Short Answer Questions:

1. What is the file extension for databases created using OpenOffice.Org Base?
2. List any three file formats that can be managed using OpenOffice.OrgBase?
3. How many types of relationships can be created in Base? Explain each of the them.
4. What do you mean by Sorting? In how many ways it can be done?
5. Explain Referential Integrity with the help of an example.

SESSION 4: RETRIEVE DATA USING QUERY

Relevant Knowledge

Having created the tables and entering data into them, now you want to extract some information.

That's when you query the database. As the name suggests, query is to collect specific information from the pool of data. A query helps us join information from different tables and filter that information. **Filtering** means that the query uses criteria you provide to hide some data and present only what you want to see.

Some RDBMS provide a graphical means to create queries, but most RDBMS do not do so. That's where you use SQL (pronounced as "sequel") or Structured Query Language. Query languages are computer languages used to make queries into databases and information systems. Queries are commands that are used to define the data structure and also to manipulate the data in the database.

A SELECT statement retrieves zero or more rows from one or more database tables or database views. In most applications, SELECT is the most commonly used Data Manipulation Language (DML) command.

The SELECT statement has many optional clauses:

- WHERE specifies which rows to retrieve.
- ORDER BY specifies an order in which to return the rows.

To retrieve all the columns in a table the syntax is:

SELECT * FROM <TABLENAME>;

In order to execute queries click on the **Queries** option available on the left side under database section, click **Create Query in SQL View** as shown below.

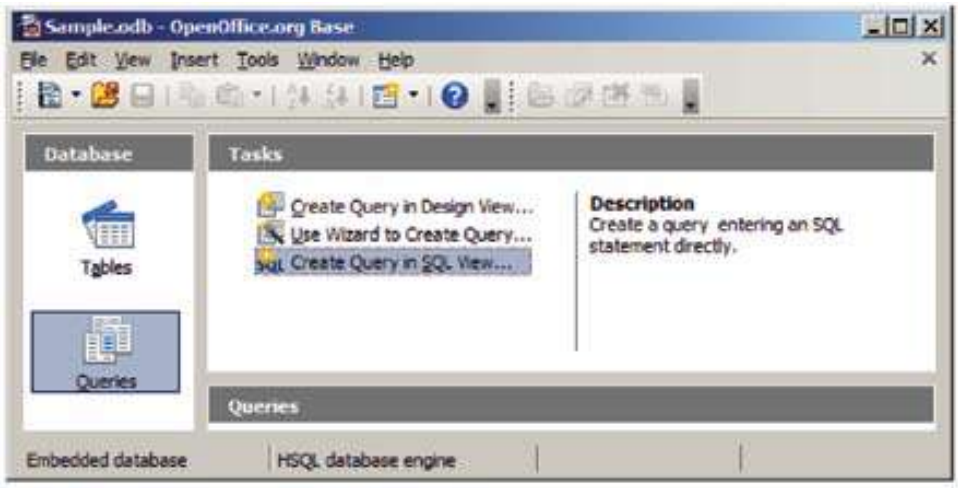

Figure 25

A window appears similar to the one displayed below.

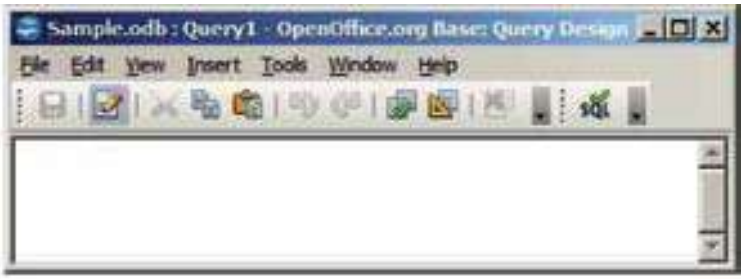

Figure 26

You can type the query in the above window and execute it by using the F5 function key or by clicking the icon in the window.

