Software Testing Assignment

Module – 3(Testing on Live Application)

1) What is RDBMS?

- RDBMS stands for **R**elational **D**atabase **M**anagement **S**ystem. 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
- So why is it called "relational"?
    - tables are related (*joined*) based on common fields

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.
- SQL is a great example of a **declarative** programming language
    - your declare what you want, DB engine figures out how…
- SQL stands for Structured Query Language
- SQL allows you to access a database
- SQL is an ANSI standard computer language
- SQL can execute queries against a database
- SQL can retrieve data from a database
- SQL can insert new records in a database
- SQL can delete records from a database
- SQL can update records in a database

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- SQL is easy to learn
- SQL is written in the form of *queries*
- *action* queries insert, update & delete data
- *select* queries retrieve data from DB

3) Write SQL Commands

- **DDL** – Data Definition Language
- **DML** – Data Manipulation Language
- **DCL** – Data Control Language
- **DQL** – Data Query Language

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 Objects in the database.

DQL - Data Query Language

Command	Description
SELECT	Retrieves certain records from one or more tables

DML – Data Manipulation Language

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

DCL – Data Control Language

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

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4) What is join?

- As the name shows, JOIN means *to combine something*. In case of SQL, JOIN means **"to combine two or more tables"**.
- The SQL JOIN clause takes records from two or more tables in a database and combines it together.

5) Write type of joins.

- **(INNER) JOIN:** Returns records that have matching values in both Tables.
  SYNTAX:
- SELECT table1.column1, table2.column2...FROM table1INNER JOIN table2ON table1.common_filed = table2.common_field;
- **LEFT (OUTER) JOIN:** Returns all records from the left table, and the matched records from the right table
  SYNTAX:
- SELECT table1.column1, table2.column2...FROM table1LEFT JOIN table2ON table1.common_filed = table2.common_field;
- **RIGHT (OUTER) JOIN:** Returns all records from the right table, and the matched records from the left table
  SYNTAX:
- SELECT table1.column1, table2.column2...FROM table1RIGHT JOIN table2ON table1.common_filed = table2.common_field;
- **FULL (OUTER) JOIN**: Returns all records when there is a match in either left or right table
- **SYNTAX**:
- SELECT table1.column1, table2.column2...FROM table1FULL JOIN table2ON table1.common_filed = table2.common_field;

6) 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. 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

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- 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

Basis of Comparison	DBMS	RDBMS
Expansion	Database Management System	Relational DataBase Management System
Data storage	Navigational model ie data by linked records	Relational model (in tables). ie data in tables as row and column
Data redundancy	Exhibit	Not Present
Normalization	Not performed	RDBMS uses normalization to reduce redundancy
Data access	Consumes more time	Faster, compared to DBMS.
Keys and indexes	Does not use.	used to establish relationship. Keys are used in RDBMS.
Transaction management	Inefficient, Error prone and insecure.	Efficient and secure.
Distributed Databases	Not supported	Supported by RDBMS.
Example	Dbase, FoxPro.	SQL server, Oracle, mysql, MariaDB, SQLite.

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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.

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

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

- **APK file stands for (Android Application Package).**
- APK is a file extension of an Android device.
- APK files can normally be used in Android and a number of other Android-based **Operating Systems** for the distribution and installation of mobile apps and mobile games.
- **An IPA (iOS App Store Package) file** is an iOS application archive file that stores an iOS app. Each IPA file includes a binary and can only be installed on an iOS device.

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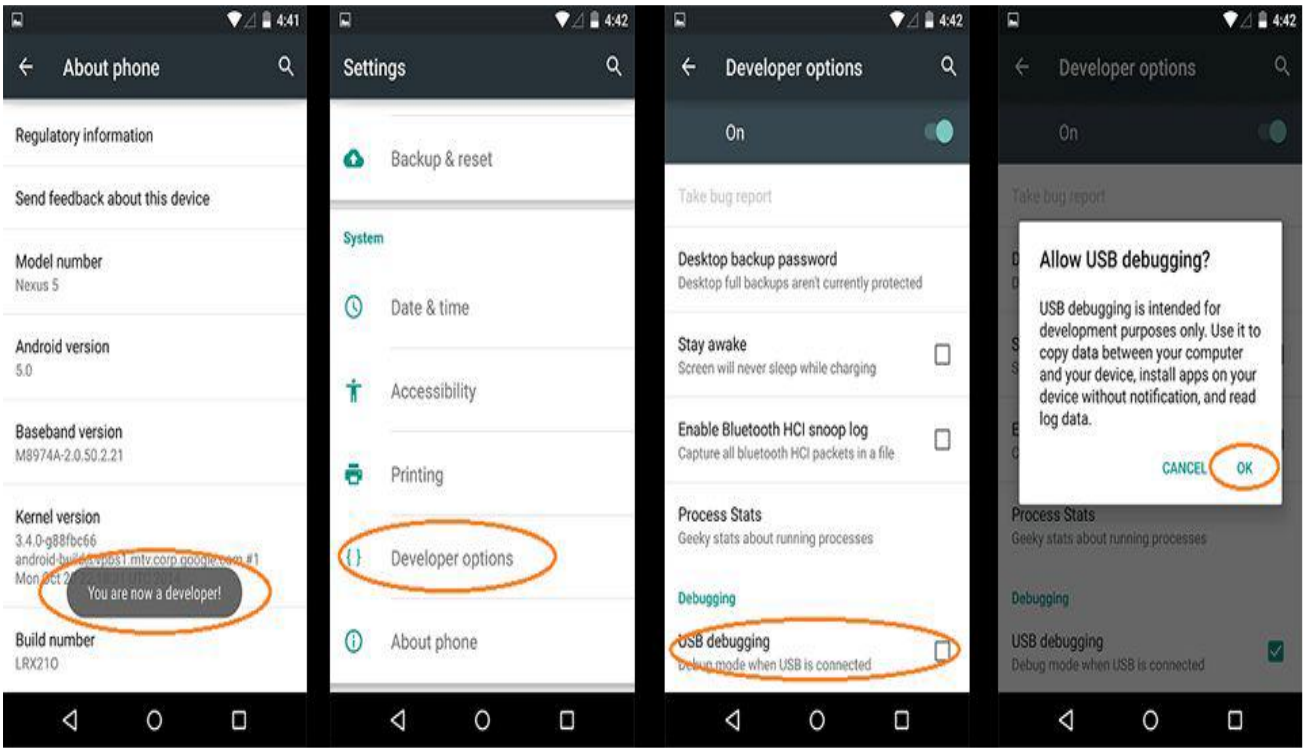
13) How to create step for to open the developer option mode ON?



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