Shri Vile Parle Kelavani Mandal's

Narsee Monjee College of Commerce and Economics (Autonomous)

TYBSCIT

SOFTWARE TESTING AND QUALITY ASSURANCE

MINI PROJECT

Practical 9: Regression Testing Using Automated Testing For Website.

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What is Regression Testing?

Regression testing is a check of already tested features after system modification. This testing is done to ensure that new code changes do not have side effects on the existing functionalities. It ensures that the old code still works once the latest code changes are done.

What is Automation Testing?

Automated testing is a process that validates if software is functioning appropriately and meeting requirements before it is released into production. This software testing method uses scripted sequences that are executed by testing tools. Automation helps the QA team avoid these human errors in application testing. It executes checks in a faster time frame than if it were done in person. Although some types of testing, such as regression or functional testing can be done manually, there are greater benefits of doing it automatically. Automation developers generally write in the following programming languages: C#, JavaScript, Python and Ruby.

Automation Testing Tools:

Best Automation Testing tools are:

1. Katalon
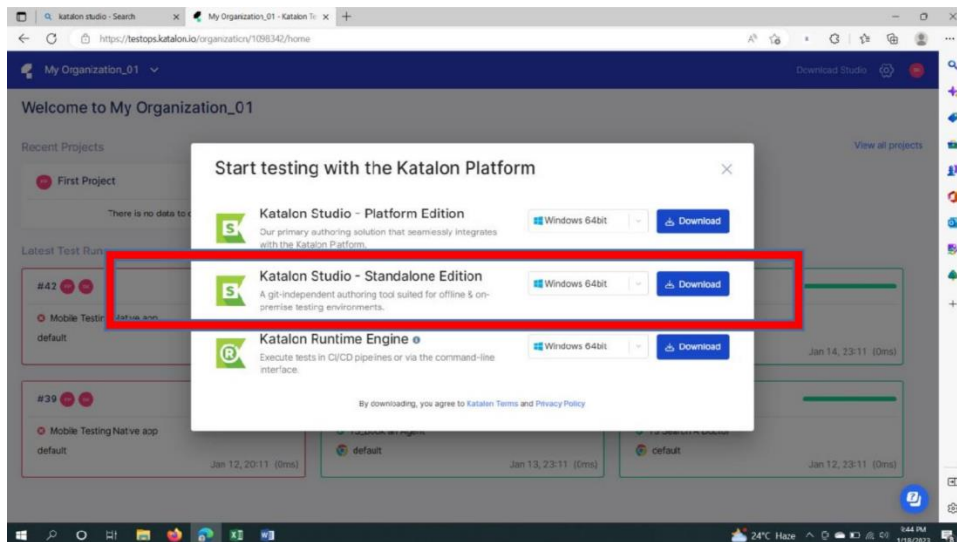2. Selenium
3. Ranorex
4. Appium
5. Eggplant

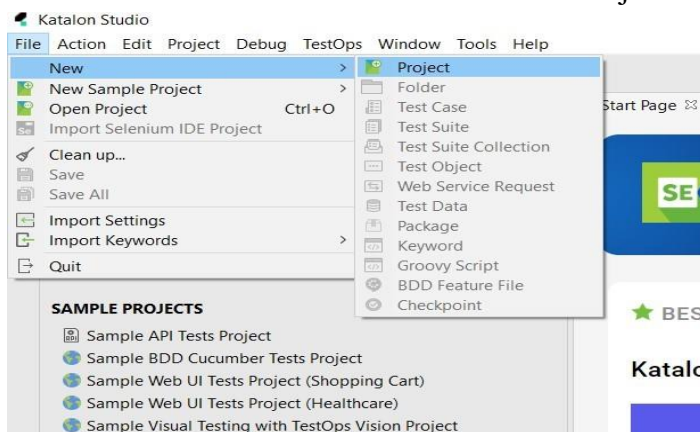From above 5 tools we have used Katalon Studio.

