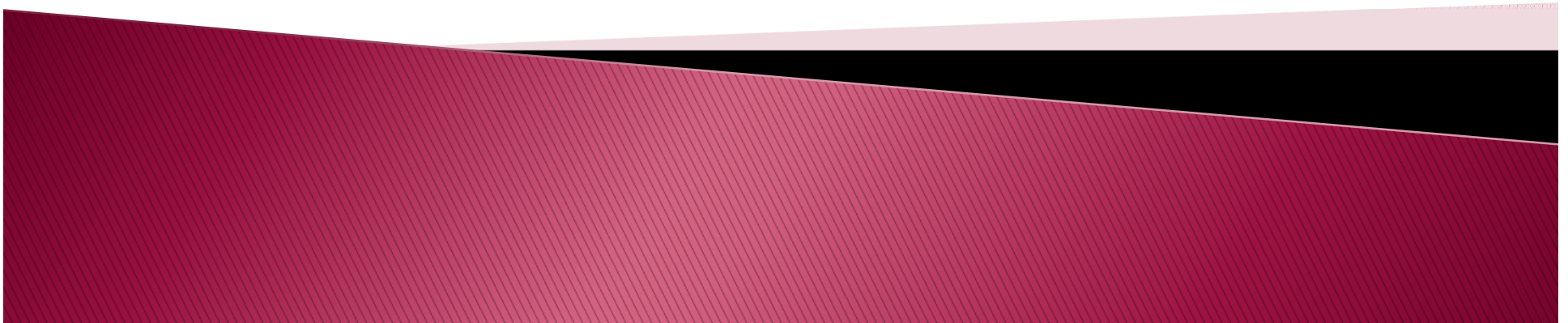


# Introduction to MS Access

Principles of Management Information Systems  
**MIS 201 Lab**



# Outline

- ▶ Introducing MS Access
- ▶ Creating Access Tables
- ▶ Establishing Relationships
- ▶ Creating Queries
- ▶ Creating and Modifying Forms
- ▶ Creating and Modifying Reports

# Introducing MS Access

- ▶ MS Access is an application software that facilitates us to create Database Management Systems (DBMS).

- ▶ **Database:**

Is a collection of information related to a particular subject or purpose.

# Introducing MS Access

## Database Terminology:

- **Field:**  
A single characteristic of a person, place, object, event, or idea like *Name, Salary, Age, ...etc.*
- **Record:**  
The field information for one person in the list such as *John Doe, \$25,000, 45, .....etc.*
- **Table:**  
A collection of rows and columns used to store field data. For example: *Employee table*

# Introducing MS Access

**Fields**

**Student Table**

**StudentId**

**StudentLastName**

**StudentFirstName**

**StudentRank**

700100109

Wilkinson

June

Senior

700987131

Hughes

Brian

Junior

700617912

Abair

Mindy

Freshman

700941142

Carlton

Larry

Junior

700464654

Williams

Pamela

Sophomore

700654778

Dulfer

Candy

Freshman

**Records**

# Introducing MS Access

## Database Objects:

- **Query:**

An object that extracts records from other tables / queries under some criteria.

- **Form:**

An object that displays data from a table / query in an easy to use format.

- **Report:**

An object used to present data in a printed format.



