

Chapter 5

INTRODUCTION OF MICROSOFT ACCESS

Q1. What is MS-Access? What are the benefits of using it?

Ans.

Overview

- Microsoft Access is a very commonly used powerful DBMS.
- It has a lot of features which help in creating, managing and viewing databases.
- Microsoft Access is a RDBMS which can handle large amount of data.
- It is easy to use and even an inexperienced programmer can use it.

Microsoft Access has many advantages of using it but a few of them are as follows.

- **Sample databases:**
 - Microsoft Access includes sample database applications for users.
 - These applications help users to learn about real word problems.
 - The user can understand the interconnection of tables, queries, forms and reports.
- **Wizards:**
 - As its name, these are really a magical component of Microsoft Access.
 - Using wizard user can create database in a couple of minutes.
 - User can even create and customize almost all objects of the Microsoft Access e.g. tables, queries, forms and reports.
- **Keys to understand the structure:**
 - Microsoft presents the structure of relations in a graphical form.
 - In this way user can easily understand the entities and attributes.
 - It is also helpful in creating and viewing their relationships.
- **Microsoft office integration:**
 - It can also be used with word, excel, and other office applications to create mail merges, charts etc.

- **Easier programming:**
 - Simple code with macros is used to program different tasks of the Microsoft Access.
 - For a little bit complex applications code of VBA is also available.
- **Common Standards:**
 - It has common standards with other applications.
 - For example SQL used in Microsoft Access is standard and can be used in any RDBMS.
- **Redundancy:**
 - It allows storing, manipulating, analyzing and printing information contained in the database.
 - Microsoft Access stores data without redundancy.
 - It stores the data at one place without duplication.

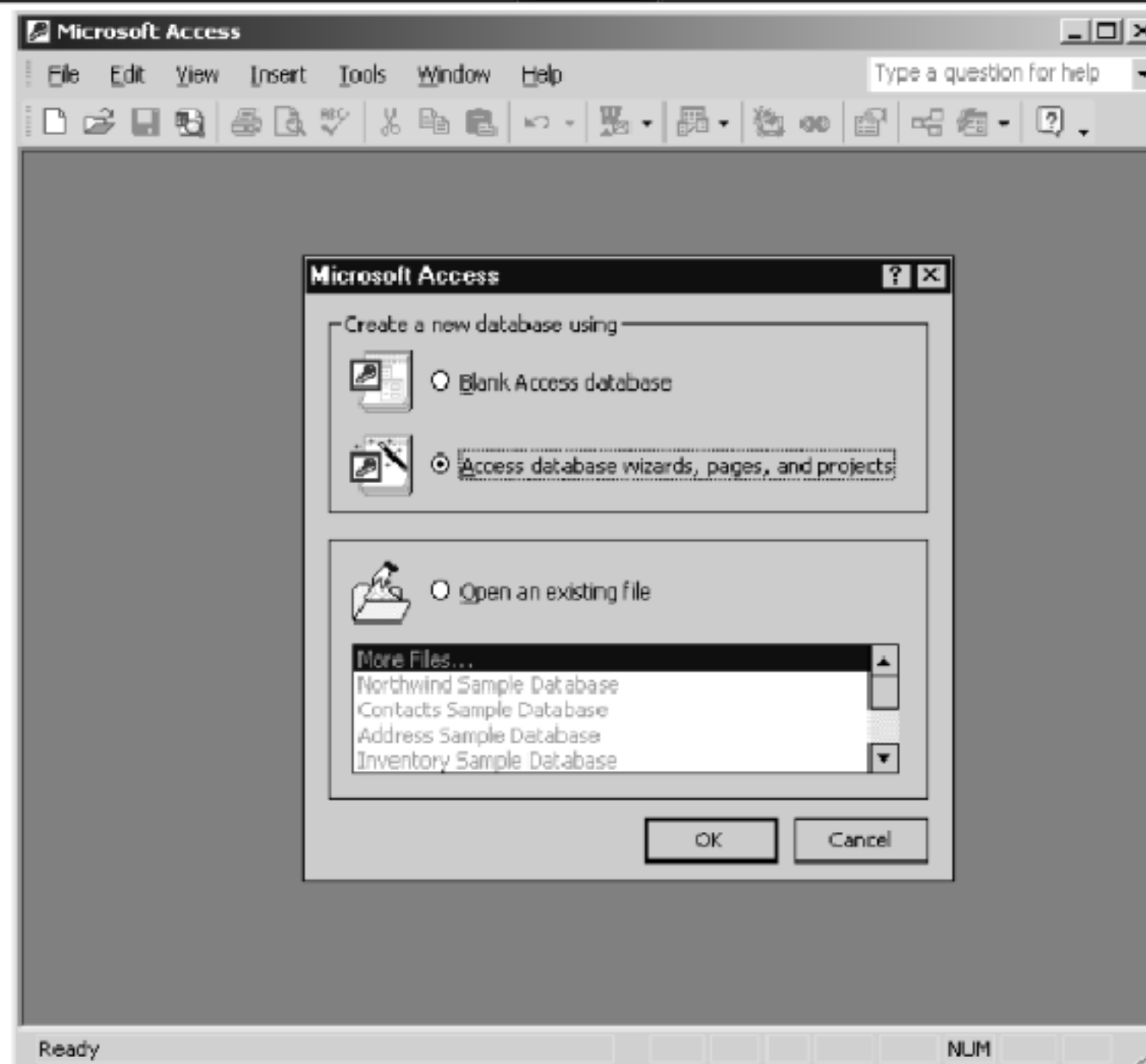
Q2. Explain the procedure for creating a new database in MS-Access.

