



# Final Report

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## **Issues & Difficulties:**

- The IDs of each element on the website were constantly changing, causing some issues, particularly during Selenium WebDriver, TestNG, and Cucumber. We solved this problem by using the full x-path.
- Some test cases in the Selenium IDE test suites were not executed because the object ID was constantly changing until it was time to run.
- Some test cases in the Selenium IDE and TestNG failed for no apparent reason at first, but they worked when run again.
- It took time to configure each environment, tool, and framework to work with, necessitating numerous searches and wasting time.
- The majority of tools require a fast network connection to avoid failure in the middle of the run.
- The website has very strict authentication and authorization rules, which caused us to be banned for a few hours.
- For some of us, the test suite report did not appear during TestNG for no apparent reason.

## **Summary of each website analysis tool:**

### **Selenium IDE**

It is the foundational tool in the Selenium suite. It is an add-on that allows you to quickly create tests using its recording and playback features. This feature is similar to the QTP feature. Its simplicity allows for easy installation and learning. Selenium IDE should only be used for prototyping, not as a complete solution for creating and maintaining complex test suites. Its features include easy registration and playback, smart domain selection using IDs, names, or XPath as needed, auto-completion of all common Selenium commands, walkthrough tests, debugging, and setting breakpoints.

### **Selenium WebDriver**

WebDriver is an important component of the Selenium package. It interacts directly with the browser, without any intermediary. It allows you to create test scripts in any of the supported programming languages and run them directly in most modern web browsers. WebDriver supports multiple languages, including C#, Java, Perl, PHP, Python, and Ruby. This project

used Java. WebDriver is useful for cross-browser testing and managing multiple frames, browser windows, pop-ups, alerts, and complex page navigation. It includes multiple features such as support for multiple browsers and languages, speed, and simplicity of commands.

## **TestNG**

TestNG is a testing framework modelled after JUnit and NUnit. However, new functions have been added to make it more powerful and user-friendly. It is an open-source automated testing framework; the NG in TestNG stands for Next Generation. TestNG is similar to JUnit, but much more powerful and inspired by JUnit. It is intended to perform better than JUnit, particularly when testing integrated classes. There are a number of benefits, but from a Selenium perspective, the main advantages of TestNG are: it provides the ability to produce HTML reports of the execution, annotations made testers' lives easier, test cases can be grouped and prioritized more easily, parallel testing is possible, and logs are generated.

## **Cucumber & Gherkin**

Cucumber is a testing framework for behavior-driven development. It enables us to specify application behavior in meaningful plain English text using simple grammar rules defined by a language called Gherkin. The option is written in Ruby, but it can also be used to test code in other languages such as Java, C#, and Python. In this project, Java was used. While Gherkin is a simple, lightweight, and structured language for describing requirements and scenarios in commonly spoken languages. English, French, and about 30 other languages are considered normal spoken language. Gherkin is a set of keywords that define different hypotheses for a scenario.

## **JMeter**

JMeter is an open-source testing tool. It is a 100% pure Java application designed for load and performance testing. It is intended to cover test categories such as load, function, performance, and regression, and requires JDK 6 or higher. JMeter includes a free and simple GUI, a platform-independent tool, and a multi-threading framework that allows for simultaneous sampling by multiple threads as well as simultaneous sampling of different jobs by separate thread pools. It can also be used to run automated and functional tests on your application.

# Screenshots:

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**TestNG (Test Cases)**

The screenshot shows the Eclipse IDE interface with the Package Explorer view open, displaying Java files for LinkedInTestNG. The TC\_01\_EventTest.java file is selected and contains code for interacting with a date-time picker. The code includes finding elements by XPath, clicking on them, and sending keys to set start and end times. The Problems view at the bottom shows a single test named TC1\_EventTest [TestNG] detected TestNG version 6.14.3 and passed.

```
87 // Click on element
88 WebElement spaceElement = driver.findElement(By.xpath("//html/body/div[3]/div/div/div[2]"));
89 spaceElement.click();
90
91 // Click on "Start Date" and "Start Time"
92 WebElement startDate = driver.findElement(By.id("date-time-picker-v2__start-date"));
93 startDate.click();
94
95 // Type Start Time as "09:00 AM"
96 WebElement startTime = driver.findElement(By.id("date-time-picker-v2__start-time"));
97 startTime.clear();
98 startTime.sendKeys("09:00 PM");
99
100 // Click on "End Time"
101 WebElement endTime = driver.findElement(By.id("date-time-picker-v2__end-time"));
102 endTime.click();
103
104 // Type End Time as "11:00 AM"
105 WebElement endTimeInput = driver.findElement(By.id("date-time-picker-v2__end-time"));
106 endTimeInput.clear();
107 endTimeInput.sendKeys("11:00 PM");
108
109 // Store start and end time values
110 String startTimeValue = startTime.getAttribute("value");
111 String endTimeValue = endTime.getAttribute("value");
112
113
114
115
116
117
```

=====  
Default test  
Tests run: 1, Failures: 0, Skips: 0  
=====  
Default suite  
Total tests run: 1, Failures: 0, Skips: 0  
=====  
4

The screenshot shows the Eclipse IDE interface with the Package Explorer view open, displaying Java files for LinkedInTestNG. The TC\_01\_TestNG.java file is selected and contains code for interacting with a dropdown menu. It uses Actions to press the arrow down key to select the first option and then presses Enter to confirm the selection. The code also asserts that the actual location value matches the expected location. The Problems view at the bottom shows a single test named TC\_01\_TestNG [TestNG] detected TestNG version 6.14.3 and passed.

```
78 // Click on "find an expert" again
79 WebElement findExpertButtonAgain = driver.findElement(By.xpath("//html/body/div[3]/div/div/div[2]/div[2]/div[1]/div[1]/div[2]/div[1]/div[1]/div[8]"));
80 findExpertButtonAgain.click();
81
82 // Click on Location dropdown
83 WebElement locationDropdown = driver.findElement(By.xpath("//html/body/div[3]/div/div/div[2]/div[1]/div[1]/div[2]/input"));
84 locationDropdown.click();
85
86 // Pause briefly to allow the dropdown options to load
87 try {
88     Thread.sleep(1000);
89 } catch (InterruptedException e) {
90     e.printStackTrace();
91 }
92
93 // Simulate pressing arrow down to select the first option
94 Actions actions = new Actions(driver);
95 actions.sendKeys(Keys.ARROW_DOWN).perform();
96
97 // Confirm the selection by pressing Enter
98 actions.sendKeys(Keys.ENTER).perform();
99
100 // Asserting the input value
101 String expectedLocation = "Cairo, Cairo, Egypt";
102 String actualLocation = locationDropdown.getAttribute("value");
103 assert actualLocation.equals(expectedLocation) : "location input value is incorrect";
```

=====  
Default test  
Tests run: 1, Failures: 0, Skips: 0  
=====  
Default suite  
Total tests run: 1, Failures: 0, Skips: 0  
=====  
4

eclipse-workspace - LinkedInTestNG/src/testNGpackage/TC5\_DelEventTest.java - Eclipse IDE

```

File Edit Source Refactor Navigate Project Run Window Help
Package Explorer X TC_01_TestingJava TC1_EventTestJava TC7_EditEventTestJava TCS_DelEventTest.java X
55+
56    @Test
57    public void testEventDeletion() {
58        // Maximize window
59        driver.manage().window().maximize();
60
61        // Click on Events link
62        driver.findElement(By.xpath("//html/body/div[5]/div[3]/div/div/div[2]/div/div/div[3]/section/header/h2/a")).click();
63
64        // Click on event
65        driver.findElement(By.xpath("//html/body/div[5]/div[3]/div[2]/div/div/main/section[2]/section/div[2]/a[1]/div[1]")).click();
66
67        // Click on manage button
68        driver.findElement(By.xpath("//html/body/div[5]/div[3]/div[2]/div/div/main/section/div[1]/div[2]/div[2]/button")).click();
69
70        // Click on Delete event
71        driver.findElement(By.xpath("//html/body/div[5]/div[2]/div/main/section/div[1]/div[2]/div[1]/div[2]/button")).click();
72
73        // Assert text for deletion confirmation
74        WebElement deleteEventHeader = driver.findElement(By.xpath("//html/body/div[3]/div[1]"));
75        WebElement deletionConfirmationMessage = driver.findElement(By.xpath("//html/body/div[3]/div[2]"));
76        assertEquals(deleteEventHeader.getText(), "Delete event");
77        assertEquals(deletionConfirmationMessage.getText(), "When you delete this event, all posts and conversations on the event page will be removed. The event will");
78
79        // Click on Delete button
80        driver.findElement(By.xpath("//html/body/div[3]/div[2]/div/div[3]/button[2]")).click();

```

Problems Javadoc Declaration Console Results of running class TCS\_DelEventTest  
<terminated> TCS\_DelEventTest [TestNG] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (24 Apr 2024, 21:26:33 – 21:27:06) [pid: 44040]  
[RemoteTestNG] detected TestNG version 6.14.3  
PASSED: testEventDeletion

=====
Default test  
Tests run: 1, Failures: 0, Skips: 0

=====
Default suite  
Total tests run: 1, Failures: 0, Skips: 0

4

eclipse-workspace - LinkedInTestNG/src/testNGpackage/TC6\_CncEventTest.java - Eclipse IDE

```

File Edit Source Refactor Navigate Project Run Window Help
Package Explorer X TC_01_TestingJava TC1_EventTestJava TC7_EditEventTestJava TCS_DelEventTest.java TC6_CncEventTest.java X
51+
52    }
53}
54
55+
56    @Test
57    public void testEventCancellation() {
58        // Maximize window
59        driver.manage().window().maximize();
60
61        // Click on Events link
62        driver.findElement(By.xpath("//html/body/div[5]/div[3]/div/div/div[2]/div/div/div[3]/section/header/h2/a")).click();
63
64        // Click on event
65        driver.findElement(By.xpath("//html/body/div[5]/div[3]/div[2]/div/div/main/section/div[2]/section/div[2]/a[1]/div[1]")).click();
66
67        // Click on manage button
68        driver.findElement(By.xpath("//html/body/div[5]/div[3]/div[2]/div/div/main/section/div[1]/div[2]/div[1]/div[2]/button")).click();
69
70        // Click on Cancel event
71        driver.findElement(By.xpath("//html/body/div[5]/div[3]/div[2]/div/div/main/section/div[1]/div[2]/div[1]/div[2]/div[2]")).click();
72
73        // Assert text for cancellation confirmation
74        WebElement cancelEventHeader = driver.findElement(By.xpath("//html/body/div[3]/div[1]"));
75        WebElement cancellationConfirmationMessage = driver.findElement(By.xpath("//html/body/div[3]/div[2]"));
76        assertEquals(cancelEventHeader.getText(), "Cancel event");
77        assertEquals(cancellationConfirmationMessage.getText(), "When you cancel this event, all attendees will be notified that the event is cancelled. The event page");

```

Problems Javadoc Declaration Console Results of running class TC6\_CncEventTest  
<terminated> TC6\_CncEventTest [TestNG] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (24 Apr 2024, 22:52:48 – 22:53:33) [pid: 32020]  
[RemoteTestNG] detected TestNG version 6.14.3  
PASSED: testEventCancellation

=====
Default test  
Tests run: 1, Failures: 0, Skips: 0

=====
Default suite  
Total tests run: 1, Failures: 0, Skips: 0

4

## TestNG Report (Test Cases)

### Default test

Tests passed Failed/Skipped:	1/0/0
Started on:	Wed Apr 24 16:32:51 EET 2024
Total time:	76 seconds (76623 ms)
Included groups:	
Excluded groups:	

(Hover the method name to see the test class name)

### PASSED TESTS

Test method	Exception	Time (seconds)	Instance
createEvent (test class: testNGpackage.TC1_EventTest)		11	testNGpackage.TC1_EventTest@233fe9b6

Default test			
<i>(Hover the method name to see the test class name)</i>			
Test method	Exception	Time (seconds)	Instance
testNegativeFindExpert Test class: testNGpackage.TC_01_TestNG		6	testNGpackage.TC_01_TestNG@2f6fb6c7

PASSED TESTS			
Test method	Exception	Time (seconds)	Instance
testNegativeFindExpert Test class: testNGpackage.TC_01_TestNG		6	testNGpackage.TC_01_TestNG@2f6fb6c7

Default test			
<i>(Hover the method name to see the test class name)</i>			
Test method	Exception	Time (seconds)	Instance
testEventDeletion Test class: testNGpackage.TC5_DelEventTest		11	testNGpackage.TC5_DelEventTest@2f6fb6c7

PASSED TESTS			
Test method	Exception	Time (seconds)	Instance
testEventCancellation Test class: testNGpackage.TC6_CncleEventTest		28	testNGpackage.TC6_CncleEventTest@2f6fb6c7

## TestNG (Test Suite)

The screenshot shows the Eclipse IDE interface with the following details:

- Package Explorer:** Displays the project structure. It includes packages like LinkedIn, LinkedInCucumber, LinkedInTestNG, JRE System Library (jdk-17.0.2), TestNG, and testNGpackage. Under testNGpackage, there are Java files: TC\_01\_TestNG.java, TC1\_EventTest.java, TC5\_DelEventTest.java, TC6\_CncleEventTest.java, TC7\_EditEventTest.java, and testng.xml.
- Testng.xml Content:**

```

<http://testing.org/testng-1.0.dtd (doctype)
1 <!xml version="1.0" encoding="UTF-8"?>
2 <!DOCTYPE suite SYSTEM "http://testing.org/testng-1.0.dtd">
3<suite name="Suite">
4<test thread-count="5" name="Test">
5<classes>
6<class name="testNGpackage.TC1_EventTest"/>
7<class name="testNGpackage.TC6_CncleEventTest"/>
8<class name="testNGpackage.TC5_DelEventTest"/>
9</classes>
10</test><!-- Test -->
11</suite><!-- Suite -->
12

```
- Test Results View:** Shows the results of the running suite.
  - Results of running suite
  - <terminated> TestSuite [TestNG] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (24 Apr 2024, 23:21:21 – 23:23:23) [pid: 22892]
  - [RemoteTestNG] detected Testing version 6.14.3
  - Suite
  - Total tests run: 3, Failures: 0, Skips: 0

## TestNG Report (Test Suite)

Test	# Passed	# Skipped	# Failed	Time (ms)	Included Groups	Excluded Groups
Suite						
Test	3	0	0	120,770		
Class						
Class	Method	Start	Time (ms)			
Suite						
Test — passed						
testNGpackage.TC1_EventTest	createEvent	1713993694481	27171			
testNGpackage.TC5_DelEventTest	testEventDeletion	1713993776430	26079			
testNGpackage.TC6_CncEventTest	testEventCancellation	1713993735017	29368			