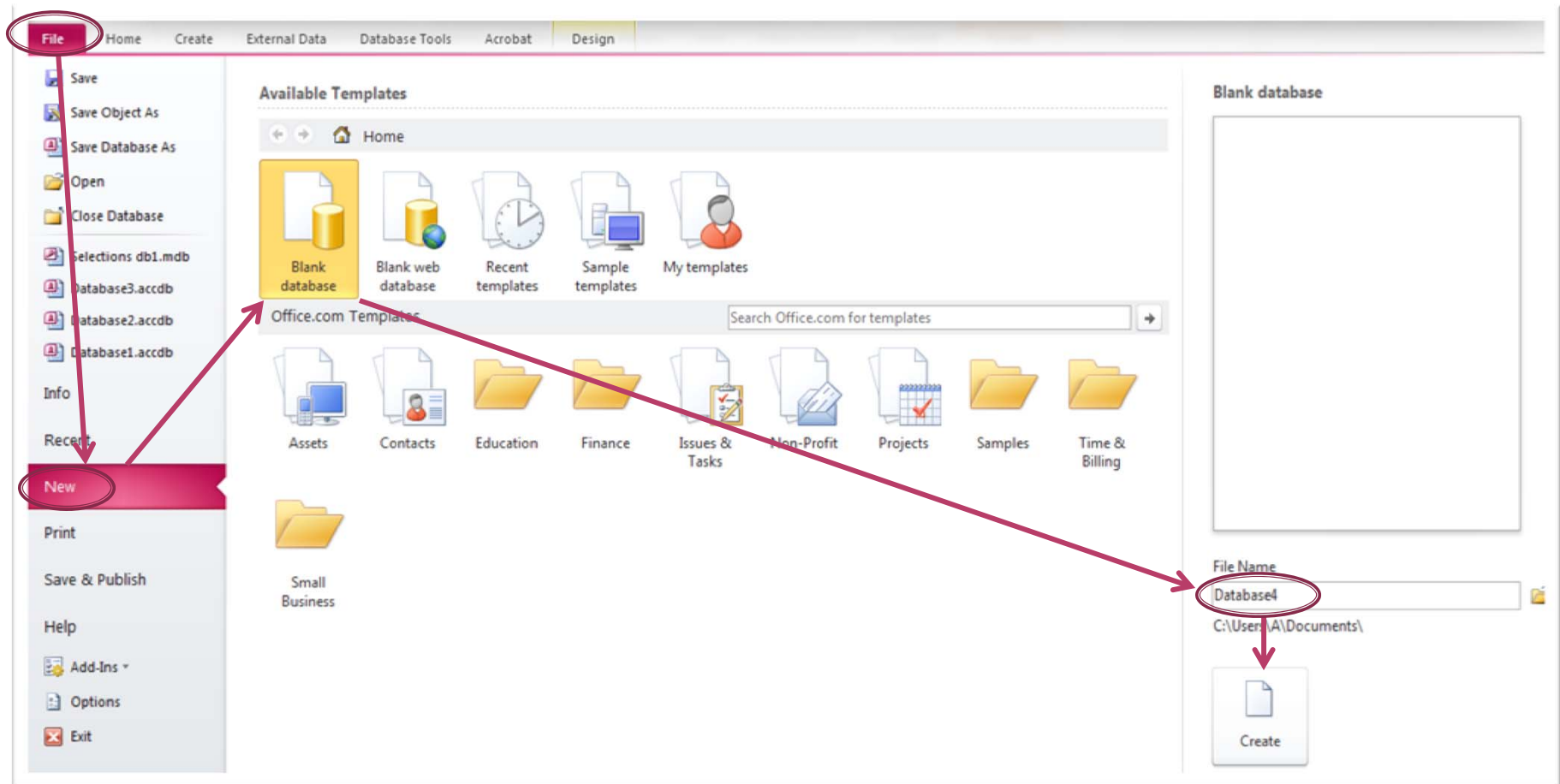
# Introducing MS Access

To create a New Database:

- Click on “File” Menu – “New”
- Select “Blank database”
- Type in database filename and click on “Create” button.

