

Software Testing and Quality Assurance Lab

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Practical No: 1**1. Write a test cases for BMI Calculator Application.**

Name : Aishwarya R. Tupe
 Class : SYMCA Div : B
 Roll No : C24124

- Q1. Write a test cases for BMI calculator Application
- Input : Person's weight & Height
 - Output : Body Mass Index
 - The range of height : 4ft to 6.5 ft
 - The range of weight : 40 kg to 100 kg

Sr. No	Test Steps	Test Object	Test Data	Expected Result	Actual Result	Status
1.	valid input	Height, weight	H = 5.6ft w = 65kg	Accept & calculate	BMI shown correctly	Pass
2.	minimum Boundary height	Height	H = 4.0ft	Accept value	Accepted	Pass
3.	maximum Boundary height	Height	H = 6.5ft	Accept value	Accepted	Pass
4.	Height below min	Height	H = 3.9ft	Reject input	Input accepted	Fail
5.	Height above max	Height	H = 6.6ft	Reject input	error not shown	Fail

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6.	Negative height	Height	$H = -5.0\text{ ft}$	Reject input	App crashes	Fail
7.	Non - Numeric Height	Height	$H = \text{"five"}$	Reject input	Accept without warning	Fail
8.	Empty height	Height	$H =$	prompt shows to enter blank BMI value	shows blank BMI	Fail
9.	valid min weight	weight	$w = 40\text{ kg}$	Accept input	Accepted	Pass
10.	valid max weight	weight	$w = 100\text{ kg}$	Accept input	error out of range	Fail
11.	weight below min	weight	$w = 35\text{ kg}$	Reject input	Accepts value	Fail
12.	weight above max	weight	$w = 105\text{ kg}$	Reject input	Error shown	Pass
13.	Negative weight	weight	$w = -45\text{ kg}$	Reject input	value accepted	Fail

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14.	Empty weight	weight $w =$	prompt for weight	No error message	Fail
15.	Special char in weight	$w = 6@$	Reject input	App reload	Fail
16.	Floating point values	Height, weight 5.8 ft, 72.5 kg	Accepts & calculate BMI	BMI correct	Pass
17.	Large values for both height, weight	200 kg, 7.5 ft	Reject input	values are not valid	Fail
18.	Mixed invalid weight	Height, $w = -40$, $H = 7.0\text{ft}$	Reject input	blank BMI	pass
19.	valid pair weight, height	$w = 55\text{kg}$, $H = 5.4\text{ft}$	BMI shown	$BMI = 21.1$	pass
20.	only height filled	weight $w = (\text{empty})$, $H = 5.6\text{ft}$	Reject input	BMI shown fail as non	
21.	BMI category check	w, H $w = 50\text{kg}$, $H = 5.4\text{ft}$	category = normal	category: underweight	fail
22.	UI response to invalid input	Button checks $w = -70$, $H = 1.5\text{ft}$	error prompt	NO response	fail
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23.	special char in height	Height	11@85.5	Reject input	Input box cleared	Pass
24.	mid range w, H valid input	w = -70 H = 5.5ft	BMI displayed	correct output	pass	
25.	valid input without edge	W = 100kg H = 65.5ft	BMI displayed	BMI = 18.3	pass	

2. Write a Test Cases for, Triangle Problem accepts three integers – a, b, c as three sides of the triangle. It returns the type of triangle (Scalene, Isosceles, Equilateral, Not a Triangle) formed by a, b, c.

Test Case ID: TC002

Test Priority : Medium

Module Name: Triangle Validation

Test Title: Triangle Type Identifier

Test Designed By: ABC

Test Designed Date: 20/7/25

Test Executed By: ABC

Test Executed Date: 20/7/25

Pre-conditions: All sides must be positive integers

Description: This test case checks triangle type (Scalene, Isosceles, Equilateral, Not a Triangle)