### Test

testNGpackage.TC1\_EventTest#createEvent

[back to summary](#)

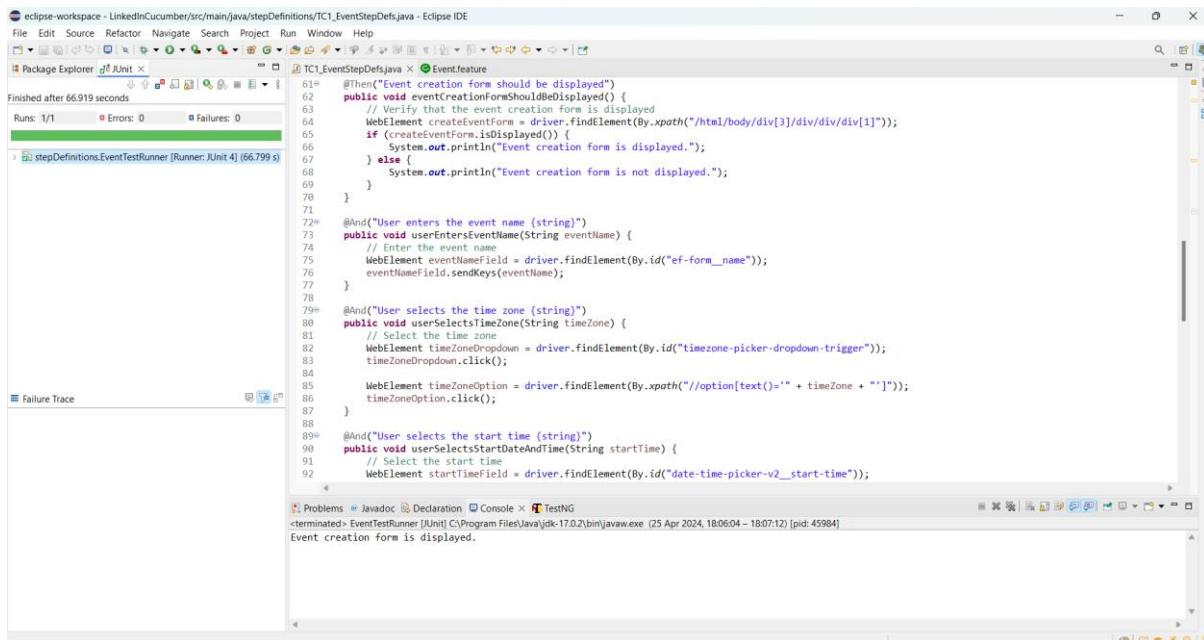
testNGpackage.TC5\_DelEventTest#testEventDeletion

[back to summary](#)

testNGpackage.TC6\_CncEventTest#testEventCancellation

[back to summary](#)

## Cucumber & Gherkin



The screenshot shows the Eclipse IDE interface with the following details:

- Title Bar:** eclipse-workspace - LinkedInCucumber/src/main/java/stepDefinitions/TC1\_EventStepDefs.java - Eclipse IDE
- File Menu:** File Edit Source Refactor Navigate Search Project Run Window Help
- Toolbar:** Standard toolbar with various icons.
- Package Explorer:** Shows a single file: TC1\_EventStepDefs.java under the Eventfeature package.
- Code Editor:** Displays Java code for step definitions. The code includes annotations like @And and @Then, and interacts with a WebDriver instance to verify event creation forms and select time zones.
- Output View:** Shows the message "Finished after 66.919 seconds" and "Runs: 1/1 Errors: 0 Failures: 0".
- Console View:** Shows the output of the test run, including log messages and the result "Event creation form is displayed."
- Failure Trace:** Shows the failure trace for the test.
- Bottom Status Bar:** Shows the status "terminated: EventTestRunner [JUnit] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (25 Apr 2024, 18:06:04 – 18:07:12) [pid: 45984]" and the message "Event creation form is displayed."

The screenshot shows the Eclipse IDE interface with the following details:

- Title Bar:** eclipse-workspace - LinkedInCucumber/src/main/java/stepDefinitions/Tc1\_PostStepDefs.java - Eclipse IDE
- Toolbar:** File Edit Source Refactor Navigate Search Project Run Window Help
- Package Explorer:** Shows a single entry: Tc1\_PostStepDefs.java.
- Console:** Displays the output of the test run:

```
Finished after 73.257 seconds
Runs: 1/1    Errors: 0    Failures: 0
stepDefinitions.PostTestRunner [Runner: JUnit 4] (73.160 s)
```
- Code Editor:** The file Tc1\_PostStepDefs.java is open, containing the following code:

```
1 package stepDefinitions;
2
3 import io.cucumber.java.en.*;
4
5 public class Tc1_PostStepDefs {
6
7     private WebDriver driver;
8
9     @Given("I am logged in to LinkedIn")
10    public void iAmLoggedInToLinkedIn() {
11        // Set ChromeDriver path
12        System.setProperty("webdriver.chrome.driver", "C:\\Users\\arwab\\Desktop\\chromedriver.exe");
13
14        // Create a new instance of the Chrome driver
15        ChromeOptions option = new ChromeOptions();
16        option.addArguments("--remote-allow-origins=*");
17        driver = new ChromeDriver(option);
18
19        // Implicit wait
20        driver.manage().timeouts().implicitlyWait(10, TimeUnit.SECONDS);
21
22        // Open LinkedIn
23        driver.get("https://www.linkedin.com");
24
25        // Login
26        WebElement signInButton = driver.findElement(By.cssSelector(".nav__button--secondary"));
27        signInButton.click();
28
29        WebElement emailField = driver.findElement(By.id("username"));
30        emailField.sendKeys("rueibrahim0@gmail.com");
31
32        WebElement passwordField = driver.findElement(By.id("password"));
33    }
34}
```

- Failure Trace:** No failures are present.
- Bottom Status Bar:** Shows the status: Post successful.

The screenshot shows the Eclipse IDE interface with the following details:

- Title Bar:** eclipse-workspace - LinkedInCucumber/src/main/java/stepDefinitions/TC3\_PostStepDefs.java - Eclipse IDE
- File Menu:** File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help
- Toolbar:** Standard Eclipse toolbar icons.
- Package Explorer:** Shows the project structure with files like negativePostTestRunner.java, TC3\_PostStepDefs.java, and negativePost.feature.
- Run View:** Shows "Runs: 1/1", "Errors: 0", and "Failures: 0".
- Console View:** Displays the output of the JUnit test runner: "Finished after 82.899 seconds".
- Code Editor:** The main editor window contains the Java code for step definitions, including logic for interacting with a dropdown menu and asserting input values.
- Bottom Status Bar:** Shows "Problems", "Javadoc", "Declaration", "Console", and "TestNG".
- Bottom Taskbar:** Shows the status of the Java process: "<terminated> negativePostTestRunner [JUnit] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (25 Apr 2024, 20:59:07 - 21:00:32) [pid: 23396]".

Amr 208778

## TestNG (Test Cases)

The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer (Package Expl...):** Shows the project structure with packages like LinkedIn\_SQA, LinkedInCucumber, LinkedInTestNG, and TestNG.
- Editor Area:** Displays the code for `TestRunner.java` and `*AddToProfileATestScorePositive.java`. The `*AddToProfileATestScorePositive.java` file contains Java code for interacting with a web application, including assertions and cleanup logic.
- Console Output:** Shows the results of running the `AddToProfileATestScorePositive` class. The output indicates the test was completed successfully with 3 passes, 0 failures, and 0 skips.

```
<terminated> AddToProfileATestScorePositive [TestNG] D:\Program Files\JavaSDK 20\bin\javaw.exe (Apr 25, 2024, 9:56:15 PM – 9:57:23 PM) [pid: 4]
[RemoteTestNG] detected TestNG version 7.4.0
Apr 25, 2024 9:56:18 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 124, returning the closest version; found: 123; Ple
Starting Login Test
Login Test Passed
Starting Navigation Test
Navigation Test Passed
Starting Test Score Entry Test
Test Score Entry Test Passed
All tests completed and browser closed.
PASSED: testLogin
PASSED: testAddTestScore
PASSED: testNavigateToEducationSection
=====
Default test
Tests run: 3, Failures: 0, Skips: 0
=====
Default suite
Total tests run: 3, Passes: 3, Failures: 0, Skips: 0
=====
```

ecl dir - LinkedInTestNG/LinkedInTestNG/TestNG/DeleteEntireResumeFootPrint.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Expl... AddToProfileATestScorePositive.java DeleteEntireResumeFootPrint.java

```
27 }
28
29 // Output to console after each login test completes
30 @AfterMethod(onlyForGroups = {"login"})
31 public void afterLoginTest() {
32     System.out.println("Login Test Passed");
33 }
34
35 // Output to console before each navigation test begins
36 @BeforeMethod(onlyForGroups = {"navigate"})
37 public void beforeNavigateTest() {
38     System.out.println("Starting Navigation Test");
39 }
40
41 // Output to console after each navigation test completes
42 @AfterMethod(onlyForGroups = {"navigate"})
43 public void afterNavigateTest() {
44     System.out.println("Navigation Test Passed");
45 }
46
47 // Output to console before beginning the resume removal test
48 @BeforeMethod(onlyForGroups = {"removeResume"})
49 public void beforeEmptyFieldTest() {
50     System.out.println("Starting Remove Resume Test");
51 }
```

Console

```
<terminated> DeleteEntireResumeFootPrint [TestNG] D:\Program Files\Java\SDK 20\bin\javaw.exe (Apr 25, 2024, 10:18:13 PM – 10:19:14 PM) [pid: 123]
[RemoteTestNG] detected TestNG version 7.4.0
Apr 25, 2024 10:18:19 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 124, returning the closest version; found: 123; Please file a bug at https://github.com/w3c/webdriver/issues
Starting Login Test
Login Test Passed
Starting Navigation Test
Navigation Test Passed
Starting Remove Resume Test
Remove Resume Test Passed
All tests completed and browser closed.
PASSED: testNavigateToResumeBuilder
PASSED: testLogin
PASSED: testDeleteResume

=====
Default test
Tests run: 3, Failures: 0, Skips: 0
=====

=====
Default suite
Total tests run: 3, Passes: 3, Failures: 0, Skips: 0
=====
```

ecl dir - LinkedInTestNG/LinkedInTestNG/TestNG/ResumeEducationSchoolNameFieldPositive.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Expl... AddToProfileATestScorePos... DeleteEntireResumeFootPr... ResumeEducationSchoolNam... X

```
public void testEducationFieldFunctionality() throws InterruptedException {
    // Interact with the school input field
    WebElement schoolInputField = driver.findElement(By.cssSelector("#resume-builder-edu-schoolInputField"));
    schoolInputField.click();
    Thread.sleep(1000);
    schoolInputField.sendKeys("The British University in Egypt");
    Thread.sleep(500);
    schoolInputField.sendKeys(Keys.ENTER);
    Thread.sleep(1500);

    // Interact with the degree field
    WebElement degreeField = driver.findElement(By.cssSelector("#resume-builder-edu-degreeField"));
    degreeField.click();
    Thread.sleep(1000);
    degreeField.sendKeys("cs");
    Thread.sleep(1000);

    // Interact with the field of study
    WebElement fieldField = driver.findElement(By.cssSelector("#resume-builder-edu-fieldField"));
    fieldField.click();
    Thread.sleep(1000);
    fieldField.sendKeys("se");
    Thread.sleep(1000);

    // Select start year from dropdown
    WebElement startYearDropdown = driver.findElement(By.id("resume-builder-edu-startYearDropdown"));
    startYearDropdown.click();
    startYearDropdown.sendKeys("2000");
    startYearDropdown.sendKeys(Keys.ENTER);
    Thread.sleep(1000);

    // Click on the save button
    WebElement saveButton = driver.findElement(By.cssSelector("#resume-builder-edu-saveButton"));
    saveButton.click();
    Thread.sleep(2000);

    // Verify the success message
    String successMessage = driver.findElement(By.cssSelector("#successMessage")).getText();
    assertEquals("Your education information has been successfully updated.", successMessage);
}
```

Console Results of running class ResumeEducationSchoolNameFieldPositive

```
<terminated> ResumeEducationSchoolNameFieldPositive [TestNG] D:\Program Files\JavaSDK 20\bin\javaw.exe (Apr 25, 2024, 10:37:35 PM - 10:38:00 AM)
[RemoteTestNG] detected TestNG version 7.4.0
Apr 25, 2024 10:37:36 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 124, returning the closest version; found: 123; Please file a bug at https://github.com/w3c/webdriver-specs
Starting Login Test
Login Test Passed
Starting Navigation Test
Navigation Test Passed
Starting Name Field Test
Name Field Test Passed
All tests completed and browser closed.
PASSED: testEducationFieldFunctionality
PASSED: testNavigateToEducationSection
PASSED: testLogin

=====
      Default test
      Tests run: 3, Failures: 0, Skips: 0
=====

=====
Default suite
Total tests run: 3, Passes: 3, Failures: 0, Skips: 0
=====
```

ecl dir - LinkedInTestNG/LinkedInTestNG/TestNG/ResumeEducationSchoolNameFieldNegative.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explor... AddToProfileATest... DeleteEntireRes... ResumeEducationS... ResumeEducationS... X

```
public void testNavigateToEducationSection() throws InterruptedException {
    Thread.sleep(1000); // Wait for page to load
    driver.findElement(By.cssSelector(".t-16:nth-child(2)").click());
    Thread.sleep(1000); // Delay for UI response
    driver.findElement(By.xpath("//div[3]/div[2]/div/button")).click();
    Thread.sleep(1000);
    driver.findElement(By.xpath("//div[2]/div/div/div/ul/li[3]/div/span")).click();
    Thread.sleep(1000);
    driver.findElement(By.xpath("//div[3]/div/button/span")).click();
    Thread.sleep(1000);
    driver.findElement(By.xpath("//div[3]/button/span")).click();
    Thread.sleep(1000);
    driver.findElement(By.xpath("//div[4]/button")).click();
    Thread.sleep(1000);
}

// Test to check functionality of the school name field when it is left empty
@Test(priority = 3, groups = "emptyField")
public void testEmptySchoolNameField() throws InterruptedException {
    WebElement degreeField = driver.findElement(By.id("resume-builder-education-section"));
    degreeField.click();
    degreeField.sendKeys("cs");

    Thread.sleep(1000);
    WebElement fieldField = driver.findElement(By.id("resume-builder-education-section"));
    fieldField.click();
}
```