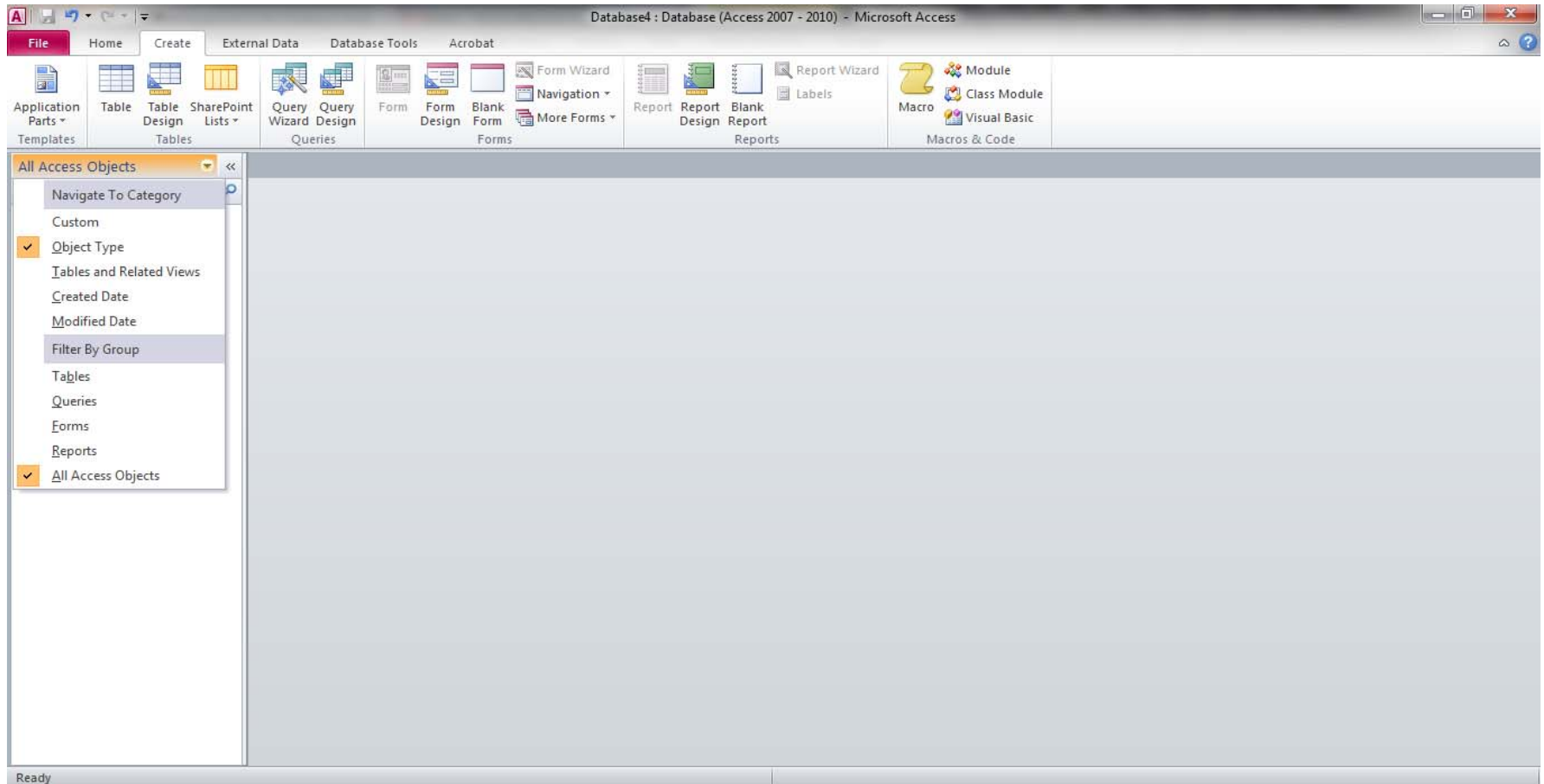
*Now you can see the database name in the title bar of the Access database window.*

# Introducing MS Access





# Introducing MS Access



# Creating Access Tables

To create a New Table:

- Click on “Create” tab
- Select “Table Design”
- Type in the *Field Names* and select *Data Type* in front of each field name.

## Field Properties:

Includes their data type, field size, and an optional description of the field.