Introduction:

Katalon Studio is a test automation tool for web, mobile, and API testing. It is used to automate the testing of software applications to ensure that they are functioning correctly and meeting the requirements. It provides a user-friendly interface for creating, executing, and reporting on test cases and test suites. It supports both manual and automated testing.
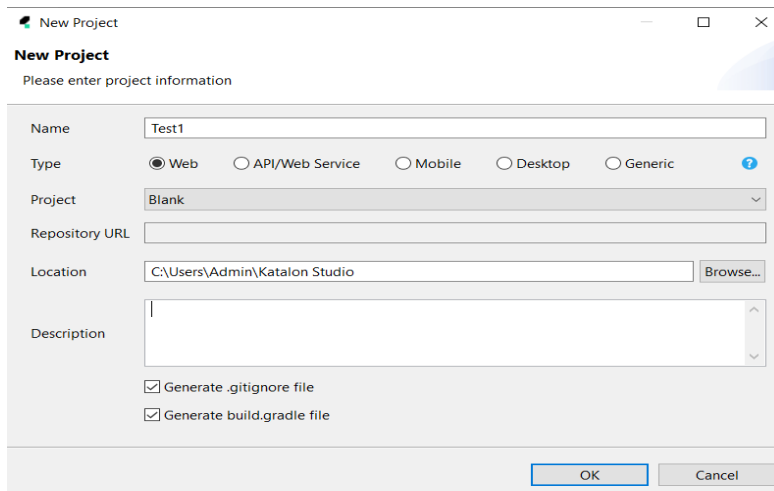
Steps:

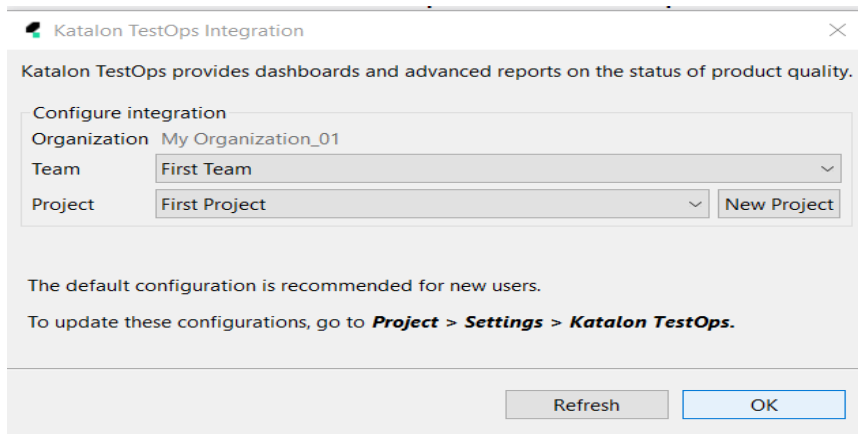1. Download from: Katalon Studio | Best Codeless Test Automation Tools

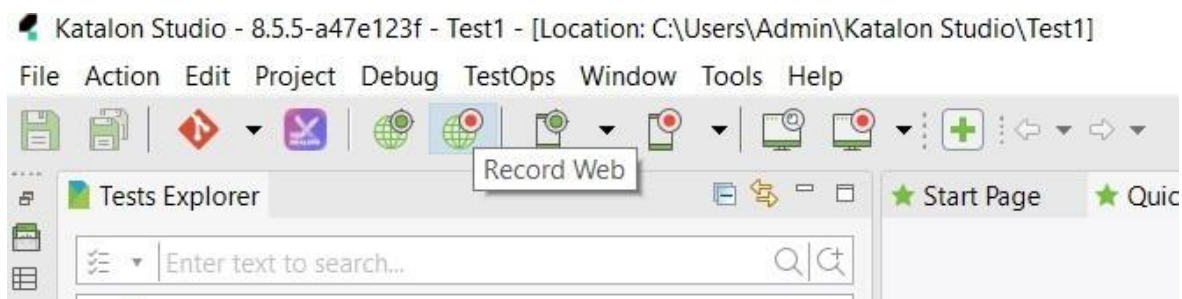## 2. Go in KatalonStudio.exe Click on New > Project

