What is RDBMS ?

RDBMS is a relational Database management system that allows user to store, manage, query, and retrieve data stored in a relational format.

A relational format in terms of SQL can be a Sequence of Colom's and Rows that can store data in relational form.

Ex: MySQL, PostgreSQL, MariaDB, Microsoft SQL Server, and Oracle Database.

What is SQL ?

SQL is Structured Query Language that is used to managing data held in a relational database management system.

It is mainly used for data management.

Write SQL Commands.

COMMANDS

ALTER TABLE

ALTER TABLE table name ADD column datatype;

ALTER TABLE lets you add columns to a table in a database.

AND

SELECT column name(s) FROM table name WHERE column_1 = value_1 AND column_2 = value_2;

AND is an operator that combines two conditions. Both conditions must be true for the row to be included in the result set.

AS

SELECT column name AS 'Alias' FROM table name;

AS is a keyword in SQL that allows you to rename a column or table using an alias.

AVG

SELECT AVG(column name) FROM table name;

AVG() is an aggregate function that returns the average value for a numeric column.

BETWEEN

SELECT column name(s) FROM table name WHERE column name BETWEEN value_1 AND value_2;

The BETWEEN operator is used to filter the result set within a certain range. The values can be numbers, text or dates.

COUNT

SELECT COUNT(column name) FROM table name;

COUNT() is a function that takes the name of a column as an argument and counts the number of rows where the column is not NULL.

CREATE TABLE

CREATE TABLE table name (column_1 datatype, column_2 datatype, column_3 datatype);

CREATE TABLE creates a new table in the database. It allows you to specify the name of the table and the name of each column in the table.

DELETE

DELETE FROM table name WHERE some column = some value;

DELETE statements are used to remove rows from a table.

GROUP BY

SELECT COUNT(*) FROM table name GROUP BY column name;

GROUP BY is a clause in SQL that is only used with aggregate functions. It is used in collaboration with the SELECT statement to arrange identical data into groups.

INNER JOIN

SELECT column name(s) FROM table_1 JOIN table_2 ON table_1.column name = table_2.column name;

An inner join will combine rows from different tables if the join condition is true.

INSERT

INSERT INTO table name (column_1, column_2, column_3) VALUES (value_1, 'value_2', value_3);

INSERT statements are used to add a new row to a table.

LIKE

SELECT column name(s) FROM table name WHERE column name LIKE pattern;

LIKE is a special operator used with the WHERE clause to search for a specific pattern in a column.

LIMIT

SELECT column name(s) FROM table name LIMIT number;

LIMIT is a clause that lets you specify the maximum number of rows the result set will have.

MAX

SELECT MAX(column name) FROM table name;

MAX() is a function that takes the name of a column as an argument and returns the largest value in that column.

MIN

SELECT MIN(column name) FROM table name;

MIN() is a function that takes the name of a column as an argument and returns the smallest value in that column.

OR

SELECT column name FROM table name WHERE column name = value_1 OR column name = value_2;

OR is an operator that filters the result set to only include rows where either condition is true.

ORDER BY

SELECT column name FROM table name ORDER BY column name ASC|DESC;

ORDER BY is a clause that indicates you want to sort the result set by a particular column either alphabetically or numerically.

OUTER JOIN

SELECT column name(s) FROM table_1 LEFT JOIN table_2 ON table_1.column name = table_2.column name;

An outer join will combine rows from different tables even if the join condition is not met. Every row in the left table is returned in the result set, and if the join condition is not met, then NULL values are used to fill in the columns from the right table.

ROUND

SELECT ROUND(column name, integer)

FROM table name;

ROUND() is a function that takes a column name and an integer as an argument. It rounds the values in the column to the number of decimal places specified by the integer.

SELECT

SELECT column name FROM table name;

SELECT statements are used to fetch data from a database. Every query will begin with SELECT.

SELECT DISTINCT

SELECT DISTINCT column name FROM table name;

SELECT DISTINCT specifies that the statement is going to be a query that returns unique values in the specified column(s).

