POWER OF CUCUMBER

EASY AUTOMATION FOR ALL

Eafa Framework by Salman Saeed

PROBLEM

Why don’t we start with automation?

- Lack of Skills
- High Cost
- Time Constraint

SOLUTION TO THE PROBLEM

Cucumber can be an easy choice…

Reason?

- Easy to Setup
- Easy to Learn
- Less Coding Skills required
- One Source of Truth
- Low Maintenance Cost

CUCUMBER – STRUCTURE

What Needs to be Understood

Feature File

- Contains executable specifications written in a language called Gherkin

Keywords:

- Feature, Background, Scenario, Scenario Outline, Given, When, Then, Examples, Tags

Step Definitions

- To translate plain text Gherkin steps into actions that will interact with the system.

Runner File

- This class just need *annotations* to understand that *cucumber features* would be run through it

CUCUMBER – GHERKIN

Feature: Google Searching

As a web surfer, I want to search Google, so that I can learn new things.

Scenario Outline: Simple Google searches

Given a web browser is on the Google page

When the search phrase “panda" is entered

Then results for “panda are shown

And the related results include “Panda Express"

CUCUMBER – STEP DEFINITIONS

Step Definition

```
public class MyStepdefs {
    @When("the search phrase \"([^\"]*)\" is entered")
    public void the_search_phrase_entered(String phrase) {
        driver.findElement(By.id(“phrase-id”)).sendKeys(phrase);
          System.out.println(“Phrase:“ + phrase);
    }
}
```

PROBLEM WITH THE SOLUTION

- Still Coding
- Still Framework building and Maintenance Cost
- Building another framework for Mobile Testing
- Same effort again for each project

RESOLUTION TO THE PROBLEMATIC SOLUTION

Our Plug & Play Eafa-Framework – Codeless Automation

- No skills required
- Least possible output time
- Free for all
- Web and Mobile in single setup
- Can be written by BA's, Project Managers and Clients also
- Only two files to be maintained in the whole project

CODELESS AUTOMATION! REALLY?

What if you need to:

- open a different browser?
- upload a file?
- select a value from dropdown?
- take a screenshot?
- check page spellings?
- get Token or OTP from user email?
- open new or switch browser tab?
- get or post API results?
- generate a comprehensive report?

HOW?

Here is the formula:

Manual Test Cases x Magic = Automated Test Scripts

CUCUMBER – HOW DID WE ACHIEVE

- Wrote simple actions in feature files with tags

e.g. user clicks on “Submit” button

- Wrote dynamic step definitions which takes values from feature files
- Created dynamic methods for almost all technologies to perform actions such as:

‘Click, Input, File upload, Open browser, Spellcheck, Screenshot etc.

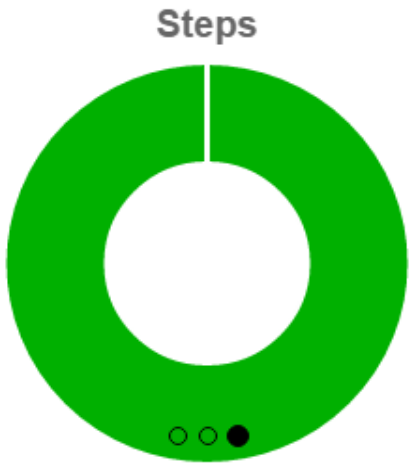
CUCUMBER – WHAT DO I NEED TO SETUP?

1. Java Environment Setup
2. Maven
3. Eclipse
4. Appium
5. Download our Magical Code

REPORTS

Features Statistics

The following graphs show passing and failing statistics for features



	Scenarios			Steps								
Feature	Total	Passed	Failed	Total	Passed	Failed	Skipped	Pending	Undefined	Missing	Duration	Status
Login	1	1	0	4	4	0	0	0	0	0	51s 138ms	Passed
Registration Form	2	2	0	6	6	0	0	0	0	0	58s 516ms	Passed
2	**3**	**3**	**0**	**10**	**10**	**0**	**0**	**0**	**0**	**0**	**1m 49s 654ms**	**Totals**

Feature Report

	Steps						Scenarios			Features	
Feature	Passed	Failed	Skipped	Pending	Undefined	Total	Passed	Failed	Total	Duration	Status
demo/callfeature/call-feature.feature	27	0	0	0	0	27	1	0	1	1s 366ms	Passed

Feature demo/callfeature/call-feature.feature

calling another feature file

Background 654ms

Steps

* url demoBaseUrl 654ms

Scenario create kittens and then create parent cat 712ms

Steps

* call create-two-cats.feature 000ms
* url demoBaseUrl 000ms
Given path 'cats' 000ms
And request { name: 'Bob' } 000ms
When method post 000ms

Doc string

```
08:10:05.182 DEBUG -
1 > POST http://127.0.0.1:58317/cats
1 > Accept-Encoding: gzip,deflate
```

CUCUMBER – TIME FOR HANDS ON!

The whole process from configuration till you execute your first automation test case is of maximum 30 minutes and it'll take even less time if you have a little setup knowledge.

Downloading time is not included ☺

Let's now start with some hands on !

