

## Software Testing Assignment

### :: Module 3 : ST - Testing on Live Application ::

**1. What is RDBMS?**

**Ans.** RDBMS stands for Relational Database Management System.  
All modern database management systems (DBMS) like SQL, MS SQL Server, ORACLE, My-SQL, and Microsoft Access are based on RDBMS.  
It is called Relational Database Management System (RDBMS) because it is based on the relational model introduced **by E.F. Codd**.  
RDBMS uses SQL queries to access the data in the database.

**2. What is SQL?**

**Ans.** SQL is Structured Query Language, which is a specialized programming language for storing, manipulating and retrieving data stored in relational database.

**3. Write SQL Commands.**

**SQL Commands are as follow:**

**DDL – Data Definition Language**

SQL commands used to create the database structure are known as data definition language (DDL).

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

**DML – Data Manipulation Language**

A relational database can be updated with new data using data manipulation language (DML) statements.

Command	Description
SELECT	Retrieves certain records from one or more tables.
INSERT	Creates a record.
UPDATE	Modifies records.
DELETE	Deletes records.

**DCL – Data Control Language**

Data control language (DCL) is a programming language used by database administrators to control or grant other users access to databases.

Command	Description
GRANT	Gives a privilege to the user.
REVOKE	Takes back privileges granted by the user.

**DQL – Data Query Language**

Data retrieval instructions are written in the data query language (DQL), which is used to access relational databases.

**TCL - Transaction Control Language**

To automatically update databases, the relational engine uses transaction control language (TCL).

**4. What is join?**

**Ans.** Joins are clauses that extracts data from two tables to make a meaningful set of new data. Joins are used for a maximum of two tables only.

The data that is extracted from tables forms a new table or relation that is different from previous tables that is being used for data extraction.

**5. Write type of joins.**

**Ans.** Microsoft version of SQL supports different types of joins like – left join, right join, self join, inner join, full outer join, and cross join.

**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.

**6. How Many constraint and describes it self.**

**Ans.** The available constraints in SQL are:

- **NOT NULL:** This constraint tells that we cannot store a null value in a column. That is, if a column is specified as NOT NULL then we will not be able to store null in this particular column any more.
- **UNIQUE:** This constraint when specified with a column, tells that all the values in the column must be unique. That is, the values in any row of a column must not be repeated.
- **PRIMARY KEY:** A primary key is a field which can uniquely identify each row in a table. And this constraint is used to specify a field in a table as primary key.
- **FOREIGN KEY:** A Foreign key is a field which can uniquely identify each row in another table. And this constraint is used to specify a field as Foreign key.
- **CHECK:** This constraint helps to validate the values of a column to meet a particular condition. That is, it helps to ensure that the value stored in a column meets a specific condition.
- **DEFAULT:** This constraint specifies a default value for the column when no value is specified by the user.

## 7. Difference between RDBMS vs DBMS.

Ans.

Parameter	DBMS	RDBMS
Storage	DBMS stores data as a file.	Data is stored in the form of tables.
Database structure	DBMS system, stores data in either a navigational or hierarchical form.	RDBMS uses a tabular structure where the headers are the column names, and the rows contain corresponding values
Number of Users	DBMS supports single user only.	It supports multiple users.
Type of program	It is the program for managing the databases on the computer networks and the system hard disks.	It is the database systems which are used for maintaining the relationships among the tables.
Hardware and software needs.	Low software and hardware needs.	Higher hardware and software need.
Integrity constraints	DBMS does not support the integrity constants. The integrity constants are not imposed at the file level.	RDBMS supports the integrity constraints at the schema level. Values beyond a defined range cannot be stored into the particular RDMS column.
Ideally suited for	DBMS system mainly deals with small quantity of data.	RDMS is designed to handle a large amount of data.
Client Server	DBMS does not support client-server architecture	RDBMS supports client-server architecture.
Data Fetching	Data fetching is slower for the complex and large amount of data.	Data fetching is rapid because of its relational approach.
Data Redundancy	Data redundancy is common in this model.	Keys and indexes do not allow Data redundancy.
Data Relationship	No relationship between data	Data is stored in the form of tables which are related to each other with the help of foreign keys.
Security	There is no security.	Multiple levels of security. Log files are created at OS, Command, and object level.
Data Access	Data elements need to access individually.	Data can be easily accessed using SQL query. Multiple data elements can be accessed at the same time.
Examples	Examples of DBMS are a file system, XML, Windows Registry, etc.	Example of RDBMS is <a href="#">MySQL</a> , Oracle, SQL Server, etc.

**8. What is API Testing?**

**Ans.** API Testing is a type of software testing that focuses on validating the functionality, reliability, performance, and security of Application Programming Interfaces (APIs).

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

API testing involves **sending requests to the API, analyzing responses, and verifying whether they are correct or not**. This type of testing is typically performed at the integration level, after unit testing is completed, and before user interface testing begins.

**9. Types of API Testing?**

**Ans.** 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

**10. What is Responsive Testing?**

**Ans.** Responsive testing is a process that ensures a website or application is optimized and functions correctly across various devices, screen sizes, and orientations.

It involves testing the website's layout, content, and user interface on different viewports, including desktops, laptops, tablets, smartphones, and other devices.

**11. Which types of tools are available for Responsive Testing?**

**Ans.** Following tools are available for Responsive Testing:

- LT Browser
- Lambda Testing
- Google Resizer
- I am responsive
- Pixel tuner

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

**Ans.** .apk (Android Application Package)  
.ipa (iOS App Store Package)

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

**Ans.** To open the Developer Options mode ON on your Android device, follow these steps:

Step 1: Open the Settings app on your Android phone.

Step 2: Scroll down and locate the About phone or About device section. This may vary depending on your device manufacturer (e.g., Samsung, Google Pixel).

Step 3: Tap the Build number seven times. You may see a countdown or a message indicating that Developer Options is being unlocked.