Console Results of running class ResumeEducationSchoolNameFieldNegative

```
<terminated> ResumeEducationSchoolNameFieldNegative [TestNG] D:\Program Files\JavaSDK 20\bin\javaw.exe (Apr 25, 2024, 10:48:40 PM - 10
[RemoteTestNG] detected TestNG version 7.4.0
Apr 25, 2024 10:48:42 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 124, returning the closest version; found: 123; Pl
Starting Login Test
Login Test Passed
Starting Navigation Test
Navigation Test Passed
Starting Empty Field Test
Empty Field Test Passed
All tests completed and browser closed.
PASSED: testLogin
PASSED: testNavigateToEducationSection
PASSED: testEmptySchoolNameField

=====
Default test
Tests run: 3, Failures: 0, Skips: 0
=====

=====
Default suite
Total tests run: 3, Passes: 3, Failures: 0, Skips: 0
=====
```

## TestNG Report (Test Cases)

Default test					
Tests passed/Failed/Skipped:		3/0/0			
Started on:		Thu Apr 25 21:56:17 EET 2024			
Total time:		65 seconds (65614 ms)			
Included groups:					
Excluded groups:					
(Hover the method name to see the test class name)					
PASSED TESTS					
Test method	Exception	Time (seconds)	Instance		
testLogin Test class: TestNG.AddToProfileATestScorePositive		26	TestNG.AddToProfileATestScorePositive@4fb0f2b9		
testAddTestScore Test class: TestNG.AddToProfileATestScorePositive		8	TestNG.AddToProfileATestScorePositive@4fb0f2b9		
testNavigateToEducationSection Test class: TestNG.AddToProfileATestScorePositive		28	TestNG.AddToProfileATestScorePositive@4fb0f2b9		

## Default test

Tests passed/Failed/Skipped:	3/0/0
Started on:	Thu Apr 25 22:18:18 EET 2024
Total time:	54 seconds (54993 ms)
Included groups:	
Excluded groups:	

(Hover the method name to see the test class name)

### PASSED TESTS

Test method	Exception	Time (seconds)	Instance
<a href="#">testNavigateToResumeBuilder</a> Test class: TestNG.DeleteEntireResumeFootPrint		30	TestNG.DeleteEntireResumeFootPrint@4cc451f2
<a href="#">testLogin</a> Test class: TestNG.DeleteEntireResumeFootPrint		20	TestNG.DeleteEntireResumeFootPrint@4cc451f2
<a href="#">testDeleteResume</a> Test class: TestNG.DeleteEntireResumeFootPrint		3	TestNG.DeleteEntireResumeFootPrint@4cc451f2

## Default test

Tests passed/Failed/Skipped:	3/0/0
Started on:	Thu Apr 25 22:37:35 EET 2024
Total time:	67 seconds (67074 ms)
Included groups:	
Excluded groups:	

(Hover the method name to see the test class name)

### PASSED TESTS

Test method	Exception	Time (seconds)	Instance
<b>testEducationFieldFunctionality</b> Test class: TestNG.ResumeEducationSchoolNameFieldPositive		12	TestNG.ResumeEducationSchoolNameFieldPositive@4fb0f2b9
<b>testNavigateToEducationSection</b> Test class: TestNG.ResumeEducationSchoolNameFieldPositive		27	TestNG.ResumeEducationSchoolNameFieldPositive@4fb0f2b9
<b>testLogin</b> Test class: TestNG.ResumeEducationSchoolNameFieldPositive		12	TestNG.ResumeEducationSchoolNameFieldPositive@4fb0f2b9

## Default test

Tests passed/Failed/Skipped:	3/0/0
Started on:	Thu Apr 25 22:48:41 EET 2024
Total time:	49 seconds (49785 ms)
Included groups:	
Excluded groups:	

(Hover the method name to see the test class name)

### PASSED TESTS

Test method	Exception	Time (seconds)	Instance
<a href="#">testLogin</a> Test class: TestNG.ResumeEducationSchoolNameFieldNegative		25	TestNG.ResumeEducationSchoolNameFieldNegative@4fb0f2b9
<a href="#">testNavigateToEducationSection</a> Test class: TestNG.ResumeEducationSchoolNameFieldNegative		16	TestNG.ResumeEducationSchoolNameFieldNegative@4fb0f2b9
<a href="#">testEmptySchoolNameField</a> Test class: TestNG.ResumeEducationSchoolNameFieldNegative		6	TestNG.ResumeEducationSchoolNameFieldNegative@4fb0f2b9

## TestNG (Test Suite)

The screenshot shows the Eclipse IDE interface with the following details:

- File Explorer (Package Explorer):** Displays the project structure under "LinkedInTestNG". It includes Java files like "AddToProfileATestScorePositive.java", "DeleteEntireResumeFootPrint.java", "ResumeEducationSchoolNameFieldNegative.java", and "ResumeEducationSchoolNameFieldPositive.java".
- Editor (testng.xml):** Shows the XML configuration for the TestNG suite. The XML content is as follows:

```
https://testing.org/testng-1.0.dtd (doctype)
1 <?xml version="1.0" encoding="UTF-8"?>
2 <!DOCTYPE suite SYSTEM "https://testing.org/testng-1.0.dtd">
3<suite name="Suite">
4<test thread-count="5" name="Test">
5<classes>
6<class name="TestNG.ResumeEducationSchoolNameFieldPositive">
7<class name="TestNG.AddToProfileATestScorePositive"/>
8<class name="TestNG.DeleteEntireResumeFootPrint"/>
9</classes>
10</test> <!-- Test -->
11</suite> <!-- Suite -->
12
```

- Console:** Displays the output of the test execution. It shows the TestNG version detected (7.4.0), log entries for starting various tests like "Login Test", "Navigation Test", and "Test Score Entry Test", and the final summary: "Total tests run: 9, Passes: 9, Failures: 0, Skips: 0".

## TestNG Report (Test Suite)

Test			
<small>(Hover the method name to see the test class name)</small>			
PASSED TESTS			
Test method	Exception	Time (seconds)	Instance
<b>testLogin</b> Test class: TestNG.ResumeEducationSchoolNameFieldPositive		12	TestNG.ResumeEducationSchoolNameFieldPositive@67d48005
<b>testNavigateToEducationSection</b> Test class: TestNG.AddToProfileATestScorePositive		14	TestNG.AddToProfileATestScorePositive@6d763516
<b>testDeleteResume</b> Test class: TestNG.DeleteEntireResumeFootPrint		3	TestNG.DeleteEntireResumeFootPrint@52bf72b5
<b>testAddTestScore</b> Test class: TestNG.AddToProfileATestScorePositive		8	TestNG.AddToProfileATestScorePositive@6d763516
<b>testLogin</b> Test class: TestNG.AddToProfileATestScorePositive		25	TestNG.AddToProfileATestScorePositive@6d763516
<b>testEducationFieldFunctionality</b> Test class: TestNG.ResumeEducationSchoolNameFieldPositive		12	TestNG.ResumeEducationSchoolNameFieldPositive@67d48005
<b>testNavigateToResumeBuilder</b> Test class: TestNG.DeleteEntireResumeFootPrint		13	TestNG.DeleteEntireResumeFootPrint@52bf72b5
<b>testNavigateToEducationSection</b> Test class: TestNG.ResumeEducationSchoolNameFieldPositive		16	TestNG.ResumeEducationSchoolNameFieldPositive@67d48005
<b>testLogin</b> Test class: TestNG.DeleteEntireResumeFootPrint		13	TestNG.DeleteEntireResumeFootPrint@52bf72b5

## Cucumber & Gherkin

The screenshot shows the Eclipse IDE interface with the following details:

- Top Bar:** Shows the title "ecl dir - LinkedInCucumber1/src/main/java/stepDefinitions/ATPATSP/AddToProfileATestScorePositive.java - Eclipse IDE".
- Menu Bar:** Includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help.
- Toolbar:** Standard Eclipse toolbar with icons for file operations, search, and run.
- Package Explorer:** Shows the project structure with "stepDefinitions.AddToProfileATestScorePositiveTR [Runner: JUnit 4] (38.54s)" selected.
- JUnit View:** Displays the test results: "Finished after 38.65 seconds", "Runs: 1/1", "Errors: 0", "Failures: 0".
- Code Editor:** The main editor pane contains the Java code for the Cucumber step definitions:

```
1 package stepDefinitions.ATPATSP;
2
3 import io.cucumber.java.en.Given;
4 import io.cucumber.java.en.When;
5 import io.cucumber.java.en.And;
6 import io.cucumber.java.en.Then;
7 import org.junit.Assert;
8 import org.openqa.selenium.By;
9 import org.openqa.selenium.WebDriver;
10 import org.openqa.selenium.WebElement;
11 import org.openqa.selenium.chrome.ChromeDriver;
12 import org.openqa.selenium.chrome.ChromeOptions;
13 import org.openqa.selenium.support.ui.Select;
14
15 public class AddToProfileATestScorePositive {
16
17     private WebDriver driver;
18
19     @Given("User is on the LinkedIn login page")
20     public void user_is_on_the_LinkedIn_login_page() {
21         System.setProperty("webdriver.chrome.driver", "D:\\chromedriver.exe");
22         ChromeOptions options = new ChromeOptions();
23         options.addArguments("--remote-allow-origins=*");
24         driver = new ChromeDriver(options);
25         driver.get("https://www.linkedin.com/login");
26     }
27
28     @When("user enters email {string} and password {string}")
29     public void user_enters_email_and_password(String email, String password) {
30         driver.findElement(By.id("username")).sendKeys(email);
31         driver.findElement(By.id("password")).sendKeys(password);
32         driver.findElement(By.xpath("//button[contains(text(), 'Log In')]"));
33         Thread.sleep(2000);
34     }
35
36     @And("user clicks on user profile icon")
37     public void user_clicks_on_user_profile_icon() throws InterruptedException {
38         Thread.sleep(2000);
39         driver.findElement(By.cssSelector(".t-16:nth-child(2)"));
40     }
41
42     @And("user clicks on Add Profile Section tab")
43     public void user_clicks_on_Add_Profile_Section_tab() throws InterruptedException {
44         Thread.sleep(1000);
45         driver.findElement(By.xpath("//div[3]/button/span"));
46     }
47
48     @And("user clicks on Additional drop down menu")
49     public void user_clicks_on_additional_drop_down_menu() throws InterruptedException {
50         driver.findElement(By.cssSelector(".t-16:nth-child(2)"));
51     }
52
53     @Then("user successfully adds a test score to their LinkedIn profile")
54     public void userSuccessfullyAddsATestScoreToLinkedInProfile() {
55         Assert.assertTrue(true);
56     }
57 }
```

- Console View:** Shows the terminal output for the test run:

```
<terminated> AddToProfileATestScorePositiveTR [JUnit] D:\Program Files\JavaSDK 20\bin\java
Apr 26, 2024 6:51:05 PM org.openqa.selenium.devtools.CdpVersionFinder
WARNING: Unable to find an exact match for CDP version 124, returning
```

ecl dir - LinkedInCucumber1/src/main/java/stepDefinitions/DERFP/DeleteEntireResumeFootPrint.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer JUnit

Finished after 37.03 seconds

Runs: 1/1 Errors: 0 Failures: 0

stepDefinitions.DeleteEntireResumeFootPrintTR [Runner: JUnit 4] (36.918 s)

Deleting An Entire Saved Resume (36.918 s)

Successfully Delete An Entire Saved Resume from profile (36.918 s)

Failure Trace

Console

```
35     Thread.sleep(2000);
36 }
37
38 @And("user clicks on user profile icon")
39 public void user_clicks_on_user_profile_icon() throws InterruptedException {
40     Thread.sleep(2000);
41     driver.findElement(By.xpath("//a/div[2]")).click();
42 }
43
44 @And("user clicks on more tab")
45 public void user_clicks_on_more_tab() throws InterruptedException {
46     Thread.sleep(2000);
47     driver.findElement(By.xpath("//div[3]/div[2]/div/button")).click();
48 }
49
50 @And("user clicks on build a resume tab")
51 public void user_clicks_on_build_a_resume_tab() throws InterruptedException {
52     Thread.sleep(2000);
53     driver.findElement(By.xpath("//div[2]/div/div/div/u")).click();
54 }
55
56 @And("user clicks on The more tab beside the CV you have")
57 public void user_clicks_on_the_more_tab_beside_the_cv_you_have() throws InterruptedException {
58     Thread.sleep(1000);
59     driver.findElement(By.xpath("//span/button")).click();
60     Thread.sleep(1000);
61 }
62
63 @And("user clicks on "Delete""")
64 public void user_clicks_on_delete() throws InterruptedException {
65     Thread.sleep(1000);
66     driver.findElement(By.xpath("//button[4]")).click();
67     Thread.sleep(1000);
68 }
69
70 @And("user confirms Deletion by clicking on Delete again")
71 public void user_confirms_deletion_by_clicking_on_delete() throws InterruptedException {
72     Thread.sleep(1000);
73     driver.findElement(By.xpath("//div[3]/button[2]/span")).click();
74     Thread.sleep(1000);
75 }
76
77 @Then("user confirms element has been deleted via {string}")
78 public void user_confirms_element_has_been_deleted_via_string(String string) {
79     WebElement errorMessageElement = driver.findElement(By.xpath("//div[3]/p"));
80     String errorMessage = errorMessageElement.getText();
81     String expectedErrorMessage = "Resume deleted"; // I am not sure about this
82     Assert.assertEquals(errorMessage, expectedErrorMessage);
83 }
```

<terminated> DeleteEntireResumeFootPrintTR [JUnit] D:\Program Files\JavaSDK 20\bin\java

Apr 26, 2024 7:04:50 PM org.openqa.selenium.devtools.CdpVersionFinder

WARNING: Unable to find an exact match for CDP version 124, returning 124

ecl dir - LinkedInCucumber1/src/main/java/stepDefinitions/RESNFP/ResumeEducationSchoolNameFieldPositive.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer JUnit X

Finished after 51.687 seconds

Runs: 1/1 Errors: 0 Failures: 0

stepDefinitions.ResumeEducationSchoolNameFieldPositiveTR [Runner: JUnit 4] (51.553 s)

Adding An Existing Education Facility Name To Resume Checking If It Will Be Accepted (51.553 s)

Successfully add education details to LinkedIn profile resume (51.553 s)

Failure Trace

```
package stepDefinitions.RESNFP;
import org.openqa.selenium.By;
import org.openqa.selenium.Keys;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.chrome.ChromeOptions;
import org.openqa.selenium.support.ui.WebDriverWait;
import org.testng.Assert;
import io.cucumber.java.en.*;
import org.openqa.selenium.WebElement;
private WebDriver driver;
@Given("user is on the LinkedIn login page")
public void user_is_on_the_LinkedIn_login() {
    System.setProperty("webdriver.chrome.driver", "C:\\Users\\Dell\\Desktop\\chromedriver.exe");
    ChromeOptions options = new ChromeOptions();
    options.addArguments("--remote-allow-origins=*");
    driver = new ChromeDriver(options);
    driver.get("https://www.linkedin.com");
}
@when("user enters email {string} and password {string}")
public void user_enters_email_and_password(String email, String password) {
    driver.findElement(By.id("username")).sendKeys(email);
    driver.findElement(By.id("password")).sendKeys(password);
    driver.findElement(By.xpath("//button[@type='submit']")).click();
    Thread.sleep(2000);
}
@And("user clicks on user profile icon")
public void user_clicks_on_user_profile_icon() {
    Thread.sleep(2000);
    driver.findElement(By.xpath("//a[@class='pv-profile-section__card-section']")).click();
}
@And("user clicks on more tab")
public void user_clicks_on_more_tab() {
    Thread.sleep(2000);
    driver.findElement(By.xpath("//div[@class='pv-profile-section__card-section']//a[@class='pv-profile-section__card-section']")).click();
}
```