For example, if you want to display all the data in the table that you created in the early session, then the select statement will be:

Select * from SDetails;

After executing the select query the output will be shown similar to the one displayed below.

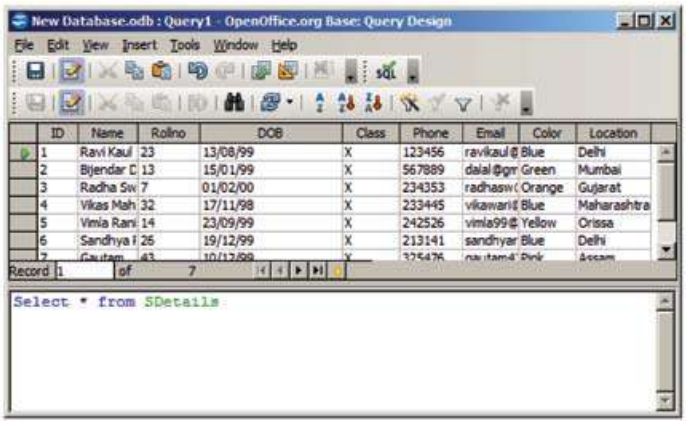

Figure 27

Grouping of Data

To display the records containing the same type of values "**WHERE**" clause can be used with the Select SQL Command.

To get details about the list of students whose favorite color is blue, you can use:

select * from SDetails where Color='Blue';

After executing the select query the output will be shown similar to the one displayed below.

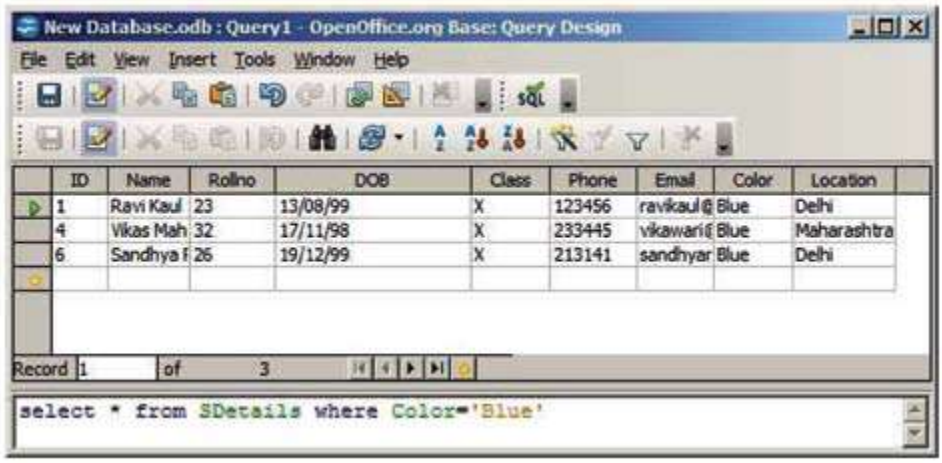

Figure 28

To view records in ascending order of RollNo, from the table the select statement will be:

select * from SDetails order by "Rollno" ASC;

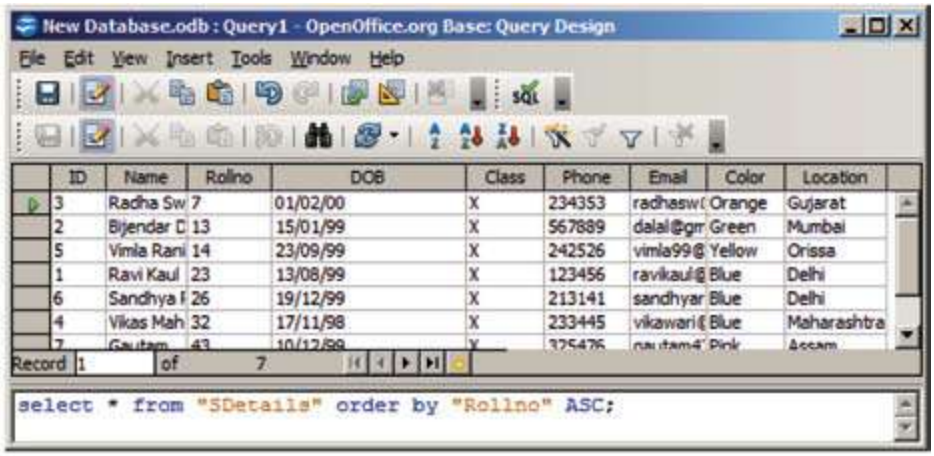

Figure 29

You can add, modify or delete records using the Insert, Update and Delete commands.

