	2-12
Project Window.....	2-12
Properties Window.....	2-13
Code Window.....	2-15
Summary.....	2-20

3. Your First Visual Basic Project

Review and Preview.....	3-1
Steps in Building a Visual Basic Project.....	3-2
Placing Controls on the Form.....	3-5
Example.....	3-6
Setting Control Properties (Design Mode).....	3-8
Example.....	3-11
Naming Controls.....	3-13
Setting Properties in Run Mode.....	3-14
How Control Names are Used in Event Procedures.....	3-15
Writing Event Procedures.....	3-17
Example.....	3-18
Summary.....	3-22

4. Project Design, Forms, Command Buttons

Review and Preview.....	4-1
Project Design.....	4-2
Saving a Visual Basic Project.....	4-4
On-Line Help.....	4-6
The Form Control.....	4-8
Properties.....	4-8
Example.....	4-9
Events.....	4-9
Command Button Control.....	4-12
Properties.....	4-12
Example.....	4-13
Events.....	4-16
BASIC - The First Lesson.....	4-17
Event Procedure Structure.....	4-17
Assignment Statement.....	4-18
Property Types.....	4-19
Comments.....	4-22
Project - Form Fun.....	4-23
Project Design.....	4-23
Place Controls on Form.....	4-23
Set Control Properties.....	4-24
Write Event Procedures.....	4-26
Run the Project.....	4-31
Other Things to Try.....	4-31
Summary.....	4-32

5. Labels, Text Boxes, Variables

Review and Preview.....	5-1
Debugging a Visual Basic Project.....	5-2
Syntax Errors.....	5-3
Run-Time Errors.....	5-4
Logic Errors.....	5-7
Label Control.....	5-9
Properties.....	5-9
Example.....	5-10
Events.....	5-11
Text Box Control.....	5-12
Properties.....	5-12
Example.....	5-13
Events.....	5-14
BASIC - The Second Lesson.....	5-15
Variables.....	5-15
Variable Names.....	5-16
Variable Types.....	5-16
Declaring Variables.....	5-17
Arithmetic Operators.....	5-20
Val and Str Functions.....	5-24
String Concatenation.....	5-27
Project - Savings Account.....	5-28
Project Design.....	5-28
Place Controls on Form.....	5-28
Set Control Properties.....	5-29
Write Event Procedures.....	5-31
Run the Project.....	5-33
Other Things to Try.....	5-34
Summary.....	5-37

6. Scroll Bars, Decisions, Random Numbers

Review and Preview.....	6-1
Scroll Bar Control.....	6-2
Properties.....	6-3
Example.....	6-6
Events.....	6-7
BASIC - The Third Lesson.....	6-9
Logical Expressions.....	6-9
Comparison Operators.....	6-10
Logical Operators.....	6-13
Decisions - The If Statement.....	6-18
Random Number (Rnd) Function.....	6-23
Project - Guess the Number Game.....	6-27
Project Design.....	6-27
Place Controls on Form.....	6-28
Set Control Properties.....	6-28
Write Event Procedures.....	6-31
Run the Project.....	6-35
Other Things to Try.....	6-35
Summary.....	6-37

7. Icons, Frames, Check Boxes, Option Buttons

Review and Preview.....	7-1
Icons.....	7-2
Designing Your Own Icon with IconEdit.....	7-2
Assigning Icons to Forms.....	7-6
Frame Control.....	7-7
Properties.....	7-7
Placing Controls in a Frame.....	7-8
Example.....	7-8
Check Box Control.....	7-10
Properties.....	7-10
Example.....	7-11
Events.....	7-12
Option Button Control.....	7-13
Properties.....	7-14
Example.....	7-15
Events.....	7-16
BASIC - The Fourth Lesson.....	7-17
Decisions - Select Case.....	7-17
Project - Sandwich Maker.....	7-22
Project Design.....	7-22
Place Controls on Form.....	7-23
Set Control Properties.....	7-24
Write Event Procedures.....	7-29
Run the Project.....	7-36
Other Things to Try.....	7-37
Summary.....	7-39

8. Picture Boxes, Mouse Events, Colors

Review and Preview.....	8-1
Picture Box Control.....	8-2
Properties.....	8-2
Picture Property.....	8-4
Example.....	8-6
Graphics Methods.....	8-7
PSet Method.....	8-9
Example.....	8-9
Line Method.....	8-10
Example.....	8-11
Circle Method.....	8-12
Example.....	8-13
Cls Method.....	8-14
BASIC - The Fifth Lesson.....	8-15
Mouse Events.....	8-15
MouseDown Event.....	8-15
MouseUp Event.....	8-17
MouseMove Event.....	8-18
Colors.....	8-19
Symbolic Constants.....	8-19
QBColor Function.....	8-21
RGB Function.....	8-22
Project - Blackboard Fun.....	8-25
Project Design.....	8-25
Place Controls on Form.....	8-25
Set Control Properties.....	8-26
Write Event Procedures.....	8-29
Run the Project.....	8-34
Other Things to Try.....	8-34
Summary.....	8-36

9. Lines, Shapes, Images, Arrays

Review and Preview.....	9-1
Line Control.....	9-2
Properties.....	9-2
Example.....	9-3
Shape Control.....	9-4
Properties.....	9-4
Example.....	9-5
Image Control.....	9-6
Properties.....	9-6
Picture and Stretch Properties.....	9-7
Example.....	9-8
Events.....	9-8
Form Layers.....	9-9
BASIC - The Sixth Lesson.....	9-11
Variable Arrays.....	9-11
For/Next Loops.....	9-13
Procedure Level Variables.....	9-15
Shuffle Routine.....	9-16
Project - Card Wars.....	9-22
Project Design.....	9-22
Place Controls on Form.....	9-22
Set Control Properties.....	9-23
Write Event Procedures.....	9-28
Run the Project.....	9-36
Other Things to Try.....	9-36
Summary.....	9-38

10. Timers, Animation, Keyboard Events

Review and Preview.....	10-1
Timer Control.....	10-2
Properties.....	10-2
Events.....	10-3
Examples.....	10-3
BASIC - The Final Lesson.....	10-9
Animation - The Move Method.....	10-9
Control Disappearance.....	10-12
Border Crossing.....	10-14
Collision Detection.....	10-18
Keyboard Events.....	10-21
KeyDown Event.....	10-22
KeyPress Event.....	10-25
Project - Balloons.....	10-29
Project Design.....	10-29
Place Controls on Form.....	10-29
Set Control Properties.....	10-30
Write Event Procedures.....	10-34
Run the Project.....	10-46
Other Things to Try.....	10-46
Summary.....	10-48
Bonus Project - Pong!.....	10-50

Appendix. Other Projects To Try

1. Computer Stopwatch
2. Loan Calculator
3. Tic-Tac-Toe