SETUP GUIDE – STEP 1 (CONT.)
DOWNLOAD AND CONFIGURE JDK

JDK Download and setup help links:

- https://www.wikihow.com/Install-the-Java-Software-Development-Kit
- https://www.youtube.com/watch?v=Wp6uS7CmivE

SETUP GUIDE – STEP 1
DOWNLOAD AND CONFIGURE JDK

- Download JDK from below link:

http://www.oracle.com/technetwork/java/javase/downloads/jdk10-downloads-4416644.html

SETUP GUIDE – STEP 2
DOWNLOAD AND CONFIGURE MAVEN

Open link and follow the instruction to download and setup Maven:

- https://www.javatpoint.com/how-to-install-maven

SETUP GUIDE – STEP 3
VERIFY JDK AND MAVEN ARE INSTALLED

Before you download Eclipse please verify that JDK and Maven are installed and configured.

Open Command prompt with administrative rights

cmd > right click and Run as Administrator

Type “java --version”

Without quotes to verify jdk is installed

Then type “mvn --version”

To verify that Maven is installed and configured

Google it for more details… but its important

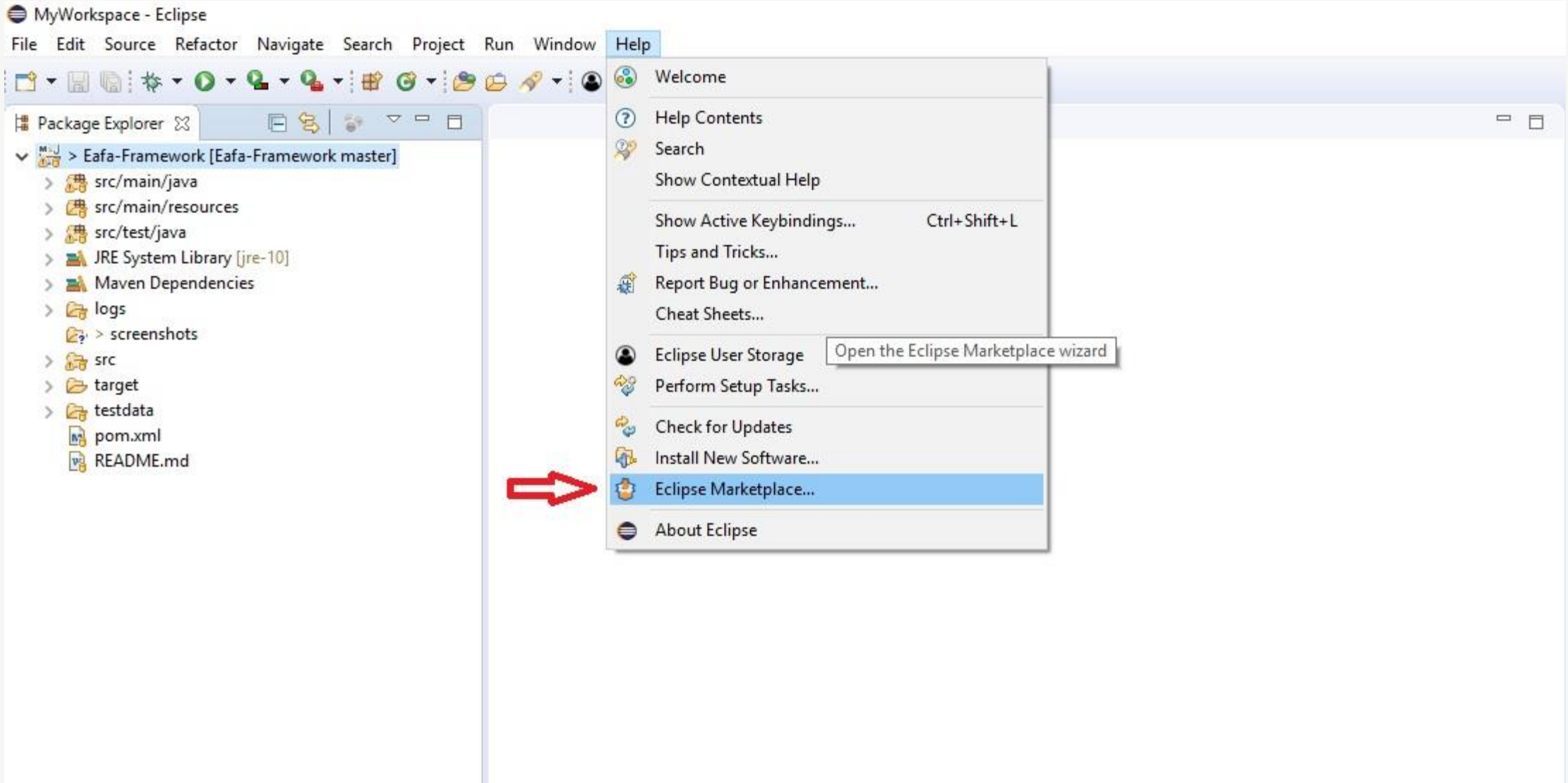
SETUP GUIDE – STEP 3
DOWNLOAD AND INSTALL ECLIPSE OXYGEN

