# 3 MORE ON MS ACCESS 2010

**Your Aim**
to learn about:

- Forms in MS Access
- Reports in MS Access
- Queries in MS Access

## INTRODUCTION

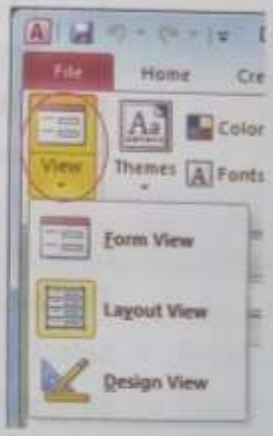
You have learnt how MS Access is used to create tables and maintain records in a database. Suppose, there are many columns in a table, then you may have to spend too much time in looking for a particular data from all records. Also, all information about a record is not always needed. To solve this problem, MS Access has some more features like Forms, Queries and Reports. These features help in shortlisting the required information. It also helps in linking two or more tables and display a consolidated information from all the selected tables.

## FORMS IN MS ACCESS

Forms are used to add, edit and display data from the tables in a user-friendly manner. While creating a form, you can choose the fields to be displayed and how you want to display them. By creating forms, you can make your database more user friendly for those who edit and enter the records.

The three main views in which a form can be displayed are:

- **Form View** is used to enter, edit and view data.
- **Design View** is used to adjust the design of your form. It gives you a more detailed view of the structure of a form such as Header, Detail and Footer sections.
- **Layout View** is used to change the appearance and size of various controls of a form.



Views options of a Form

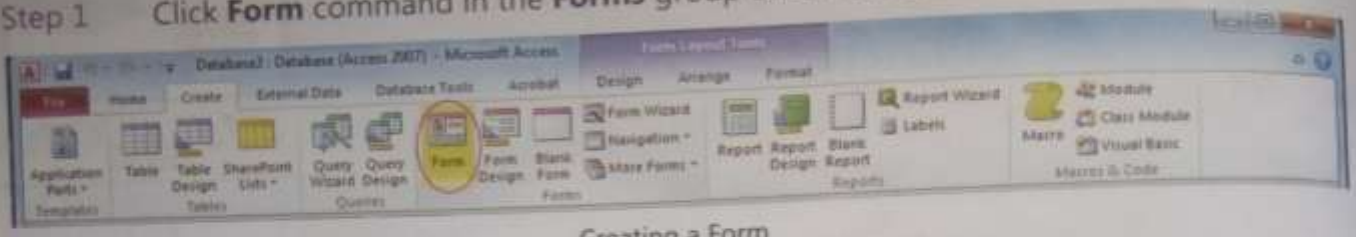
**TECH FUNDA**

Shortcut key for switching to **Form View** from the **Design View** is F5.

## Creating a Form

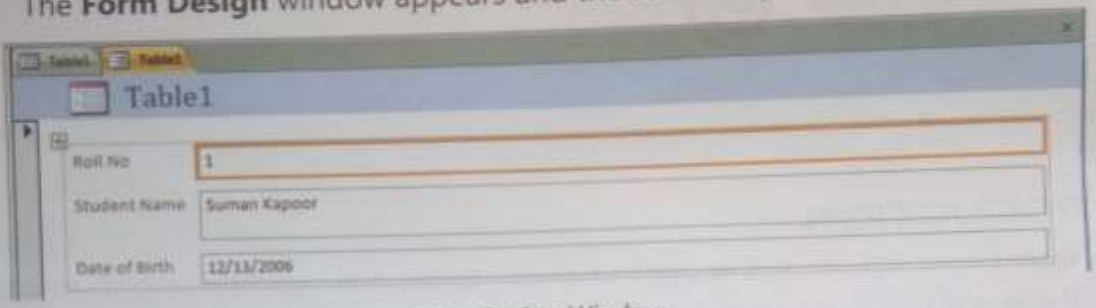
To create a form, follow these steps:

Step 1 Click **Form** command in the **Forms** group under the **Create** tab.



Creating a Form

Step 2 The **Form Design** window appears and the form is opened in the Layout View.




Form Design Window

Step 3 By default, the form contains all the field labels from the table and corresponding text boxes.

