

Data Accessing Using Object Variables

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◆ Overview

- Using the Data Access Objects
- Database Variables
- Tables, Dynasets, Snapshots
- Sorting Records
- Selecting Records
- Using Queries From the Database
- Getting the Structure of a Database
- Accessing SQL Server or dBASE Databases
- Creating New Databases

◆ The Data Object Variables

- Database Variables
- Recordset Variables
 - Table
 - Dynaset
 - Snapshot

The Database Object

■ Database Declaration

```
Dim db As Database
```

■ OpenDatabase Function

```
Set db=OpenDatabase("c:\nwind.mdb",  
    ↪ False, False, dbconnect$)
```

■ Close Method

```
db.Close
```

◆ The Recordset Objects

Recordset variable	Can user modify records?	Reflects adds/deletes by other users	Result of a query?
Table	Can add, change, delete	Yes	No
Dynaset	Can add, change, delete	No	Yes
Snapshot	Fixed	N/A	Yes

Table Objects

- **Table Declaration**

```
Dim tb As Table
```

- **OpenTable Function**

```
Set tb = db.OpenTable("Employees")
```

- **Access Table Data**

```
txtLastName.Text = tb![Last Name]
```

Requesting Exclusive Use of a Table

```
Const DB_DENYWRITE = &H1  
Const DB_DENYREAD = &H2  
Dim options As Integer  
Dim t As Table  
options = DB_DENYREAD + DB_DENYWRITE  
Set t = db.OpenTable("Employees", options)
```

Dynaset Objects

■ Dynaset Declaration

```
Dim ds1 As Dynaset, ds2 as Dynaset
```

■ Create Dynaset Method

```
Set ds1 = db.CreateDynaset("Employees")  
Set ds1 = db.CreateDynaset("Select lname  
    ↪ from Emp where id>'50'")  
Set ds2 = ds1. CreateDynaset()
```

Same as REFRESH

■ Access Data in Dynaset

```
txtLastName.Text = ds![Last Name]
```

Using an External Database to Process a Query

```
Const DB_SQLPASSTHROUGH = &H40
Dim options As Integer
Dim sql As String
Dim ds As Dynaset
options = DB_SQLPASSTHROUGH
sql = "SELECT ....."
Set ds = db.CreateDynaset(sql, options)
```

Snapshot Objects

- Snapshot Declaration

```
Dim sn As Snapshot
```

- CreateSnapshot Method

```
Set sn = db.CreateSnapshot("Employees")
```

- Access Data in Snapshot

```
txtLastName.Text = sn![Last Name]
```

Comparison of Recordset Objects

■ Comparison of Table, Dynaset, and Snapshot

- Table = Disk Resident Permanently Recorded Data
- Dynaset = Dynamically Constructed "Image"
- Snapshot = "Fresh Frozen" Dynaset

Sorting Records

- **Sorting a Table — Set Index Property to Existing Index**

```
Set t.Index = "lastname"
```

- **Sorting a Dynaset or Snapshot — Set Sort Property and Recreate**

```
Set ds = db.CreateDynaset ("Employees")  
ds.Sort = "[first name]"  
Set dsSorted = ds.CreateDynaset ()
```

Selecting Records

- Create the Dynaset

```
Set ds = db.CreateDynaset ("Employees")
```

- Set the Filter Property

```
ds.Filter = "[Title] = 'Clerk' "
```

Any Valid SQL “Where ...” Clause

- Recreate the Dynaset

```
Set dsfilter = ds.CreateDynaset ( )
```

◆ Using Queries from the Database

- Types of Queries
 - Select queries
 - Action queries
- Using Existing Queries
- Creating New Queries

