

Defining a Database

Visual Basic uses a specific set of data access objects to define or *describe* the database, tables, fields and records you work with. Figure 20.3 illustrates the database design of Visual Basic databases. All databases, regardless of their internal structure, will be expressed in terms of this design.

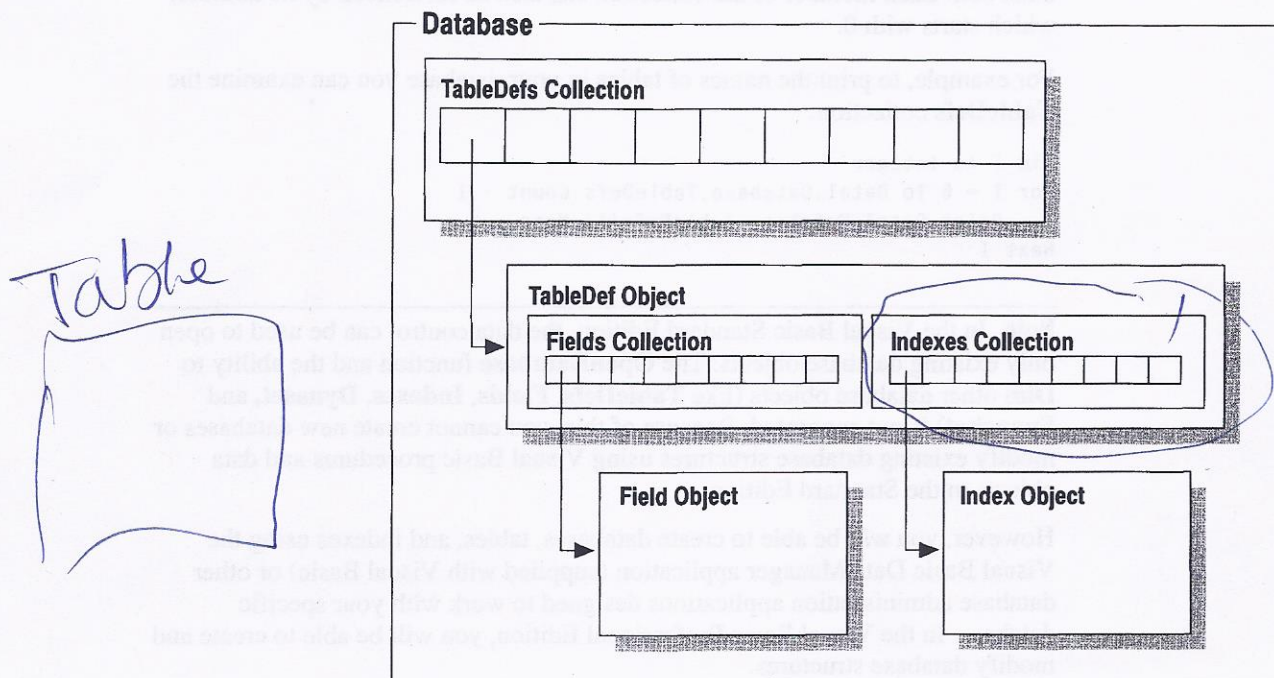


Figure 20.3 Visual Basic Database Structure

The Database Object

The data control's Database property can be represented by a **Database** object that *describes* the current database. It maintains information about the name of the database and its structure. For example, the database structure describes the tables in the database and the fields in each table. The **Database** object also supports several Visual Basic methods that you can use to manage the database.



Collections

A *collection* is a set of related objects. The objects in a collection are referred to as *members* of the collection. In Visual Basic, each member of a collection has a unique name so it's easy to identify. You can use the Count property to determine the number of members in a collection. Collections are managed like the items in a list box. Each member of the collection can also be referenced by its number, which starts with 0.

For example, to print the names of tables in your database you can examine the **TableDefs** collection:

```
Dim I As Integer
For I = 0 To Data1.Database.TableDefs.Count - 1
    Print Data1.Database.TableDefs(I).Name
Next I
```

Note In the Visual Basic Standard Edition, the data control can be used to open only existing database objects. The **OpenDatabase** function and the ability to **Dim** other database objects (like **TableDefs**, **Fields**, **Indexes**, **Dynaset**, and **Snapshot**) is not supported. Because of this, you cannot create new databases or modify existing database structures using Visual Basic procedures and data objects in the Standard Edition.

However, you *will* be able to create databases, tables, and indexes using the Visual Basic Data Manager application (supplied with Visual Basic) or other database administration applications designed to work with your specific database. In the Visual Basic Professional Edition, you will be able to create and modify database structures.

TableDef Objects and TableDefs Collection

Because a database can have several tables, and tables can have several fields, Visual Basic groups the definitions for these objects in *collections*.

A **Database** object can have one or many tables. The description of each table is maintained in a **TableDef** object (shown in Figure 20.4).