Console X

```
<terminated> ResumeEducationSchoolNameFieldPositiveTR [JUnit]
Apr 26, 2024 6:43:15 PM org.openqa.selenium.devtools
WARNING: Unable to find an exact match for CDP \
```

ecl dir - LinkedInCucumber1/src/main/java/stepDefinitions/RESNFN/ResumeEducationSchoolNameFieldNegative.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer JUnit X

Finished after 47.562 seconds

Runs: 1/1 Errors: 0 Failures: 0

stepDefinitions.ResumeEducationSchoolNameFieldNegativeTR [Runner: JUnit 4] (47.444 s)

Which is a required field (47.444 s)

Successfully add education details without adding an educational facility name to LinkedIn

```
1 package stepDefinitions.RESNFN;
2
3
4 import org.openqa.selenium.By;
5 import org.openqa.selenium.WebDriver;
6 import org.openqa.selenium.chrome.ChromeDriver;
7 import org.openqa.selenium.chrome.ChromeOptions;
8 import org.openqa.selenium.support.ui.Select;
9 import org.testng.Assert;
10 import io.cucumber.java.en.*;
11 import org.openqa.selenium.WebElement;
12
13 public class ResumeEducationSchoolNameFieldNegative {
14
15     private WebDriver driver;
16
17     @Given("user is on the LinkedIn login page")
18     public void user_is_on_the_LinkedIn_login_page() {
19         System.setProperty("webdriver.chrome.driver", "C:\\Users\\Dell\\Desktop\\chromedriver.exe");
20         ChromeOptions options = new ChromeOptions();
21         options.addArguments("--remote-allow-origins=*");
22         driver = new ChromeDriver(options);
23         driver.get("https://www.linkedin.com/login");
24     }
25
26     @When("user enters email {string} and password {string}")
27     public void user_enters_email_and_password(String email, String password) {
28         driver.findElement(By.id("username")).sendKeys(email);
29         driver.findElement(By.id("password")).sendKeys(password);
30         driver.findElement(By.xpath("//button[@type='submit']")).click();
31         Thread.sleep(2000);
32     }
33
34     @And("user clicks on user profile icon")
35     public void user_clicks_on_user_profile_icon() {
36         Thread.sleep(2000);
37         driver.findElement(By.xpath("//a/div[2]")).click();
38     }
39
40     @And("user clicks on more tab")
41     public void user_clicks_on_more_tab() throws InterruptedException {
42         Thread.sleep(2000);
43         driver.findElement(By.xpath("//div[3]/div/a[2]")).click();
44     }
45
46     @And("user clicks on build a resume tab")
47     public void user_clicks_on_build_a_resume_tab() throws InterruptedException {
48         Thread.sleep(2000);
        driver.findElement(By.xpath("//div[3]/div/a[3]")).click();
    }
}
```

Failure Trace

Console X

```
<terminated> ResumeEducationSchoolNameFieldNegativeTR [JUnit] D:\Projects\LinkedInCucumber1\src\main\java\stepDefinitions\RESNFN\ResumeEducationSchoolNameFieldNegative.java
Apr 26, 2024 6:47:01 PM org.openqa.selenium.devtools.CdpSession$Builder<Session> <init>
WARNING: Unable to find an exact match for CDP version
```

# Mohamed 214991

## TestNG Report (Test Cases)

### Default test

Tests passed/Failed/Skipped:	1/0/0
Started on:	Thu Apr 25 02:34:59 EET 2024
Total time:	47 seconds (47025 ms)
Included groups:	
Excluded groups:	

(Hover the method name to see the test class name)

PASSED TESTS			
Test method	Exception	Time (seconds)	Instance
testApplyforJobOffer Test class: ApplyforJobOffer		42	ApplyforJobOffer@32eff876

### Default test

Tests passed/Failed/Skipped:	1/0/0
Started on:	Thu Apr 25 02:02:30 EET 2024
Total time:	45 seconds (45787 ms)
Included groups:	
Excluded groups:	

(Hover the method name to see the test class name)

PASSED TESTS			
Test method	Exception	Time (seconds)	Instance
testDuplicateJobPosting Test class: DuplicateJobPosting		40	DuplicateJobPosting@32eff876

### Default test

Tests passed/Failed/Skipped:	1/0/0
Started on:	Thu Apr 25 01:57:23 EET 2024
Total time:	57 seconds (57777 ms)
Included groups:	
Excluded groups:	

(Hover the method name to see the test class name)

PASSED TESTS			
Test method	Exception	Time (seconds)	Instance
testReopenJobOffer Test class: ReopenJobOffer		50	ReopenJobOffer@32eff876

## Default test

Tests passed/Failed/Skipped:	4/0/0
Started on:	Thu Apr 25 02:27:25 EET 2024
Total time:	98 seconds (98371 ms)
Included groups:	
Excluded groups:	

(Hover the method name to see the test class name)

### PASSED TESTS

Test method	Exception	Time (seconds)	Instance
<a href="#">testFirstPage</a> Test class: SuccessfulvalidJobposting		52	SuccessfulvalidJobposting@71809907
<a href="#">testSecondPage</a> Test class: SuccessfulvalidJobposting		13	SuccessfulvalidJobposting@71809907
<a href="#">testThirdPage</a> Test class: SuccessfulvalidJobposting		19	SuccessfulvalidJobposting@71809907
<a href="#">testFourthPage</a> Test class: SuccessfulvalidJobposting		10	SuccessfulvalidJobposting@71809907

## TestNG Report (Test Suite)

### Test

Tests passed/Failed/Skipped:	6/0/0
Started on:	Thu Apr 25 02:17:00 EET 2024
Total time:	198 seconds (198071 ms)
Included groups:	
Excluded groups:	

(Hover the method name to see the test class name)

### PASSED TESTS

Test method	Exception	Time (seconds)	Instance
<a href="#">testApplyforJobOffer</a> Test class: ApplyforJobOffer		50	ApplyforJobOffer@74e52303
<a href="#">testFirstPage</a> Test class: SuccessfulvalidJobposting		52	SuccessfulvalidJobposting@4567f35d
<a href="#">testSecondPage</a> Test class: SuccessfulvalidJobposting		13	SuccessfulvalidJobposting@4567f35d
<a href="#">testThirdPage</a> Test class: SuccessfulvalidJobposting		19	SuccessfulvalidJobposting@4567f35d
<a href="#">testFourthPage</a> Test class: SuccessfulvalidJobposting		10	SuccessfulvalidJobposting@4567f35d
<a href="#">testReopenJobOffer</a> Test class: ReopenJobOffer		42	ReopenJobOffer@2e005c4b

## *Cucumber & Gherkin*

The screenshot shows a Java IDE interface with several windows open:

- JUnit**: Shows the test results: "Runs: 1/1", "Errors: 0", "Failures: 0".
- File List**: Shows the file structure: "ApplyforJobOffer.java", "ApplyforJobOfferTestRunner.java", and "ApplyforJobOffer.feature".
- Code Editor**: Displays the source code for `ApplyforJobOfferTestRunner.java`. The code uses Selenium WebDriver to interact with a LinkedIn homepage, applying for a job offer, and verifying the result.
- Task List**: Shows the tasks: "Task List", "Outline", "Console", and "Console".
- Output**: Shows the terminal output: "terminated - ApplyforJobOfferTestRunner [JUnit] E:\Program Files\Java\jdk-21\bin\javaw.exe (Apr 25, 2024, 4:02:13 PM org.openqa.selenium.devtools.CdpVersionFinder\$findNearestMatch WARNING: Unable to find an exact match for CDP version 124, returning the closest version; found: 123; Please", "Launching Google Chrome browser", "Apr 25, 2024 4:02:15 PM org.openqa.selenium.devtools.CdpVersionFinder\$findNearestMatch WARNING: Unable to find an exact match for CDP version 124, returning the closest version; found: 123; Please", and "Apr 25, 2024 4:02:15 PM org.openqa.selenium.devtools.CdpVersionFinder\$findNearestMatch WARNING: Unable to find an exact match for CDP version 124, returning the closest version; found: 123; Please".

The screenshot shows the Eclipse IDE interface with the following details:

- Top Bar:** Shows "Package Explorer" and "JUnit" tabs.
- Middle Left Panel:** Displays "Finished after 73.842 seconds" and a summary: "Runs: 1/1", "Errors: 0", and "Failures: 0".
- Middle Right Panel:** Shows the source code of a Java file named "TestRunner.java". The code contains annotations for @When and @Then steps, and includes explicit waits using Thread.sleep().
- Bottom Left Panel:** Shows a "Failure Trace" section.
- Bottom Right Panel:** Shows tabs for "Console" and "TestNG".

The screenshot shows the Eclipse IDE interface with the following components visible:

- Package Explorer**: Shows a single JUnit run completed after 76.109 seconds with 1 run, 0 errors, and 0 failures.
- ReopenJobOfferTestRunner.java**: The main test class containing step definitions.
- ReopenJobOffer.java**: A Java file with imports for cucumber annotations.
- Failure Trace**: An empty section in the left-hand view.
- Task List**: Shows a search bar and a list of items: Find, All, Activate... (with a question mark icon).
- Console**: Displays the output of the TestNG run, including the launch of Google Chrome and a warning about CDP version finding.

```
14 import io.cucumber.java.en.*;
15 import io.cucumber.java.en.When;
16
17 public class ReopenJobOffer {
18
19     WebDriver driver;
20
21
22@Given("User is on the LinkedIn homepage {string}")
23 public void userIsOnLinkedInHomepage(String baseUrl) {
24     System.out.println("Launching Google Chrome browser");
25     driver = new ChromeDriver();
26     driver.get(baseUrl);
27 }
28
29@When("User enters email and password")
30 public void userEntersEmailAndPassword() throws InterruptedException {
31     driver.findElement(By.id("username")).sendKeys("mohamed214991@ue.edu");
32     driver.findElement(By.id("password")).sendKeys("H%$_5z%?mYK5_7");
33     driver.findElement(By.className("login_form_action_container")).submit();
34     Thread.sleep(40000);
35 }
36
37@And("User clicks on the Jobs icon")
38 public void userClicksOnJobsIcon() throws InterruptedException {
39     driver.findElement(By.xpath("//*[@id='global-nav']/div/nav/ul/li[3]"));
40     Thread.sleep(3000);
41 }
42
43@And("User clicks on Manage job posts")
44 public void userClicksOnManageJobPosts() throws InterruptedException {
45     driver.findElement(By.xpath("/html/body/div[5]/div[3]/div/div[3]/div"));
46     Thread.sleep(3000);
47 }
```

<terminated> ReopenJobOfferTestRunner [JUnit] F:\Program Files\Java\jdk-21\bin\javaw.exe (Apr 25, 2024, 1:23:44 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch) WARNING: Unable to find an exact match for CDP Version 124, returning the closest v

(He will submit his part via his e-learning due to his delay)

Hossam 175577

## Group Work

### JMeter

#### 1<sup>st</sup> Test Plan

ID	LIN-1
Test Case Name	Visit LinkedIn Events Page
Objective	Check the peak load on the server by visiting the website events page
Test Scenario	<ol style="list-style-type: none"><li>1. Create thread group</li><li>2. Enter number of threads</li><li>3. Enter ramp-up period</li><li>4. Create HTTP Request Sampler</li><li>5. Create View Results, Summary Report, Graph Results and View Results in Table</li></ol>
Input	Number of threads 250 Ramp-up 1 Server URL/Path
Expected Output	250 users/threads visit the website events page within 1 second between each user
Actual Output	100 users/threads visited the website events page with an error rate of 31.80%
Pass/Fail	Fail

## View Results Tree

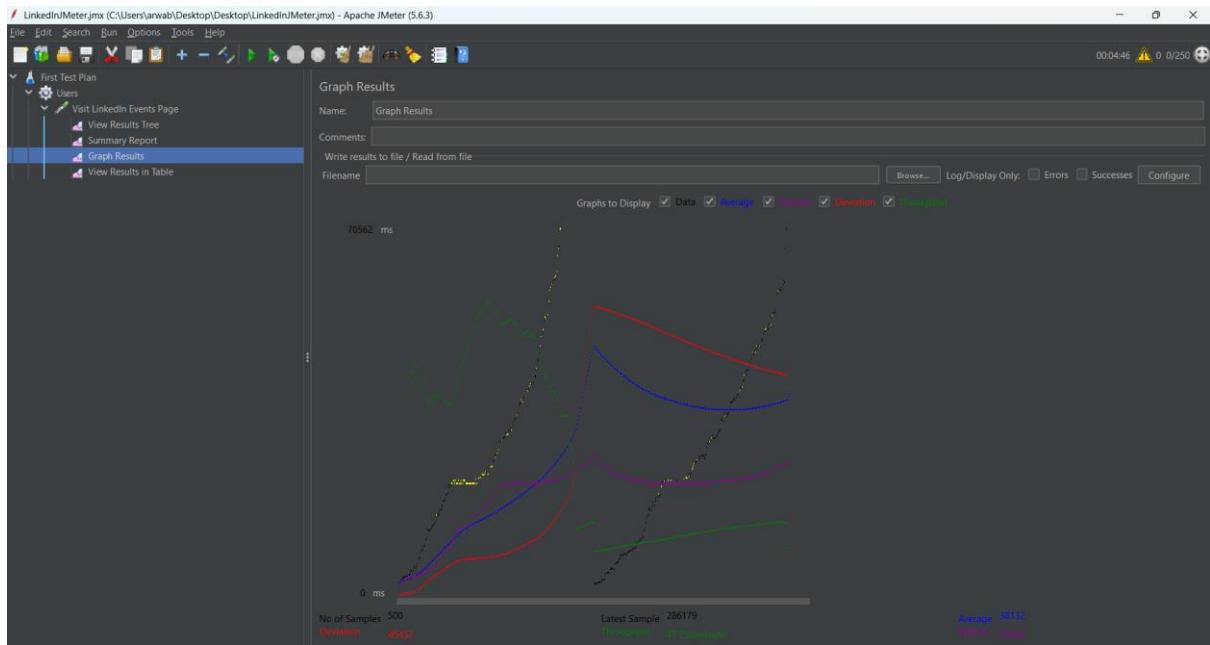
The screenshot shows the Apache JMeter interface with the 'View Results Tree' listener selected. The left sidebar shows a test plan with a single group named 'Users' containing a sampler named 'Visit LinkedIn Events Page'. The main panel displays a tree view of sampler results, all of which are successful (green checkmarks). A search bar at the top allows filtering by text or regular expression. Below the search bar are buttons for 'Raw' and 'Parsed' data formats.