Dependencies: No Dependencies

Step no	Test step	Test object	Test Data	Expected result	Actual result	Status
1	Validation of valid data	Text box: Side A	Enter data:5 cm	Should accept data	Accepts data	Pass
2	Validation of valid data	Text box: Side A	Enter data:5 cm	Should accept data	Doesn't accept data	Fail
3	Validation of invalid data	Text box: Side A	Enter data:1 cm	Should not accept data	Accepts data	Fail
4	Validation of invalid data	Text box: Side A	Enter data:1 cm	Should not accept data	Doesn't accept data	Pass
5	Validation of invalid data	Text box: Side A	Enter data: (empty)	Should not accept data	Accepts data	Fail
6	Validation of invalid data	Text box: Side A	Enter data:-5 cm	Display "Enter a positive no."	Accepts data	Fail
7	Validation of invalid data	Text box: Side A	Enter data:-5 cm	Display "Enter a positive no."	Doesn't accept data	Pass
8	Validation of invalid data	Text box: Side A	Enter data:@	Display "Enter a number"	Accepts data	Fail
9	Validation of invalid data	Text box: Side A	Enter data: #	Display "Enter a number"	Doesn't accept data	Pass

10	Validation of invalid data	Text box: Side A	Enter data:-abc	Display “Enter a number”	Accepts data	Fail
11	Validation of valid data	Textbox: Side B	Enter data:7 cm	Should accept data	Accepts data	Pass
12	Validation of valid data	Textbox: Side B	Enter data:7 cm	Should accept data	Doesn't accept data	Fail
13	Validation of invalid data	Textbox: Side B	Enter data:-7 cm	Display “Enter positive no.”	Accepts data	Fail
14	Validation of invalid data	Textbox: Side B	Enter data:-7 cm	Display “Enter positive no.”	Doesn't accept data	Pass
15	Validation of invalid data	Textbox: Side B	Enter data:0 cm	Display “Side can't be zero”	Accepts data	Fail
16	Validation of invalid data	Textbox: Side B	Enter data:0cm	Display “Side can't be zero”	Doesn't accept data	Pass
17	Validation of invalid data	Textbox: Side B	Enter data:- \$	Display “Enter a number”	Accepts data	Fail
18	Validation of invalid data	Textbox: Side B	Enter data:- \$	Display “Enter a number”	Doesn't accept data	Pass
19	Validation of valid data	Textbox: Side C	Enter data: 10cm	Should accept data	Accepts data	Pass
20	Validation of Valid data	Textbox: Side C	Enter data:10cm	Should accept data	Doesn't accept data	Fail
21	Validation of Invalid data	Textbox: Side C	Enter data:-4cm	Shouldn't accept data	Accepts data	Fail
22	Validation of invalid data	Textbox: Side C	Enter data:-4cm	Shouldn't accept data	Doesn't accept data	Pass
23	Validation of invalid data	Textbox: Side C	Enter data:abc	Display “Enter a number.”	Accepts data	Fail
24	Validation of invalid data	Textbox: Side C	Enter data: abc	Display “Enter a number.”	Doesn't accept data	Pass
25	Validation of valid data	Display Box	Enter Data:5cm,5cm,5cm	Should accepts the value &	It accepts and display “Equilateral” moves	Pass

				display “Equilateral”	cursor to next	
26	Validation	Display Box	Enter Data: 5cm,5cm,5cm	Should accept the value & display “Equilateral”	It does not accept and display	Fail
27	Validation of valid data	Display Box	Enter Data: 5cm,5cm,8cm	Should accept the value & display “Isosceles”	It accepts and display “Isosceles” moves cursor to next	Pass
28	Validation	Display Box	Enter Data: 5cm,5cm,8cm	Should accept the value & display “Isosceles”	It does not accept and display “Isosceles”	Fail
29	Validation of valid data	Display Box	Enter Data: 3cm,4cm,5cm	Should accept the value & display “Scalene”	It accepts and display “Scalene”	Pass
30	Validation	Display Box	Enter Data: 3cm,4cm,5cm	Should accept the value & display “Scalene”	It does not accept and display “Scalene”	Fail
31	Validation of valid data	Display Box	Enter Data: 1cm,2cm,3cm	Should accept the value & display “Not a Triangle”	It does not accept and display “Not a Triangle” moves cursor to next	Pass
32	Validation of valid data	Display Box	Enter Data: -4cm,5cm,6cm	Should not accept the value & display “Invalid Input”	It does not accept and display “Invalid Input”	Pass

