**#84. What is schema?**  
**Ans.** A schema is a collection of database objects of a User.

###In MySQL there are three main data types: string, numeric, and date and time.

**#85. What is Table?**  
**Ans.** A table is the basic unit of data storage in the database management system. Table data is stored in rows and columns.

### Operator in sql?

1. Arithmetic operators : +,-,\*,/,%
2. Bitwise Operators: &,^,
3. Comparison operators: =,<,>,<=,>=
4. Compound operator: +=,-=,\*=,/=,%=,&=
5. Logical operators: All, AND, Any, IN, Like , Not, Or, Some.

**3.Which are different statements in Data Definition Language in SQL?[100 % asked SQL Interview Questions for Testers ]**

**Answer:**

There are following different statements in Data Definition Language:

**1.1. Create:**Create Command is used to create new table, new view or any database objects from the table.

**1.2. Alter:**Alter Statements are used to modify the existing database object such as add new column in the table, remove column from the table, enable disable constraints from the table.

**1.3. Drop:** Drop statement deletes the entire table, view and other database objects.

**4.Which are different statements in Data Manipulation Language in SQL?[100 % asked SQL Interview Questions for Testers ]**

**Answer:**

There are following statements in Data Manipulation Language:

**2.1 Update:** Update statement of SQL are used to update the records from the table

**2.2 Insert:** Insert statement of SQL are used to insert the records in the table.

**2.3 Delete :** Delete statement in SQL are used to delete the records from the table.

**5.Which are different Data Control Statements in SQL?[100 % asked SQL Interview Questions for Testers]**

**Answer:**There are following data control statements in SQL:

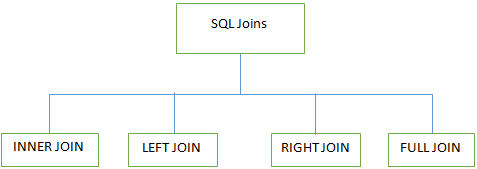
**3.1 Grant:** Grant command gives the privilege to the user.

**3.2 Revoke:** Revoke command takes back the privileges from the user.

**TCL**  
TCL is abbreviation of Transactional Control Language. It is used to manage different transactions occurring within a database.  
  
**Examples:** COMMIT, ROLLBACK, SAVE TRANSACTION statements,

1. **COMMIT:** used for saving the work done in a particular transaction. For example: “Ctrl + S” in word file.
2. **ROLLBACK:** used for reverting the transaction to the original state before commit. For example: “Ctrl + Z” in word file.
3. **SAVE TRANSACTION:** used for setting save point in transactions.

**#7) What are different JOINS used in SQL?**



There are 4 major types of joins made to use while working on multiple tables in SQL databases

**INNER JOIN:**It is also known as SIMPLE JOIN which returns all rows from BOTH tables when it has at least one column matched

***Syntax:****SELECT column\_name(s)*  
*FROM table\_name1*  
*INNER JOIN table\_name2*  
*ON column\_name1=column\_name2****;***

Enter the following SQL statement

|  |  |  |
| --- | --- | --- |
| 1 | SELECT Employee.Emp\_id, Joining.Joining\_Date | |
| 2 | FROM Employee |

|  |  |
| --- | --- |
| 3 | INNER JOIN Joining |
| 4 | ON Employee.Emp\_id = Joining.Emp\_id | |

|  |  |
| --- | --- |
| 5 | ORDER BY Employee.Emp\_id; |

*Employee* and *orders* tables where there is a matching *customer\_id* value in both the *Employee* and *orders* tables

**LEFT JOIN (LEFT OUTER JOIN):**This join returns all rows from a LEFT table and its matched  
rows from a RIGHT table**.**

***Syntax:****SELECT column\_name(s)*  
*FROM table\_name1*  
*LEFT JOIN table\_name2*  
*ON column\_name1=column\_name2****;***

|  |  |  |
| --- | --- | --- |
| 1 | SELECT Employee.Emp\_id, Joining.Joining\_Date | |
| 2 | FROM Employee |

|  |  |
| --- | --- |
| 3 | LEFT OUTER JOIN Joining |
| 4 | ON Employee.Emp\_id = Joining.Emp\_id | |

|  |  |
| --- | --- |
| 5 | ORDER BY Employee.Emp\_id; |

**RIGHT JOIN (RIGHT OUTER JOIN):**This joins returns all rows from the RIGHT table and its matched rows from a LEFT table**.**