## Summary Report

The screenshot shows the Apache JMeter interface with the 'Summary Report' listener selected. The left sidebar shows a test plan with a single group named 'Users' containing a sampler named 'Visit LinkedIn Events Page'. The main panel displays a detailed summary report table. The table includes columns for Label, # Samples, Average, Min, Max, Std. Dev., Error %, Throughput, Received KB/sec, Sent KB/sec, and Avg. Bytes. The data shows 500 samples for the 'Visit LinkedIn Events Page' label, with an average response time of 38132 ms, a minimum of 2122 ms, a maximum of 286179 ms, and a standard deviation of 45452.82 ms. The error percentage is 31.80%, and the throughput is 47.8/min. The total row shows the same values for the entire test run.

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
Visit LinkedIn Ev...	500	38132	2122	286179	45452.82	31.80%	47.8/min	24.24	0.10	31183.6
TOTAL	500	38132	2122	286179	45452.82	31.80%	47.8/min	24.24	0.10	31183.6

## Graph Results



## View Results in Table

The screenshot shows the JMeter View Results in Table view. The left sidebar lists the test plan: First Test Plan > Users > Visit LinkedIn Events Page > View Results in Table. The main area displays a table of test results. The table has 10 columns: Sample #, Start Time, Thread Name, Label, Sample Time(ms), Status, Bytes, Sent Bytes, Latency, and Connect Time(ms). The table contains 34 rows of data, each representing a user thread. The status column shows mostly green checkmarks, indicating successful samples. The connect time values range from 1481 to 4948 ms.

Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
1	234721159	Users 1-13	Visit LinkedIn Even...	2122	green	42298	184	1967	1481
2	234721219	Users 1-28	Visit LinkedIn Even...	2535	green	42298	184	2410	1927
3	234721231	Users 1-31	Visit LinkedIn Even...	2587	green	51468	184	2280	1712
4	234721211	Users 1-26	Visit LinkedIn Even...	2640	green	51468	184	2479	2022
5	234721123	Users 1-4	Visit LinkedIn Even...	3018	green	42298	184	2924	2418
6	234721138	Users 1-7	Visit LinkedIn Even...	3151	green	42298	184	2897	2309
7	234721147	Users 1-10	Visit LinkedIn Even...	3435	green	42298	184	3339	2769
8	234721154	Users 1-12	Visit LinkedIn Even...	3478	green	42298	184	3360	2947
9	234721203	Users 1-24	Visit LinkedIn Even...	3574	green	42298	184	3453	2971
10	234721187	Users 1-20	Visit LinkedIn Even...	3666	green	42298	184	3386	2782
11	234721191	Users 1-21	Visit LinkedIn Even...	3707	green	51468	184	3398	2903
12	234721168	Users 1-15	Visit LinkedIn Even...	3752	green	51468	184	3441	2794
13	234721411	Users 1-75	Visit LinkedIn Even...	3532	green	42298	184	3279	2763
14	234721271	Users 1-41	Visit LinkedIn Even...	3975	green	42298	184	3824	3312
15	234721206	Users 1-25	Visit LinkedIn Even...	4072	green	51468	184	3765	3139
16	234721172	Users 1-91	Visit LinkedIn Even...	3978	green	42298	184	3887	2886
17	234721520	Users 1-103	Visit LinkedIn Even...	4623	green	42298	184	4462	3970
18	234721214	Users 1-102	Visit LinkedIn Even...	4694	green	42298	184	4516	3994
19	234721906	Users 1-200	Visit LinkedIn Even...	4366	green	42298	184	4208	3754
20	234721812	Users 1-176	Visit LinkedIn Even...	4713	green	42298	184	4406	3838
21	234721635	Users 1-132	Visit LinkedIn Even...	5374	green	42298	184	5279	4964
22	234721564	Users 1-114	Visit LinkedIn Even...	5642	green	42298	184	5345	4789
23	234722001	Users 1-223	Visit LinkedIn Even...	5219	green	42298	184	5068	4656
24	234721812	Users 1-175	Visit LinkedIn Even...	5621	green	42298	184	5529	5076
25	234721674	Users 1-717	Visit LinkedIn Even...	4605	green	42298	184	4521	4948

## 2<sup>nd</sup> Test Plan

ID	LIN-2
Test Case Name	Search For University Page
Objective	Check the peak load on the server by searching a specific university name
Test Scenario	<ol style="list-style-type: none"> <li>1. Create thread group</li> <li>2. Enter number of threads</li> <li>3. Enter ramp-up period</li> <li>4. Create HTTP Request Sampler</li> <li>5. Add Parameter</li> <li>6. Create View Results, Summary Report, Graph Results and View Results in Table</li> </ol>
Input	<p>Number of threads 250  Ramp-up 1  Server URL/Path  Parameters:</p> <ul style="list-style-type: none"> <li>• Name: keywords Value: British%20University%20In%20Egypt</li> <li>• Name: Origin Value: GLOBAL_SEARCH_HEADER</li> <li>• Name: sid Value: _Yh</li> </ul>
	250 users/threads can search for a university page within 1 second between each user
Actual Output	175 users/threads searched for the company on LinkedIn page with an error rate of 29.20%
Pass/Fail	Fail

## *View Results Tree*

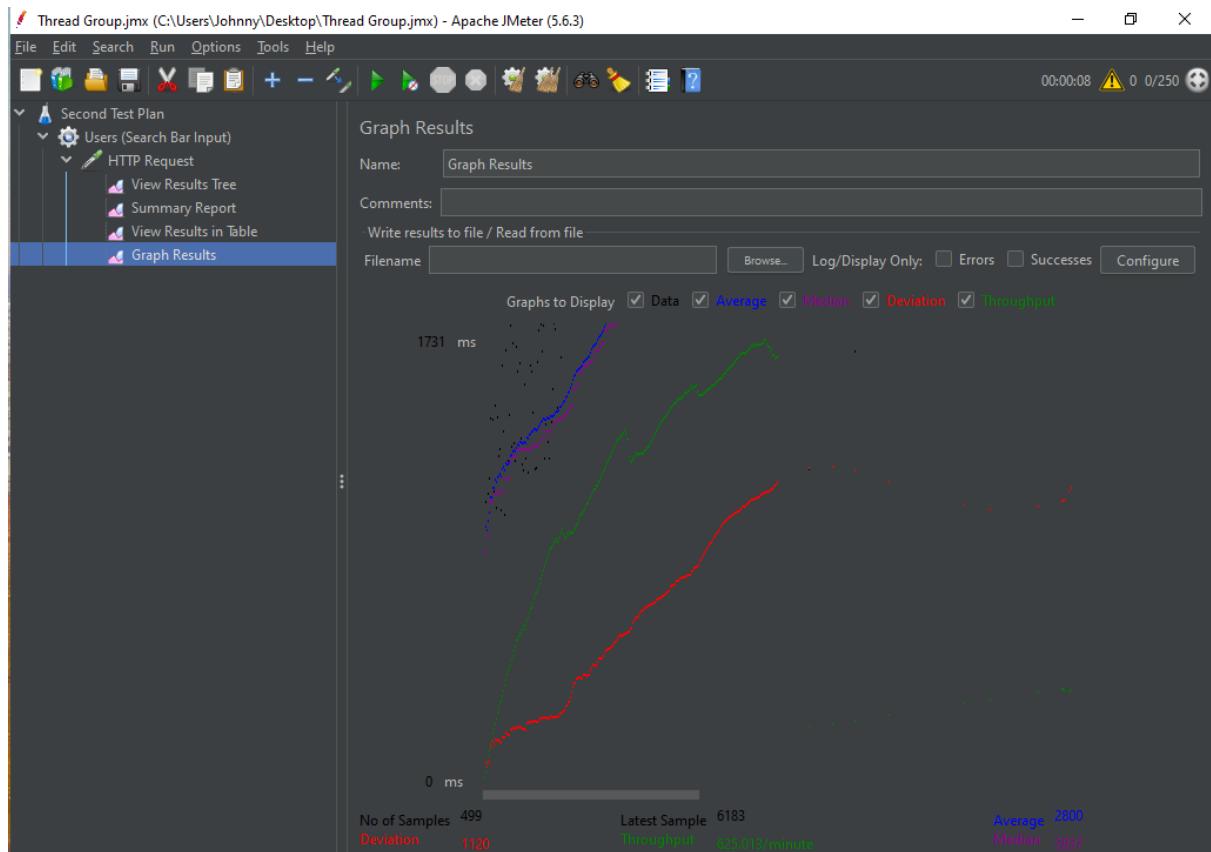
The screenshot shows the Apache JMeter interface with the 'View Results Tree' listener selected in the left sidebar under the 'HTTP Request' category. The main panel displays a tree view of 'Sampler result' entries, each labeled 'HTTP Request' with a green checkmark icon. At the bottom of the tree view, there is a checkbox labeled 'Scroll automatically?'. The top status bar indicates '00:00:08' and '0 0/250'.

## *Summary Report*

The screenshot shows the Apache JMeter interface with the 'Summary Report' listener selected in the left sidebar under the 'HTTP Request' category. The main panel displays a table of performance metrics. The table has the following columns: Label, # Samples, Average, Min, Max, Std. Dev., Error %, Through..., Received..., Sent KB/..., and Avg. Bytes. Two rows are present: 'HTTP Re...' and 'TOTAL'. Both rows show values: # Samples: 500, Average: 3695, Min: 968, Max: 8393, Std. Dev.: 1642.03, Error %: 39.60%, Through...: 5.3/sec, Received...: 217.72, Sent KB/...: 3.88, and Avg. Bytes: 41718.8. The top status bar indicates '00:00:07' and '0 0/250'.

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Through...	Received...	Sent KB/...	Avg. Bytes
HTTP Re...	500	3695	968	8393	1642.03	39.60%	5.3/sec	217.72	3.88	41718.8
TOTAL	500	3695	968	8393	1642.03	39.60%	5.3/sec	217.72	3.88	41718.8

## Graph Results



## View Results in Table

The screenshot shows the Apache JMeter interface with the title "Thread Group.jmx (C:\Users\Johnny\Desktop\Thread Group.jmx) - Apache JMeter (5.6.3)". The left sidebar shows a tree structure of a "Second Test Plan" containing "Users (Search Bar Input)" and "HTTP Request". Under "HTTP Request", there are four options: "View Results Tree", "Summary Report", "View Results in Table", and "Graph Results", with "View Results in Table" currently selected. The main panel is titled "View Results in Table" and displays a table of results. The table has columns: Sample #, Start Time, Thread Name, Label, Sample Tim..., Status, Bytes, Sent Bytes, and Latenc. The table lists 20 rows of data, each representing an HTTP request sample. The "Status" column contains green checkmarks, indicating successful requests. The "Bytes" and "Sent Bytes" columns show values between 47446 and 56884 bytes. The "Latenc" column shows latencies between 878 and 1573 milliseconds.

Sample #	Start Time	Thread Name	Label	Sample Tim...	Status	Bytes	Sent Bytes	Latenc
1	15:58:16.500	Users (Searc...	HTTP Request	878	✓	47446	743	
2	15:58:16.572	Users (Searc...	HTTP Request	1064	✓	47982	743	
3	15:58:16.744	Users (Searc...	HTTP Request	937	✓	47446	743	
4	15:58:16.612	Users (Searc...	HTTP Request	1095	✓	47446	743	
5	15:58:16.585	Users (Searc...	HTTP Request	1152	✓	56616	743	
6	15:58:16.505	Users (Searc...	HTTP Request	1377	✓	47446	743	
7	15:58:16.824	Users (Searc...	HTTP Request	1068	✓	47446	743	
8	15:58:16.520	Users (Searc...	HTTP Request	1372	✓	56616	743	
9	15:58:16.820	Users (Searc...	HTTP Request	1106	✓	47714	743	
10	15:58:16.543	Users (Searc...	HTTP Request	1427	✓	47714	743	
11	15:58:16.935	Users (Searc...	HTTP Request	1045	✓	56884	743	
12	15:58:16.600	Users (Searc...	HTTP Request	1383	✓	47714	743	
13	15:58:16.784	Users (Searc...	HTTP Request	1236	✓	47446	743	
14	15:58:16.788	Users (Searc...	HTTP Request	1263	✓	47446	743	
15	15:58:17.076	Users (Searc...	HTTP Request	1033	✓	47446	743	
16	15:58:16.548	Users (Searc...	HTTP Request	1573	✓	47446	743	
17	15:58:16.805	Users (Searc...	HTTP Request	1331	✓	47446	743	
18	15:58:17.124	Users (Searc...	HTTP Request	1016	✓	56884	743	
19	15:58:16.509	Users (Searc...	HTTP Request	1633	✓	56616	743	
20	15:58:17.005	Users (Searc...	HTTP Request	1146	✓	47446	743	

### **3<sup>rd</sup> Test Plan**

ID	LIN-3
Test Case Name	View Jobs Page
Objective	Check the peak load on the server by visiting the website jobs page
Test Scenario	<ol style="list-style-type: none"> <li>1. Create thread group</li> <li>2. Enter number of threads</li> <li>3. Enter ramp-up period</li> <li>4. Create HTTP Request Sampler</li> <li>5. Create View Results, Summary Report, Graph Results and View Results in Table</li> </ol>
Input	Number of threads 350 Ramp-up 2 Server URL/Path
Expected Output	350 users/threads visit the website jobs page within 2 seconds between each user
Actual Output	100 users/threads visited the website jobs page with an error rate of 26.86%
Pass/Fail	Fail

## View Results Tree

The screenshot shows the Apache JMeter interface with the 'View Results Tree' listener selected in the left sidebar under the 'Users' group. The main panel displays a tree structure with 350 'View Jobs Page' samplers. The tree is collapsed, showing a single node labeled 'View Results Tree'. At the bottom of the tree, there is a checkbox labeled 'Scroll automatically?'.