Step 4 Using various commands in the **Header/Footer** group on the **Design** tab, you can improve the appearance of your form.

a. **Logo** command is used to place the image of the company/ organization.

b. **Title** command is used to edit the title of the form.

c. **Date and Time** command is used to display the date and time in the desired format on the form.


Header/Footer group

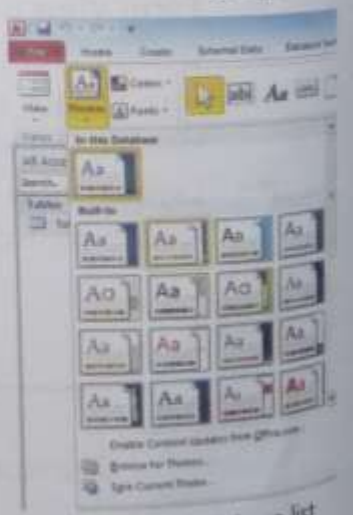
Step 5 Click on the drop-down arrow of **Themes** command under **Design** tab. A list of themes appears.

Step 6 Select a theme from the list.

Step 7 Save the form by clicking on the **Save** button in the **Quick Access Toolbar**.

Step 8 The **Save as** dialog box will appear. Type the name of the form and click **OK** button.

Step 9 Click on the **Form View** button at the bottom right of the **Form Design** window to see the form.

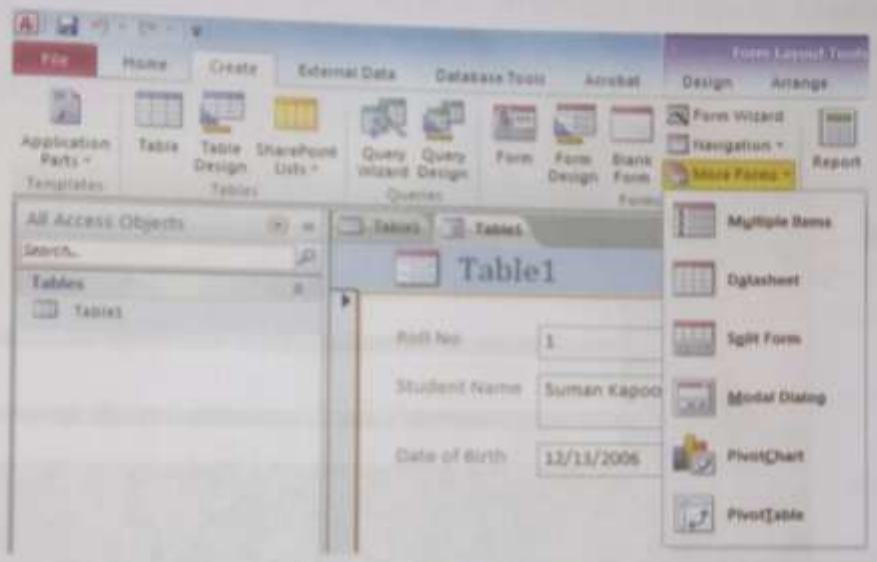


Themes drop-down list

## Types of Forms

The different types of basic forms in MS Access are:

- **Multiple Items:** In this form you will see multiple records at the same time.
- **Datasheet:** This form just looks like a regular datasheet, but it is actually a form. It is useful when you want to show a datasheet on a sub-form.
- **Split Form:** This form shows two parts. The upper part shows the form and the lower part shows the database for the table.
- **Modal Dialog:** It is useful in creating navigational menu systems. It looks like a dialog box.



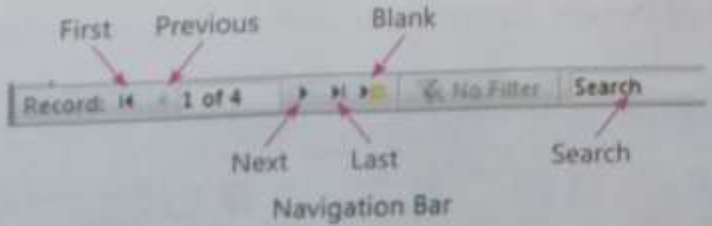

Types of Forms in Access

You can select a type of form needed by clicking on **More Forms** command of **Forms** group under the **Create** tab.