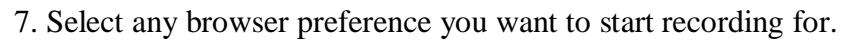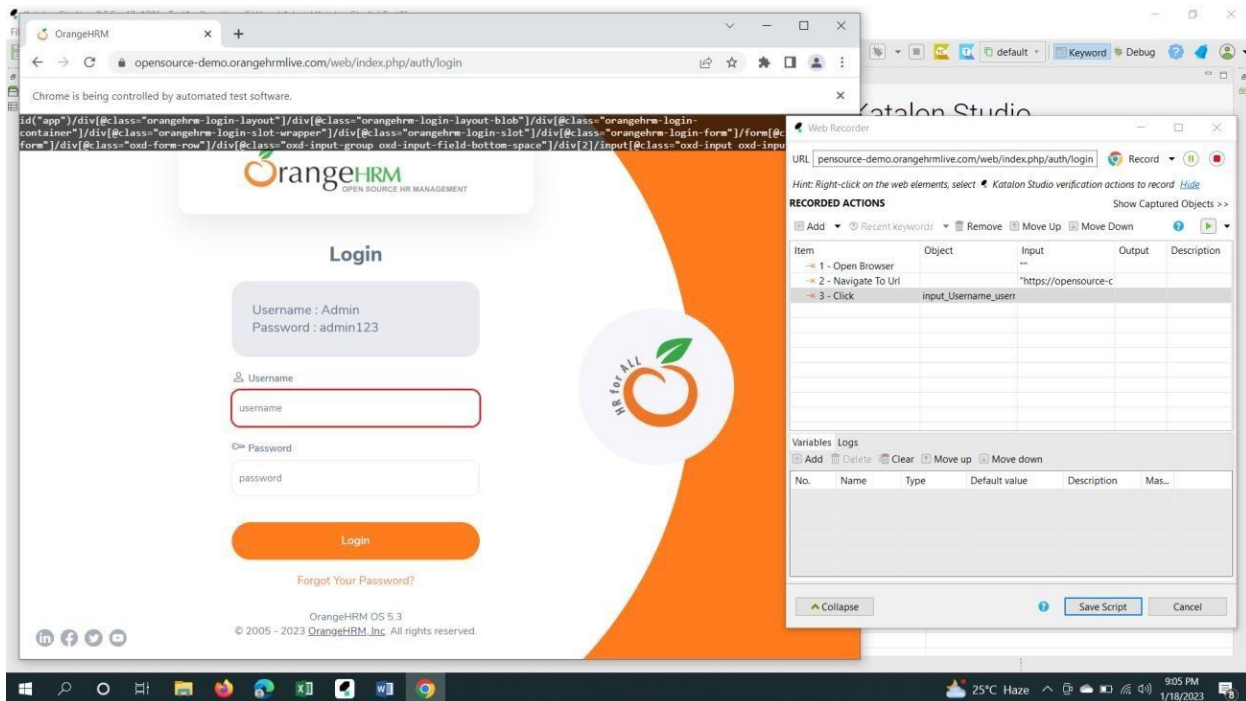## 3. Enter your Project Name and keep everything default
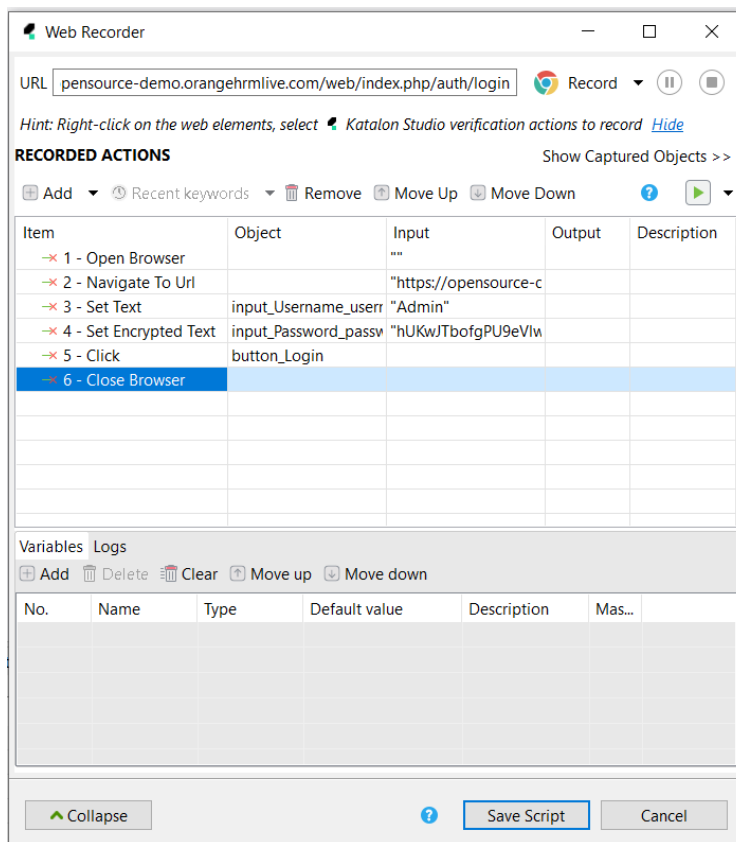
4. Click Ok