Ans.

Creating New Databases:

From task bar on desktop

Press start button → Programs → Microsoft Access



Microsoft Access will open with a dialog box. There are three options in the dialog box.

- Blank Access database
- Access database wizards, pages, and projects
- Open an existing file

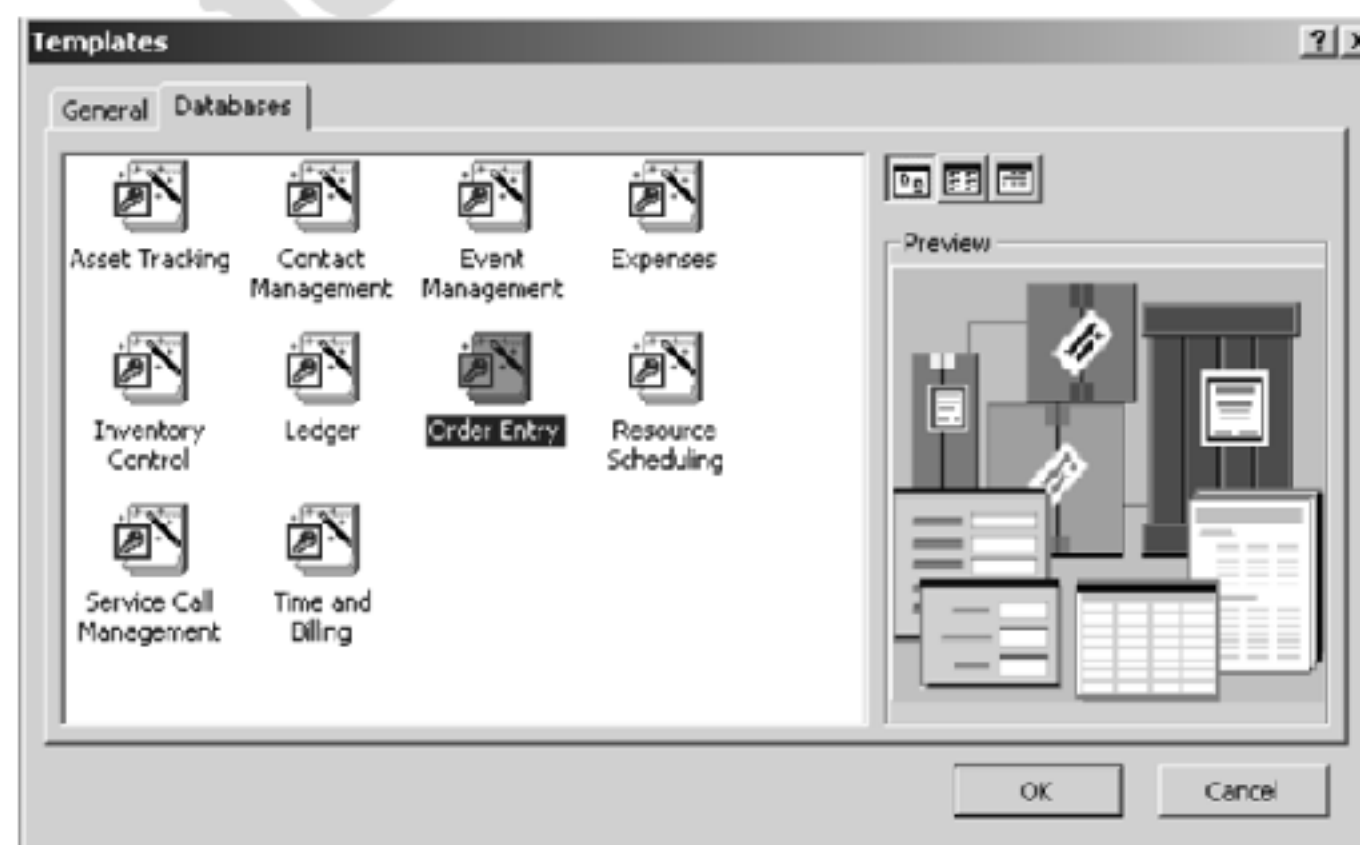
Create a blank Access Database without using wizard

