Module 3 (Testing on Live Application)

(1) What is RDBMS?

- RDBMS stands for Relational Database Management System. RDBMS is the basis for SQL, and for all modern database systems like MS SQL Server, IBM DB2, Oracle, MySQL, and Microsoft Access.
- A Relational database management system (RDBMS) is a database management system (DBMS) that is based on the relational model as introduced by E. F. Codd.
- Most of today's databases are relational:
- database contains 1 or more tables
- table contains 1 or more records
- record contains 1 or more
- fields fields contain the data
- tables are related (joined) based on common fields
- Customers… Here's some data for the Customers table

-Products…Here's some data for the Products table

-Orders… Here's some data for the Orders table

(2) What is SQL?

- 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.

- SQL tutorial gives unique learning on Structured Query Language and it helps to make practice on SQL commands which provides immediate results.

- SQL is a language of database, it includes database creation, deletion, fetching rows and modifying rows etc.

- SQL is an ANSI (American National Standards Institute) standard but there are many different versions of the SQL language.

- SQL is the standard programming language of relational DBs

- SQL is a standard computer language for accessing and manipulating databases.

(3) Write SQL Commands?

- (1) 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.

(2) DQL – Data Query Language

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

(3) DML – Data Manipulation Language

Command	Description
INSERT -	Creates a record
UPDATE -	Modifies records
DELETE -	Deletes records

(4) DCL – Data Control Language

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

(4) What is join?

- SQL joins are used to fetch or retrieve data from two or more data tables, based on a join condition. A join condition is a relationship among some columns in the data tables that take part in Sql join. Basically data tables are related to each other with keys. We use these keys relationship in Sql joins.

- the expert level, JOIN is more common SQL commands used in day to day life. JOIN is used to retrieving the records from multiple tables. SQL allows you to take JOIN on multiple tables from the same database as well as different databases from the same server.

- Basically the tables are interrelated with each other using Primary & foreign keys. So these keys are used in the JOIN to interlink two tables.

(5) Write type of joins.

(1) INNER JOIN: returns rows when there is a match in both tables.

- The most frequently used and important of the joins is the INNER JOIN. They are also referred to as an EQUIJOIN.

- The INNER JOIN creates a new result table by combining column values of two tables (table1 and table2) based upon the join-predicate. The query compares each row of table1 with each row of table2 to find all pairs of rows which satisfy the join-predicate. When the join-predicate is satisfied, column values for each matched pair of rows of A and B are combined into a result row.

- SYNTAX: The basic syntax of INNER JOIN is as follows:

- SELECT table1.column1, table2.column2...FROM table1INNER JOIN table2ON table1.common_filed = table2.common_field;

(2) LEFT JOIN: returns all rows from the left table, even if there are no matches in the right table.

- The SQL LEFT JOIN returns all rows from the left table, even if there are no matches in the right table. This means that if the ON clause matches 0 (zero) records in right table, the join will still return a row in the result, but with NULL in each column from right table.

- This means that a left join returns all the values from the left table, plus matched values from the right table or NULL in case of no matching join predicate.

- SYNTAX: The basic syntax of LEFT JOIN is as follows:

- SELECT table1.column1, table2.column2...FROM table1LEFT JOIN table2ON table1.common_filed = table2.common_field;

(3) RIGHT JOIN: returns all rows from the right table, even if there are no matches in the left table.

- The SQL RIGHT JOIN returns all rows from the right table, even if there are no matches in the left table. This means that if the ON clause matches 0 (zero) records in left table, the join will still return a row in the result, but with NULL in each column from left table.

- This means that a right join returns all the values from the right table, plus matched values from the left table or NULL in case of no matching join predicate.

- SYNTAX: The basic syntax of RIGHT JOIN is as follows:

- SELECT table1.column1, table2.column2...FROM table1RIGHT JOIN table2ON table1.common_filed = table2.common_field;

(4) FULL JOIN: returns rows when there is a match in one of the tables.

- The SQL FULL JOIN combines the results of both left and right outer joins.

- The joined table will contain all records from both tables, and fill in NULLs for missing matches on either side.

- SYNTAX: The basic syntax of FULL JOIN is as follows:

SELECT table1.column1, table2.column2...FROM table1FULL JOIN table2ON table1.common_filed = table2.common_field;

(6) How Many constraint and describes it self

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➢ 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. Uniquely identifies each row in a table

➢ 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

(7) Difference between RDBMS vs DBMS

DBMS	RDBMS
DBMS stores data as file.	RDBMS stores data in tabular form.
Data elements need to access individually.	Multiple data elements can be accessed at the same time.
No relationship between data.	Data is stored in the form of tables which are related to each other.
Normalization is not present.	Normalization is present.
DBMS does not support	RDBMS supports distributed database.

DBMS	RDBMS
distributed database.	
It stores data in either a navigational or hierarchical form.	It uses a tabular structure where the headers are the column names, and the rows contain corresponding values.
It deals with small quantity of data.	It deals with large amount of data.
Data redundancy is common in this model.	Keys and indexes do not allow Data redundancy.
It is used for small organization and deal with small data.	It is used to handle large amount of data.
Not all Codd rules are satisfied.	All 12 Codd rules are satisfied.
Security is less	More security measures provided.
It supports single user.	It supports multiple users.
Data fetching is slower for the large amount of data.	Data fetching is fast because of relational approach.
The data in a DBMS is subject to low security levels with regards to data manipulation.	There exists multiple levels of data security in a RDBMS.
Low software and hardware necessities.	Higher software and hardware necessities.
Examples: XML, Window Registry, Forxpro, dbaseIIIplus etc.	Examples: MySQL, PostgreSQL, SQL Server, Oracle, Microsoft Access etc.

(8) 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

- another definition , 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.

(9) 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.

(10)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

(11) Which types of tools are available for Responsive Testing

- LT Browser

- Lembda Testing

- Google Resizer

- I am responsive

- Pixel tuner

(12) What is the full form of .ipa, .apk

ipa - iOS AppStore Package.

Apk - Android Application Package**.**

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

- **Step 1:** Go to *Settings* > *About phone*.

- **Step 2:** Scroll down to *Build number*.

- **Step 3:** Tap *Build number* seven times. After the first few taps, you should see the steps counting down until you unlock the developer options. You may also have to tap in your PIN for verification.

- **Step 4:** Once developer options are activated, you will see a message that reads, *You are now a developer*.

- **Step 5:** Go back to the *Settings* pane and head to *System*, where you will now find *Developer options* as an entry.

- **Step 6:** Tap it and toggle the switch on if it is not already, and from there, you can proceed to make adjustments to your phone.