5. Click on Record Web

6. https://opensource-demo.orangehrmlive.com/web/index.php/auth/login use this url and paste it in URL box

7. Select any browser preference you want to start recording for.

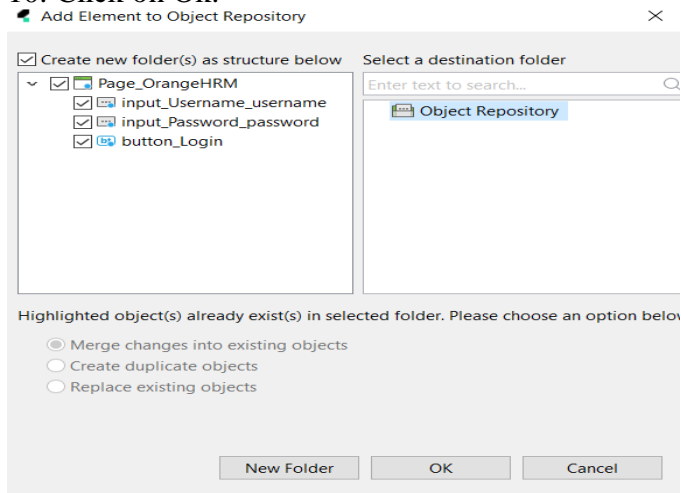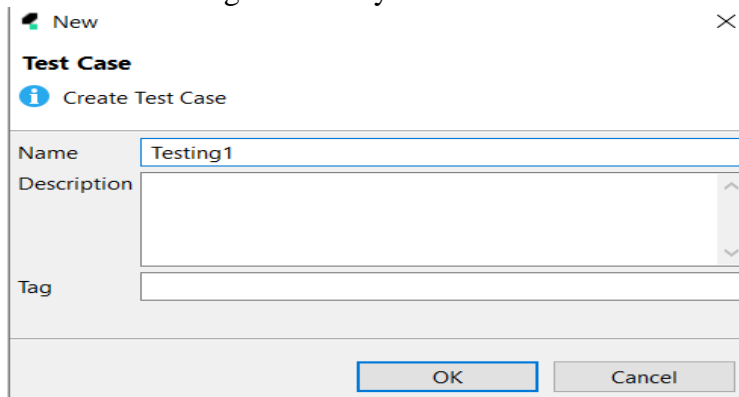8. Enter the Credentials in website as the web recorder will record