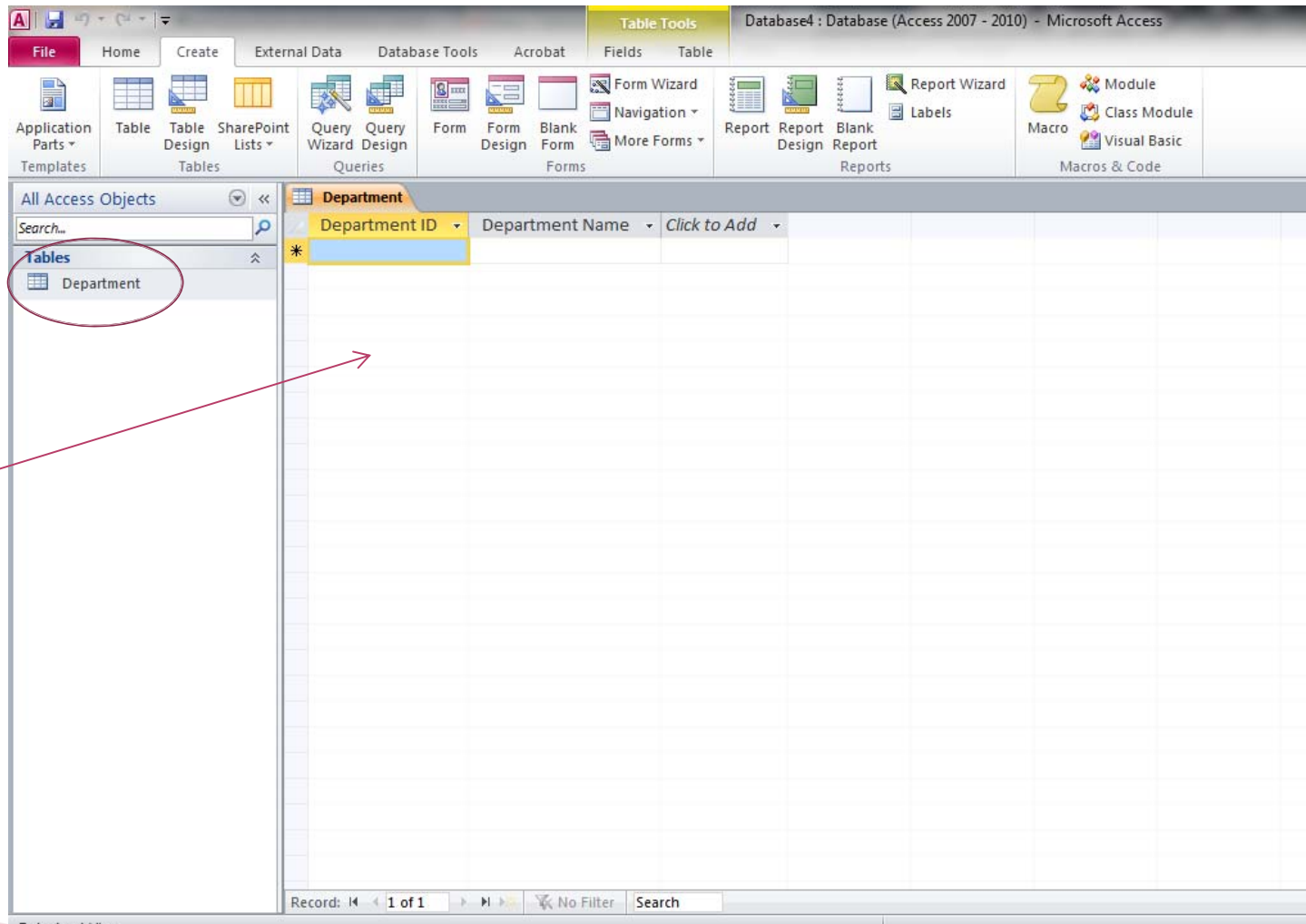
# Creating Access Tables

## To create a New Table:

- Determine the Primary Key by clicking on “Design” tab – “Primary Key”
  - *Primary Key is the key that uniquely identifies record in the table.*
- Click on “File” – “Save Object As” to write the “Table name”
- Double click on the created table (in the navigation Pane) to fill out the records

# Creating Access Tables

Data Sheet View



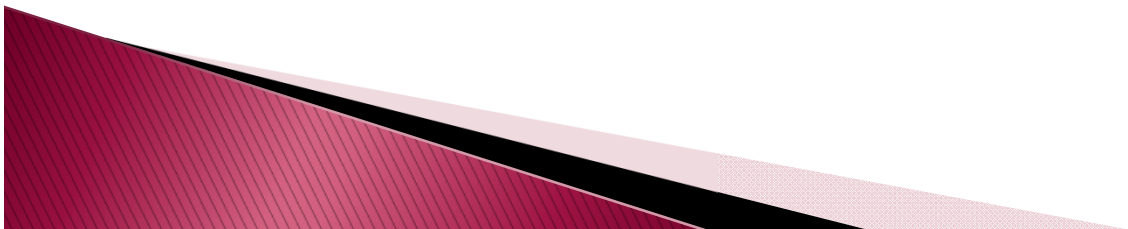
# Establishing Relationships

## ► Relationships:

- It exists between two tables and called a join
- It supports the appropriate kind of join between tables, all designed to enforce the concept of referential integrity.

- **Referential Integrity:**

Is a database concept that ensures that relationships between tables remain consistent.