Practical No. 2

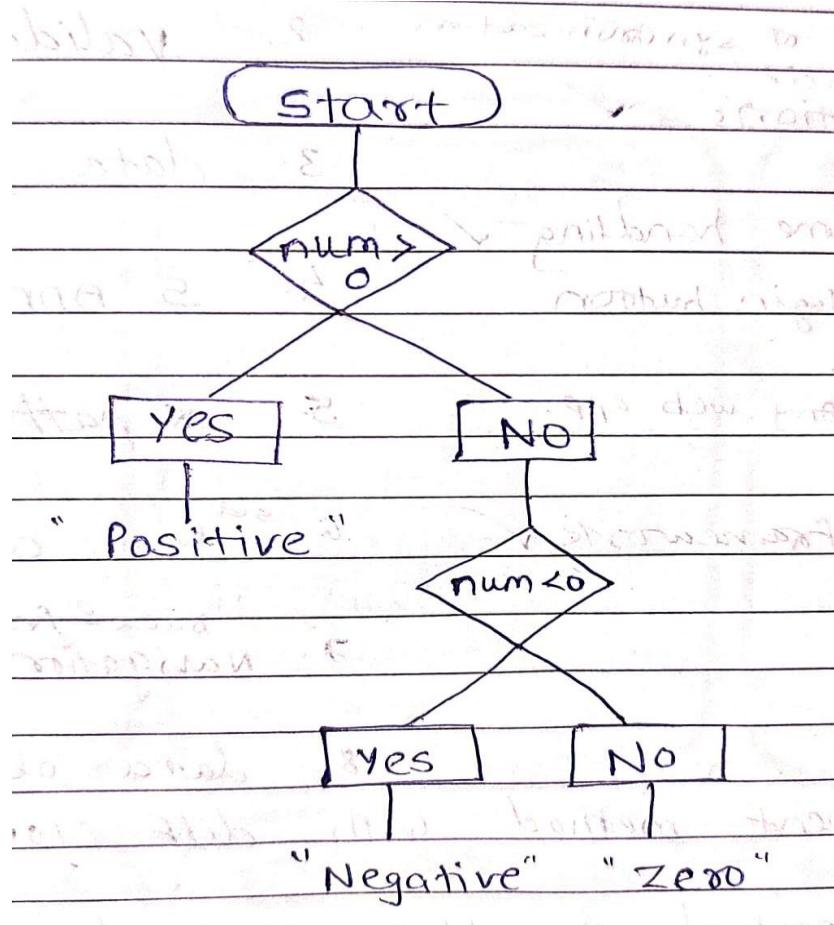
Implementation of White Box Testing

Control Flow Analysis, Cyclomatic Complexity

Consider a program to find whether a number is positive, negative or zero

```
public void checkNumber(int num) {
    if (num > 0) {
        System.out.println("Positive");
    } else if (num < 0) {
        System.out.println("Negative");
    } else {
        System.out.println("Zero");
    }
    System.out.println("Done");
}
```

Control flow graph for the above code is



Cyclomatic Complexity

$$V(G) = E - N + 2P$$

N = 8 nodes

E = 9 edges

P = 1

$$V(G) = E - N + 2P$$

$$= 9 - 8 + 2 * 1$$

$$= 3$$

Practical No. 3

1. Write a Test Cases for ATM Pin Entry

Test Case ID: TC003

Test Priority : High

Module Name: ATM

Test Title: ATM Pin validation

Test Designed By: ABC

Test Designed Date: 20/7/25

Test Executed By: ABC

Test Executed Date: 20/7/25

Pre-conditions: ATM card inserted and machine ready for PIN

Description: Test various scenario for PIN Entry

Test Case:

STEP NO	TEST STEP	TEST OBJECT	TEST DATA	EXPECTED RESULT	ACTUAL RESULT	STATUS
1	Validation of valid data	PIN Textbox	Enter Data: 6122	It should accept and proceed to menu	It proceeds to menu	Pass
2	Validation of valid data	PIN Textbox	Enter Data: 6122	It should accept and proceed to menu	It is not accepting	Fail
3	Validation of invalid 4-digit PIN	PIN Textbox	Enter Data: 5678	It should show "Incorrect PIN"	It is not accepts and shows incorrect PIN	Pass
4	Validation of invalid 4-digit PIN	PIN Textbox	Enter Data: 5678	It should show "Incorrect PIN"	It is accepting and proceeds to menu	Fail
5	Validation of invalid data	PIN Textbox	Enter Data: 123	It should show "Invalid PIN format"	It is not accepting and shows error	Pass