SUM

SELECT SUM(column name) FROM table name;

SUM() is a function that takes the name of a column as an argument and returns the sum of all the values in that column.

UPDATE

UPDATE table name SET some column = some value WHERE some column = some value;

UPDATE statements allow you to edit rows in a table.

WHERE

SELECT column name(s) FROM table name WHERE column name operator value;

WHERE is a clause that indicates you want to filter the result set to include only rows where the following condition is true.

What is join?

Join is used in the SQL to combine two table and select data from the tables to view as a new table that contains data from both tables that has user selected Colom's from both tables.

Write type of joins.

INNER JOIN

SELECT column name(s) FROM table_1 JOIN table_2 ON table_1.column name = table_2.column name;

An inner join will combine rows from different tables if the join condition is true.

OUTER JOIN

SELECT column name(s) FROM table_1 LEFT JOIN table_2 ON table_1.column name = table_2.column name;

An outer join will combine rows from different tables even if the join condition is not met. Every row in the left table is returned in the result set, and if the join condition is not met, then NULL values are used to fill in the columns from the right table.

LEFT OUTER JOIN: Shows all records from the left table, and the matched records from the right table

RIGHT OUTER JOIN: Shows all records from the right table, and the matched records from the left table

FULL OUTER JOIN: Shows all records when there is a match in both tables

How Many constraint and describes it .

Mainly Constraints on the relational database are of 4 types:

1. Domain constraints
   Every domain must contain value that is in limit of datatype and size.
   Each cell represents a single value attribute.

2. Key constraints
   The key used in the table should be unique to each row.
   When a problem accrues with using primary key user can use candidate key if it solves the issue.
   primary key cannot Be NULL, hence Not Null constraint is also a part of key constraint.

3. Entity Integrity constraints
   primary key cannot Be NULL, hence Not Null constraint is also a part of key constraint.

   The Entity is identified using the primary key so to functionally operate the database we need a Primary key for the table.

4. Referential integrity constraints
   A Primary key is used to maintain relation between two tables.
   A primary key must be unique for each row.

   A concept of foreign key is used to refer and join two tables which share at least one Colom common.

   The values of the foreign key in a tuple of relation Table1 can either take the values of the primary key for some tuple in relation Table2, or can take NULL values, but can’t be empty.

Difference between RDBMS vs DBMS

RDBMS	DBMS
Data stored is in table format	Data stored is in the file format
Multiple data elements are accessible together	Individual access of data elements
Data in the form of a table are linked together	No Relation between data
Normalisation is not achievable	There is normalisation
Support distributed database	No support for distributed database
Data is stored in a large amount	Data stored is a small quantity
Here, redundancy of data is reduced with the help of key and indexes in RDBMS	Data redundancy is common
RDBMS supports multiple users	DBMS supports a single user
It features multiple layers of security while handling data	There is only low security while handling data
The software and hardware requirements are higher	The software and hardware requirements are low.
EX: MySQL, PostgreSQL, MariaDB, Microsoft SQL Server, and Oracle Database	EX: XML, Microsoft Access.

What is API Testing

API testing is a type of software testing that analyzes an application program interface (API) to verify that it fulfills its expected functionality, security, performance and reliability.

The tests are performed either directly on the API or as part of integration testing.

API is used to communicate with two different database or sets a of data.

Types of API Testing

1. Functional Testing
   Functionality of the product is checked

2. Security Testing
   Security of the product is checked

3. Load Testing
   Load on the product is checked to determine the limits of operation (Green and Red conditions)

4. Runtime Error Detection
   On Runtime product is checked for errors and failures

5. User Interface Testing
   UI of the product is checked

6. Validation Testing
   Validation testing is one of the last processes that are carried out during the test cycle of a software application. It is conducted after verification of the API's constituent parts and functions, at the end of the development process.

What is Responsive Testing?

Responsive testing is used to check for website pages that renders on viewports of multiple devices using CSS media queries based on the user device where the website is accessed.

Responsive testing is used to check for response of a webpage or a website on different devices that are available. It ensures that responsive web design is optimized well for all types of screen sizes and resolutions.