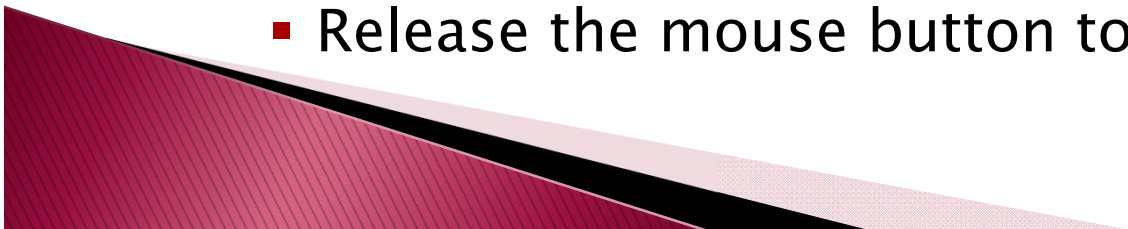


# Establishing Relationships

## ► To create Relationships:

*Notes when creating a relationship, close any open table.*

- Click the “Relationship” button on the “Database Tools”
- The “Show Table” dialog appears
- Select the table names then click “Add”
- Drag the primary key field from one table and insert it into the other table where it becomes a foreign key
- Release the mouse button to display a dialogue box



# Establishing Relationships

- ▶ To create Relationships (cont.):

- Place a check to enforce referential integrity between the two tables.

☐ Enforce Referential Integrity

- ▶ Foreign Key:

Is a key used to link two tables together

- ▶ Types of Relationships:

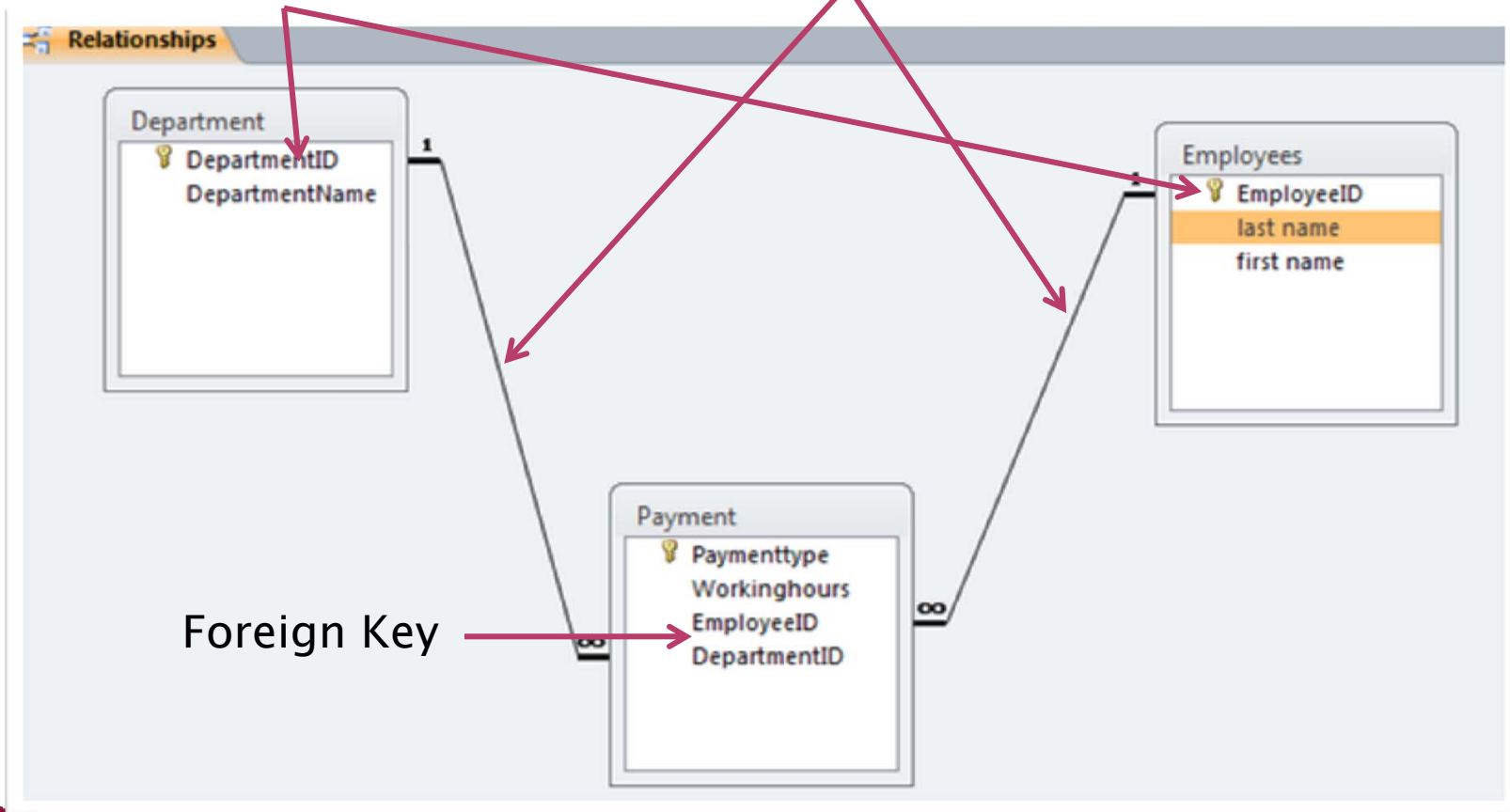
- One-to-one relationships
- One-to-many relationships
- Many-to-many relationships