Download Eclipse any latest version and set a workspace:

- https://www.eclipse.org/downloads/

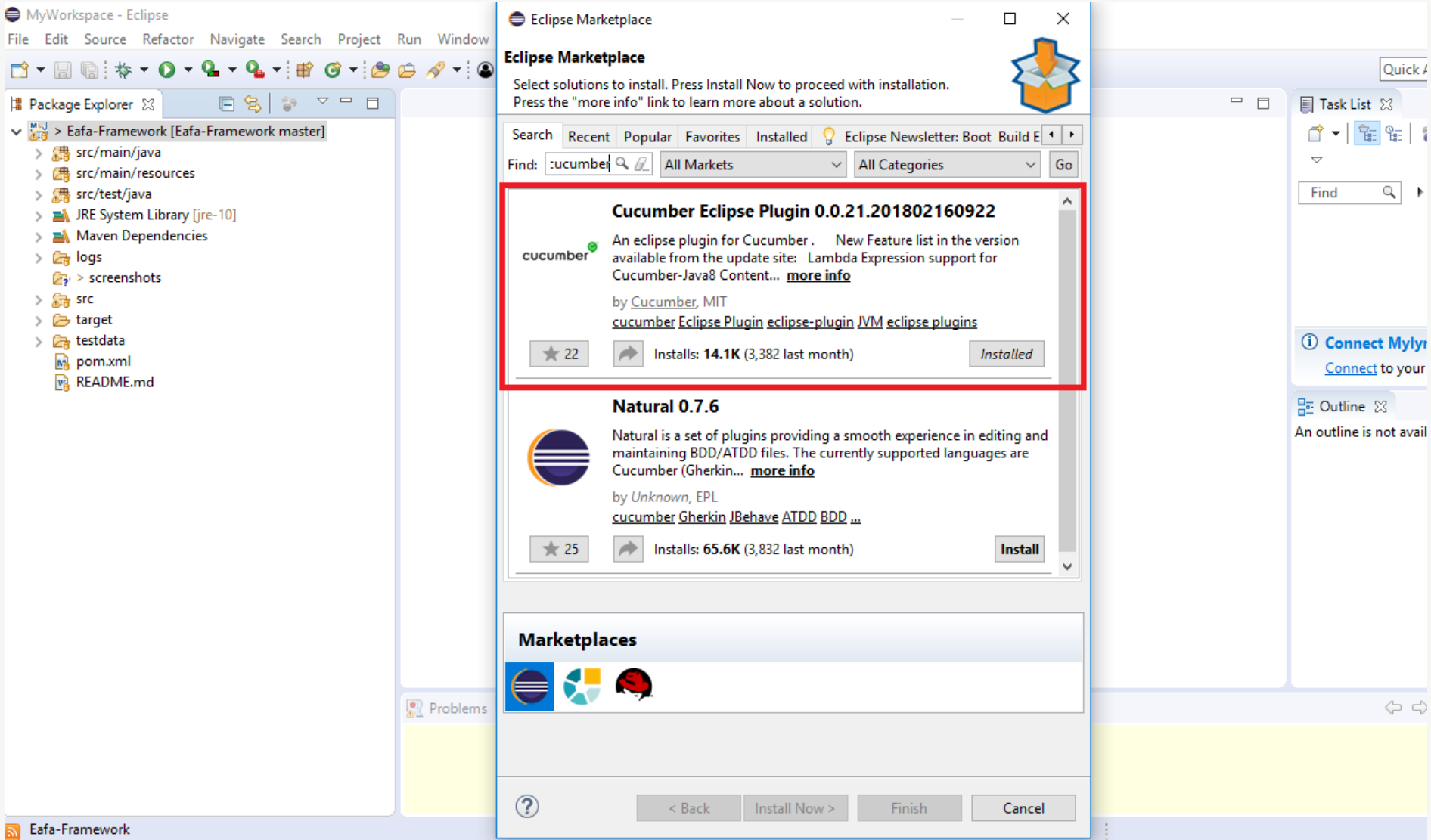
SETUP GUIDE – STEP 4

INSTALL CUCUMBER PLUGIN IN ECLIPSE



SETUP GUIDE – STEP 4 (CONT.)

