***Software testing Assignment***

**Module = 3 (Testing on Live Application)**

Q.1 what is API testing

* Application Programming Interface (API)
* Application Programming Interface (API) is a way for two or more computer programs to communicate with each other
* API is a software interface that allows two applications to interact with each other without any user intervention
* API Testing aims to check the functionality, reliability, performance, and security of the programming interfaces.
* API tests are very different from GUI Tests and won’t concentrate on the look and feel of an application
* One purpose of API is to hide the internal details of how a system work, exposing only those parts a programmer will find useful and keeping them consistent even if the internal details later change.
* API is defined as a code that helps two different software to communicate and exchange data with each other

Q.2 types of API testing

* 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 restrictions to use them so, they also know 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 system. It helps you to enhance the productivity of your teams
* Composite APIs: this type of API combines different data and service APIs

Q.3 what is responsive testing

* Responsive testing involves how a website or web application looks and behaves on different devices, screen sizes, and resolutions.
* A responsive web design involves creating a flexible web page that is accessible from any device, starting from a mobile phone to a tablet
* A responsive web design requires thorough evaluation using a variety of devices before it is ready to go live
* The goal of responsive testing is to ensure that the website or web application can be used effectively on various devices, including desktops, laptops, tablets, and smartphones.
* Lastly, various tools available to perform responsive testing

Q.4 which types of tools are available for responsive testing

* There are many tools available to test responsive design
* LT browser
* Lambda testing
* Google resizer
* I am responsive
* Pixel tuner
* Responsinator
* Emulators
* Cross browser testing
* Browser stack

Q.5 what is SQL

* SQL is a structured Query Language
* SQL is a language of a database, it includes database creation, deletion, fetching rows and modifying rows etc.
* SQL is a standard computer language for accessing and manipulating database
* SQL is a structured Query Language, which is a computer language for storing manipulating and retrieving data stored in relational database
* SQL is an ANSI standard computer language
* SQL allows you to access a database
* SQL is easy to learn
* SQL can update records in a database
* SQL can insert new records in a database
* SQL can delete record in a database

Q.6 write SQL commands

* SQL commands are the instructions used to communicate with a database and queries with data
* SQL commands can be used to search the database and to do other functions like creating tables, adding data to tables, modifying data, and dropping tables
* SQL commands
* ***DDL -- data definition language***
* ***DML—data manipulations language***
* ***DCL—data control language***
* ***DQL—data query language***
* **DDL (data definition language) commands**
* Create = create a table, a view of a table, or another 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 object in the database
* **DQL (data query language) commands**
* Select = retrieves certain records from one or more tables
* **DML (data manipulation language) commands**
* Insert = creates a record
* Update = modifies record
* Delete = deletes record
* **DCL (data control language) commands**
* GRANT= gives a privilege to user
* Revoke = take back privileges granted from user

Q.7 what is RDBMS

* RDBMS stands for Relational Database Management System
* 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.
* databases are relational:
* the database contains 1 or more tables
* table contains 1 or more records
* record contains 1 or more fields
* fields contain the data

Q.8 what is joins

* A JOIN clause is used to combine rows from two or more tables, based on a related column between them.

Q.9 write types of joins

* Different types 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.

Q.10 different 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 distributed database. | RDBMS supports 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. |
| 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, etc. | Examples: MySQL, PostgreSQL, SQL Server, Oracle, Microsoft Access etc. |

Q.11 what is full form of .ipa, .apk

* IPA: IOS app store package
* Apk: android application package file

Q.12 how many constraints and describes it self

* Primary key
* No duplicate value
* No null values
* Primary key once
* It uniquely identifies the record/row of a table
* Unique key
* No duplicate value
* 1 null value
* Multiple time
* It uniquely identifies the record of a table
* Default
* Set default values
* Foreign key
* Refer the primary key of the other table
* Not null
* Column cant be null