Which types of tools are available for Responsive Testing .

Tools Available for Responsive testing.

1. Testsigma
2. Responsinator
3. Screenfly
4. LambdaTest
5. Am I Responsive?
6. CrossBrowserTesting
7. Browserstack
8. Emulators
9. ViewPort Resizer
10. Google Resizer

What is the full form of .ipa, .apk ?

.apk : Android Package Kit or Android Application Package

.ipa : iOS App Store Package

How to create step for to open the developer option mode ON?

Step 1: Go to android Settings

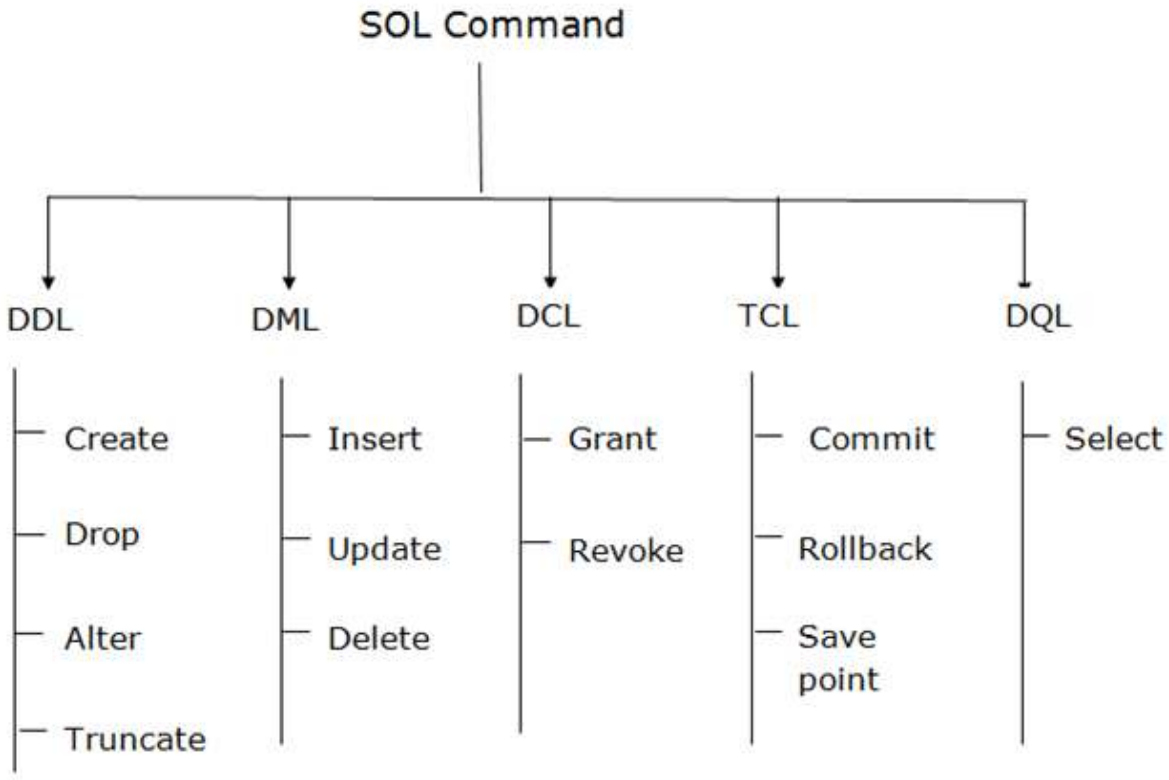
Step 2: Select About Phone

Step 3: Touch multiple times on Build Number option

Step 4: user will see the message " you are a Developer now " Developer mode is on now

Step 5: user can go to : Settings > Developer mode to change available settings.

SQL commands by type



DDL : Data Definition Language

Commands : Create, Alter, Drop, Truncate, rename

DML : Data Manipulation Language

Commands : Insert, Update, Delete

DQL: Data Query Language

Commands : Select

DCL : Data Control Language

Commands : Grant, Revoke

TCL : Transaction Control Language

Commands : rollback, commit, save point