INSTALL CUCUMBER PLUGIN IN ECLIPSE



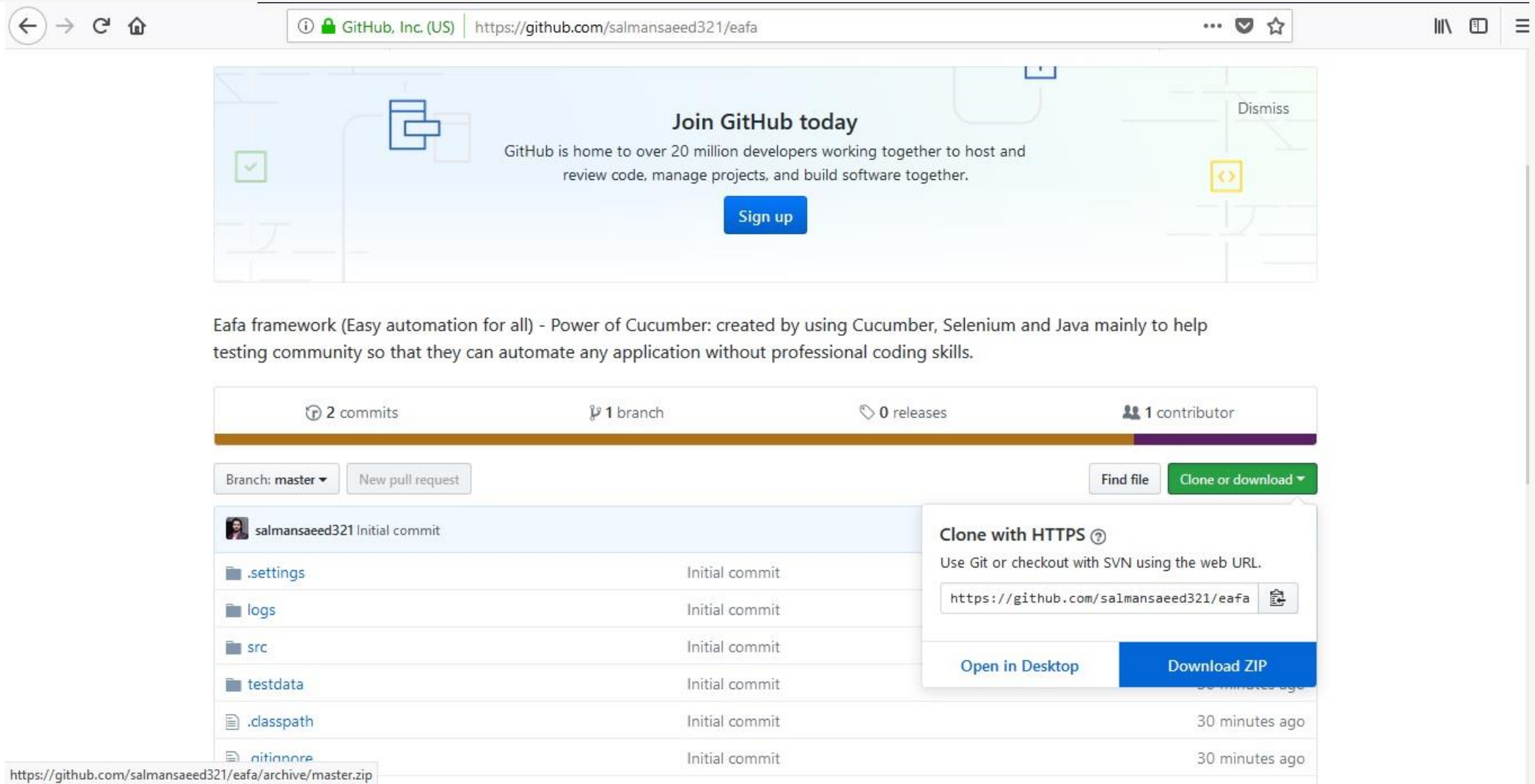
SETUP GUIDE – STEP 5 DOWNLOAD EAFA-FRAMEWORK

Link to download Eafa-Framework

- https://github.com/salmansaeed321/eafa

SETUP GUIDE – STEP 5 (CONT.)

