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Software Testing

This is a process of checking **C**orrectness, **C**ompleteness, **S**ecurity and **Q**uality of developed software application.

Manual Testing

Tester is using hand-eye-brain co-ordination

Actions

* Entering the data in text box
* Clicking on buttons
* Selecting options from drop down list, list box, radio button, check box
* Navigating from one page to another
* Mark the test case as pass or fail

Automation testing means performing all above actions via a machine.

Machine in this context is Test Automation Tool.

Every automation tool is a software.

Every tool understands programming language, you are supposed to provide the instructions via any one of the supported programming language. (Selenium – Java, C#. net, JavaScript, Python)

Process of Automation

1. Planning
2. Tool selection
   1. Technology / type of application
   2. Cost of tool
   3. Market presence
   4. Support availability
   5. HR availability
3. Creating the script
4. Creating the test data
5. Executing the script
6. Generating the report
7. Maintance

Selenium

This is a bundle / suite of tools for testing web application.

Components of Selenium

* Selenium IDE
* Selenium Grid
* Selenium RC
* Selenium WebDriver

**Selenium WebDriver**

* This is the tool for testing browser based applications (Web Sites)
* Interface in Java
* API

Create 2 Folders (On D driver or E Drive)

1. YourName\_SeleniumDemos
2. Selenium Jar File

Pre-Requisite for Selenium WebDriver

1. Windows 10
2. Minimum Java 11
3. Any one updated browser
4. Any one IDE (Editor)
   1. Eclipse
   2. Idea Intellij
5. Selenium Jar file

Download Selenium Jar File

1. Launch selenium.dev
2. Click on Downloads link
3. Download Latest stable version [4.34.0](https://github.com/SeleniumHQ/selenium/releases/download/selenium-4.34.0/selenium-server-4.34.0.jar)
4. Open your downloads folder
5. Cut / Copy this file and paste in 2nd folder (Selenium Jar Files)

Configuration of Selenium with Eclipse

1. Launch Eclipse
2. Click on browse and
3. Select the 1st folder which you have created in earlier step
4. Click on Launch
5. Click on File menu 🡪 New 🡪 Java Project
6. Give any name to Project
7. **Uncheck create module-info.java file checkbox**
8. Click on Finish button
9. Create a package
   1. Right click on project
   2. New 🡪 Package
10. Create a Class
11. Right Click on Project 🡪 Build Path 🡪 Configure Build Path
12. Click on Libraries tab
13. Click on ClassPath
14. Click on Add External JARs…
15. Select the file which you have downloaded in earlier stpe
16. Click on Apply and Close