## Viewing the Records

You can observe Navigation Bar at the bottom of the Form window. The navigation bar helps in scrolling between the records. It also displays the location of the selected record in the table as well as total number of records in the table. The First record and Last record buttons help to quickly move to the first and the last records respectively of the table.

You can also search for a particular record in the table by entering the keywords in the Search text box.

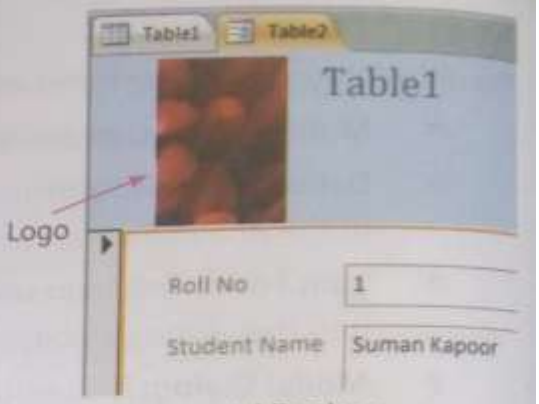



Navigation Bar

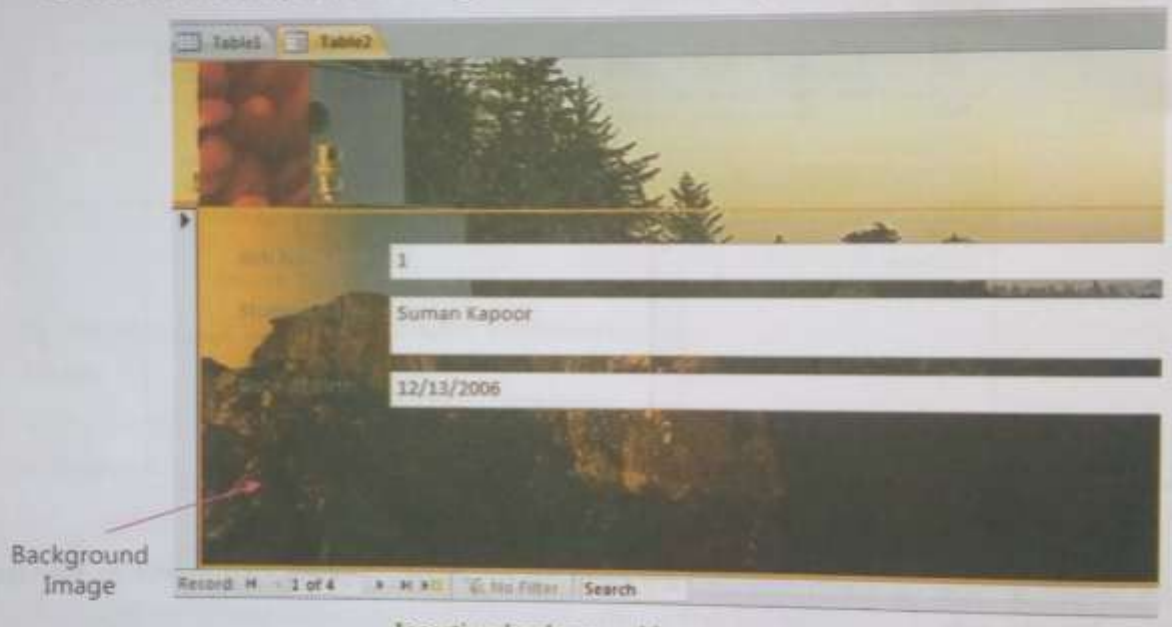
## Formatting a Form

You can change the appearance of the form by using various options available on the **Design** and **Format** tabs.

- **Using Design Tab:** You can add logo and title to your form by making use of **Logo** and **Title** commands present under the **Header/Footer** group in the **Design** tab.
- **Using Format Tab:** You can change the font, size, colour and alignment of labels, add a background image to the form, change the colour of the shapes, etc. using various commands present on the **Format** tab.




