What is RDBMS

RDBMS (Relational Database Management System) is a database system in which data is stored in the form of tables (rows and columns) and the tables are related to each other using keys.

Key points:

- Data stored in tables
- Uses primary key and foreign key
- Maintains data integrity
- Supports SQL

Examples: MySQL, Oracle, SQL Server, PostgreSQL

What is SQL

SQL (Structured Query Language) is a standard language used to create, store, retrieve, update, and delete data from a relational database.

Uses of SQL:

- Create database & tables
- Insert, update, delete data
- Retrieve data
- Set constraints

Write SQL Commands

SQL commands are divided into 5 types:

1. DDL (Data Definition Language)
    - CREATE
    - ALTER
    - DROP
    - TRUNCATE
2. DML (Data Manipulation Language)
    - INSERT
    - UPDATE
    - DELETE
3. DQL (Data Query Language)
    - SELECT
4. DCL (Data Control Language)
    - GRANT
    - REVOKE
5. TCL (Transaction Control Language)
    - COMMIT
    - ROLLBACK
    - SAVEPOINT

What is join?
A JOIN is used to combine data from two or more tables based on a common column between them.

Write type of joins.
INNER JOIN – Returns matching records from both tables
LEFT JOIN – Returns all records from left table
RIGHT JOIN – Returns all records from right table
FULL JOIN – Returns all records from both tables
CROSS JOIN – Returns Cartesian product

How Many constraint and describes it self

There are 6 main SQL constraints:

NOT NULL – Column cannot be empty
UNIQUE – All values must be unique
PRIMARY KEY – Uniquely identifies each record
FOREIGN KEY – Creates relationship between tables
CHECK – Checks a condition
DEFAULT – Sets default value

Difference between RDBMS vs DBMS

DBMS	RDBMS
Stores data as files	Stores data as tables
No relationship	Tables are related
Less secure	More secure
No normalization	Normalization used

What is an SQL alias?

An alias is a temporary name given to a column or table for easy understanding.

Example:

```sql
SELECT name AS Student_Name FROM student;
```

Write a query to create the table in Structured Query Language
CREATE TABLE Student (
  id INT PRIMARY KEY,
  name VARCHAR(50),
  age INT,
  city VARCHAR(30)

);

Write a query to insert data into table.
INSERT INTO Student VALUES (1, 'Mahi', 21, 'Ahmedabad');

write a query to update data into table with validations.
UPDATE Student SET city = 'Surat' WHERE id = 1;
Write a query to delete data from table with validations.
DELETE FROM Student WHERE id = 1;

Write a query to insert new column in existing table.
ALTER TABLE Student ADD email VARCHAR(50);

Write a query to drop table and database.
DROP TABLE Student;

Write a query to find max and min value from table.
SELECT MAX(age) FROM Student;
SELECT MIN(age) FROM Student;

Create two tables named Seller and Product apply foreign key in product table
CREATE TABLE Seller (
  seller_id INT PRIMARY KEY,
  seller_name VARCHAR(50)
);

CREATE TABLE Product (
  product_id INT PRIMARY KEY,
  product_name VARCHAR(50),
  seller_id INT,
  FOREIGN KEY (seller_id) REFERENCES Seller(seller_id)
);

Fetch data from both table using different joins.

INNER JOIN

```
SELECT * FROM Seller
INNER JOIN Product
ON Seller.seller_id = Product.seller_id;
```

LEFT JOIN

```
SELECT * FROM Seller
LEFT JOIN Product
ON Seller.seller_id = Product.seller_id;
```

RIGHT JOIN

```
SELECT * FROM Seller
RIGHT JOIN Product
ON Seller.seller_id = Product.seller_id;
```

What is API Testing

API Testing is a type of software testing that checks whether Application Programming Interfaces (APIs) work correctly in terms of functionality, reliability, performance, and security.

Types of API Testing

Functional Testing
Load Testing
Security Testing
Reliability Testing
Validation Testing

What is Responsive Testing?

Responsive Testing checks whether an application or website adjusts correctly to different screen sizes like mobile, tablet, and desktop.

Which types of tools are available for Responsive Testing

Google Chrome DevTools
BrowserStack
LambdaTest
Responsinator
Screenfly

What is the full form of .ipa, .apk

- IPA – iOS App Store Package
- APK – Android Package Kit

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

Open Settings
Go to About Phone
Tap Build Number 7 times
Message appears: *"You are now a developer"*
Developer Options enabled