- It is the first option in the dialog box.
- In this option you can create a blank new database.
- When you select this option another dialog will appear.
- In this “new file database” dialog give the name to your database and press create button.
- A database is created at the location with the name you specified.



Create a database using the database wizard

- It is the second option in the dialog box.
- In this option you can create a database using wizard or from template.
- When you select this option another dialog will appear.
- From this dialog you can select a template.
- On the basis of that template you can create a new database.
- It reduces a lot of effort and provides a guideline to create the required database.

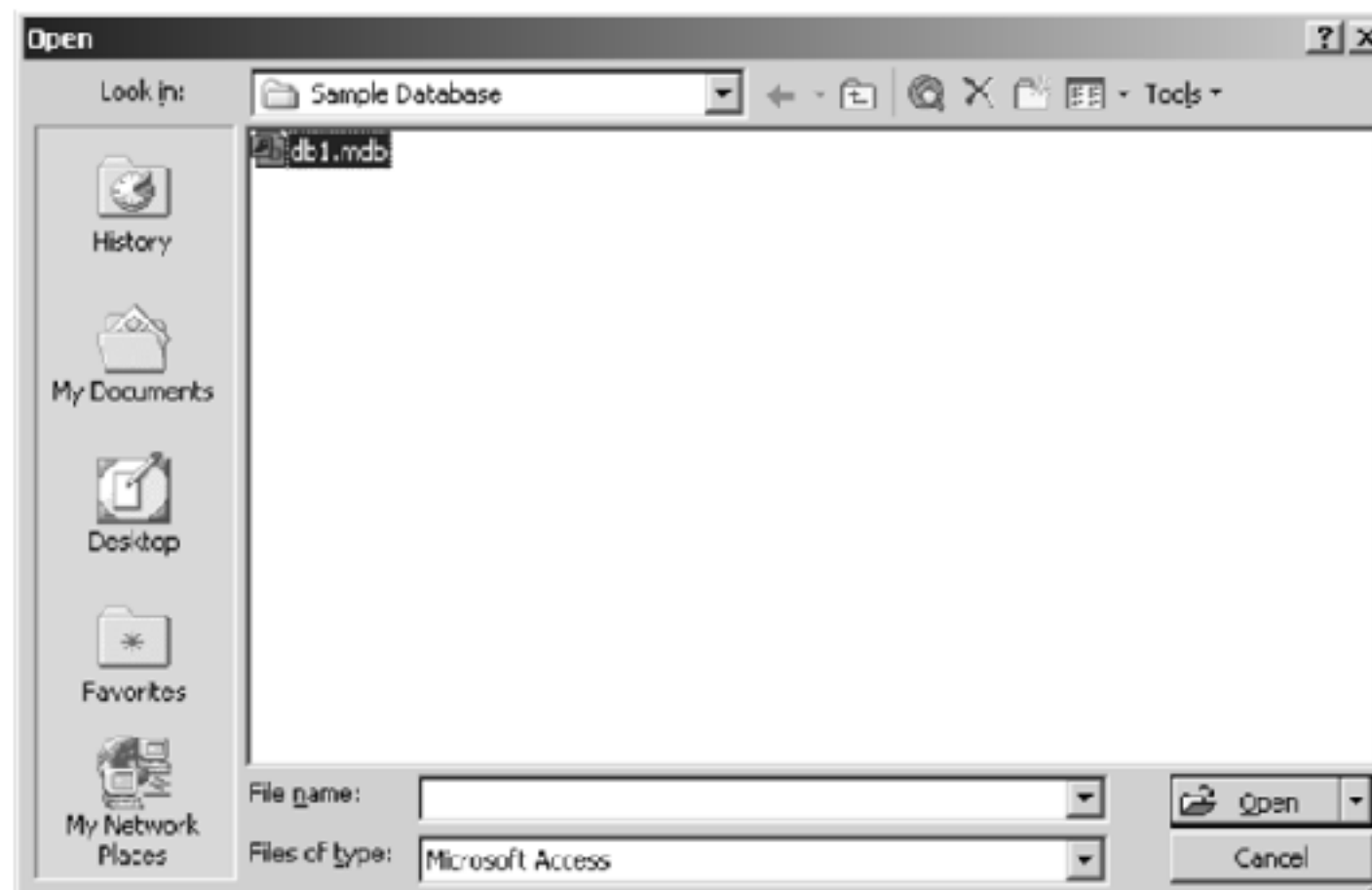


Q3. Explain the procedure to open and exit an existing database.

Ans.

Opening existing Databases

- It is the third option in the dialog.
- In this option you can open an existing database file.
- When you select this option an open dialog will appear.
- From here you can explore your database file and press open button.



Exit Microsoft Access

- After completing your work with Microsoft Access properly exit the program to avoid data loss.
- From file menu select close option to close the open database.
- Again from file menu select the exit option to close the application.

Q4. Discuss the MS-Access Application Window, title bar, menu bar, toolbar, scrollbars and status bar in detail.

Ans.

MS-Access Application Window

Microsoft Access application window is just like any other Microsoft application program's window.

- **Title bar**

