**Introduction:**

**What is Test Automation?  
Automation Testing or Test Automation** is a software testing technique that performs using special automated testing software tools to execute a test case suite.

**Why is Test Automation used?  
Test Automation** is the best way to increase the effectiveness, test coverage, and execution speed in software testing. Automated software testing is important due to the following reasons:

* Manual Testing of all workflows is time consuming.
* Test Automation in software testing does not require Human intervention. You can run automated test unattended.
* Test Automation increases the speed of test execution.
* Automation helps increase Test Coverage.
* Manual Testing can become boring and hence error prone.

**Limitations of Automation Testing?**

* Only used for web-based applications.
* No in-built image comparison. //Third party tools can used
* No self reporting capabilities within Selenium. // TestNG will be used
* No Tech Support.
* Captcha Automation is not automated.

**Which Test Cases to Automate?**

Test cases to be automated can be selected using the following criteria to increase the automation ROI

* High Risk - Business Critical test cases.
* Test cases that are repeatedly executed.
* Test Cases that are very tedious or difficult to perform manually.
* Test Cases which are time-consuming.

**Which Test Cases are not to Automate?**

* Test Cases that are newly designed and not executed manually at least once.
* Test Cases for which the requirements are frequently changing.
* Test cases which are executed on an ad-hoc basis.

**Automated Testing Process?**

Following steps are followed in an Automation Process.

**Step 1)** Test Tool Selection

**Step 2)** Define scope of Automation.

**Step 3)** Planning, Design and Development

**Step 4)** Test Execution

**Step 5)** Maintenance

**Chart

Description automatically generated**

**What is Selenium**   
It is an open source automation testing tool.  
It is used exclusively for web based applications.  
You can work on multiple operating systems using selenium .

Platforms Supported by Selenium

Windows  
OS X  
Linux  
Solaris

following languages are used with selenium.

- Java  
- C#  
- Ruby  
- Python  
- PHP  
- Pearl

Selenium Browsers Support:

InternetExplorer  
Firefox  
Chrome  
Safari

**Some Testing Tools?**

**Selenium  
TestProject  
Ranorex  
HP UFT  
IBM Rational   
Skill Test**