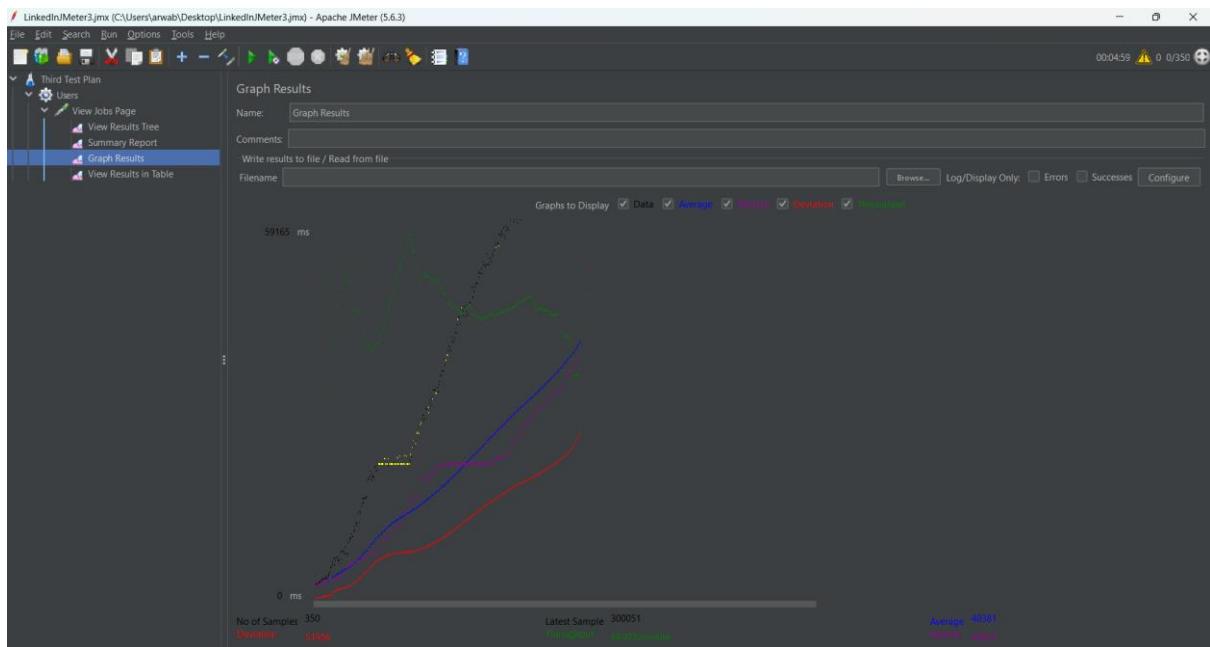
## Summary Report

The screenshot shows the Apache JMeter interface with the 'Summary Report' listener selected in the left sidebar under the 'Users' group. The main panel displays a detailed performance report table. The table has the following columns: Label, # Samples, Average, Min, Max, Std. Dev., Error %, Throughput, Received KB/sec, Sent KB/sec, and Avg. Bytes. The data in the table is as follows:

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
View Jobs Page	350	32258	3283	255083	20525.50	26.86%	1.4/sec	128.78	0.12	96199.8
TOTAL	350	32258	3283	255083	20525.50	26.86%	1.4/sec	128.78	0.12	96199.8

At the bottom of the table, there are three checkboxes: 'Include group name in label?', 'Save Table Data', and 'Save Table Header'. The 'Save Table Data' and 'Save Table Header' checkboxes are checked.

## Graph Results



## View Results in Table

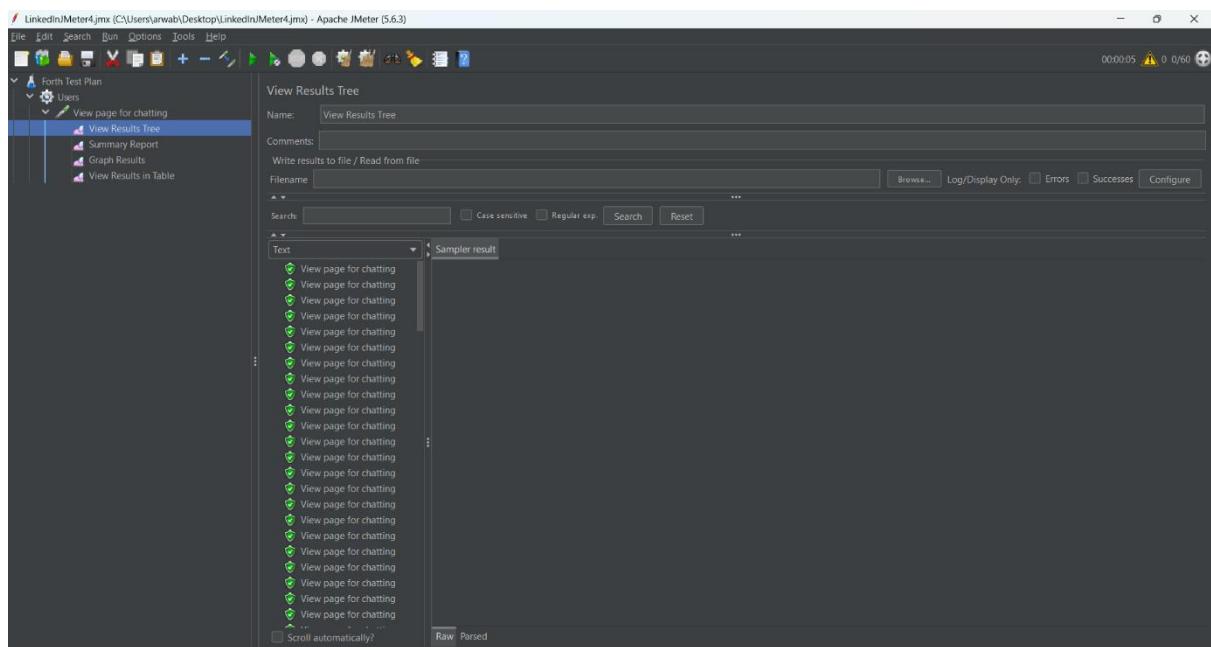
The screenshot shows the 'View Results in Table' page in Apache JMeter. The table lists 35 samples with the following columns: Sample #, Start Time, Thread Name, Label, Sample Time(ms), Status, Bytes, Sent Bytes, Latency, and Connect Time(ms). The table shows various user interactions with the 'View Jobs Page' over a period of time, with response times ranging from 2038 ms to 5774 ms.

Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
1	02:06:31.284	Users 1-4	View Jobs Page	2038	green	130609	122	1749	1399
2	02:06:31.291	Users 1-5	View Jobs Page	2108	green	130609	122	1816	1508
3	02:06:31.324	Users 1-10	View Jobs Page	2339	green	130609	122	1868	1415
4	02:06:31.391	Users 1-22	View Jobs Page	2275	green	130877	122	1955	1658
5	02:06:31.328	Users 1-11	View Jobs Page	2369	green	130609	122	1896	1402
6	02:06:31.387	Users 1-21	View Jobs Page	2567	green	130609	122	2078	1575
7	02:06:31.359	Users 1-23	View Jobs Page	2660	green	130609	122	2200	1734
8	02:06:31.404	Users 1-24	View Jobs Page	2784	green	130609	122	2264	1846
9	02:06:31.304	Users 1-7	View Jobs Page	2915	green	130609	122	2672	2338
10	02:06:31.335	Users 1-12	View Jobs Page	3129	green	130609	122	2679	2327
11	02:06:31.442	Users 1-30	View Jobs Page	3022	green	130609	122	2493	1981
12	02:06:31.315	Users 1-9	View Jobs Page	3172	green	130609	122	2704	2347
13	02:06:31.374	Users 1-19	View Jobs Page	3116	green	130609	122	2737	2409
14	02:06:31.313	Users 1-8	View Jobs Page	3288	green	130609	122	2784	2304
15	02:06:31.297	Users 1-6	View Jobs Page	3387	green	130876	122	2924	2508
16	02:06:31.538	Users 1-46	View Jobs Page	3173	green	130609	122	2704	2272
17	02:06:31.565	Users 1-51	View Jobs Page	3335	green	130609	122	2956	2578
18	02:06:31.454	Users 1-33	View Jobs Page	3642	green	130609	122	3252	2895
19	02:06:31.848	Users 1-98	View Jobs Page	3897	green	130609	122	3508	3169
20	02:06:31.511	Users 1-42	View Jobs Page	4245	green	130609	122	3698	3290
21	02:06:31.626	Users 1-61	View Jobs Page	4852	green	130609	122	4556	4228
22	02:06:31.650	Users 1-65	View Jobs Page	4980	green	130609	122	4578	4192
23	02:06:32.200	Users 1-157	View Jobs Page	5305	green	130609	122	5035	4743
24	02:06:31.824	Users 1-94	View Jobs Page	5774	green	130877	122	5400	4934
25	02:06:31.577	Users 1-43	View Jobs Page	6779	green	130609	122	5017	4458

#### **4<sup>th</sup> Test Plan**

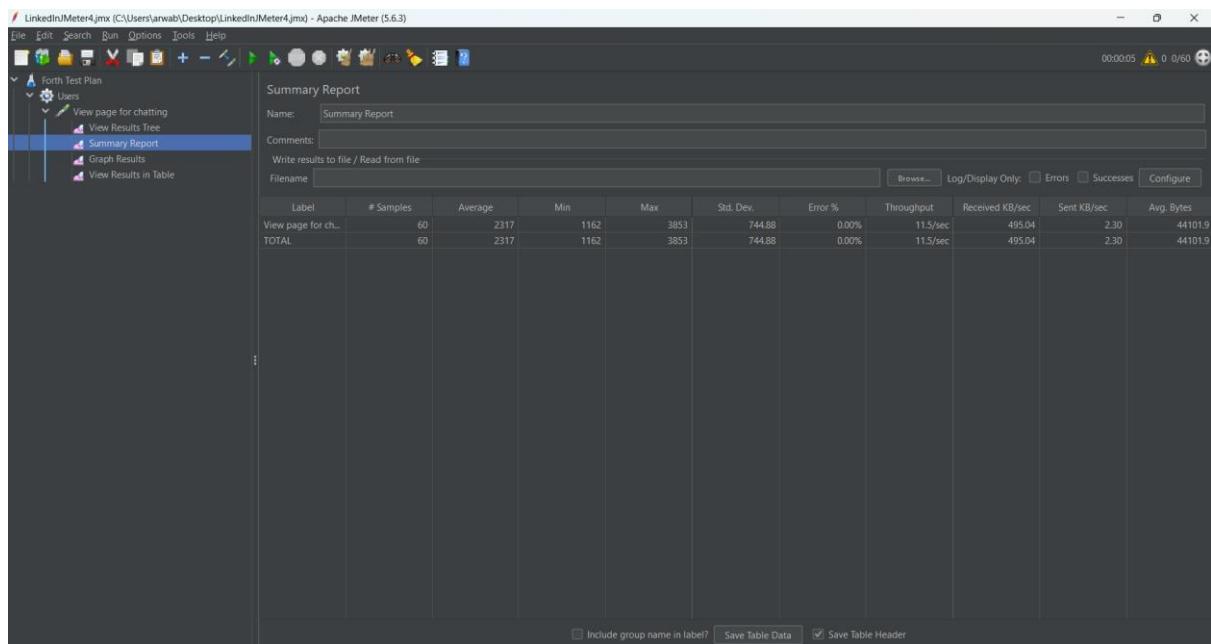
ID	LIN-4
Test Case Name	View page for chatting
Objective	Check the peak load on the server by visiting the website messaging page
Test Scenario	<ol style="list-style-type: none"> <li>1. Create thread group</li> <li>2. Enter number of threads</li> <li>3. Enter ramp-up period</li> <li>4. Create HTTP Request Sampler</li> <li>5. Create View Results, Summary Report, Graph Results and View Results in Table</li> </ol>
Input	Number of threads 60 Ramp-up 2 Server URL/Path
Expected Output	60 users/threads visit the website messaging page within 2 seconds between each user
Actual Output	60 users/threads visited the website messaging page with an error rate of 00.00%
Pass/Fail	Pass

## View Results Tree



The screenshot shows the Apache JMeter interface with the 'View Results Tree' listener selected. The left sidebar displays a tree structure under 'View page for chatting'. The main panel shows a list of 60 sampler results, each labeled 'View page for chatting'. At the bottom, there are tabs for 'Raw' and 'Parsed', and a checkbox for 'Scroll automatically?'. The status bar at the top right indicates 00:00:05, 0 errors, and 0 successes.

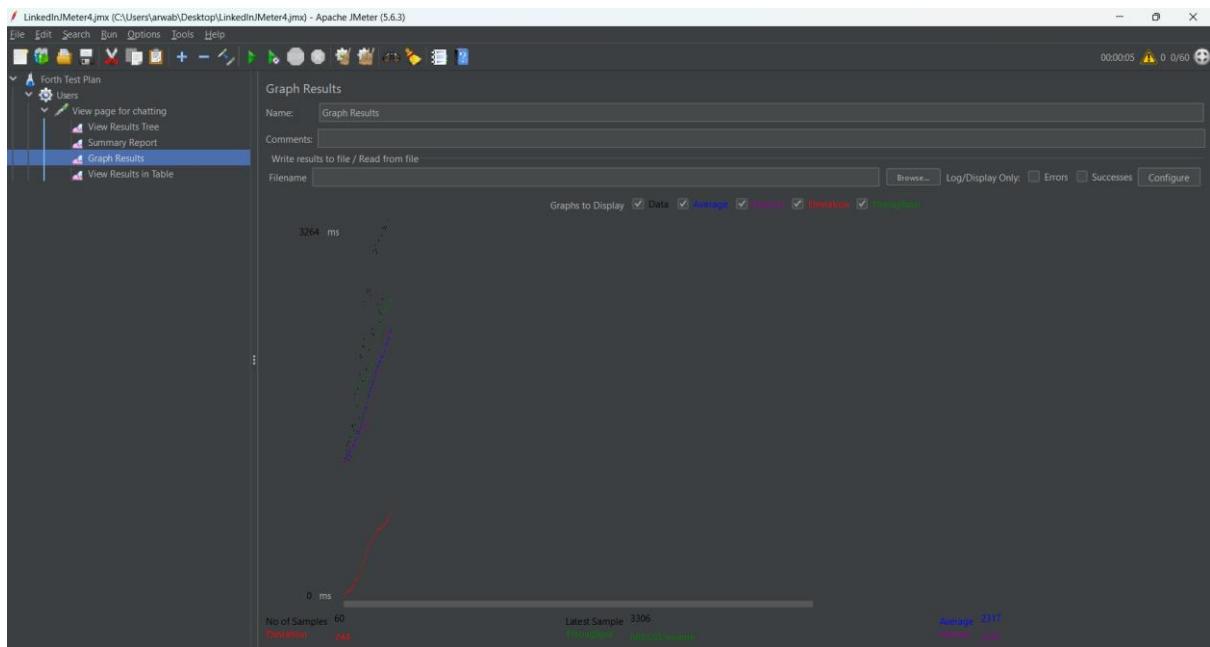
## Summary Report



The screenshot shows the Apache JMeter interface with the 'Summary Report' listener selected. The left sidebar displays a tree structure under 'View page for chatting'. The main panel displays a table of test results. The table has the following columns: Label, # Samples, Average, Min, Max, Std. Dev., Error %, Throughput, Received KB/sec, Sent KB/sec, and Avg. Bytes. There are two rows: 'View page for ch...' and 'TOTAL'. The 'TOTAL' row shows the following values: # Samples: 60, Average: 2317, Min: 1162, Max: 3853, Std. Dev.: 744.88, Error %: 0.00%, Throughput: 11.5/sec, Received KB/sec: 495.04, Sent KB/sec: 2.30, and Avg. Bytes: 44101.9. At the bottom, there are checkboxes for 'Include group name in label?' and 'Save Table Data', and a checked checkbox for 'Save Table Header'.

