

1. What is a primary key, unique key, foreign key?

A primary key is a combination of attributes that uniquely identify a record. It is a special kind of unique key, and has implicit NOT NULL constraint. Primary key values cannot be NULL.

A Unique key constraint uniquely identify each record in the database. It provides uniqueness for the column or set of columns.

There can be many unique constraints defined per table, but only one Primary key constraint defined per table.

A foreign key is used to link two tables together. A relationship needs to be created between two tables by referencing a foreign key with the primary key of another table.

2. Write a SQL query to display the current date?

The GetDate() builtIn function in SQL can be used to get the current date .

Is a NULL value equal to 0 or blank space?

No. A NULL value means that a value is unavailable, unknown, or not applicable whereas zero is a number and blank space is a character.

3. What is the difference between DROP and TRUNCATE statements?

TRUNCATE removes all the rows from the table, whereas DROP command removes the table from the database.

4. What is a subquery in SQL?

A subquery is a query inside another query .The outer query is called the main query whereas the inner query is called a subquery. These queries are always executed first and the result of the subquery is passed on to the main query. A subquery can be nested inside a SELECT, UPDATE, or any other query. A subquery can also use any comparison operators such as >, < or =.

5. Write a query to Display 3rd Highest record from a table.

```
SELECT DISTINCT(column_name) FROM table_name ORDER BY column_name DESC LIMIT 2,1
```

The SELECT DISTINCT statement is used to return only different values.

6. What are the JDBC statements?

There are 3 types of JDBC Statements:

Statement: It is used to execute SQL query.

Prepared Statement: It is used to execute a SQL statement multiple times. Input is taken dynamically at the run time.

Callable Statement: It is used to execute stored procedures.

7. What is the benefit of using PreparedStatement in Java?

Prepared Statement is used when we want to execute same SQL statement multiple times. It is compiled only once and can be used multiple times.

8. What is ResultSet?

The java.sql.ResultSet is an interface that is used to give the result set of a SQL query.

9. Why are Prepared Statements faster ?

Prepared statement execution is faster because the statement is compiled only once. Prepared statements & JDBC drivers are connected with each other during execution, and there are no connection overheads.

10. What packages are used in JDBC?

There are 8 packages that are used in JDBC –

sql.Driver

Connection

Statement

PreparedStatement

CallableStatement

ResultSet

ResultSetMetaData

DatabaseMetaData

11. What is the use of the JDBC Connection interface?

It maintains a session with the database and can be used for transaction management. It provides factory methods that return the instance of Statement, PreparedStatement, CallableStatement, and DatabaseMetaData.