It is the top most bar have name of application program with the opened file name. It also has an icon on its left side to represent the application program. It also have three buttons on its right side.

 Close button used to close the application.

 Maximize button to maximize application.

 Minimize button to minimize application.



- **Menu bar**

It is the second bar from top. It consists of many words. Each word on this bar represents a menu. Every word on this bar also has a character underlined. This underlined character represents the short cut key combination for that particular menu e.g. in file menu f is underlined therefore this menu can be accessed using Ctrl + f short cut key.



- **Toolbars**

Toolbar contain icon button to perform certain tasks. Most commonly used features are available on toolbars in the form of buttons.



A few commonly used buttons are explained below.

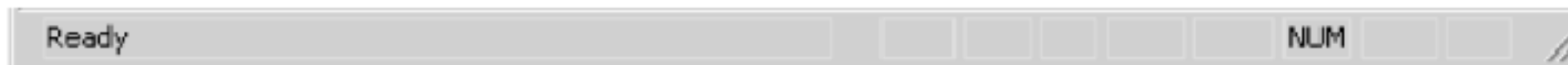
- | | |
|---|---|
|  | New button is used to open a new database |
|  | Open button is used to open an existing database |
|  | Save button is used to save the file. |
|  | Search button is used to search a particular text at particular space |
|  | Print button is used to print any table, report or query result. |
|  | Print preview button is to view before printing |
|  | Spelling and Grammar button is used to check the grammar and spelling of the text |
|  | Cut button is used to cut an object or text selection |
|  | Copy button is used to copy an object or text selection. |
|  | Paste button is used to paste the copied or cut data. |
|  | Undo button is used to remove the last action. |

- **Scroll bar**

Scroll bars are used to move around the window. There are two scroll bars, horizontal and vertical scroll bar.