6	Validation of invalid data	PIN Textbox	Enter Data: 123	It should show "Invalid PIN format"	It is accepting and proceeds to menu	Fail
7	Validation of invalid data	PIN Textbox	Enter Data: 12345	It should show "Invalid PIN format"	It shows error	Pass
8	Validation of invalid data	PIN Textbox	Enter Data: 12345	It should show "Invalid PIN format"	It is accepting and proceeds to menu	Fail
9	Validation of invalid data	PIN Textbox	Enter Data: 12a4	It should show "PIN must be numeric"	It shows error	Pass
10	Validation of invalid data	PIN Textbox	Enter Data: 12a4	It should show "PIN must be numeric"	It is accepting and proceeds to menu	Fail
11	Validation of invalid data	PIN Textbox	Enter Data: [blank]	It should show "Please enter PIN"	It shows error	Pass
12	Validation of invalid data	PIN Textbox	Enter Data: [blank]	It should show "Please enter PIN"	It is accepting and proceeds to menu	Fail
13	Validation of invalid data	PIN Textbox	Enter Data: 1 2 3 4	It should show "PIN must not contain spaces"	It shows error	Pass
14	Validation of invalid data	PIN Textbox	Enter Data: 1 2 3 4	It should show "PIN must not contain spaces"	It is accepting and proceeds to menu	Fail

15	Validation of invalid data	PIN Textbox	Enter Data: 12@4	It should show "Invalid character"	It shows error	Pass
16	Validation of invalid data	PIN Textbox	Enter Data: 12@4	It should show "Invalid character"	It is accepting and proceeds to menu	Fail
17	Validation	PIN Textbox	Enter same PIN 3 times incorrectly : 9999 (3 times)	It should block the card	It shows "Card blocked"	Pass
18	Validation	PIN Textbox	Enter same PIN 3 times incorrectly : 9999 (3 times)	It should block the card	It is accepting and proceeds to menu	Fail
21	Validation of valid data	PIN Button	Enter Data: 1234 + Cancel	It should abort the operation	It cancels transaction	Pass
22	Validation of valid data	PIN Textbox	Enter Data: 1[backspace]234	It should allow editing and login	It accepts and proceeds	Pass
23	Validation	PIN Textbox	Enter Data: 1234 (no enter)	It should timeout and cancel session	It returns to home screen	Pass
24	Validation of valid data	PIN Textbox	Enter Data: 1234 (after timeout)	It should reject and ask to reinsert card	It asks to reinsert card	Pass

2. Write a Test Cases for Gmail Login Page.

Test Case ID: TC004

Test Priority : High

Module Name: Gmail Login

Test Title: Gmail login validation

Test Designed By: ABC

Test Designed Date: 20/7/25

Test Executed By: ABC

Test Executed Date: 20/7/25

Pre-conditions: Browser with Gmail login page

Description: Test various Gmail id and password combinations

Dependencies: Internet Connection

Test Case:

STEP NO.1	TEST STEP	TEST OBJECT	TEST DATA	EXPECTED RESULT	ACTUAL RESULT	STATUS PASS/FAIL
1	Validation of valid data	Email textbox	Enter Data: abc@gmail.com	It should accept	It accepts and moves cursor to next	Pass
2	Validation	Email textbox	Enter Data: abc@gmail.com	It Should accept	It is not accepting	Fail
3	Validation of valid data	Email textbox	Enter Data: abcgmail.com	It Should not accept & show "Invalid email format"	It does not accept & show "Invalid email format"	Pass
4	Validation	Email textbox	Enter Data: abcgmail.com	It Should not accept & show "Invalid email format"	It accepts and moves cursor to next	Fail
5	Validation of valid data	Email textbox	Enter Data: abc@gmail	It Should not accept & show "Invalid email format"	It does not accept & show "Invalid email format"	Pass
6	Validation	Email textbox	Enter Data: abc@gmail	It Should not accept & show	It accepts and moves	Fail