***Syntax:****SELECT column\_name(s)*  
*FROM table\_name1*  
*RIGHT JOIN table\_name2*  
*ON column\_name1=column\_name2****;***

|  |  |  |
| --- | --- | --- |
| 1 | SELECT Employee.Emp\_id, Joining.Joining\_Date | |
| 2 | FROM Employee |

|  |  |
| --- | --- |
| 3 | LEFT OUTER JOIN Joining |
| 4 | ON Employee.Emp\_id = Joining.Emp\_id | |

|  |  |
| --- | --- |
| 5 | ORDER BY Employee.Emp\_id; |

**FULL JOIN (FULL OUTER JOIN):**This joins returns all when there is a match either in the RIGHT table or in the LEFT table**.**

***Syntax:****SELECT column\_name(s)*  
*FROM table\_name1*  
*FULL OUTER JOIN table\_name2*  
*ON column\_name1=column\_name2****;***

Enter the following SQL statement:

|  |  |  |
| --- | --- | --- |
| 1 | SELECT Employee.Emp\_id, Joining.Joining\_Date | |
| 2 | FROM Employee |

|  |  |
| --- | --- |
| 3 | FULL OUTER JOIN Joining |
| 4 | ON Employee.Emp\_id = Joining.Emp\_id | |

|  |  |
| --- | --- |
| 5 | ORDER BY Employee.Emp\_id; |

1. How to store data in a database?

* RDBMS >> Table
* NRDBMS >> Raw format

7. What is data, database, data warehouse?

* Data = any meaning full information
* Database = Where we can store data
* Data warehouse = this is a database which store only historical data

9. What is the stored procedure and trigger?

* Store procedure: I can store any SQL quires inside database for future use.
* Trigger: Store quires or stored procedure can be scheduled or executed any specific date and time.

10. How do all tables maintain relations inside the database?

* By foreign keys

11. Difference between Primary and foreign keys?



|  |  |
| --- | --- |
| Primary key | Foreign key |
| Never allow null value | Allow null value |
| One in a table | One / multiple in a table |
| Main function-identify a table uniquely. | Main function-relation between two table. |

20. Difference between DDL vs DML?

|  |  |
| --- | --- |
| DDL | DML |
| Data define language | Data manipulation language |
| Used-mainly SQL dev, also QA | Used-mainly QA, also any one |
| Auto commit (auto save) | Do not Auto commit |
| Roll back(like undo/go back) not possible | Roll back(like undo/go back) possible |
| DR CAT >>Drop, rename, create, alter, truncate | SUDI >> Select, update, delete, insert |

Types of SQL Keys

We have following types of keys in SQL which are used to fetch records from tables and to make relationship among tables or views.

1. Super Key

Super key is a set of one or more than one keys that can be used to identify a record uniquely in a table.**Example:** Primary key, Unique key, Alternate key are a subset of Super Keys.

1. Candidate Key

A Candidate Key is a set of one or more fields/columns that can identify a record uniquely in a table. There can be multiple Candidate Keys in one table. Each Candidate Key can work as Primary Key.

**Example:** In the below diagram ID, RollNo and EnrollNo are Candidate Keys since all these three fields can be work as Primary Key.

1. Primary Key

Primary key is a set of one or more fields/columns of a table that uniquely identify a record in a database table. It can not accept null, duplicate values. Only one Candidate Key can be Primary Key.

An Alternate key is a key that can be work as a primary key. Basically, it is a candidate key that currently is not a primary key.

**Example:** In the below diagram RollNo and EnrollNo become Alternate Keys when we define ID as Primary Key.

1. Composite/Compound Key

Composite Key is a combination of more than one fields/columns of a table. It can be a Candidate key, Primary key.

1. Unique Key

A unique key is a set of one or more fields/columns of a table that uniquely identify a record in a database table. It is like Primary key but it can accept only one null value and it can not have duplicate values. For more help refer to the article

1. Foreign Key

Foreign Key is a field in a database table that is Primary key in another table. It can accept multiple null, duplicate values. For more help refer to the article

**Example:** We can have a DeptID column in the Employee table which is pointing to a DeptID column in a department table where it a primary key.

**10.What is Union Operator?[100 % asked SQL Interview Questions for Testers ]**

**Answer:**

Union Operator combines the result of 2 or more tables and fetches the results of two select statements. Union operator eliminates the duplicates from the table and fetches the result. For each duplicate row in table only one row is displayed in the result. By considering the performance of SQL using union is not preferable option but if there is situation where user wants to remove the duplicate data from two or more table the use of Union is preferable.

**Example:**

***Select Employee\_Num,Employee\_name,Department,Salary from Employee\_OBIEE;***

***Union***

***Select Employee\_Num,Employee\_name,Department,Salary from Employee\_COGNOS;***