Click on 'Clone or Download' and select Download as Zip



SETUP GUIDE – STEP 6

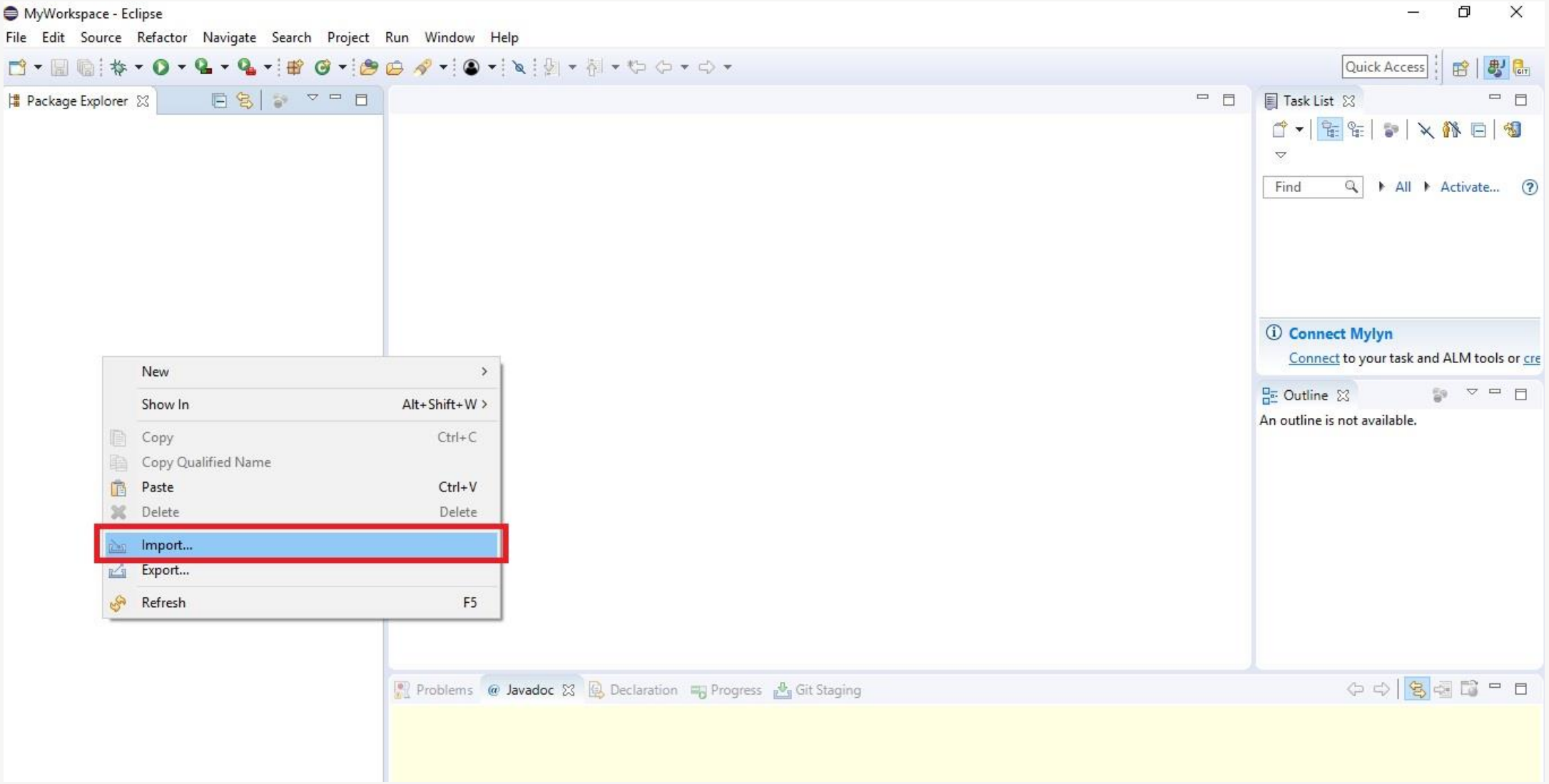
Extract downloaded folder

SETUP GUIDE – STEP 7

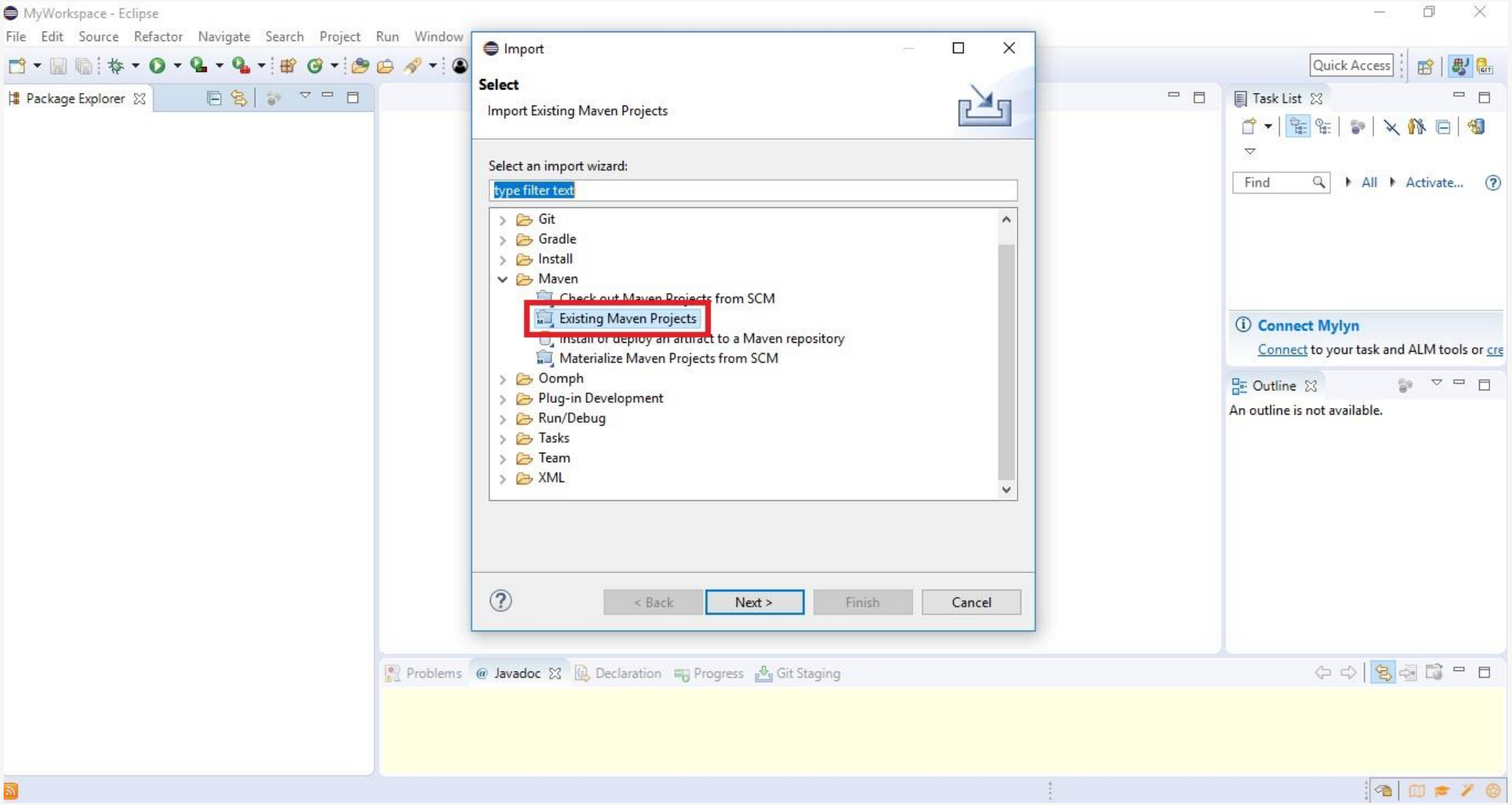
Import project in Eclipse