# Establishing Relationships

Primary Key

One to many relationship





# Creating Queries

- ▶ **Query:**

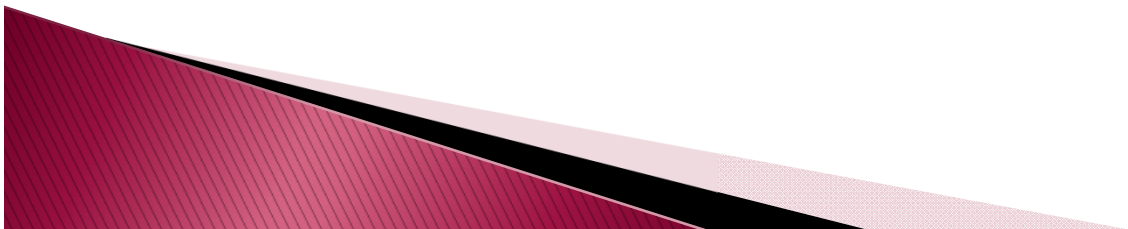
A database object that you create to view, change, and analyze data in different ways.

- ▶ **Field:**

Fields of the selected tables.

- ▶ **Criteria:**

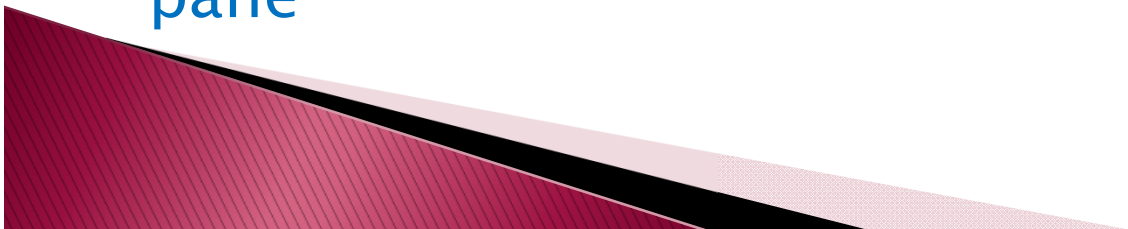
It means the condition which is fulfilled for extraction of records from table like **Basic Salary** ≤ 3000



# Creating Queries

- ▶ To create a New Query:
  - Click on “Create” tab
  - Select “Query Design”
  - The “Show Table” dialog appears
  - Select the table names then click “Add” once then click “Close”

The tables you have selected are placed in the upper pane



# Creating Queries

## ► To create a New Query (cont.):

In the lower pane (query design grid):

- Enter the fields, for which the query will ask the user for values, in the *Criteria* under that fieldname
- Enter the value, you want to use, in the criteria row to select records
- Click the run button under “Design” tab and save

Those records that match the value will be displayed in the query datasheet.



# Creating and Modifying Forms

## ► Form:

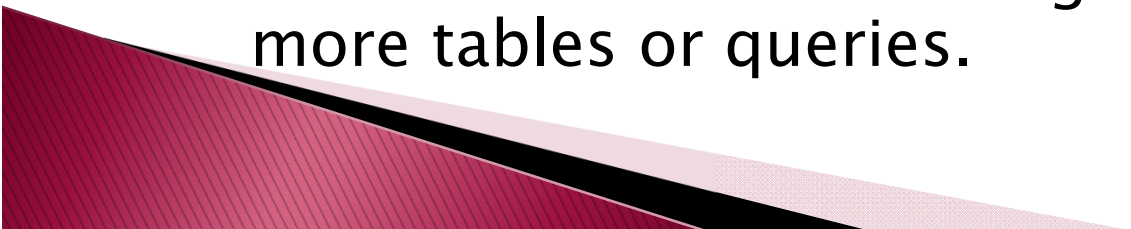
- Is an object that makes it easy to operate on a database.
- There are two methods to create a new form:

### 1. Form Design

It allows you to create the form by adding controls to the form's Detail section.