				"Invalid email format"	cursor to next	
7	Validation of valid data	Email textbox	Enter Data: abc@#gmail.com	It Should not accept & show "Invalid email format"	It does not accepts & show "Invalid email format"	Pass
8	Validation	Email textbox	Enter Data: abc@#gmail.com	It Should not accept & show "Invalid email format"	It accepts and moves cursor to next	Fail
9	Validation of valid data	Email textbox	Enter Data: [Empty]	It should show "Please enter email"	It shows error &"Please enter email"	Pass
10	Validation	Email textbox	Enter Data: [Empty]	It should show "Please enter email"	It accepts and moves cursor to next	Fail
11	Validation of valid data	Email textbox	Enter Data: Abcdefghijklmnopqrstuvwxyz1234567890@gmail.com	It should accept the input	It accepts	Pass
12	Validation	Email textbox	Enter Data: abc@gmail,com	It Should not accept & show "Invalid email format"	It accepts and moves cursor to next	Fail
13	Validation of valid data	Email textbox	Enter Data: abc@gmail,com	It Should not accept & show "Invalid email format"	It does not accepts & show "Invalid email format"	Pass
14	Validation	Password Textbox	Enter Data: correctpass@123	It should accept and login	It accepts and logs in	Pass

15	Validation	Password Textbox	Enter Data: correctpass@123	It should accept and login	It does not accepts	Fail
16	Validation of valid data	Password Textbox	Enter Data: [Empty]	It should show "Enter password"	It shows "Enter password"	Pass
17	Validation	Password Textbox	Enter Data: Abc12!	It should show "Password too short"	It shows error "Password too short"	Pass
18	Validation of valid data	Password Textbox	Enter Data: Abc12!	It should show "Password too short"	It accepts and login	Fail
19	Validation	Password Textbox	Enter Data: 12345678	It should show "Weak password" or reject login	It shows weak password error	Pass
20	Validation of valid data	Password Textbox	Enter Data: @#\$%^&*	It should show "Invalid password"	It shows invalid password	Pass
21	Validation of valid data	Email, Password Textbox	Enter Data: abc@gmail.com / wrongpass	It should show "Wrong password"	It shows "Wrong password"	Pass
22	Validation of valid data	Email, Password Textbox	Enter Data: abc@gmail.com / wrongpass	It should show "Wrong password"	It accepts and login	Fail
23	Validation of valid data	Email, Password Textbox	[blank] / correctpass	It should show "Enter email"	It shows "Enter email"	Pass
24	Validation	Email, Password Textbox	abc@gmail.com / [blank]	It should show "Enter password"	It shows "Enter password"	Pass

3. Prepare a Test case for calculator

Test Case ID: TC004

Test Priority: Medium

Module Name: Calculator

Test Title: Calculator Basic Operations Validation

Test Designed By: ABC

Test Designed Date: 22/10/25

Test Executed By: ABC

Test Executed Date: 22/10/25

Pre-conditions: Calculator application opened and ready for input

Description: Test various scenarios for basic arithmetic operations, invalid inputs, and edge cases

STEP NO.1	TEST STEP	TEST OBJECT	TEST DATA	EXPECTED RESULT	ACTUAL RESULT	STATUS PASS/FAIL
1	Addition of two positive numbers	Calculator display	Enter Data: 5+3	Display shows 8	Shows 8	Pass
2	Addition of two positive numbers	Calculator display	Enter Data: 5+3	Display should show 8	Doesn't show 8	Fail
3	Addition of negative numbers	Calculator display	Enter Data: -5+3	Display should show -2	Shows -2	Pass
4	Addition of negative numbers	Calculator display	Enter Data: -5+3	Display should show -2	Doesn't show -2	Fail
5	Subtraction of two numbers	Calculator display	Enter Data: 5-3	Should show 2	Shows 2	Pass
6	Subtraction of two numbers	Calculator display	Enter Data: 5-3	Should show 2	Doesn't show 2	Fail
7	Subtraction resulting in Negative number	Calculator display	Enter Data: 3-5	Should show -2	Shows -2	Pass
8	Subtraction resulting in a negative number	Calculator display	Enter Data: 3-5	Should show -2	Doesn't show -2	Fail
9	Multiplication of two numbers	Calculator display	Enter Data: 5 X 3	Should show 15	Shows 15	Pass