To type and execute SQL commands, click on **Tools > SQL**. A window similar to the one below will be displayed.

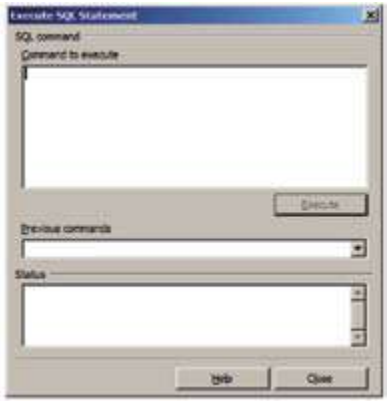

Figure 30

You can type the SQL Commands in the Command to execute space and click on **Execute**.

UPDATE statement

Update statement is used for modifying records in a database. The general syntax of the update statement is as follows:

UPDATE <table_name>
SET <column_name> = value [, column_name = value ...]
[WHERE <condition>];

To update a record using an **update statement**, type the following and click **Execute**.

Update SDetails set Location = ‘Bhubaneswar’ where Rollno = 14;

Execute select query to view the updated table. After execution you should see a window similar to the one displayed below.

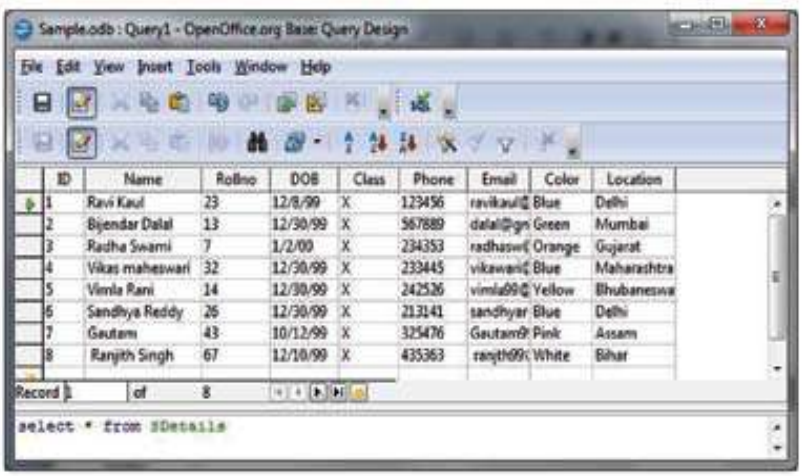

Figure 31

Activities

1. Open the database created in the previous activity. Use the select query statement to query and sort on subjects marks scored was greater than 50%.
2. Create a database for collecting and maintaining census data. Using queries display the data of people living in a specific area.
   Hint : Create fields for fields such as First Name, Last Name, DOB, Place of birth, Employment Status, etc.

Assessment

Fill in the blanks

1. A _____ helps the user to systematically store information in the database.
2. A _____ enables users to view, enter, and change data directly in database objects such as tables.
3. _____ statement retrieves zero or more rows from one or more database tables or database views.
4. By default, data is arranged in _____ order using ORDER BY clause.
5. _____ statement is used for modifying records in a database.
6. _____ statement is used to remove one or more records in a Database.

Short Answer Questions:

1. Name DML commands.
2. What is the purpose of using queries?
3. Which clause of Select statement helps to display specific data?
4. Differentiate between Where and Orderby clause of SQL statements.
5. State the purpose of Update Command with the help of an example.