i. Open Eclipse
ii. Right click in project explorer area
iii. Select Import
iv. Select Maven
v. Select Existing Maven Project
vi. Select Downloaded Project folder
vii. Click Finish

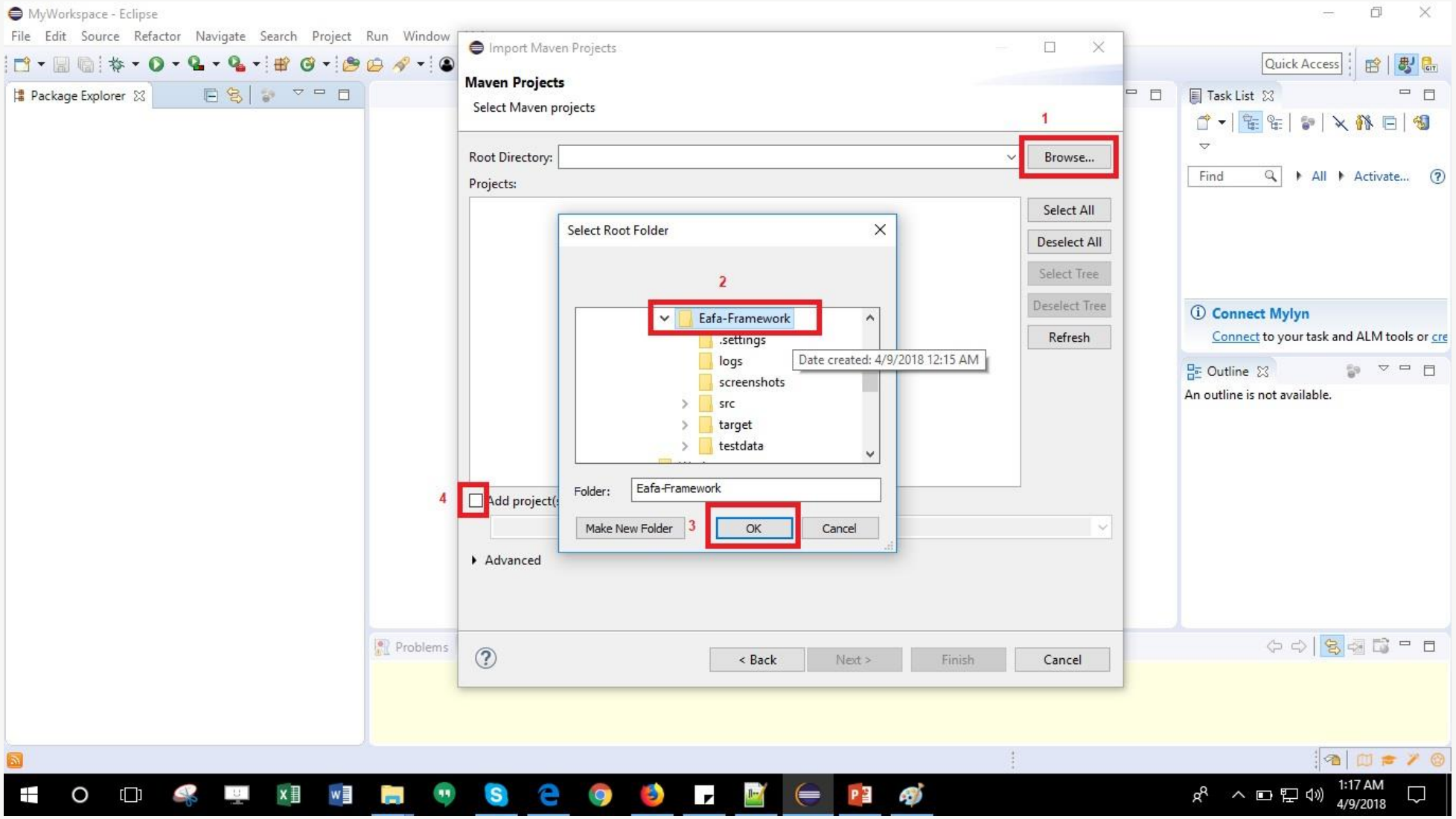
SETUP GUIDE – STEP 7 (CONT.)



