Experiment No. 7

Aim: To Setup and Run Selenium Tests in Jenkins Using Maven.

LO No. & Statement: (LO4): Examine the importance of Selenium sod Jenkins to test Software.

Theory:

What is Selenium?

Selenium is an open-source, automated testing tool used to test web applications across various browsers. Selenium can only test web applications, unfortunately, so desktop and mobile apps can't be tested. However, other tools like Appium and HP's QTP can be used to test software and mobile applications.

Features of Selenium:

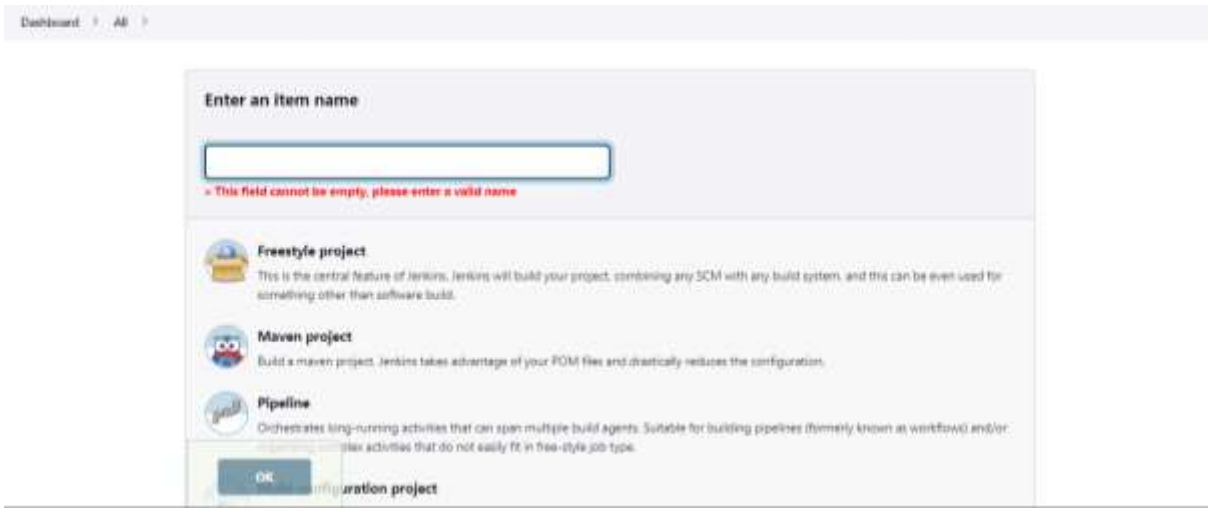
- Selenium has proven to be accurate with results thus making it extremely reliable.
- Since selenium is open-source, anybody willing to learn testing can begin at no cost.
- Selenium supports a broad spectrum of programming languages like Python, PHP, Perl, and Ruby.
- Selenium supports various browsers like Chrome, Firefox, and Opera, among others.

Limitations of Selenium:

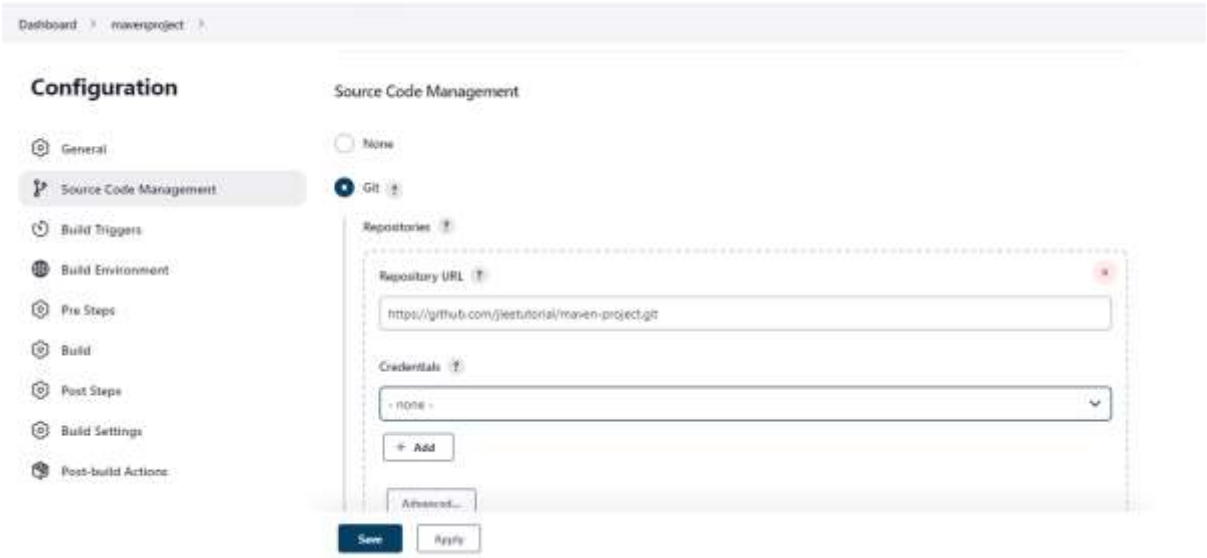
- Since Selenium is open-source, it doesn't have a developer community and hence doesn't have reliable tech support.
- Selenium cannot test mobile or desktop applications.
- Selenium offers limited support for image testing.
- Selenium has limited support for test management. Selenium is often integrated with tools like JUnit and TestNG for this purpose.
- You may need knowledge of programming languages to use Selenium.

