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#### ➤ What is RDBMS?

• RDBMS stands for *Relational Database Management System*. It stores data in tables (relations) and allows for complex queries using a structured query language (SQL). Examples include MySQL, PostgreSQL, Oracle, and SQL Server. The main feature is that it maintains relationships between data using primary and foreign keys, ensuring data integrity.

## ➤ What is SQL?

SQL, or *Structured Query Language*, is a standardized language for managing and
manipulating relational databases. It allows users to query data, insert new data, update
existing data, and delete data. SQL commands are broadly divided into Data Query
Language (DQL), Data Manipulation Language (DML), Data Definition Language (DDL),
and Data Control Language (DCL).

### > Write SQL Commands

- Basic SQL commands include:
  - **SELECT**: Retrieves data from a table.
  - **INSERT INTO**: Adds new data to a table.
  - **UPDATE**: Modifies existing data in a table.
  - **DELETE**: Removes data from a table.
  - **CREATE TABLE**: Defines a new table and its structure.
  - **ALTER TABLE**: Modifies the structure of an existing table.
  - **DROP TABLE**: Deletes a table entirely.

### ➤ What is Join?

• *Join* is a SQL operation used to combine records from two or more tables in a database based on a related column between them. It is essential for retrieving data that exists across multiple tables.

### **➤** Write Types of Joins

- **INNER JOIN**: Returns records that have matching values in both tables.
- **LEFT JOIN (or LEFT OUTER JOIN)**: Returns all records from the left table, and the matched records from the right table.
- **RIGHT JOIN (or RIGHT OUTER JOIN)**: Returns all records from the right table, and the matched records from the left table.
- **FULL JOIN (or FULL OUTER JOIN)**: Returns all records when there is a match in either left or right table.
- **CROSS JOIN**: Returns the Cartesian product of both tables, combining each row of the first table with all rows in the second.

#### **➤** How Many Constraints and Describe Them

• Constraints are rules enforced on data columns in a table. They ensure the accuracy and reliability of data within the database. Common constraints include:

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- **NOT NULL**: Ensures a column cannot have a NULL value.
- UNIQUE: Ensures all values in a column are unique.
- **PRIMARY KEY**: A combination of NOT NULL and UNIQUE. It uniquely identifies each record in a table.
- **FOREIGN KEY**: Ensures referential integrity between tables.
- **CHECK**: Ensures that all values in a column satisfy a specific condition.
- **DEFAULT**: Sets a default value for a column if no value is provided.
- **INDEX**: Improves the speed of data retrieval but doesn't enforce uniqueness.

#### Difference between RDBMS and DBMS

Database Management System	Relative Database managament system
Manages data as files without relationships	Manages data in tables with relationships
Limited data integrity due to lack of relational structure	Ensures data integrity with primary and foreign keys
Usually does not support normalization	Supports normalization to reduce redundancy
Typically stores data as files	Stores data in table format with rows and columns
Higher due to lack of structure	Lower due to table relationships and normalization

# ➤ What is API Testing?

• API Testing is a type of software testing that involves testing application programming interfaces (APIs) directly and as part of integration testing to determine if they meet expectations for functionality, reliability, performance, and security.

## ➤ What are the Types of API Testing

- **Functional Testing**: Checks the functionality of specific operations.
- **Load Testing**: Evaluates the API's performance under load.
- **Security Testing**: Ensures the API is secure and free from vulnerabilities.
- Validation Testing: Checks the accuracy and completeness of API responses.
- **UI Testing**: Verifies that the API behaves correctly in user interfaces.
- **Runtime and Error Detection**: Observes API performance and response under different conditions and data input.

## ➤ What is Responsive Testing?

• Responsive Testing is a type of testing to ensure that a web application or site adapts to different screen sizes, resolutions, and device orientations. It helps ensure a consistent user experience across devices, including desktops, tablets, and smartphones.

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# > Tools for Responsive Testing

- Some popular tools for responsive testing include:
  - **Google Chrome DevTools**: Built into the Chrome browser.
  - **Responsinator**: Provides various screen simulations for responsive testing.
  - **BrowserStack**: Offers cross-browser and cross-device testing.
  - **LambdaTest**: Provides cloud-based responsive testing on real devices.
  - Sizzy: A browser for web developers to test responsive designs across devices simultaneously.

# ➤ Write the Full Form of .ipa and .apk

- .ipa: *iOS App Store Package* the file extension for iOS applications, used on Apple devices.
- .apk: *Android Package* the file format used for Android applications.

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

- To enable Developer Options on Android devices:
  - 1. Open Settings.
  - 2. Scroll down to **About phone**.
  - 3. Locate **Build number**.
  - 4. Tap on **Build number** multiple times (usually 7 times).
  - 5. You may be prompted to enter your device PIN.
  - 6. A message should appear indicating **Developer mode has been enabled**.