

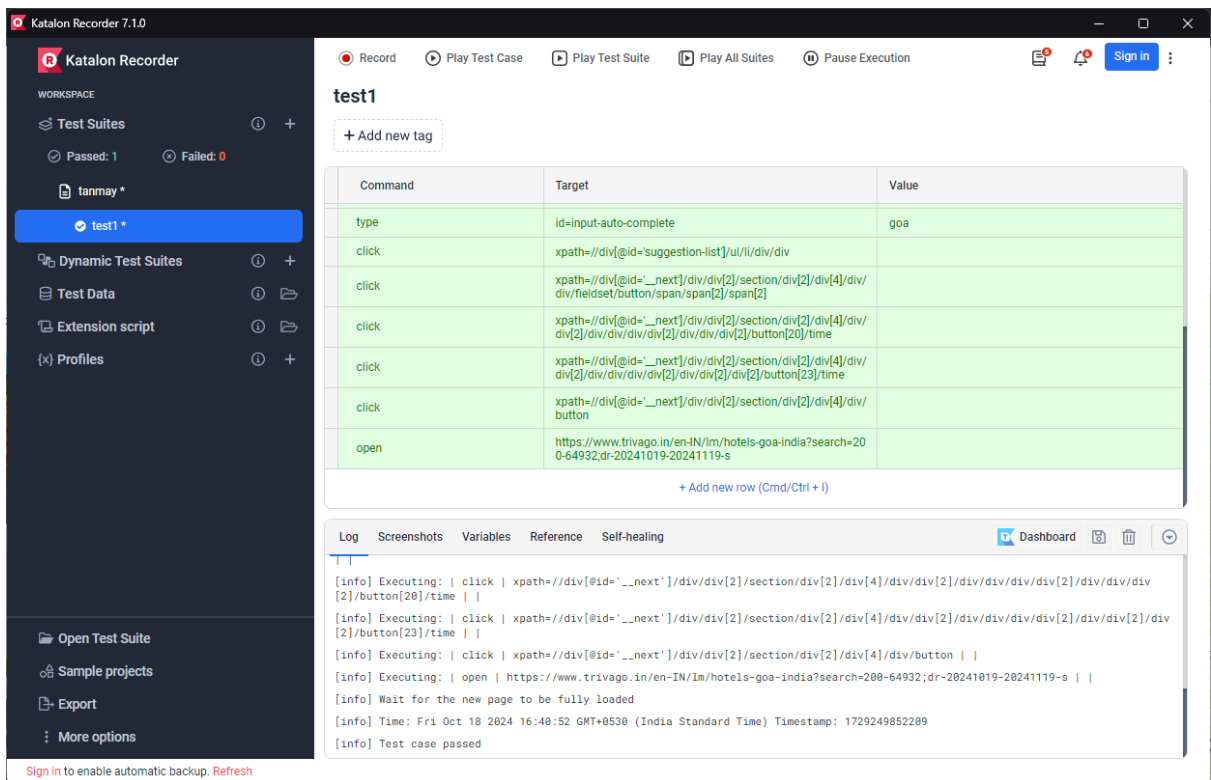
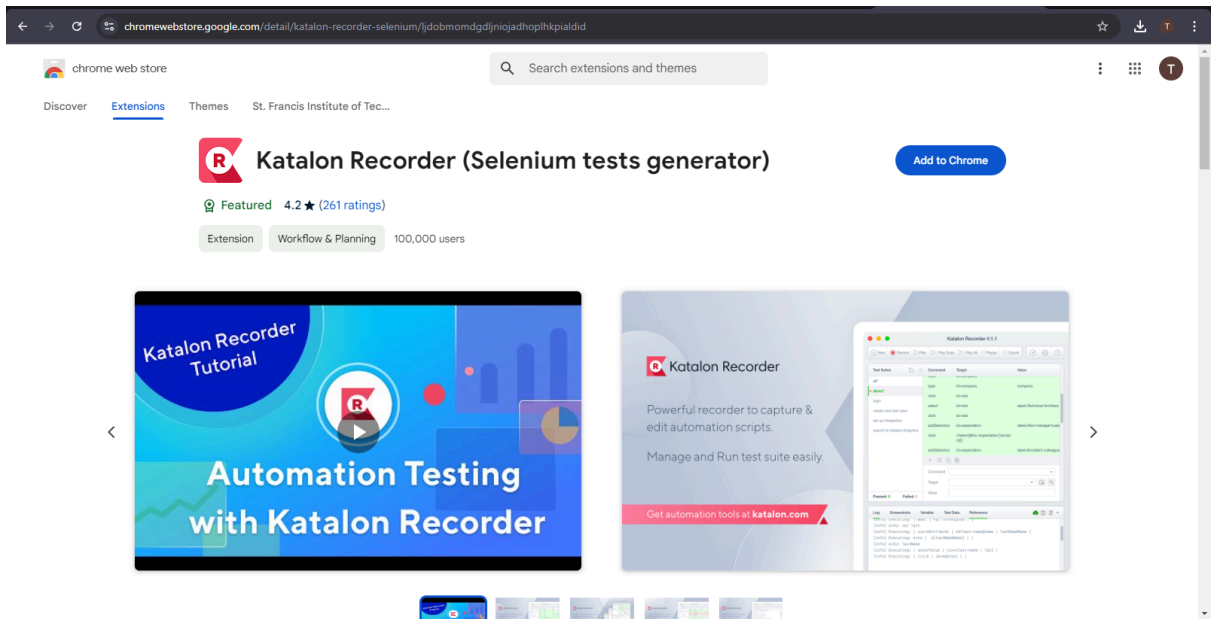
St. Francis Institute of Technology, Mumbai-400 103  
**Department Of Information Technology**