Adding logo




Inserting background image

## QUERIES IN MS ACCESS

A query is the most important feature provided by MS Access 2010 which can give you information that you might not be able to find by looking at the table directly. Using a query, you can search or compile data from one or more tables in a database by giving specific search conditions so that you are able to view the exact data that you want. You can then review, add, change or delete data from your database.

Access allows you to create or build a query and save it in the database so that you can run it multiple times. The **Query Design** command to create a query is in the **Queries** group on the **Create** tab.


Creating a query

## Types of Queries

The different types of queries in MS Access are:

- **Select Query:** It retrieves data from one or more tables. It displays the record in a datasheet, to group data, and to calculate sum, count, average, etc.
- **Parameter Query:** It is a type of select query which prompts you for the input before it runs. The query then uses the input as the criteria that controls the result.
- **Action Query:** It creates a new table or alters your data by adding, deleting, updating and appending data from it.
- **Crosstab Query:** It is a query that uses a row headings and column headings so that you can see your data in terms of two categories at once.
- **Structured Query Language (SQL):** It is a computer language for relational database and data manipulation which is used to insert, update and modify data.

## Setting up Relationship

Relationships are links that associate a field in one table with the same field in another table. A relationship works by matching a field with the same name in both the tables. The matching fields are the **Primary Key** from one table that uniquely identifies each record in a table. A **Foreign Key** is a column in one table that must match the **Primary Key** of another table.

To create a relationship, create two tables:

- Table named 'Table2' that holds general information about the students such as their Roll No., Name, Father's Name, Address, etc.
- Table named 'Table3' that holds information about Roll No., Marks, Percentage, Grade, etc.

Table2

| Roll No | Student Nan | Father's Nan | Class |
|---|---|---|---|
| 1 | Suman Kapoor | Mr. Udoy Kapo | 8 |
| 2 | Swati Jain | Mr. Prashant Ja | 8 |
| 4 | Nazia Hasan | Mohd. Arif Has | 8 |
| 5 | Surabhi Upadh | Mr. Rajesh Upa | 8 |

Table3

| Roll No | Marks | Percentage |
|---|---|---|
| 1 | 192 | 96 |
| 2 | 188 | 94 |
| 3 | 142 | 71 |
| 4 | 166 | 83 |

Using tables for defining relationships

To define relationship between the two tables, follow these steps:

Step 1 Click on the **Relationships** command from **Relationships** group under **Database Tools** tab.


Database Tools tab

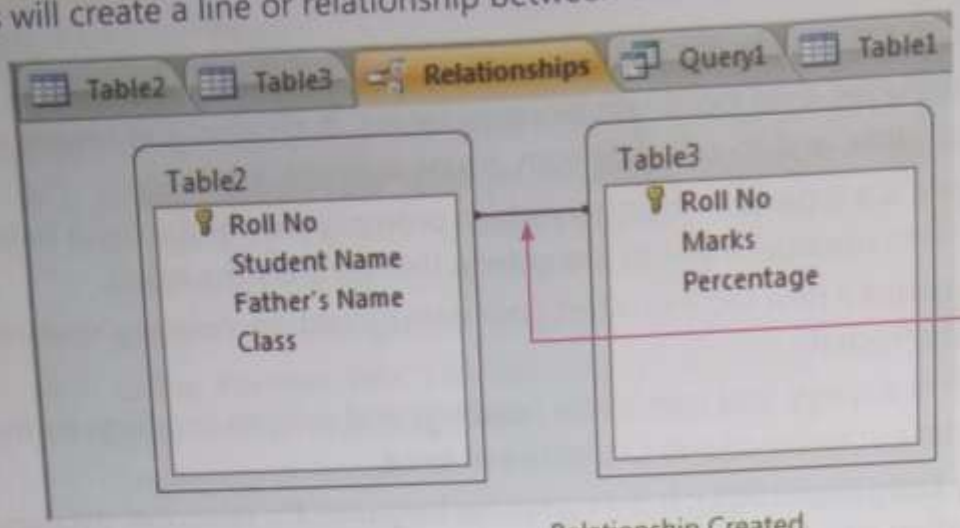
Step 2 The **Show Table** dialog box will open. Click on the **Add** button. The selected table will appear in the relationship window.

Step 3 Click and hold on the **Primary Key** field of one table.

