## Ch- 7 :: Database development (Basic)

1. What is SQL ?
   It is Structure Query Language. It is a standard that every database user uses to communicate with and perform specific task .
2. Give names of any two RDBMS.
   MYSQL, MS-ACCESS
3. What are different types of SQL commands available.
   a. DDL-DATA DEFINATION LANGUAGE Eg.- CREATE ,ALTER,DROP
   b. DML-DATA MANIPULATION LANGUAGUE Eg.. UPDATE,DELETE
4. What is the difference between DDL and DML Commands?
   DDL statements are used for creating and defining the Database structure. DML statements are used for managing data within Database.
5. What is a Primary key in a table ?
   A Primary key is a column in a table which consists of unique values i.e. it cannot have duplicate values or null values. (null – no value). For example in a table school admission number can be a primary key as it is must and unique for all students.
6. What is Foreign key in a database?
   In the context of relational databases, a foreign keys a field (or collection of fields) in one table that uniquely identifies a row of another table or the same table. In simpler words, the foreign key is defined in a second table, but it refers to the primary key or a unique key in the first table
7. What do you mean by Queries , table and Reports in respect to database.
   a. Queries – A **query** is a request for data or information from a **database** table or combination of tables.
   b. Table- It consists of columns, and rows.It is also called as relation in database.
   c. Report- **Reports** are a great way to organize and present data from your database. The data in a preview or in a printed **report** is static. **Reports** merely present the data; they do not alter the underlying data in the tables. Each time a **report** is opened, database access displays the most recent data.
   d. Forms-a **form** is a window or screen that contains numerous fields, or spaces to enter data. Each field holds a field label so that any user who views the **form** gets an idea of its contents. A **form** is more user friendly than generating queries to create tables and insert data into fields.
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8. What are the components of database?
   a. Table-also called as relation
   b. Column-also called as attribute/field/ degree
   c. Row- also called as tuple/record/cardinality
   d. Data also called as value.
9. Which data type accepts only two values?
   Yes/ No
10. Do we need to save the data in database ?
    No it is automatically save in the database when we enter data.
11. How many Autonumber datatype can appear in a table in database?
    Only one Autonumber datatype is allowed.

12. What is the difference between char and varchar datatype of SQL?

A CHAR field is a fixed length, and VARCHAR is a variable length field. This means that the storage requirements are different - a CHAR always takes the same amount of space regardless of what you store, whereas the storage requirements for a VARCHAR vary depending on the specific string stored.

***FOR WRITING SQL QUERIES :***

•SQL statements are not case sensitive.
•Place a semicolon (;) at the end of the last clause.
•SQL statements can be on one or more lines.
•Keywords cannot be abbreviated or split across lines.
•Clauses are usually placed on separate lines.
•Tabs and indents are used to enhance readability.

The general form is :
SELECT COLUMN NAME….
FROM TABLE NAME
WHERE CONDITION;

EXAMPLE : TABLE NAME IS STUDENT

| ROLLNO | NAME | MARKS1 | MARKS2 |
|---|---|---|---|
| 1 | RAJ | 54 | 66 |
| 2 | RAM | 44 | 77 |
| 3 | ROSHNI | 77 | 79 |
| 4 | ROHAN | 23 | 98 |

Write MYSQL Queries for the following :

1. To create the given table.
2. To display all the data from table.
3. To display only name and marks 1 from table.
4. To display marks1 and marks2 from the table whose Rollno is greater than 2.
5. To insert one more row as (5,”resham”,55,76)
6. To delete the record of those students who are having marks1 less than30.
7. To update the marks1 as 49 of those students who secured marks less than 30.