SETUP GUIDE – STEP 7 (CONT.)

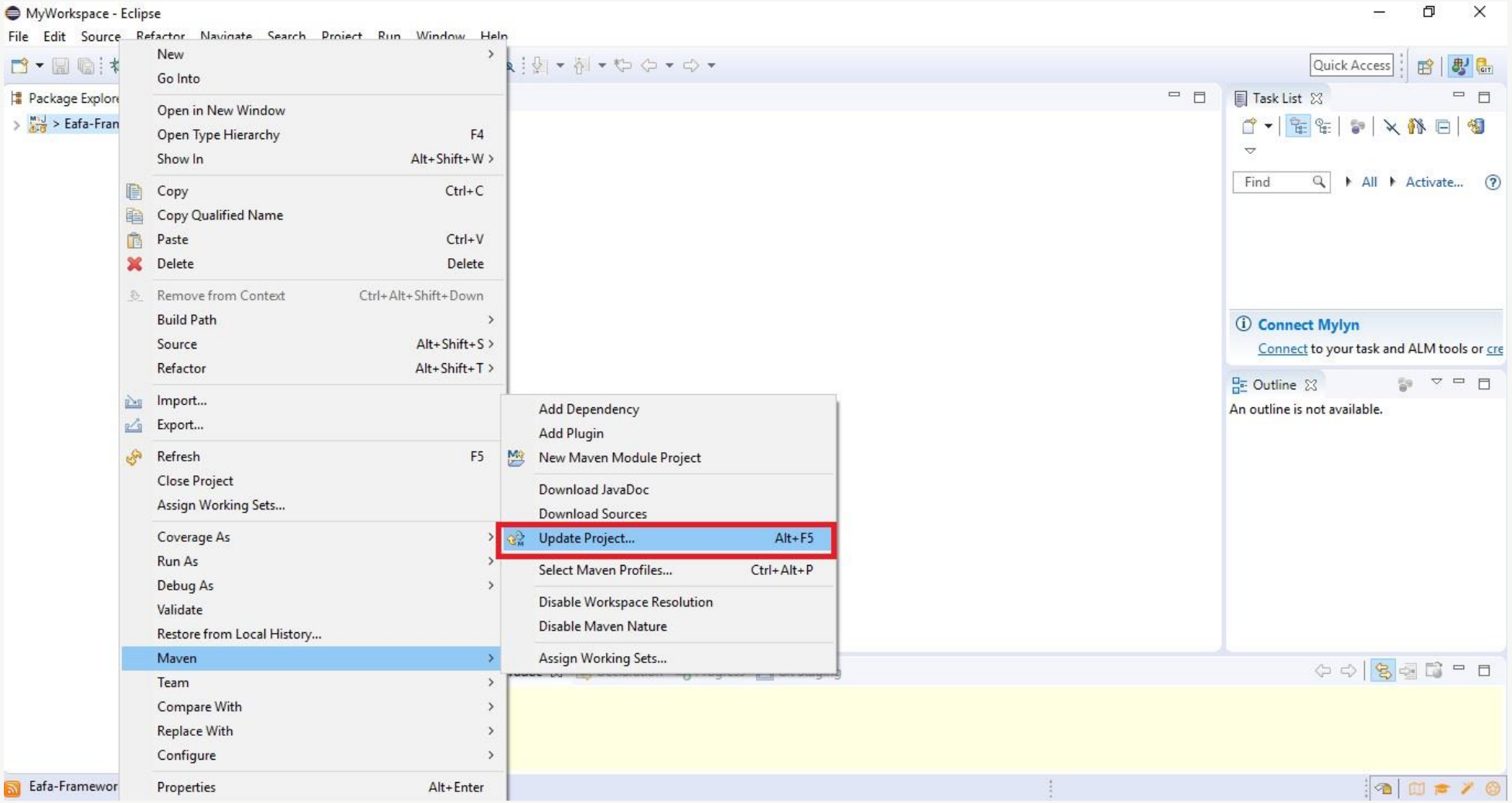


SETUP GUIDE – STEP 7 (CONT.)