Step 4 Drag the mouse pointer to the common field in the other table and release the mouse button.

Step 5 This will open **Edit Relationships** dialog box. Click on the **Create** button.

This will create a line or relationship between the related fields of the two tables:




Relationship Created

## Creating a Query

To create a query, follow these steps:

Step 1 Click on **Query Design** command from **Queries** group under **Create** tab.

Creating a query

Step 2 The **Show Table** dialog box will open in the **Relationship** pane.

Step 3 Add the field's name to the query window and specify the criteria.

| Field: | Roll No | Student Name | Marks | Percentage |
|---|---|---|---|---|
| Table: | Table2 | Table2 | Table3 | Table3 |
| Sort: | | | | |
| Show: | ☑ | ☑ | ☑ | ☑ |
| Criteria: | | | >180 | |
| or: | | | | |

Defining query criteria

The parameters of the design grid in the bottom part of the Query window are:

- **Field:** It is the first row of the design grid that displays the selected field names from the table.
- **Table:** It displays the name of the existing tables in the relationship window.
- **Show:** This means that the field with the check mark will be displayed in the result and the fields with an uncheck mark will not be displayed when the query runs.
- **Sort:** It displays the data in either descending or ascending order during the run time.

- **Criteria:** This displays the condition on the basis of which the records will be filtered and displayed in the query output.
- **Or:** It is used to set multiple conditions in a query.

After creating the query, we need to run the query by clicking on the Run button . The related records of the query will be displayed in the Datasheet view.

| Roll No | Student Nan | Marks | Percentage |
|---|---|---|---|
| 1 | Suman Kapoor | 192 | 96 |
| 2 | Swati Jain | 188 | 94 |

Query result

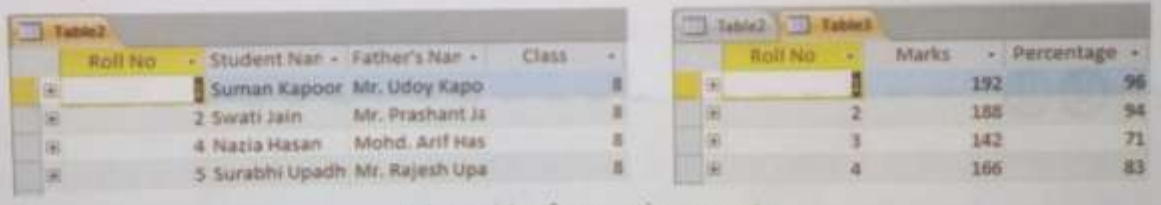
## REPORTS IN MS ACCESS

A report in MS Access is a feature which allows you to organize and present your data in a user-friendly format so that it can be printed. The four new tabs that appear on the ribbon of the Report window are **Design**, **Arrange**, **Format** and **Page Setup**.

### Creating a Report

To create a report, follow these steps:

Step 1 Open the Tables such as Table2 or Table3.



| Roll No | Student Nan | Father's Nar | Class |
|---|---|---|---|
| 1 | Suman Kapoor | Mr. Udoy Kapo | 8 |
| 2 | Swati Jain | Mr. Prashant Ja | 8 |
| 4 | Nazia Hasan | Mohd. Arif Has | 8 |
| 5 | Surabhi Upadh | Mr. Rajesh Upa | 8 |

| Roll No | Marks | Percentage |
|---|---|---|
| 1 | 192 | 96 |
| 2 | 188 | 94 |
| 3 | 142 | 71 |
| 4 | 166 | 83 |

Using tables for creating reports

Step 2 Click on the **Report** command from **Reports** group under **Create** tab.

Creating a report

Step 3 The report of the table, which is open will be created.