Using a Select Query

- Declare the QueryDef Variable

```
Dim Q As QueryDef
```

- Open the Query

```
Set Q = db.OpenQueryDef ("Employee Sales by Country")
```

- Set the Parameters (If Any)

```
Q![beginning date] = txtstartdate.text
```

- Create a Dynaset Based on the Query

```
Set ds = Q.CreateDynaset()
```

Using Action Queries

- Declare the QueryDef Variable

```
Dim Q As QueryDef
```

- Create the Query

```
Set Q = db.OpenQueryDef ("UpdatePrices")
```

- Execute the Query

```
Q.Execute
```

Creating New Queries

- Declare the QueryDef Variable

```
Dim Q As QueryDef
```

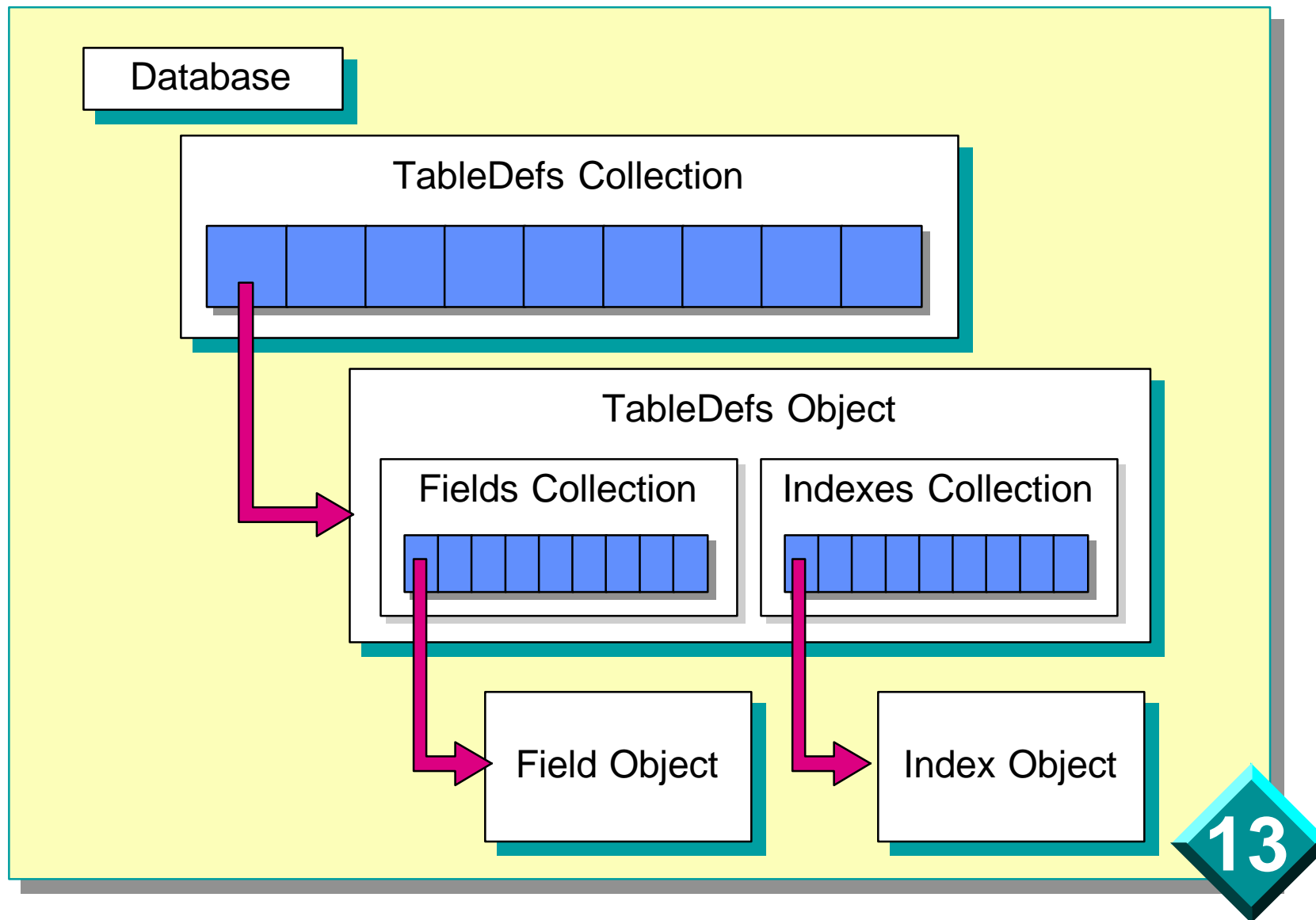
- Create the SQL Definition

```
sql$ = "Select price, quantity, price *  
       quantity As Total From Orders"
```

- Create the Query Definition

```
Set Q = db.CreateQueryDef ("New Query", sql$)
```

Getting the Structure of a Database



Accessing dBASE Databases

- Specify Directory in OpenDatabase Function
- Set Connect Property to "dBASE III;" or "dBASE IV;"
- DLLs Listed in VB.INI
- .INF File to List Index Files
- Create *app*.INI to List DLLs for Executable File

Accessing a SQL Server Database

- Set Connect Property to Data Source Name
- Valid Data Source Names Listed in ODBC.INI

Creating New Databases

- Use the Data Manager Application (Standard or Professional Edition)
- Use the CreateDatabase Function (Professional Edition Only)

Summary

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