A.Y. 2024-2025  
Class: TE-ITA/B, Semester: V

Subject: **DevOps Lab**

**Experiment – 8: To setup and run Selenium tests in Jenkins using Maven.**

1. **Aim:** To setup and run Selenium tests in Jenkins using Maven
2. **Objectives:** Aim of this experiment is that, the students will learn:
  - Selenium and how to automate your test cases for testing web elements
  - Introduction to X-Path, TestNG and integrate Selenium with Jenkins and Maven.
3. **Outcomes:** After study of this experiment, the students will learn following:
  - Introduction to Selenium
  - Installing Selenium
  - Creating Test Cases in Selenium WebDriver
  - Run Selenium Tests in Jenkins Using Maven
4. **Prerequisite:** Knowledge of Software Engineering concept of testing and test cases.
5. **Requirements:** Jenkins, JDK, Eclipse IDE, Firefox browser, Personal Computer, Windows operating system, Internet Connection, Microsoft Word.
6. **Pre-Experiment Exercise:**  
**Brief Theory:** Refer shared material
7. **Laboratory Exercise**
  - A. **Procedure:**
    - a. **Answer the following:**
      - Explain Selenium suite?
      - What are the limitations of Selenium IDE?
    - b. **Execute following (Refer the shared material) and attach screenshots:**
      - Create and run a test case on Chrome/Firefox browser with selenium IDE addon
      - Create a Maven Project in Jenkins and run selenium tests using selenium Grid
8. **Post-Experiments Exercise**
  - A. **Extended Theory:**  
Nil
  - B. **Questions:**
    - What are Locators? Explain its types.
    - What is the benefit of using Selenium Grid with Jenkins?
  - C. **Conclusion:**
    - Write what was performed in the experiment.
    - Write the significance of the topic studied in the experiment.
  - D. **References:**
    - <https://jenkins.io/doc/>
    - <https://www.slideshare.net/abediaz/introduction-to-jenkins>
    - <https://q-automations.com/2019/09/26/selenium-grid-with-jenkins/>



Getting screenshot by adding screenshot command at end

Katalon Recorder

WORKSPACE

Test Suites

Passed: 1

Failed: 0

hammay \*

test1 \*

Dynamic Test Suites

Test Data

Extension script

Profiles

Open Test Suite

Sample projects

Export

More options

Record

Play Test Case

Play Test Suite

Play All Suites

Pause Execution

test1

+ Add new tag

Command	Target	Value
click	id=input-auto-complete	
type	id=input-auto-complete	goa
click	xpath=//div[@id=suggestion-list]/ul/li/div/div	
click	xpath=//div[@id=__next1]/div/div[2]/section/div[2]/div[4]/div/div/fieldset/button/span/span[2]/span[2]	
click	xpath=//div[@id=__next1]/div/div[2]/section/div[2]/div[4]/div/div[2]/div/div/div[2]/div/div/div[2]/button[20]/time	
click	xpath=//div[@id=__next1]/div/div[2]/section/div[2]/div[4]/div/div[2]/div/div/div[2]/div/div/div[2]/button[23]/time	
click	xpath=//div[@id=__next1]/div/div[2]/section/div[2]/div[4]/div/button	
open	https://www.trivago.in/en-IN/lm/hotels-go-a-india?search=200-64932;dr=20241019-20241119-s	
captureEntirePageScreenshot		