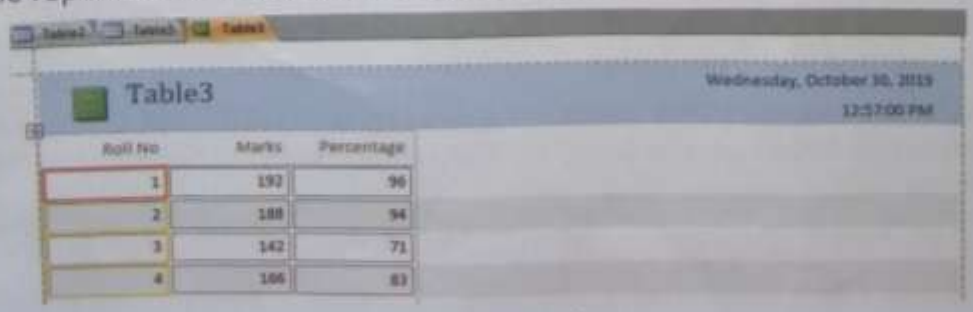


Table3

Wednesday, October 30, 2019
12:57:00 PM

| Roll No | Marks | Percentage |
|---|---|---|
| 1 | 192 | 96 |
| 2 | 188 | 94 |
| 3 | 142 | 71 |
| 4 | 166 | 83 |

Report created

## Printing a Report

To print a report, follow these steps.

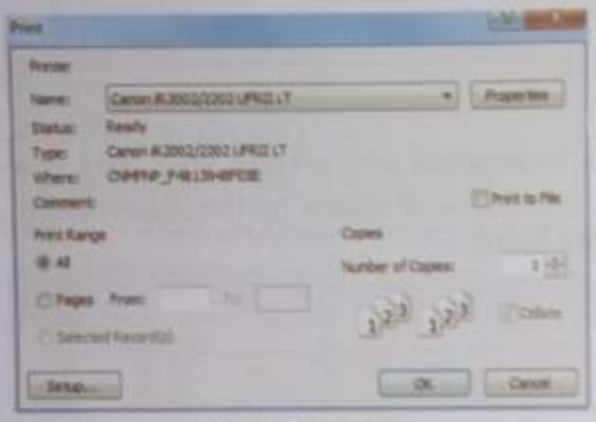
Step 1 Click on the **File** tab.

Step 2 Choose the **Print** option.

Step 3 Choose the **Print Preview** option.

This view displays how the report will appear on a page. It also allows you to choose the page orientation and page setup.

Printing a report



Print dialog box

Step 4 Click on **Print** button to print the report. The **Print** dialog box appears.

Step 5 Select the appropriate printer and click on **OK** button.

### Reboot

- Forms are used to create, edit and display data stored in tables in a user-friendly manner.
- Using a query, you can search or compile data from one or more tables in a database by giving specific search conditions so that you are able to view the exact data that you want.
- A report in MS Access is a feature which allows you to organize and present your data in a user-friendly format so that it can be printed.
- The three main views in which a form can be displayed are: Form View, Design View and Layout View.
- The four new tabs that appear on the Ribbon of the Report window are Design, Arrange, Format and Page Setup.
- Relationships are links that associate a field in one table with the same field in another table. A relationship works by matching a field with the same name in both the tables.

## One Touch Learn

**A. Tick (✓) the correct option.**

1. The feature in MS Access which allows us to retrieve data from a table is called ..... .
   a. Primary Key ☐ c. Foreign Key ☐
   b. Select Query ☐ d. None of these ☐
2. ..... is an organised way of creating, editing and displaying data from the table.
   a. Report ☐ c. Query ☐
   b. Form ☐ d. Table ☐
3. ..... displays the data in either descending or ascending order during the run time in the query window.
   a. Field ☐ c. Sort ☐
   b. Or ☐ d. Criteria ☐
4. ..... are the links that associate a field in one table with the same field in another table.
   a. Structures ☐ c. Relationships ☐
   b. Binding ☐ d. Printing ☐

**B. Write 'T' for true and 'F' for false. Correct the false statements.**

1. You can run the query only once. .....
2. You cannot insert a picture in the form. .....
3. Logo can be added in the report window. .....
4. Design view is used to change the appearance of the form. .....
5. You can set the multiple query in a form. .....
6. The data can be displayed in either descending or ascending during the run time. .....

**C. Fill in the blanks using the words given below.**


select query, title, run, logo, relationship

1. ..... and ..... are the commands present in the Header/ Footer group on the Design tab.