Answers :

1. CREATE TABLE STUDENT
   ( ROLLNO INTEGER(20),
   NAME CHAR(20),
   MARKS1 INTEGER(4),
   MARKS2 INTEGER(4));
2. SELECT * FROM STUDENT;
3. SELECT NAME,MARKS1 FROM STUDENT;
4. SELECT MARKS1,MARKS2 FROM STUDENT WHERE ROLLNO >2;
5. INSERT INTO STUDENT VALUES(5,RESHAM,55,76);
6. DELETE FROM STUDENT WHERE MARKS1<30;

7. UPDATE STUDENT
   SET MARKS1=49
   WHERE MARKS<30;

## Q. What do you understand by Data types:

Ans. Datatypes are used to identify which type of data (value) we are going to store in the database.
Fields themselves can be of different types depending on the data they contain. Data types in OpenOffice base are broadly classified into five categories listed below.

- Numeric Types
- Alphanumeric Types
- Binary Types
- Date time
- Other Variable types

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Q1 A _____ is an organized collection of data
a) Information b) Valuable information
c) **Database** d) Metadata

Q 2. DBMS is software.
a) True
b) False

**Answer:** True

Q3 What does DBMS stands for?

**Answer:** Database Management System.

Q4. In how many ways you can schedule an appointment using calendar.
**Answer:** We can schedule an appointment in two ways: i) Using menu bar. ii) Using calendar view.

Q**5.** DML is provided for
a. Description of the logical structure of a database.
b. The addition of new structures in the database system.
**c. Manipulation & processing of the database.**
d. Definition of a physical structure of the database system.

Q 6. A _____is a database management system that is based on the relational model.
**Answer:** RDBMS

Q 7. Three popular DBMS software are i) _____, ii)_____, & iii) _____.
**Answer:** i)Microsoft SQL server ii) MYSQL iii) ORACLE

Q 8. List the data types used in a DBMS /RDBMS?
**Answer:** i) Numeric Types ii) Alphanumeric Types iii) Binary Types iv) Date time v) Other Variable types

Q 9. List data types available in Alphanumeric Data type?
**Answer:** i) LONGVARCHAR ii) CHAR iii) VARCHAR iv) VARCHAR_IGNORECASE

Q 10. Types of languages used for creating and manipulating the data in the Database are i)_____ & ii)_____.
**Answer:** (i) DDL (ii) DML

Q 11. State the relationship and difference between a primary and foreign key?
**Answer:** The foreign key identifies a column or set of columns in one (referencing) table that refers to a column or set of columns in another (referenced) table. Here the key in the referenced table is the primary key.

Q 12. _____ is a set of data elements that is organized using a model of vertical columns and horizontal rows.
**Answer:** Table

Q13 _____are used to identify which type of data we are going to store in the database.
**a) Primary Key** b) Foreign key
c) candidate key d) super key

Q 14.A _____ is a unique value that identifies a row in a table.
**Answer:** Primary key.

Q15 . Which one of the following attribute can be taken as a primary key ?

a) Name b) Street

**c) Id** d) Department

Q.16 The statement in SQL which allows modification of information in the database.
a. Alter. **c. Update.**
c. Create. d. select.

## ASSESSMENT

Fill in the blanks:

1. A _____ is an organized collection of data.
2. A _____ is a software package that can be used for creating

and managing databases.
3. A _____ is a database management system that is based on the relational model.
4. Three popular DBMS software are _____, _____, & _____.
5. A _____ is a unique value that identifies a row in a table.
6. Composite Key is a combination of _____ columns.

Short Answer Questions

1. What does DBMS stands for?
2. What does RDBMS stands for?
3. How is data organized in a RDBMS?
4. State the relationship and difference between a primary and foreign key?

## ASSESSMENT

Fill in the blanks:
1. A table is a set of data elements that is organized using a model of vertical _____ and horizontal _____.
2. A _____ is a set of data values of a particular type, one for each row of the table.
3. A _____ represents a single, data item in a table.
4. _____ are used to identify which type of data we are going to store in the database.
5. _____ DDL command is used to create a table.
6. Common DDL statements are _____, _____ and _____.

Short Answer Questions

1. In how many ways tables can be created in Base?
2. Why are data types used in DBMS /RDBMS?
3. List datatypes available in Numeric Datatype?
4. List datatypes available in Alphaumeric Datatype?
5. Define the structure of a table.
6. Differentiate between Tuples and Attributes of a table.
7. Name different Binary data types.

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.