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
View page for ch...	60	2317	1162	3853	744.88	0.00%	11.5/sec	495.04	2.30	44101.9
TOTAL	60	2317	1162	3853	744.88	0.00%	11.5/sec	495.04	2.30	44101.9

## Graph Results



## View Results in Table

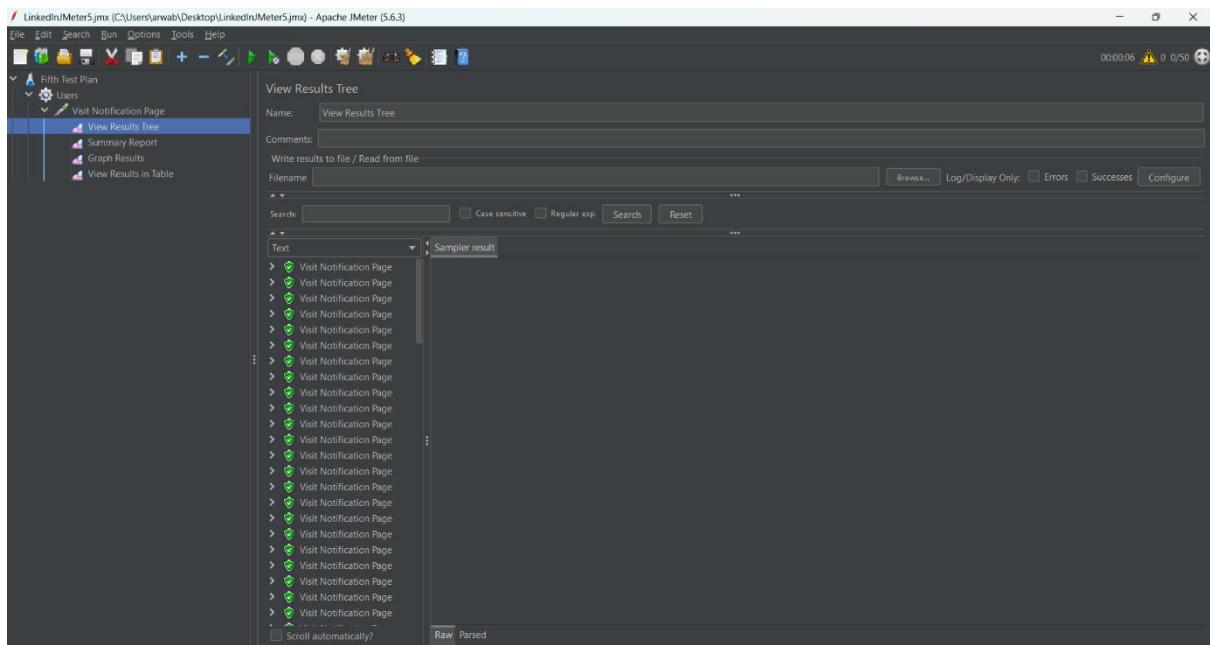
The screenshot shows the JMeter interface with the 'View Results in Table' option selected in the left sidebar. The main area displays a table of test results. The table has 11 columns: Sample #, Start Time, Thread Name, Label, SampleTime(ms), Status, Bytes, Sent Bytes, Latency, Connect Time(ms), and a timestamp column. The table contains 26 rows of data, each representing a sample. The bottom of the table shows summary statistics: 'No of Samples: 60', 'Latest Sample: 3306', 'Average: 2317', and 'Deviation: 744'. The top status bar shows '00:00:05 0/0/60'.

Sample #	Start Time	Thread Name	Label	SampleTime(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
1	03:12:47.617	Users 1-1	View page for chatt...	1162	✓	42385	205	998	539
2	03:12:47.651	Users 1-2	View page for chatt...	1209	✓	51555	205	1033	509
3	03:12:47.716	Users 1-4	View page for chatt...	1279	✓	42385	205	1082	573
4	03:12:47.683	Users 1-3	View page for chatt...	1327	✓	42385	205	1147	606
5	03:12:47.816	Users 1-7	View page for chatt...	1197	✓	42385	205	1017	505
6	03:12:47.782	Users 1-6	View page for chatt...	1351	✓	42653	205	1125	607
7	03:12:47.749	Users 1-5	View page for chatt...	1389	✓	51555	205	1130	589
8	03:12:47.882	Users 1-9	View page for chatt...	1286	✓	42653	205	1095	526
9	03:12:47.982	Users 1-12	View page for chatt...	1226	✓	42385	205	1137	601
10	03:12:47.851	Users 1-8	View page for chatt...	1497	✓	51823	205	1226	608
11	03:12:48.915	Users 1-10	View page for chatt...	1494	✓	42385	205	1212	534
12	03:12:48.047	Users 1-14	View page for chatt...	1492	✓	42385	205	1235	581
13	03:12:48.246	Users 1-20	View page for chatt...	1455	✓	42385	205	1272	777
14	03:12:47.948	Users 1-11	View page for chatt...	1761	✓	51555	205	1355	635
15	03:12:48.212	Users 1-19	View page for chatt...	1499	✓	42385	205	1202	663
16	03:12:48.079	Users 1-15	View page for chatt...	1654	✓	42385	205	1360	638
17	03:12:48.409	Users 1-25	View page for chatt...	1441	✓	42385	205	1296	818
18	03:12:48.113	Users 1-16	View page for chatt...	1810	✓	42385	205	1502	666
19	03:12:48.376	Users 1-24	View page for chatt...	1564	✓	42385	205	1327	777
20	03:12:48.145	Users 1-17	View page for chatt...	1928	✓	42385	205	1598	738
21	03:12:48.013	Users 1-13	View page for chatt...	2102	✓	42385	205	1770	615
22	03:12:48.178	Users 1-18	View page for chatt...	2082	✓	42385	205	1740	943
23	03:12:48.542	Users 1-29	View page for chatt...	1875	✓	51555	205	1573	1020
24	03:12:48.278	Users 1-21	View page for chatt...	2169	✓	42653	205	1812	909
25	03:12:48.741	Users 1-22	View page for chatt...	2173	✗	51555	205	1888	962

## **5<sup>th</sup> Test Plan**

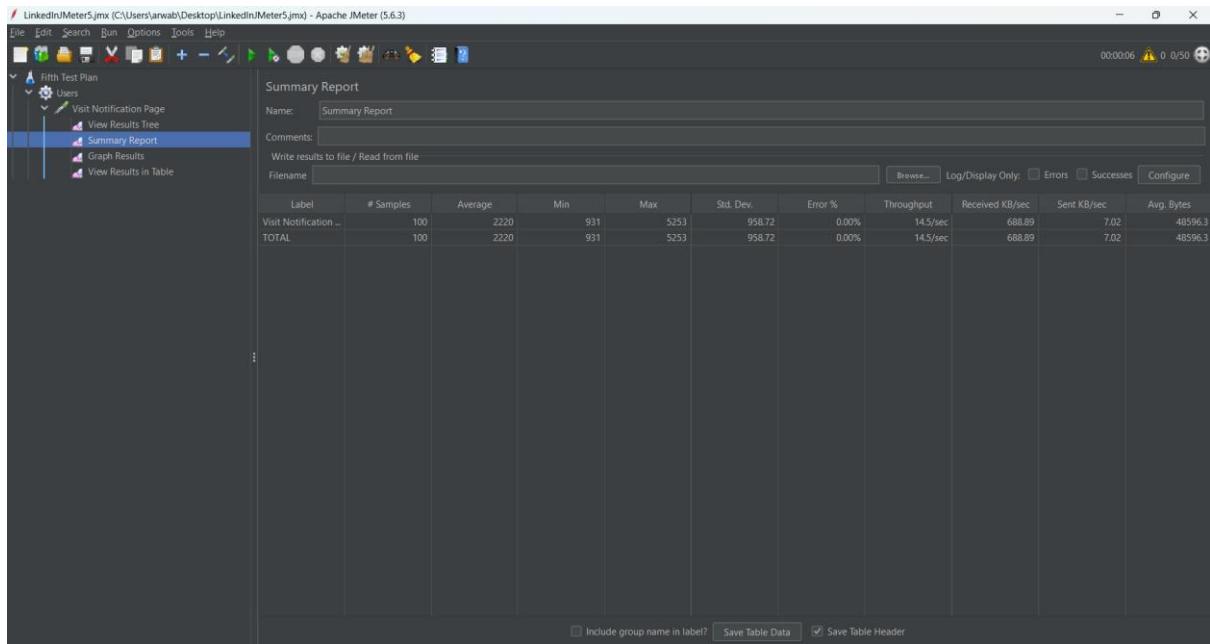
ID	LIN-5
Test Case Name	Visit Notification Page
Objective	Check the peak load on the server by visiting the website notification page
Test Scenario	<ol style="list-style-type: none"> <li>1. Create thread group</li> <li>2. Enter number of threads</li> <li>3. Enter ramp-up period</li> <li>4. Create HTTP Request Sampler</li> <li>5. Create View Results, Summary Report, Graph Results and View Results in Table</li> </ol>
Input	Number of threads 50 Ramp-up 1 Loop count 2 Server URL/Path
Expected Output	50 users/threads visit the website notification page within 1 second between each user
Actual Output	50 users/threads visited the website notification page with an error rate of 0.00%
Pass/Fail	Pass

## View Results Tree



The screenshot shows the Apache JMeter interface with the 'View Results Tree' listener selected. The left sidebar shows a test plan with a single thread group containing a 'Visit Notification Page' sampler. The main panel displays the results tree, which is expanded to show 20 individual sampler results, all labeled 'Visit Notification Page'. Each result is represented by a green icon and a small preview window showing the response content.

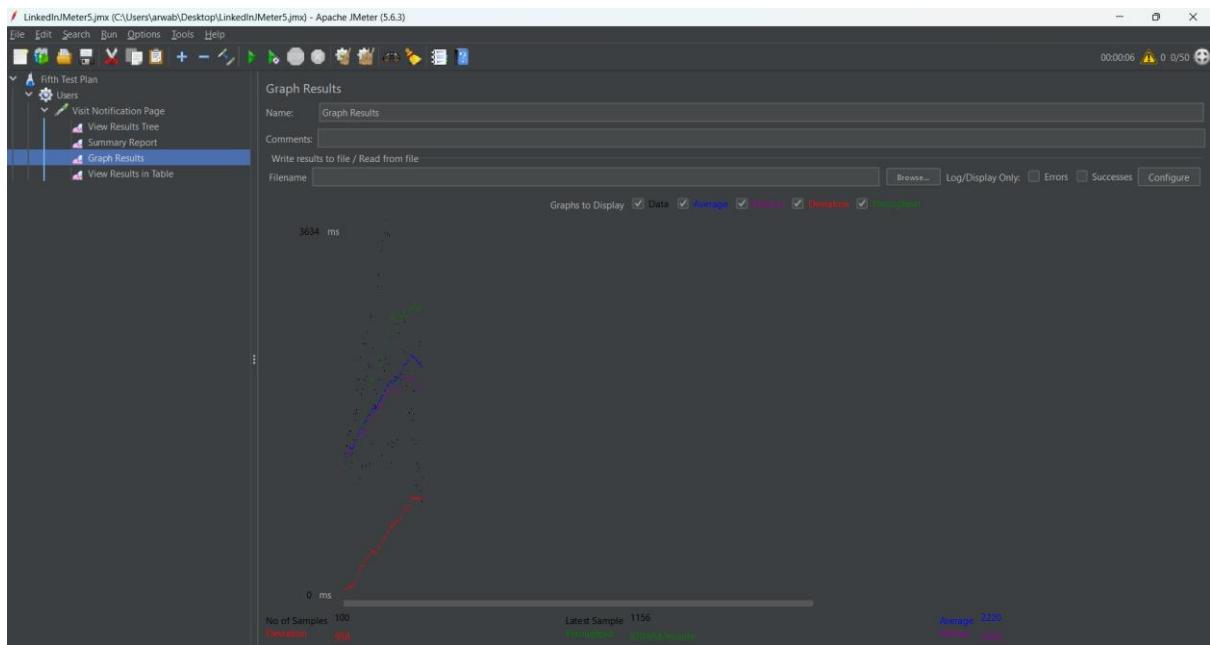
## Summary Report



The screenshot shows the Apache JMeter interface with the 'Summary Report' listener selected. The left sidebar shows a test plan with a single thread group containing a 'Visit Notification Page' sampler. The main panel displays a detailed performance summary table. The table includes columns for Label, # Samples, Average, Min, Max, Std. Dev., Error %, Throughput, Received KB/sec, Sent KB/sec, and Avg. Bytes. The data shows one entry for 'Visit Notification Page' with 100 samples, an average of 2220, and a throughput of 14.5/sec. A 'TOTAL' row is also present at the bottom of the table.