- **Status bar**

Status bar is the bottom most bar. It shows the status of different operations e.g. whether the num lock and caps lock are on or off



Q5. What is database window in the MS-Access? Also discuss different buttons (objects) available in this window.

Ans.

Database Window

The database window displays all the objects of the database. From here all these objects are managed. From this window all tables, forms, queries and reports are created, edited and maintained.



Database Objects

Database consists of different components called the database objects. These database objects are used to manage data. The four major database objects are as follows.

- **Tables**
 - Table is a collection of rows and columns.
 - All the intersection points of rows and columns are called cells.
 - In these cells data can be stored.
 - Each column of table represents a field.
 - Each field is specified to store a particular type of data.
 - Table can be viewed in different ways but most commonly are datasheet view and design view.

Category ID	Category Name	Description	Picture
1	Beverages	Soft drinks, coffees, teas, beers, and ales	Bitmap Image
2	Condiments	Sweet and savory sauces, relishes, spreads, :	Bitmap Image
3	Confections	Desserts, candies, and sweet breads	Bitmap Image
4	Dairy Products	Cheeses	Bitmap Image
5	Grains/Cereals	Breads, crackers, pasta, and cereal	Bitmap Image
6	Meat/Poultry	Prepared meats	Bitmap Image
7	Produce	Dried fruit and bean curd	Bitmap Image
8	Seafood	Seaweed and fish	Bitmap Image

Record: 1 of 8

Data sheet view of a table

Field Name	Data Type	Description
CategoryID	AutoNumber	Number automatically assigned to a new category.
CategoryName	Text	Name of food category.
Description	Memo	
Picture	OLE Object	A picture representing the food category.