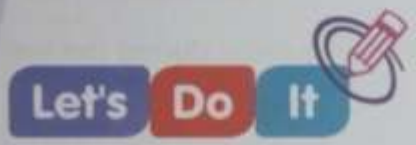
2. ..... retrieves data from one or more tables.

3. ..... is established between two tables based on the Primary Key.

4. After creating the query we need to run the query by clicking on the ..... button.

**D. Match the following columns with suitable options.**

| Column A | Column B |
|---|---|
| 1. Layout View | a. Header/Footer |
| 2. Logo | b. Query |
| 3. Foreign Key | c. Form |
| 4. Crosstab | d. Relationship |

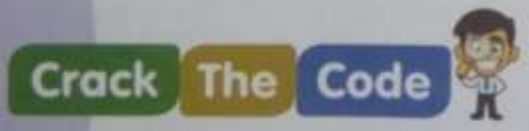



**A. Short answer type questions.**

1. Why do we need a form in MS Access?
2. Give any one use of the report feature in MS Access.
2. Name the three main views in which the form can be displayed.

**B. Long answer type questions.**

1. Differentiate between query and report in MS Access.
2. What is a Primary key? Why is it necessary to have a primary key in a table?
3. What is Foreign key? How you can establish a link between Primary and Foreign key explain with the help of an example.




**A. Application based questions**

1. Sahil wants to display data stored in a table in a user-friendly manner. Which feature of Access can he use to do so?
2. Anisha wants to compile data from three tables stored in a database. Can she do this in Access? If yes, which feature can she use?
3. Rounak wants to view information in two categories at once. Which query can he create to do so?

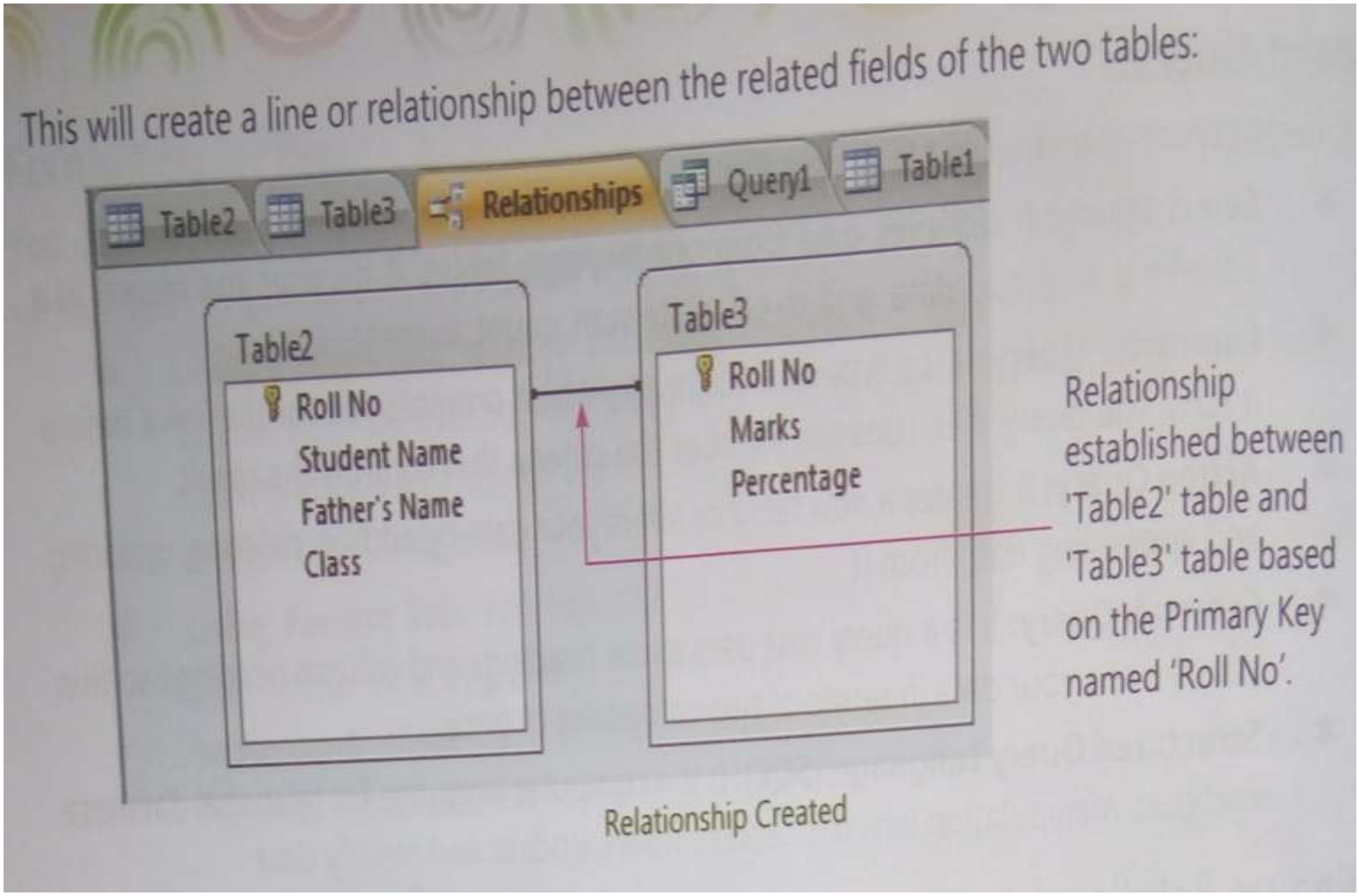
## A. Short answer type questions.

