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**DEPLOMA IN SOFTWARE TESTING**

**Assignment**

TESTING ON LIVE APPLICATION

## What is RDBMS?

* Relational Database Management System (RDBMS) is an advanced version of a DBMS system.
* It came into existence during 1970’s.
* RDBMS system also allows the organization to access data more efficiently then DBMS.
* RDBMS is a software system which is used to store only data which need to be stored in the form of tables. In this kind of system, data is managed and stored in rows and columns which is known as tuples and attributes.
* RDBMS is a powerful data management system and is widely used across the world.

## Difference between RDBMS vs DBMS.

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| --- | --- | --- |
| PARAMETERS | DBMS | RDBMS |
| Storage | DBMS stores data as a file | Data is stored in the forms 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 name and the rows contains corresponding values |
| Number of users | DBMS supports single user only | It supports multiple users |
| Data fetching | Data fetching is slower for the complex and large amount of data | Data fetching is rapid because of its relational apprpach |
| 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 relationship 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. Value beyond a defined range cannot be stored into the particular RDBMS column |
| Normalization | DBMS does not support normalization | RDBMS can be normalized |
| Distributed databases | DBMS does not support distributed database | RDBMS offers support for distributed database |
| Ideally suited for | DBMS system mainly deals with small quantity of data | RDBMS is designed to handle a large amount of data |
| Client server | DBMS does not support client server architecture | RDBMS support client server architecture |
| Data relationship | No relationship between data | Data is stored in the form of tables which are related to each other with the help od foreign keys |
| Security | There is no security | Multiple level 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 | File system, XML, windows registry etc… | MySQL, oracle, SQL server etc… |

## What is SQL?

* SQL stands for Structured Query language
* **SQL** is the standard language for dealing with Relational Databases. SQL can be used to insert, search, update, and delete database records. SQL can do lots of other operations, including optimizing and maintenance of databases.

## Write SQL commands.

* Here’s a list of some of the most commonly used **SQL commands**:
* **DDL :** data definition language
* **DML :** data manipulation language
* **DCL :** data control language
* **DQL** **:** data query language

1. **DDL :** data definition language

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| --- | --- |
| COMMAND | DESCRIPTION |
| Create | Create a new table, a view of 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 |

1. **DML :** data manipulation language

|  |  |
| --- | --- |
| COMMAND | DESCRIPTION |
| Insert | Create a record |
| Update | Modifies records |
| Delete | Deletes records |

1. **DCL :** data control language

|  |  |
| --- | --- |
| COMMAND | DESCRIPTION |
| Grant | Gives a privilege to user |
| Revoke | Takes back privilege granted from user |

1. **DQL** **:** data query language

|  |  |
| --- | --- |
| COMMAND | DESCRIPTION |
| Select | Retrieves certain records from one or more table |

## What is join?

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

## Write types of join.

* Here are the different types of the JOINs in SQL:
* **(INNER) JOIN:** Returns records that have matching values in both tables
* **LEFT (OUTER) JOIN:** Returns all records from the left table, and the matched records from the right table
* **RIGHT (OUTER) JOIN:** Returns all records from the right table, and the matched records from the left table
* **FULL (OUTER) JOIN:** Returns all records when there is a match in either left or right table

1.    2. 

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## How many constraints of SQL and describes itself.

* There are several types of constraints in SQL, including:

1. **PRIMARY KEY:** A primary key constraint is used to uniquely identify each row in a table. It ensures that the values in the specified column or columns are unique and not null.
2. **FOREIGN KEY:** A foreign key constraint is used to establish a relationship between two tables. It ensures that the values in the specified column or columns of one table match the values in the primary key column or columns of another table.
3. **UNIQUE:** A unique constraint ensures that the values in the specified column or columns are unique.
4. **NOT NULL:** A not null constraint ensures that a column cannot contain null values.
5. **CHECK:** A check constraint is used to ensure that the values in a column meet a specific condition or set of conditions.
6. **DEFAULT:** A default constraint is used to provide a default value for a column if no value is specified.
7. **INDEX:** An index is used to speed up queries by creating a data structure that allows the database to quickly find rows that match a certain set of criteria.
8. **VIEW:** A view is a virtual table that is based on the result of a SELECT statement. It is used to simplify complex queries and to provide a level of abstraction between the user and the underlying data.
9. **TRIGGER:** A trigger is a set of actions that are automatically performed when a specific event occurs, such as inserting, updating, or deleting data.

* These are some of the most commonly used constraints in SQL, but there are many others as well. Each constraint serves a specific purpose and helps ensure the integrity of the database.

## What is API testing?

* **API** testing is the process of testing the Application Programming Interfaces (APIs) to ensure that they function as intended and meet the requirements of the application. APIs allow different software components or systems to interact with each other without any user intervention.
* **API** 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.

## Types of API testing?

* There are mainly 3 types of API Testing

1. **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.
2. **Partner APIs:** Specific rights or licenses to access this type of API because they are not available to the public.
3. **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.
* Responsive testing involves testing a website or application on different devices such as desktops, laptops, tablets, and smartphones to identify any layout or functional issues. This testing can be done manually or through automated tools that simulate different devices and screen sizes.

## Which types of tools are available for responsive testing?

1. **BrowserStack:** It is a cloud-based testing platform that allows you to test websites and web applications on multiple devices and browsers.
2. **Responsinator:** It is a free web-based tool that allows you to test the responsiveness of a website on multiple devices, including tablets and smartphones.
3. **Google Chrome DevTools:** It is a built-in browser feature that allows you to test responsive designs, simulate device sizes, and see how web pages look on different devices.
4. **Am I Responsive:** It is a free web-based tool that allows you to view a website on multiple devices at once, giving you an overall view of how the website looks across different devices.
5. **Screenfly:** It is a free web-based tool that allows you to test a website's responsiveness on different devices, including smartphones, tablets, and desktops.
6. **LT Browser**
7. **Lembda Testing**
8. **Google Resizer**
9. **Pixel tuner**

## What is the full form of .ipa and .apk?

* **.ipa** : IPA stands for "iOS App Store Package" or "iPhone App Store Package". It is a file format used for distributing and installing apps on Apple's iOS operating system. The IPA file contains the app itself, along with any necessary resources and metadata, and can be installed on an iPhone, iPad, or iPod Touch using iTunes or Apple's own App Store app.
* **.apk :** “Android Application Package". It is a file format used to distribute and install applications on devices that run on the Android operating system.

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

* he steps to enable developer options on an Android device may vary slightly depending on the make and model of the device, but generally, you can follow these steps:

1. Go to "Settings" on your Android device.
2. Scroll down and tap on "About phone" or "About device".
3. Scroll down to find the "Build number" or "Build version" option.
4. Tap on the "Build number" or "Build version" option seven times in quick succession. You will see a message that says "You are now a developer!" or something similar.
5. Go back to the main "Settings" menu and you should see a new option called "Developer options" or "Developer mode". Tap on it to access the developer options.

* Once you have accessed the developer options, you can enable or disable various settings such as USB debugging, OEM unlocking, and more. However, be careful when making changes in the developer options, as some settings can potentially harm your device if used improperly.