+ Add new row (Cmd/Ctrl + I)

Log

Screenshots

Variables

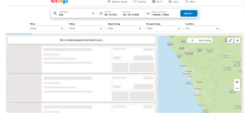
Reference

Self-healing

Dashboard

Info

Executing: | captureEntirePageScreenshot | |



[info] Time: Fri Oct 18 2024 16:44:37 GMT+0530 (India Standard Time) Timestamp: 1729258077386

[info] Test case passed

Sign in to enable automatic backup. Refresh

Selenium HTML report 1.1

This is an Jenkins plugin to visualize the results of selenium tests

Report an issue with this plugin

Selenium Plugin 3.141.59

Report an issue with this plugin

Warning: The currently installed plugin version may not be safe to use. Please review the following security notices:

Complete lack of CSRF protection can lead to OS command injection

Jenkins

Search (CTRL+K)

admin log out

Dashboard > Selenium Grid

Back to Dashboard

Status

Configurations

Console Output

### Hub management

Restart

### Configuration

Host: localhost

Port: 4444

### Status

Online

Running at localhost:4444.

See [Console Output](#) and [Grid Web Console](#) for detailed status and configuration

Selenium 1 clients should connect as follow:

```
Selenium selenium = new DefaultSelenium("localhost", 4444, "firefox", "http://my.test.site.org/");
```

Selenium 2 clients should connect as follow:

```
WebDriver driver = new RemoteWebDriver(new URL("http://localhost:4444/wd/hub"), capability);
```

### Registered Remote Controls

Dashboard > Selenium Grid

Plugin home

Configurations

Nodes matching configurations

New configuration

### New configuration

Name of the configuration

### Matcher

☒ Match all nodes ?

☐ Match no nodes ?

☐ Match nodes from a label expression ?

### Type

☐ Custom RC node configuration ?

☒ Custom web driver node configuration ?

Preferred port ?

Internet Explorer

Maximum instances ?

Version ?

IE driver path ?

Advanced ▾

Firefox

Maximum instances ?

5

Version ?

Advanced ▾

Chrome

Maximum instances ?


5




Version ?


Chromedriver path ?

⚠

Must not be empty unless it is already defined from a previous chrome browser definition or already defined in the path

Type	Delete	Name 1	Matching type	Description summary
		tanmay	Match all nodes	1 instances of Internet Explorer (version : Not specified) 5 instances of Firefox (version : Not specified) 5 instances of Chrome (version : Not specified)











 master  2 Branches  Tags

 Go to file

 t

Add file

 Code


 rajnervatla	adding the new developed scripts	e4d6ed8 · 2 years ago	 5 Commits
 .settings	adding the new developed scripts	2 years ago	
 Screenshots	adding the new developed scripts	2 years ago	
 src	adding the new developed scripts	2 years ago	
 test-output	Adding the new file	2 years ago	
 .classpath	adding the new developed scripts	2 years ago	
 .gitignore	Adding the Selenium Basic programmes to the repository	2 years ago	
 .project	Adding the Selenium Basic programmes to the repository	2 years ago	
 pom.xml	adding the new developed scripts	2 years ago	

## Create a new fork

A *fork* is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project. [View existing forks.](#)


Required fields are marked with an asterisk (\*).

Owner \*

 tgupta2004

Repository name \*

/ SeleniumProjectPractice


 SeleniumProjectPractice is available.

By default, forks are named the same as their upstream repository. You can customize the name to distinguish it further.

Description (optional)

☒ Copy the master branch only


Contribute back to rajnervatla/SeleniumProjectPractice by adding your own branch. [Learn more.](#)

 You are creating a fork in your personal account.

Create fork



## General

Enabled 

### Description

This is DevOps exp8

Plain text [Preview](#)

- ☐ Commit agent's Docker container ?
- ☐ Define a Docker template
- ☐ Discard old builds ?
- ☐ GitHub project
- ☐ This project is parameterized ?
- ☐ Throttle builds ?