10	Multiplication of two numbers	Calculator display	Enter Data: 5 X 3	Should show 15	Doesn't show 15	Fail
11	Multiplication with zero	Calculator display	Enter Data: 4 X 0	Should display 0	Displays 0	Pass
12	Multiplication with zero	Calculator display	Enter Data: 4 X 0	Should display 0	Doesn't display 0	Fail
13	Division of two numbers	Calculator display	Enter Data: 20/5	Should display 4	Displays 4	Pass
14	Division of two numbers	Calculator display	Enter Data: 20/5	Should display 4	Doesn't display 4	Fail
15	Division by zero	Calculator display	Enter Data: 5/0	Should display "Error" or "Cannot divide by zero"	Displays "Cannot divide by zero"	Pass
16	Division by zero	Calculator display	Enter Data: 5/0	Should display "Cannot divide by zero"	Displays 0	Fail
17	Chain calculation	Calculator display	Enter Data: 2+3*4	Should display 14	Displays 14	Pass
18	Chain calculation	Calculator display	Enter Data: 2+3*4	Should display 14	Doesn't display 14	Fail
19	Calculation using brackets	Calculator display	Enter Data: (2+3)*4	Should display 20	Displays 20	Pass
20	Calculation using brackets	Calculator display	Enter Data: (2+3)*4	Should display 20	Doesn't display 20	Fail
21	Clear operations	Calculator display and buttons	Enter Data: 124 and then press C	Display resets to 0	Displays 0	Pass
22	Clear operation	Calculator display	Enter Data: 124 and press C	Display resets to 0	Doesn't display 0	Fail

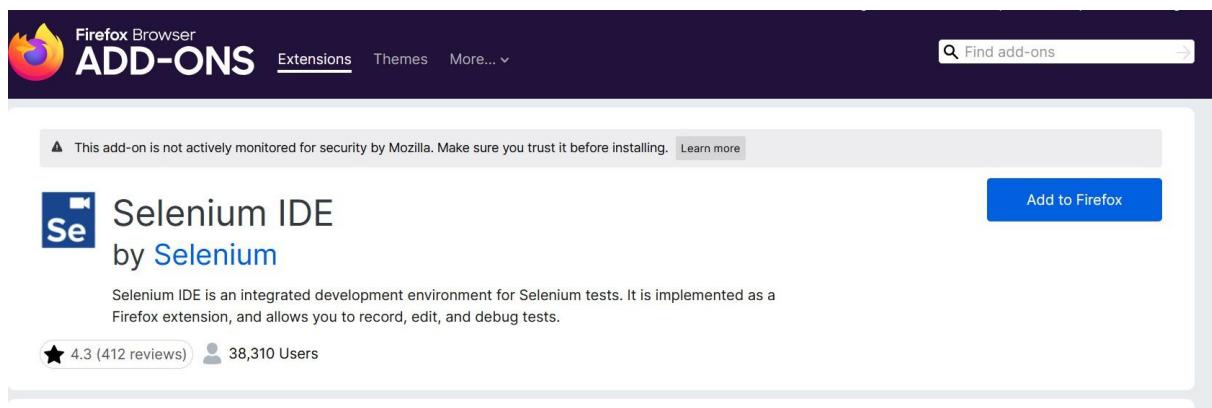
		and buttons				
23	Backspace operation	Calculator display and buttons	[blank] / 123 and then press backspace	Should display 12	Displays 12	Pass
24	Backspace operation	Calculator display and buttons	123 and then backspace	Should display 12	Doesn't display 12	Fail
25	Large number addition	Calculator display	Enter data: 9999+1	Should display 10000	Display 10000	Pass
26	Invalid character input	Calculator display and buttons	Enter data: a,b,#	Should not accept data	Doesn't accept	Pass
27	Cancel operation	Calculator display and buttons	Enter 1+4 and then press cancel	Display resets to 0	Displays 0	Pass
28	Cancel operations	Calculator display and buttons	Enter 1+4 and the press cancel	Display resets to 0	Doesn't display 0	Fail

Practical No.4

1. Write down a steps and process of Selenium IDE Installation on any 1 browser.(eg.Firefox)

Step 1: Install firefox browser(if not installed)