9.After closing the browser, you will get this window. Click on save script.
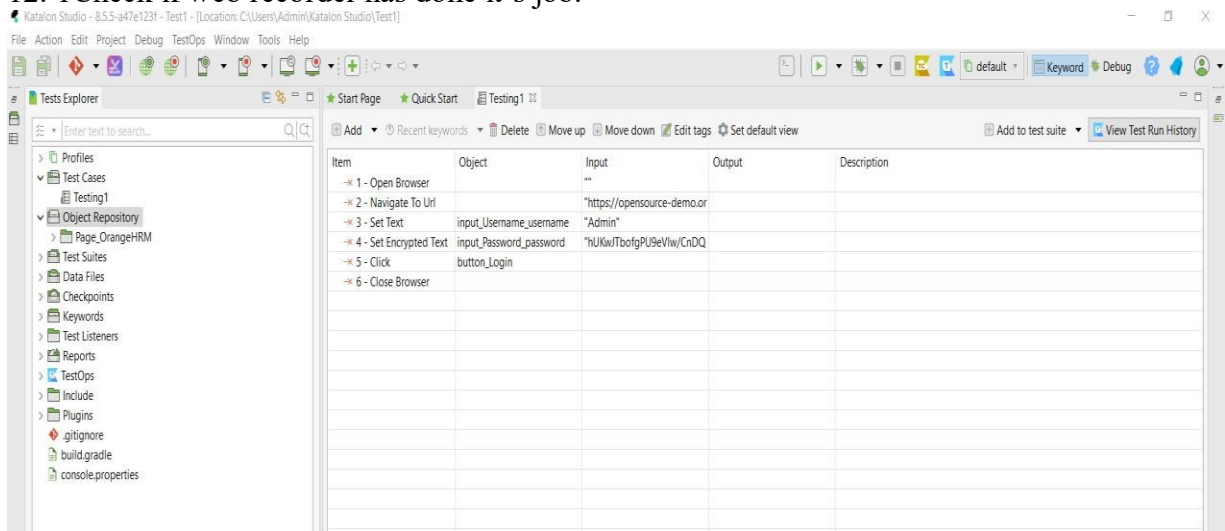
10. Click on Ok.
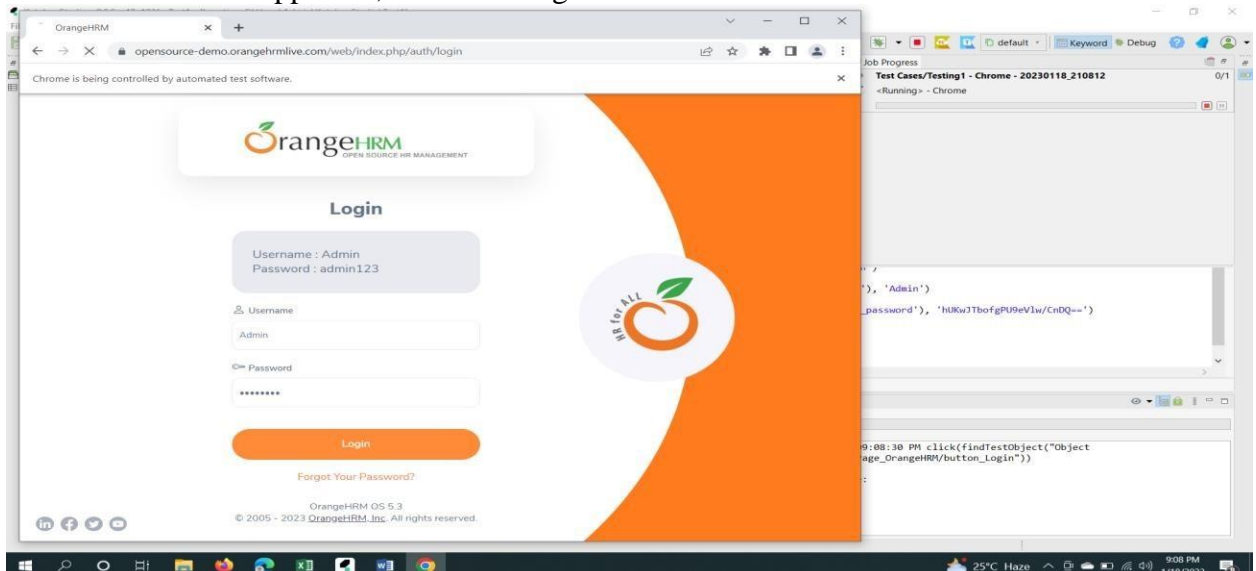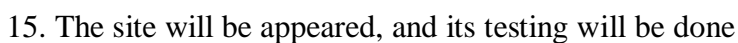
11. After Clicking ok add any name on test case
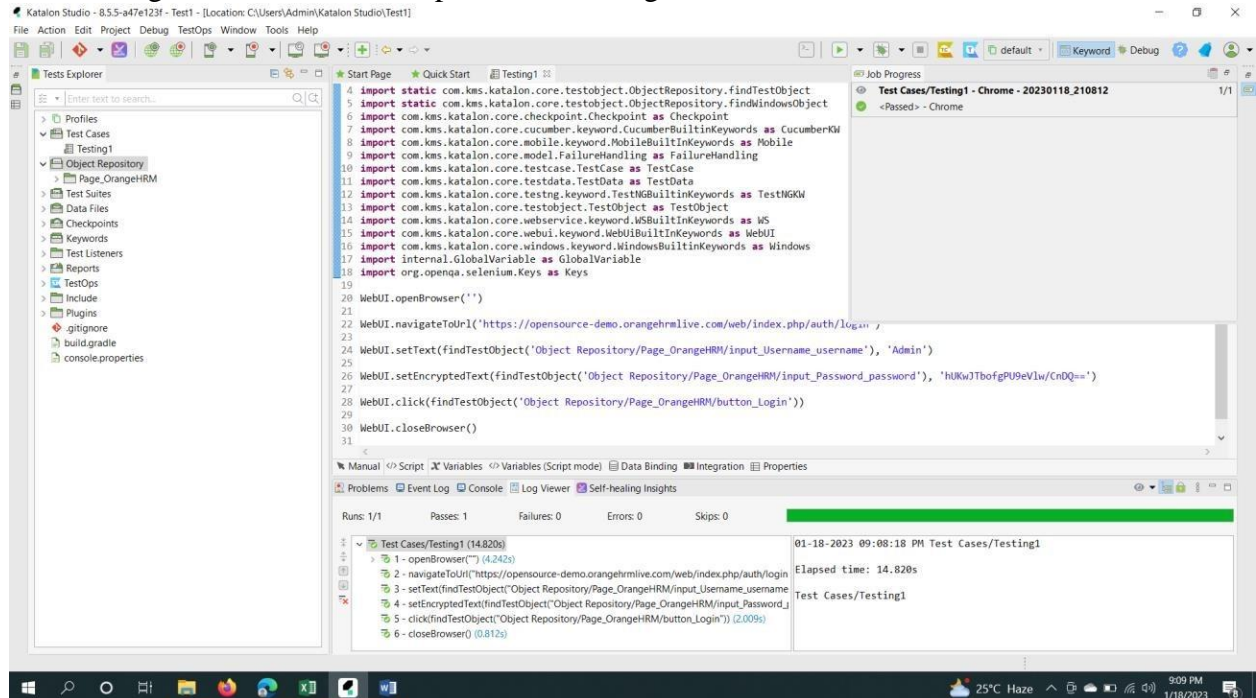
12. 1Check if web recorder has done it's job.