### 2. Form Wizard

The form wizard option lets you choose the specific fields to include which might belong to one or more tables or queries.

A decorative graphic in the bottom-left corner consisting of overlapping triangles in shades of maroon and magenta, with a black diagonal line.

# Creating and Modifying Forms

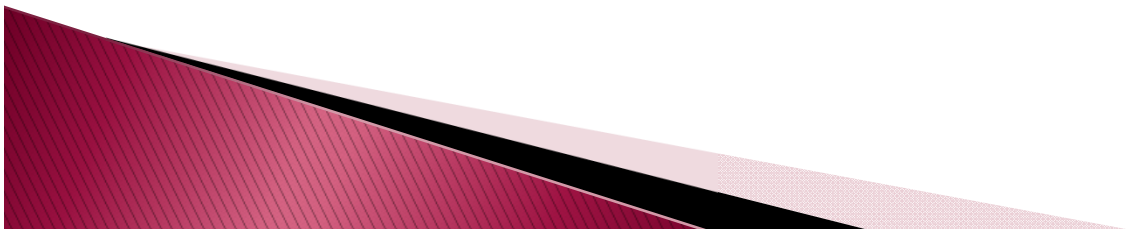
- ▶ **To create a new form using the Form Design:**
  - Click on “Create” tab
  - Select “Form Design”
  - A blank form will appear
  
- ▶ **To add controls to the form:**
  - From the fields’ list, click on “show all tables”
  - Select the desired table
  - Click on the desired field
  - Begin to drag it toward the form’s Detail section



# Creating and Modifying Forms

*Now you can edit, reposition, delete controls from the form.*

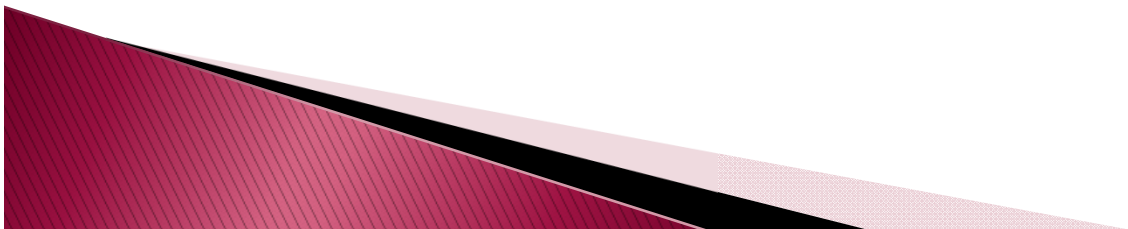
- ▶ To view the form:
  - Click on “View” – “Form View”
- ▶ To save the form:
  - Click on “File” – “Save object as”



# Creating and Modifying Reports

## ► Report:

- Is an effective way to present your data in a printed format.
- Once the report has been created, you can change the design.
- You can preview the report to view how it will look when printed.



# Creating and Modifying Reports

There are two methods to create a new report:

1. Report Design:

It allows you to create a report by adding controls to the report's Detail section.

2. Report Wizard

- Access will create the report for you according to your specifications.
- It will ask you a series of questions to help you format the report.





# Creating and Modifying Reports

- ▶ To create a new form using the Report Wizard:
  - Click on “Create” tab
  - Select “Report Wizard”
    - Choose the primary tables (or queries)
    - Move the desired fields from the “Available Fields” list box to the “Selected fields”
    - Decide on how you want the report to be grouped
    - Sort the data on a particular field or several fields
    - Select the layout and orientation of the report
    - Add a title to your report



# Creating and Modifying Reports

*Now you can edit, reposition, delete controls by going to “View” then “Design View”.*

- ▶ **To save the report:**
  - Click on “File” – “Save object as”
  
- ▶ **To print the report:**
  - View the report in “Print Preview” to make any changes by clicking on “View” – “Print Preview”
  - Click on “File” then “Print”