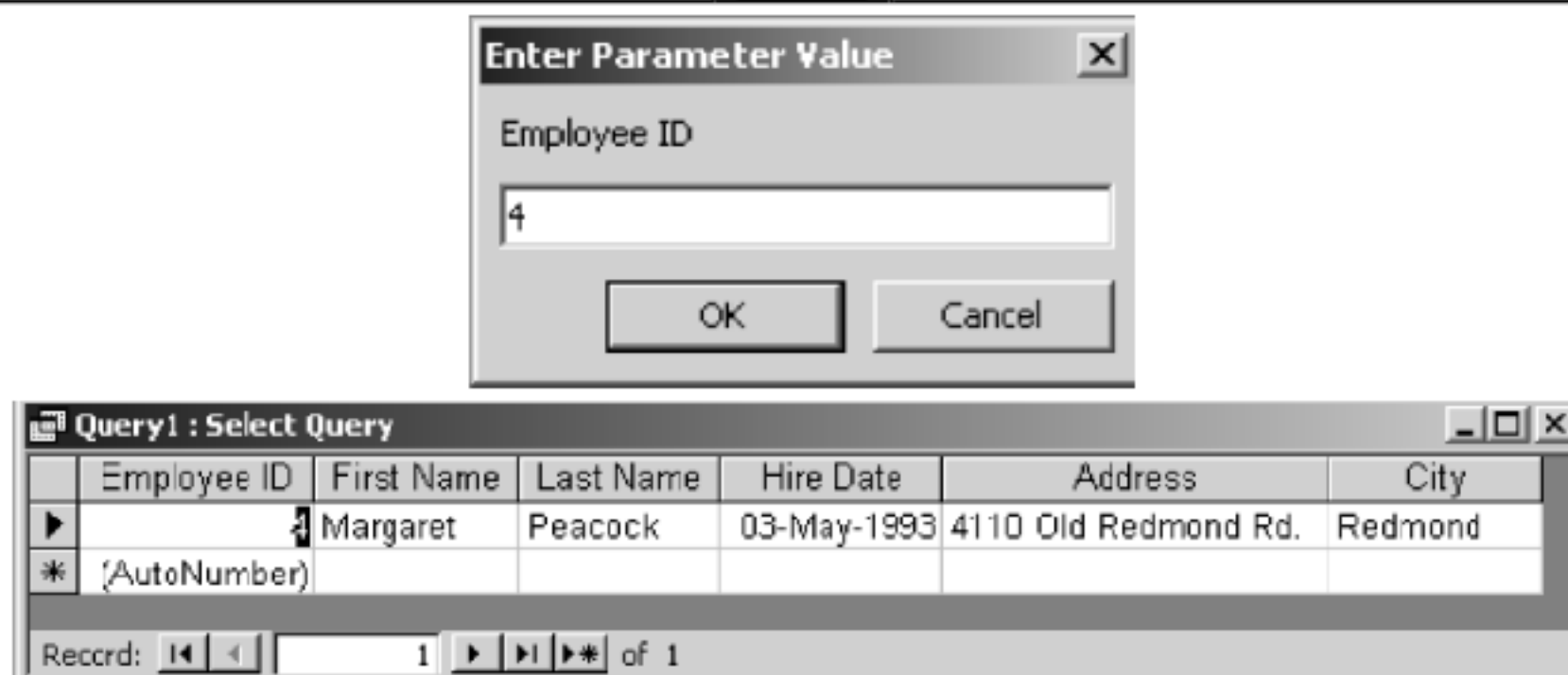
General	
Field Size	Long Integer
New Values	Increment
Format	
Caption	Category ID
Indexed	Yes (No Duplicates)

A field name can be up to 64 characters long, including spaces. Press F1 for help on field names.

Design view of a table

- Queries**

- Query is used to get data from the database.
- The actual objective of data storage is that it can be retrieved when ever it is required.
- Using query object data can also be deleted and updated.
- It is a powerful object to create reports according to the requirements.



The image shows two overlapping windows from Microsoft Access. The top window is titled 'Enter Parameter Value' and contains a text box labeled 'Employee ID' with the number '4' entered. Below the text box are 'OK' and 'Cancel' buttons. The bottom window is titled 'Query1 : Select Query' and displays a table with the following data:

