**Module 3**

**• What is RDBMS**

A relational database management system (RDBMS) is **a program used to create, update, and manage relational databases**. Some of the most well-known RDBMSs include MySQL, PostgreSQL, MariaDB, Microsoft SQL Server, and Oracle Database.

**• What is SQL**

Structured query language (SQL) is a programming language for storing and processing information in a relational database. SQL is Structured Query Language, which is a computer language for

storing, manipulating and retrieving data stored in relational database.

* SQL is the standard language for Relation Database System. All relational database management systems like MySQL, MS Access, Oracle, Sybase, Informix, postgres and SQL Server use SQL as standard
* database language.
* Also, they are using different dialects, such as: MS SQL Server using T-SQL, ANSI SQL
* Oracle using PL/SQL,
* MS Access version of SQL is called JET SQL (native format) etc.

**• Write SQL Commands**

* **DDL** – Data Definition Language

|  |  |
| --- | --- |
| **Command** | **Description** |
| CREATE | Creates a new table, a view of a table, or other object in  database |
| ALTER | Modifies an existing database object, such as a table. |
| DROP | Deletes an entire table, a view of a table or other object  in the database. |

* **DML** – Data Manipulation Language

|  |  |
| --- | --- |
| **Command** | **Description** |
| INSERT | Create a record |
| UPDATE | Modifies record |
| DELETE | Deletes record |

* **DCL** – Data Control Language

|  |  |
| --- | --- |
| **Command** | **Description** |
| GRANT | Gives a privilege to user |
| REVOKE | Takes back privileges granted from user |

* **DQL** – Data Query Language

|  |  |
| --- | --- |
| **Command** | **Description** |
| SELECT | Retrieves certain records from one or more tables |

**• What is join?**

JOIN is **an SQL clause used to query and access data from multiple tables, based on logical relationships between those tables**. In other words, JOINS indicate how SQL Server should use data from one table to select the rows from another table.

**• Write type of joins**

* **INNER JOIN:** returns rows when there is a match in both tables.
* **LEFT JOIN:** returns all rows from the left table, even if there are no matches in the right table.
* **RIGHT JOIN:** returns all rows from the right table, even if there are no matches in the left table.
* **FULL JOIN:** returns rows when there is a match in one of the tables.

**• How Many constraint and describes it self ?**

* + NOT NULL - Ensures that a column cannot have a NULL value.
  + UNIQUE - Ensures that all values in a column are different.
  + PRIMARY KEY - A combination of a NOT NULL and UNIQUE . ...
  + FOREIGN KEY - Prevents actions that would destroy links between tables.
  + CHECK- Ensures that the values in a column satisfies a specific condition.
  + DEFAULT- Sets a default value for a column if no value is specified.
  + CREATE INDEX**-** Used to create and retrieve data from the database very quickly.

**• 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 connection 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 |
| Oracle, SQL Server. | XML, Microsoft Access. |

**• What is API Testing**

Application Programming Interface (API) **is a software interface that allows two applications to interact with each other without any user intervention**

**API (Application Programming Interface)** is a computing interface which enables communication and data exchange between two separate software systems.

The purpose of API Testing is to check the functionality, reliability, performance, and security of the programming interfaces.

In API Testing, instead of using standard user inputs(keyboard) and outputs, you use software to send calls to the API, get output, and note down the system’s response.

API tests are very different from GUI Tests and won’t concentrate on the look and feel of an application.

**• Types of API Testing**

**There are mainly 3 types of API Testing**

* **Open APIs:** These types of APIs are publicly available to use like OAuth APIs from Google. It has also not given any restriction to use them. So, they are also known as Public APIs.
* **Partner APIs:** Specific rights or licenses to access this type of API because they are not available to the public.
* **Internal APIs**: Internal or private. These APIs are developed by companies to use in their internal systems. It helps you to enhance the productivity of your teams.

**• What is Responsive Testing?**

A responsive web design involves creating a flexible web page that is accessible from any device, starting from a mobile phone to a tablet. Furthermore, a responsive web design improves users’ browsing experience.

Considering this from a quality assurance perspective, a responsive web design requires thorough evaluation using a variety of devices before it is ready to go live.

Software testers may find it challenging to perform responsive design testing as a variety of factors are to be looked into during the testing phase.

Some points to be understand for Responsive Testing.

* The challenges involved in testing a responsive website
* How website testing differs from a mobile device to a computer
* Rules and guidelines to be followed during responsive design testing and
* Lastly, various tools available to perform responsive testing

**• Which types of tools are available for Responsive Testing?**

* LT Browser
* Lembda Testing
* Google Resizer
* I am responsive
* Pixel tuner

**• What is the full form of .ipa, .apk**

**iPA:**iOS APP Store Package  
**APK:**Android Application Package file

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

About phone- settings- developer options-usb debugging- allow usb debugging?- press ok