## Git ?

### Repositories ?

#### Repository URL ?

https://github.com/tgupta2004/SeleniumProjectPractice.git

#### Credentials ?

- none -

Add ▾

Advanced ▾

Add Repository

### Branches to build ?

#### Branch Specifier (blank for 'any') ?

\*/master

## Build

### Root POM ?

pom.xml

### Goals and options ?

clean compile test



Post-build Actions

Publish Selenium Html Report

Selenium tests results location

relative to workspace

target

Set build result state to failure if an exception occurred while parsing result files

Add post-build action

Save

Apply

Dashboard > Tanmay Gupta > DevOps\_exp8 > #2 > Console Output

- Status
- Changes
- Console Output
- View as plain text
- Edit Build Information
- Delete build '#2'
- Git Build Data
- Redeploy Artifacts
- Selenium Html Report
- See Fingerprints
- Previous Build

Console Output

```
Started by user admin
Running as SYSTEM
Building on the built-in node in workspace C:\ProgramData\Jenkins\jenkins\workspace\DevOps_exp8
The recommended git tool is: NONE
No credentials specified
> C:\Program Files\Git\bin\git.exe rev-parse --resolve-git-dir C:\ProgramData\Jenkins\jenkins\workspace\DevOps_exp8\.git # timeout=10
Fetching changes from the remote Git repository
> C:\Program Files\Git\bin\git.exe config remote.origin.url https://github.com/tgupta2004/SeleniumProjectPractice.git # timeout=10
Fetching upstream changes from https://github.com/tgupta2004/SeleniumProjectPractice.git
> C:\Program Files\Git\bin\git.exe --version # timeout=10
> git --version # 'git version 2.34.1.windows.1'
> C:\Program Files\Git\bin\git.exe fetch --tags --force --progress -- https://github.com/tgupta2004/SeleniumProjectPractice.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> C:\Program Files\Git\bin\git.exe rev-parse "refs/remotes/origin/master:{commit}" # timeout=10
Checking out Revision e4d6ed8719a8f959346555f9a86feb825768cabf (refs/remotes/origin/master)
> C:\Program Files\Git\bin\git.exe config core.sparsecheckout # timeout=10
> C:\Program Files\Git\bin\git.exe checkout -f e4d6ed8719a8f959346555f9a86feb825768cabf # timeout=10
Commit message: "adding the new developed scripts"
> C:\Program Files\Git\bin\git.exe rev-list --no-walk e4d6ed8719a8f959346555f9a86feb825768cabf # timeout=10
Parsing POMs
Established TCP socket on 53437
```

```
[WARNING] bootstrap class path not set in conjunction with -source 8
[INFO] /C:/ProgramData/Jenkins/./jenkins/workspace/DevOps_exp8/src/test/java/waits/ExplicitWait.java: Some input files use or override a deprecated API.
[INFO] /C:/ProgramData/Jenkins/./jenkins/workspace/DevOps_exp8/src/test/java/waits/ExplicitWait.java: Recompile with -Xlint:deprecation for details.
[INFO]
[INFO] --- surefire:3.1.2:test (default-test) @ Selenium ---
[JENKINS] Recording test results
[WARNING] Attempt to (de-)serialize anonymous class org.jfrog.hudson.maven2.MavenDependenciesRecorder$1; see: https://jenkins.io/redirect/serialization-of-anonymous-classes/
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 5.773 s
[INFO] Finished at: 2024-10-18T16:55:47+05:30
[INFO] -----
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving C:\ProgramData\Jenkins\jenkins\workspace\DevOps_exp8\pom.xml to com.qa.Selenium/0.0.1-SNAPSHOT/Selenium-0.0.1-SNAPSHOT.pom
channel stopped
Publishing Selenium report...
Copying the reports.
Finished: SUCCESS
```

Status

Changes

Console Output

Edit Build Information

Delete build "#2"

Git Build Data

Redeploy Artifacts

Selenium Html Report

See Fingerprints

Previous Build

The Selenium test reports.

Result	Name	Tests total	Tests passes	Tests failures	Commands passes	Commands failures	Commands errors	Duration
	Summen	0	0	0	0	0	0	0 s = 0.0 min and 0 s