13.Go in script as we are doing automation testing with website (Script will be generated on it's own)

14.Click on play button

15. The site will be appeared, and its testing will be done

Output:

After Doing it will show if it has passed the testing

Advantages:

- Its setup and installation are very simple, you just need to download the respective package based on your OS and extract it and then activate it using your credentials.
- Helps manual tester to easily create automation tests.
- For those who have good programming expertise, Katalon provides test case creation in scripting mode also.
- The in-built templates, frameworks, integration to Jira, Git, Jenkins etc features help in speeding up the test case creation time. User only has to focus on automation of the test scripts.
- The script recorded in one browser can be made to run in any of the supported browsers, making cross browser testing fast and easy.

Disadvantges:

- Unlike tools like Selenium the script creation is limited to Java and Groovy only.
- As of now there is no support for distributed testing.

- It cannot automate desktop applications unlike some licensed tools like UFT and TestComplete.

Conclusion:

Regression testing is key to improve the overall quality of the product and user experience. The right regression testing tools can significantly identify all surfaced defects and eliminate them early in the pipeline. In addition, regression testing in Agile offers a host of technical and business advantages. Therefore, the more your organization invests in planning and performing regression testing, the more control you will have over the budget, process, and error mitigation of your product. The two tools–Ranorex Studio and Katalon Studio are used to generate scripts automatically in C# and Java languages respectively.