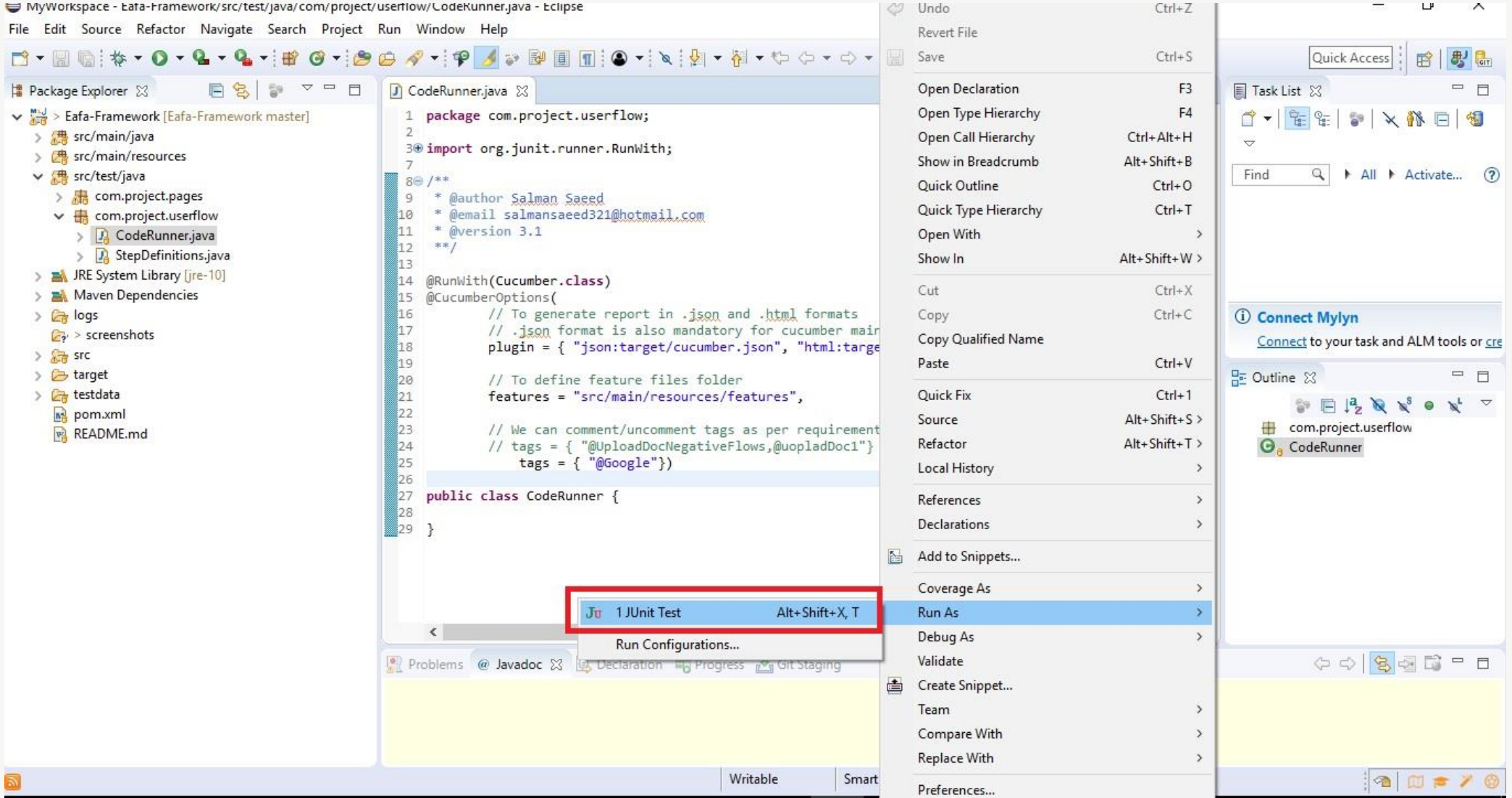
SETUP GUIDE – STEP 8

Right click on the project, select Maven and then 'Update Project' it will take a while when doing for the first time



SETUP GUIDE – STEP 9

Open ‘CodeRunner’ file, right click and select ‘Run As’ Junit Test. It should run your Google sampe test in Chrome browser



SETUP GUIDE

You will need to maintain mainly two files only but for setup please note total 4 files you will need for your project:

1. **Feature file**
    i. You can use existing feature files and can create as many new feature files as required. Each feature per file with multiple scenarios.
    ii. Please do open and read existing feature files for understanding
    iii. While creating a new file, must add file extension as .feature e.g. Login.feature
    iv. All feature files must be placed under ‘feature folder
    v. Under Feature folder there is a ReadMe.txt file which has all possible statements according to the situation. You will not be able to use any statement other than those which are mentioned in this file. Or if you wish to and have knowledge, you can add new step definitions and methods and play with however you like to ☺

SETUP GUIDE

2. OR.properties

i. This file contains all the id's, xpaths, linktext etc.

ii. In order to call any element we need a locator

iii. To get locator of any element > Open any url, right click and select "Inspect Element' and copy xpath or id. You can also Google it for more details.

iv. Paste found locators of buttons, input fields, etc. in Or.properties file with unique reference name which will be used later in feature file to call these elements for any action.

v. Element reference name must have a suffix of its type e.g. xpath, id, linktext etc. "login-button-xpath" if you have xpath or "login-button-id" if you have id of an element.

SETUP GUIDE

3. Config.properties

i. This file contains all project configurations

ii. Host url on which you wish to perform testing

iii. Page load confirmation xpath which confirms that the page has been loaded

iv. Mobile device and apk configurations

SETUP GUIDE

4. CodeRunner

i. We use coderunner file to execute test cases

ii. Right click on coderunner file and select Run As > Junit and it will execute your test

iii. You can also tag any scenario or feature and mention that tag in coderunner in tag section so that only that scenario/feature will be executed. As in example it only executes Google feature.

iv. It also takes care of test reports after execution.

SETUP GUIDE

Optional downloads for mobile application testing. You will need actual mobile device attached or simulator configured.

http://appium.io/downloads.html

https://experitest.com/mobile-test-automation/appium-studio/

Questions?

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