

Database Testing using Selenium - Database Concepts

Before knowing how to perform Database Testing using Selenium, we need to first understand the below Database concepts:

- **Database Testing** - Validating whether the data displaying on the User Interface is matching the data that is stored in the database.
 - Examples:
 - Adding a new user from UI, should add a new record with the same user details under the tables say users table in DB
 - Updating a new user, should update the details stored in DB along with displaying the updated details on UI.
 - **Database** - Database is a collection of related data.
 - Example for related data: Employee Data like Employee ID, Employee Name, Employee Location, Employee Experience etc. can be stored in Database.
 - **Database Management System** - Software that stores data in databases in an organized way to make it easier to create, retrieve, update etc.
 - Examples: MySQL, Oracle, MangoDB, MariaDB, SQLite, Cassandra and many more (Google Search - dbms software list)
 - **Data Models** - define how data is connected to each other and stored inside the system.
 - Types of Data Models - Hierarchical Model, Network Model, Entity-Relationship Model and Relational Model
 - **Relational Model**
 - Is popular and widely used by most of the DBMS
 - DBMS using Relational Data Models are known as RDBMS
 - Data is stored in the form of tables (Tables organize data in the form of columns and rows)
 - Provide an example (Employee Data)
 - **SQL** - Programming language for Relational Databases
 - Stands for Structured Query Language
 - Since SQL is for Relational Databases, it comes as a default feature in the RDBMS software like Oracle, MySQL etc.
 - The following things can be performed on Database using SQL:
 - Retrieving the data from Database
 - Inserting new data into Database
 - Modifying existing data in Database
 - Deleting existing data in Database
 - Creating new Databases
 - Creating new tables inside Databases
 - Deleting tables and databases
 - And many more
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