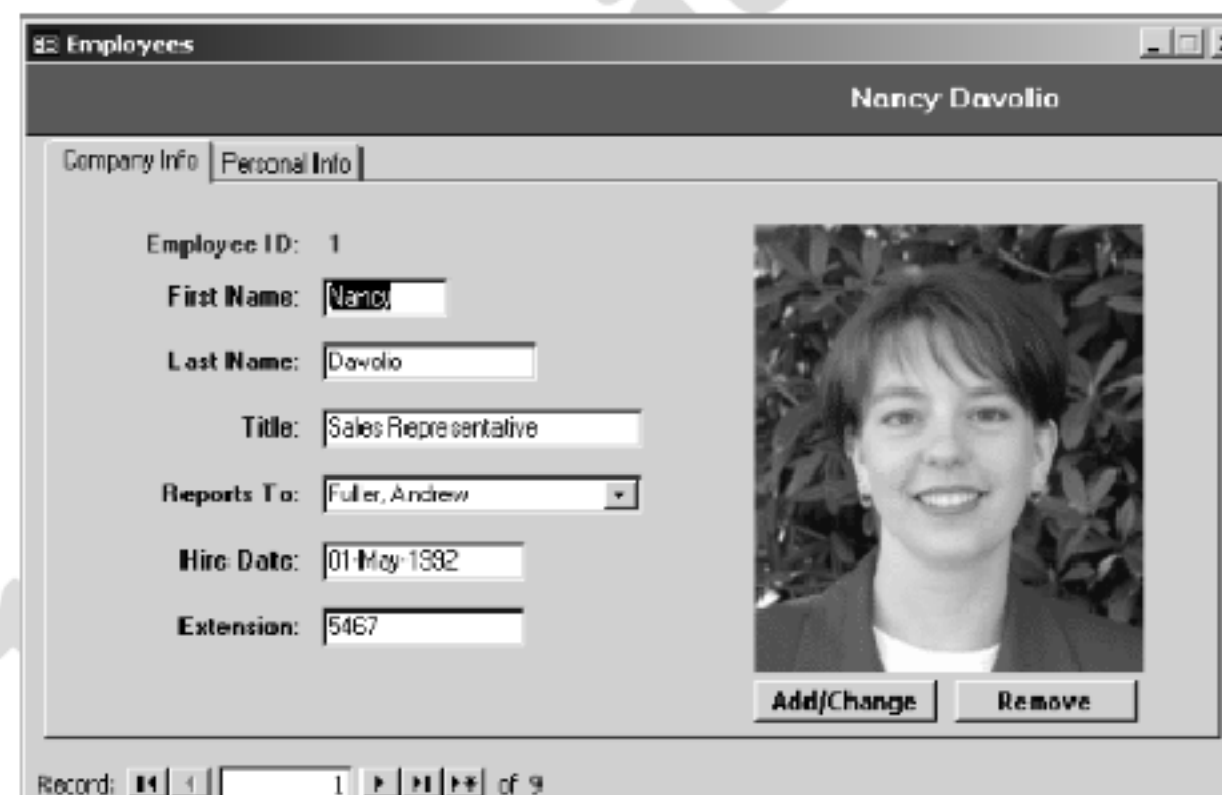
Employee ID	First Name	Last Name	Hire Date	Address	City
4	Margaret	Peacock	03-May-1993	4110 Old Redmond Rd.	Redmond

Below the table, the status bar indicates 'Record: 1 of 1'.

Query result against given information in the above dialog

- **Forms**

- The window that is used to enter data into the database is called form. Using form data can be entered, edited and even viewed in Microsoft Access.
- Data entered in forms directly goes to the tables.
- Forms are always made after table creation.
- The fields on form are linked to the table fields.



The image shows the 'Employees' form in Microsoft Access. The form has two tabs: 'Company Info' and 'Personal Info'. The 'Personal Info' tab is active, showing the following fields:

- Employee ID: 1
- First Name: Nancy
- Last Name: Davolio
- Title: Sales Representative
- Reports To: Fuller, Andrew
- Hire Date: 01-May-1992
- Extension: 5467

Below the fields is a photo of Nancy Davolio. At the bottom of the form are 'Add/Change' and 'Remove' buttons. The status bar at the bottom indicates 'Record: 1 of 9'.

- **Reports**

- Reports are used to view data from database in a formatted way.
- Not all but most of the RDBMS provide this facility to their users.
- Reports can be generated on the basis of tables and queries.
- We can apply formatting on the report to make them more presentable and understandable.

Summary of Sales by Year
01-Aug-2007

1996

<u>Quarter:</u>	<u>Orders Shipped:</u>	<u>Sales:</u>
3	61	\$63,905
4	82	\$129,331
Totals for 1996:	143	\$193,317

1997

<u>Quarter:</u>	<u>Orders Shipped:</u>	<u>Sales:</u>
1	92	\$143,703
2	92	\$145,655
3	105	\$144,320
4	109	\$175,169
Totals for 1997:	398	\$608,047

Page: 1

- **Pages**
 - It is used to create and modify Data Access Pages. Data Access Page is a HTML document (Web page). It is designed for viewing data on the Internet. A Data Access Page is like a form, but it is specially designed to run in a Web browser to access data from database stored on the Web server.
- **Macros**
 - It is used to create and modify macros. A macro is a set of one or more actions. each action performs a particular operation, such as opening a form or printing a report. Macros can help you to automate common tasks.
- **Modules**
 - It is used to create and modify modules. A module is a collection of Visual Basic declarations and procedures that are stored together as a unit. Visual Basic code can be written to perform different operations on database.