| | |
|---|---|
| Qu. 1 | Why do we need a form in MS Access? |
| Ans. | Forms are used to create, edit and display data stored in tables in a user-friendly manner. |
| Qu. 2 | Give any one use of the report feature in MS Access. |
| Ans. | A report in MS Access is a feature which allows you to organize and present your data in a user-friendly format so that it can be printed. |
| Qu. 3 | Name any three main view in which the form can be displayed. |
| Ans. | The three main views in which is form can be displayed are – • Form View<br>• Design View<br>• Layout View |

## B. Long answer type questions.

| | |
|---|---|
| Qu. 1 | Differentiate between query and report in MS Access? |
| Ans. | Query –<br>Query can give you information that you might not be able to find by looking at the table directly. Using a query, you can search or compile data from one or more tables in a database by giving specific search conditions so that you are able to view the exact data that you want. You can then review, add, change or delete data from your database.<br>Report –<br>A report in MS Access is a feature which allows you to organize and present your data in a user-friendly format so that it can be printed. The four new tabs that appear on the ribbon of the report window are Design, Arrange, Format and Page Setup. |
| Qu. 2 | What is Primary Key? Why is it necessary to have a primary key in a table? |
| Ans. | Primary Key – Primary is a unique field by which the records are uniquely identified in a table. A table can have only one primary key. For example, in a student's record the reg no. can be called a primary key.<br>A primary key is a table column that serves a special purpose. Each database table needs a primary key because it ensures row-level accessibility. The values that compose a primary key column are unique; no two values are the same. Each table has one and only one primary key, which can consist of one or many columns. |
| Qu. 3 | What is Foreign Key? How you can establish a link between primary and Foreign key explain with the help of an example. |
| Ans. | A Foreign key is a column is one table that must match the Primary key o another table.<br>To create a relationship create two table:<br>• Table named 'Table 2' that holds general information about the students such as their roll no. name father's name address etc.<br>• Table named 'Table 3' that holds information about roll no. marks, percentage grade etc.<br>To define relationship between the two table, follow these steps –<br>Step 1 – Click on the Relationships command from Relationships group under Database tools tab.<br>Step 2 – The Show Table dialog box will open. Click on the Add button. The selected table will appear in the relationship window.<br>Step 3 – Click and hold on the Primary Key field of one table.<br>Step 4 - Drag the mouse pointer to the common field in the other table and release the mouse button.<br>Step – 5 – This will open Edit Relationships dialog box. Click on the Create button. |

Activity -


This will create a line or relationship between the related fields of the two tables:
Table2
Table3
Relationships
Query1
Table1
Table2
Roll No
Student Name
Father's Name
Class
Table3
Roll No
Marks
Percentage
Relationship established between 'Table2' table and 'Table3' table based on the Primary Key named 'Roll No'.
Relationship Created