Findings and Implementation:

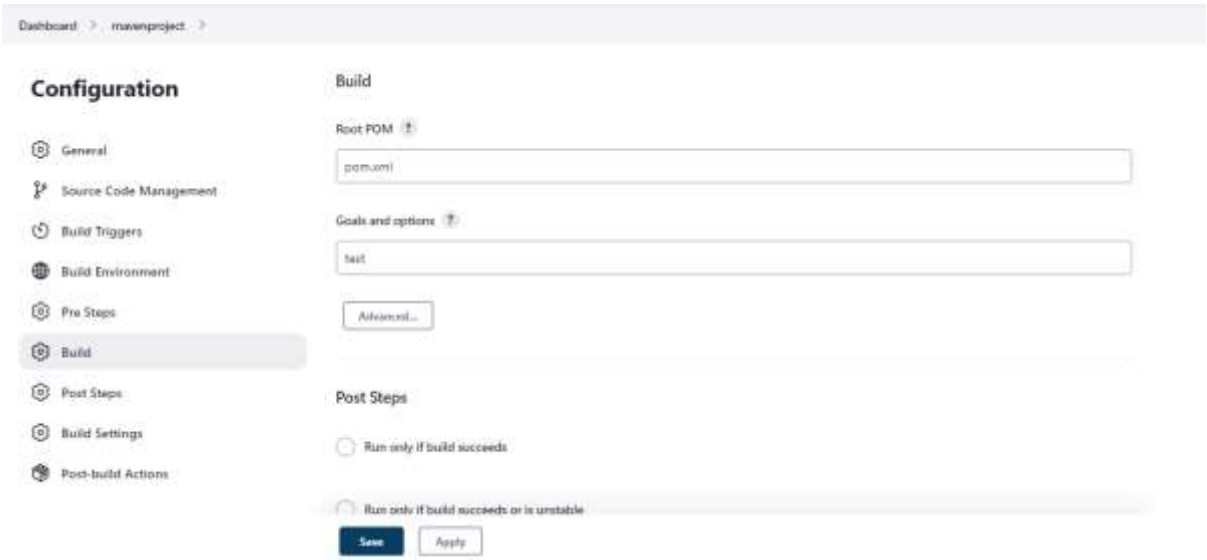
Creating a new Maven Project:



Configuration of project:

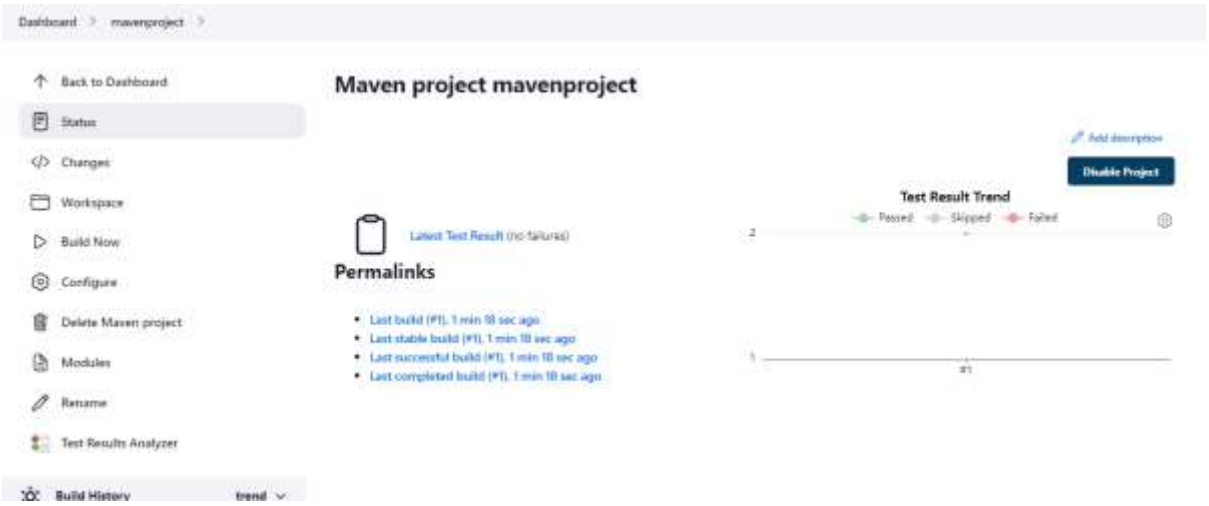


Build:



Console Output:

Test Result:



Conclusion:

Automated testing is a way to achieve one of the tasks present in the SDLC, and Selenium was used in this experiment to automate the testing for a sample project. The importance and presence of the pom.xml file which contains the JUnit test cases were highlighted and understood.

We have achieved LO4 from this experiment.

We have also achieved Program Outcomes PO1, PO2, PO3, PO4, PO5, PO12.