Selenium Automation
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- Testing an application's features by using an automation tool and automation script(programming code) is called automation testing.
- There are various automation tools as follows

    - **Selenium** - automation testing tool for web application testing.
    - **Appium** - automation testing tool for mobile based applications.
    - **Katalon Studio** - Katalon Studio can integrate with both Selenium and Appium. The automation testing tool can simplify the automation testing of API, web apps, and mobile applications.
    - **Cucumber** - automation testing tool for web application testing.
    - **SoapUI** - automation testing tool for API testing.

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Disadvantages of Manual testing

- Manual Testing is time-consuming mainly while doing regression testing.
- Manual testing is less reliable compared to automation testing because it is conducted by humans. So there will always be errors and mistakes.
- Expensive over automation testing in the long run.
- Compatibility testing is difficult in manual testing.
- Testing cycle is greater in manual testing that is very time consuming.
- Human efforts are more in manual testing.

Advantages of Automation testing

- Automation testing is faster in execution.
- It is cheaper compared to manual testing in the long run.
- Automated testing is more reliable.
- Automated testing is more powerful and versatile
- It is mostly used for regression testing.
- It is reusable because the automation process can be recorded.
- It does not require human intervention. Test scripts can be run unattended.
- It helps to increase the test coverage.
- Testing life cycle is reduced in automation testing.
- Compatibility testing is possible or easy.

Disadvantages of Automated Testing

- It is recommended only for stable products.
- Automation testing is expensive initially.
- Most of the automation tools are expensive.
- It has some limitations such as handling captcha.
- Huge maintenance in case of repeated changes in the requirements.

Advantages of selenium

1. Selenium is an open source application like Selenium IDE, Selenium RC, Selenium WebDriver and Selenium Grid.
2. Selenium supports various programming language like **java**, python, ruby, c#, PHP, perl. Nearly 80% of testers use java for automation.
3. Selenium supports various Browsers (Mozilla Firefox, Google Chrome, IE, Opera, Safari, etc.
4. Using selenium, testers can perform functional testing and non functional testing.

Disadvantages of selenium

1. Selenium is used to automate only web based applications.
2. Selenium is open source hence there is no reliable Technical Support from anybody.
3. Difficult to use, takes more time to create Test cases.
4. We can not automate Captcha.