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
Visit Notification ...	100	2220	931	5253	958.72	0.00%	14.5/sec	688.89	7.02	48596.3
TOTAL	100	2220	931	5253	958.72	0.00%	14.5/sec	688.89	7.02	48596.3

## Graph Results



## View Results in Table

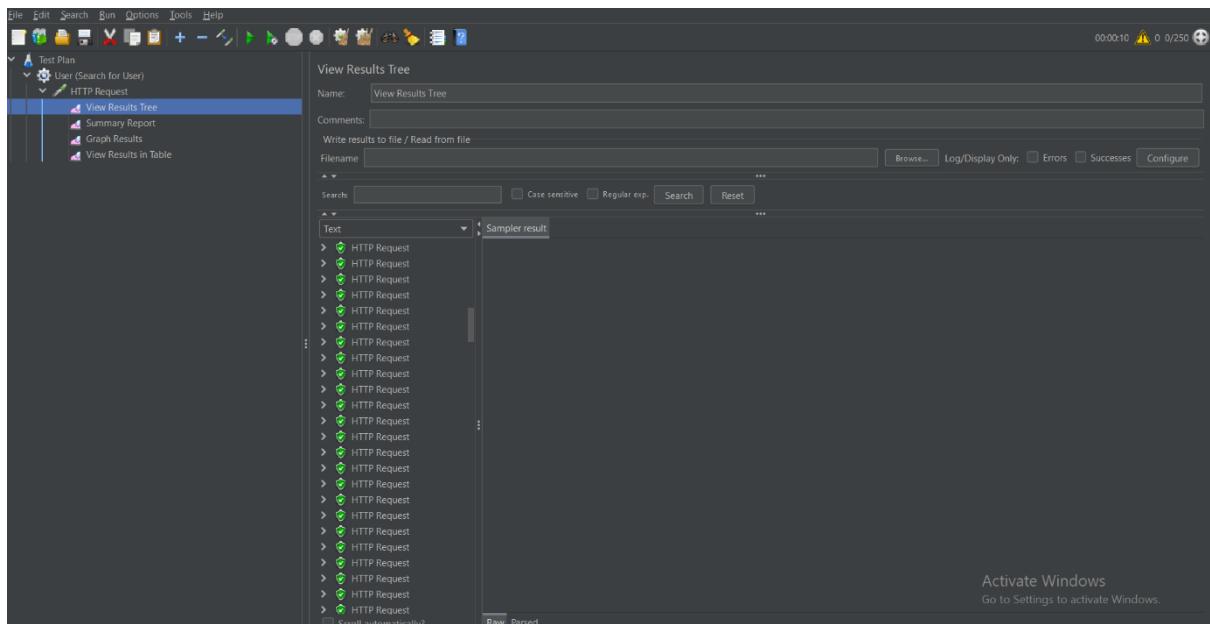
The screenshot shows the Apache JMeter interface with the 'View Results in Table' option selected in the left sidebar under the 'Users' section. The main area displays a table titled 'View Results in Table' with the following columns: Sample #, Start Time, Thread Name, Label, Sample Time(ms), Status, Bytes, Sent Bytes, Latency, and Connect Time(ms). The table lists 25 samples, each corresponding to a user thread (e.g., 'Users 1-12', 'Users 1-4', etc.) performing a 'Visit Notification Pa...' action. The status column shows green checkmarks for all samples. The bottom of the table includes summary statistics: 'No of Samples 100', 'Latest Sample 1156', 'Average 2220', and 'Deviation 108'. The top status bar shows '00:00:06' and '0/50'.

Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
1	03/21/26 255	Users 1-12	Visit Notification Pa...	1216	✓	46869	495	298	78
2	03/21/26 101	Users 1-4	Visit Notification Pa...	1386	✓	46869	495	313	87
3	03/21/26 034	Users 1-1	Visit Notification Pa...	1463	✓	46869	495	299	119
4	03/21/26 134	Users 1-6	Visit Notification Pa...	1458	✓	46869	495	249	79
5	03/21/26 173	Users 1-8	Visit Notification Pa...	1423	✓	47137	495	246	70
6	03/21/26 085	Users 1-3	Visit Notification Pa...	1568	✓	46869	495	298	80
7	03/21/26 054	Users 1-2	Visit Notification Pa...	1605	✓	46869	495	352	99
8	03/21/26 294	Users 1-14	Visit Notification Pa...	1365	✓	46869	495	250	79
9	03/21/26 116	Users 1-5	Visit Notification Pa...	1603	✓	46869	495	328	77
10	03/21/26 434	Users 1-21	Visit Notification Pa...	1301	✓	46869	495	310	81
11	03/21/26 395	Users 1-19	Visit Notification Pa...	1389	✓	47137	495	262	81
12	03/21/26 273	Users 1-13	Visit Notification Pa...	1519	✓	56039	495	304	80
13	03/21/26 154	Users 1-7	Visit Notification Pa...	1765	✓	47137	495	300	80
14	03/21/26 213	Users 1-10	Visit Notification Pa...	1710	✓	47137	495	263	80
15	03/21/26 194	Users 1-9	Visit Notification Pa...	1772	✓	46869	495	310	79
16	03/21/26 234	Users 1-11	Visit Notification Pa...	1804	✓	47405	495	267	81
17	03/21/26 315	Users 1-15	Visit Notification Pa...	2001	✓	46869	495	262	79
18	03/21/26 354	Users 1-17	Visit Notification Pa...	2100	✓	46869	495	249	79
19	03/21/26 373	Users 1-18	Visit Notification Pa...	2102	✓	46869	495	259	83
20	03/21/27 472	Users 1-12	Visit Notification Pa...	1148	✓	46869	495	477	0
21	03/21/26 335	Users 1-16	Visit Notification Pa...	2311	✓	46869	495	308	80
22	03/21/26 734	Users 1-36	Visit Notification Pa...	1953	✓	46869	495	500	159
23	03/21/27 488	Users 1-4	Visit Notification Pa...	1261	✓	46869	495	446	0
24	03/21/26 793	Users 1-39	Visit Notification Pa...	2011	✓	56039	495	592	172
25	03/21/26 414	Users 1-20	Visit Notification Pa...	7449	✗	46869	495	243	88

## **6<sup>th</sup> Test Plan**

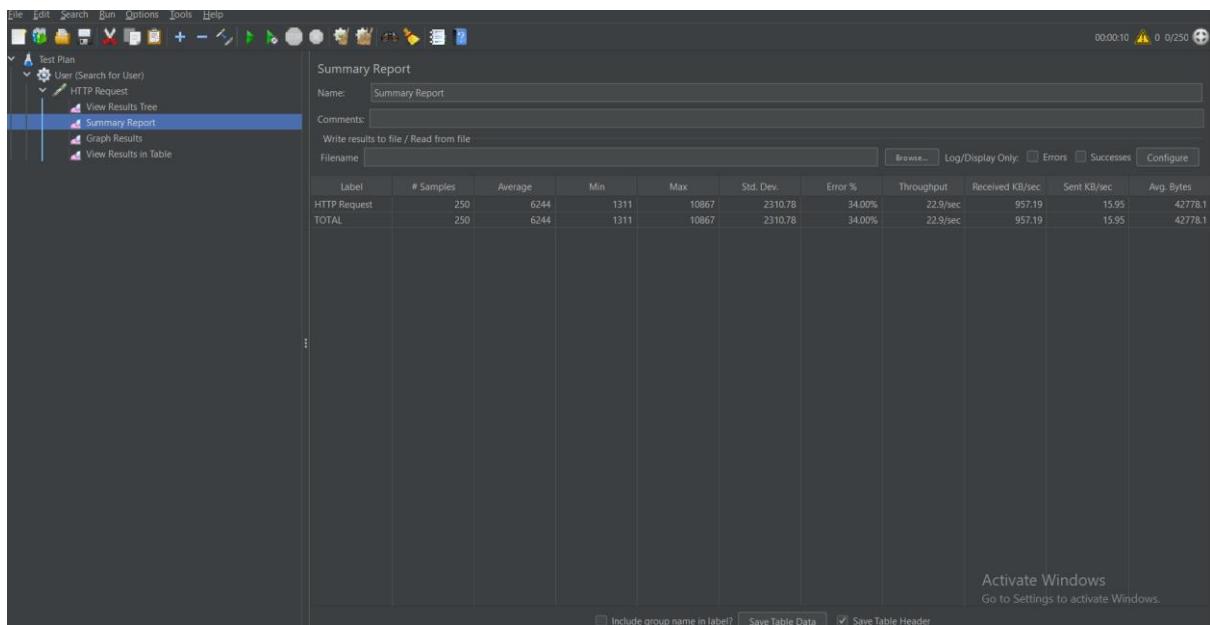
ID	LIN-6
Test Case Name	Search for User
Objective	Check the peak load on the server by searching for a specific user
Test Scenario	<ol style="list-style-type: none"> <li>1. Create thread group</li> <li>2. Enter number of threads</li> <li>3. Enter ramp-up period</li> <li>4. Create HTTP Request Sampler</li> <li>5. Add Parameter</li> <li>6. Create View Results, Summary Report, Graph Results and View Results in Table</li> </ol>
Input	<p>Number of threads 250</p> <p>Ramp-up 1</p> <p>Server URL/Path</p> <p>Parameters:</p> <ul style="list-style-type: none"> <li>• Name: search Term</li> <li>• Value: Mohamed</li> </ul>
	250 users/threads can search for a university page within 1 second between each user
Actual Output	153 users/threads successfully searched the user with an error rate of 39.20%
Pass/Fail	Fail

## View Results Tree



The screenshot shows the JMeter interface with the 'View Results Tree' listener selected in the left sidebar under the 'HTTP Request' category. The main panel displays a tree view of requests, with each node representing an 'HTTP Request' and containing a green checkmark icon. A search bar at the top right is set to 'Sampler result'. The status bar at the bottom right indicates 'Activate Windows'.

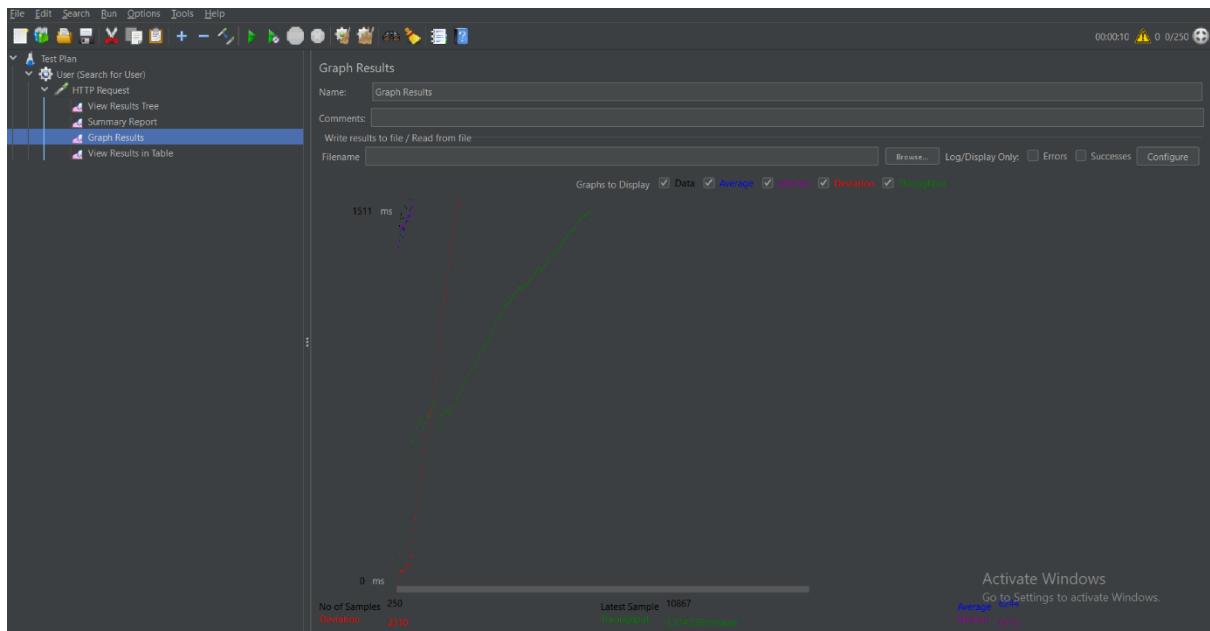
## Summary Report



The screenshot shows the JMeter interface with the 'Summary Report' listener selected in the left sidebar under the 'HTTP Request' category. The main panel displays a detailed performance summary table. The table includes columns for Label, # Samples, Average, Min, Max, Std. Dev., Error %, Throughput, Received KB/sec, Sent KB/sec, and Avg. Bytes. The data shows 250 samples for 'HTTP Request' with an average of 6244 ms, and a total of 250 samples with an average of 6244 ms. The status bar at the bottom right indicates 'Activate Windows'.

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
HTTP Request	250	6244	1311	10867	2310.78	34.00%	22.9/sec	957.19	15.95	42778.1
TOTAL	250	6244	1311	10867	2310.78	34.00%	22.9/sec	957.19	15.95	42778.1

## Graph Results



## View Results in Table

The screenshot shows the JMeter interface with the 'View Results in Table' option selected in the left sidebar. The main area displays a table of 25 HTTP request samples. The columns include Sample #, Start Time, Thread Name, Label, Sample Time(ms), Status, Bytes, Sent Bytes, Latency, and Connect Time(ms). The table shows various request details, such as User (Search for U...) and HTTP Request. Summary statistics at the bottom indicate 250 samples, an average of 1511 ms, a median of 1511 ms, and a deviation of 2310 ms. A message at the bottom right says 'Activate Windows' with a link to 'Go to Settings to activate Windows.'

Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
1	165822.874	User (Search for U...)	HTTP Request	1333	✓	47612	713	184	18
2	165823.014	User (Search for U...)	HTTP Request	1311	✓	47344	713	254	15
3	165822.925	User (Search for U...)	HTTP Request	1405	✓	47880	713	265	18
4	165822.916	User (Search for U...)	HTTP Request	1432	✓	47344	713	198	14
5	165822.933	User (Search for U...)	HTTP Request	1446	✓	47344	713	178	15
6	165822.970	User (Search for U...)	HTTP Request	1454	✓	47344	713	238	33
7	165823.074	User (Search for U...)	HTTP Request	1362	✓	47344	713	233	19
8	165823.041	User (Search for U...)	HTTP Request	1434	✓	47344	713	257	17
9	165823.105	User (Search for U...)	HTTP Request	1393	✓	47344	713	181	15
10	165823.045	User (Search for U...)	HTTP Request	1483	✓	56514	713	186	17
11	165822.998	User (Search for U...)	HTTP Request	1545	✓	47344	713	255	16
12	165823.082	User (Search for U...)	HTTP Request	1476	✓	47612	713	232	19
13	165822.958	User (Search for U...)	HTTP Request	1614	✓	47344	713	250	45
14	165823.178	User (Search for U...)	HTTP Request	1422	✓	47344	713	197	30
15	165823.146	User (Search for U...)	HTTP Request	1511	✓	47344	713	204	44
16	165823.185	User (Search for U...)	HTTP Request	1526	✓	47344	713	190	23
17	165822.977	User (Search for U...)	HTTP Request	1763	✓	57050	713	268	26
18	165823.113	User (Search for U...)	HTTP Request	1646	✓	56514	713	221	15
19	165823.229	User (Search for U...)	HTTP Request	1549	✗	29652	713	202	38
20	165822.922	User (Search for U...)	HTTP Request	2037	✓	47344	713	175	18
21	165822.877	User (Search for U...)	HTTP Request	2200	✗	29652	713	261	19
22	165822.905	User (Search for U...)	HTTP Request	2223	✓	47344	713	188	18
23	165823.217	User (Search for U...)	HTTP Request	1911	✓	56514	713	274	28
24	165822.942	User (Search for U...)	HTTP Request	2217	✗	29652	713	217	17
25	165822.882	User (Search for U...)	HTTP Request	2286	✗	29652	713	272	21