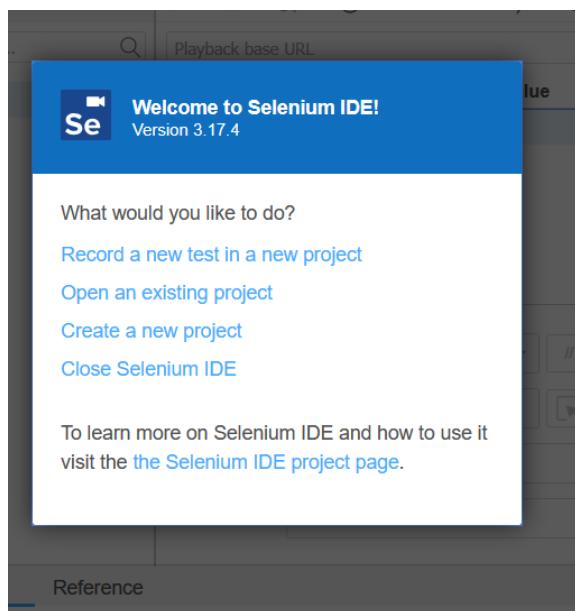
Step 2:Open firefox and Install Selenium IDE extension for firefox.



Step 3: After installation the Selenium IDE will be visible in firefox Toolbar

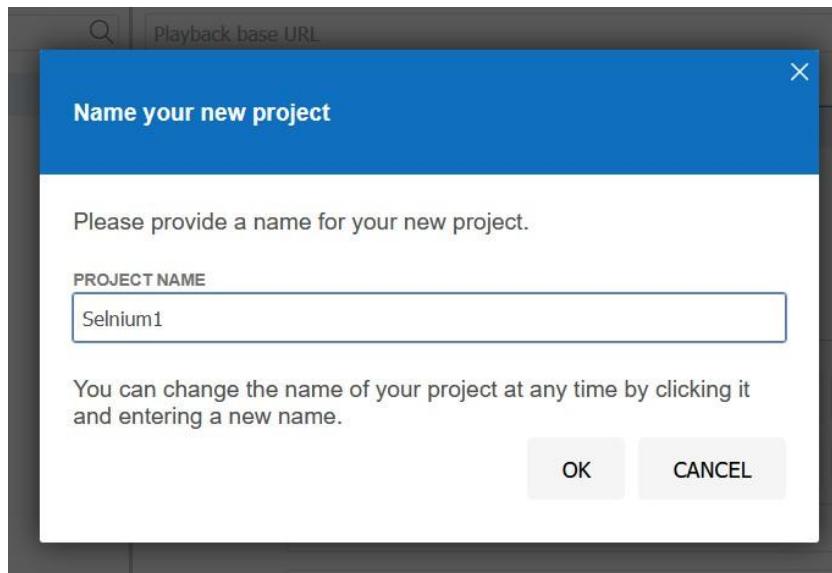


Step 4: Click on the icon to start Selenium and for recording the test cases



2. Record and run test cases on any demo website for login page through Mozilla Firefox.

Create a new project in the Selenium IDE and provide the link of the website to be tested.



Test using various combinations of username and password to see if it is logging in correctly.

A screenshot of a login page titled 'Login Page'. A red banner at the top left says 'Your password is invalid!'. The page contains two input fields for 'Username' and 'Password', both currently empty. Below the inputs is a blue 'Login' button with a right-pointing arrow icon. At the bottom, it says 'Powered by Elemental Selenium' and shows a status message 'Se | ● Selenium IDE is recording...'.

The screenshot shows a web browser window with the URL `the-internet.herokuapp.com/login`. At the top, there is a red horizontal bar with the text "Your username is invalid!". Below this, the heading "Login Page" is displayed. A form for entering a username and password is present, along with a blue "Login" button featuring a right-pointing arrow icon. At the bottom of the page, it says "Powered by Elemental Selenium" and shows a status message from Selenium IDE indicating "Selenium IDE is recording...".

The screenshot shows a green horizontal bar at the top with the text "You logged into a secure area!". Below this, the heading "Secure Area" is displayed. A "Logout" button is visible. At the bottom, it says "Powered by Elemental Selenium".

You logged out of the secure area!

Login Page

This is where you can log into the secure area. Enter *tomsmith* for the username and *SuperSecretPassword!* for the password. If the information is wrong you should see error messages.

Username

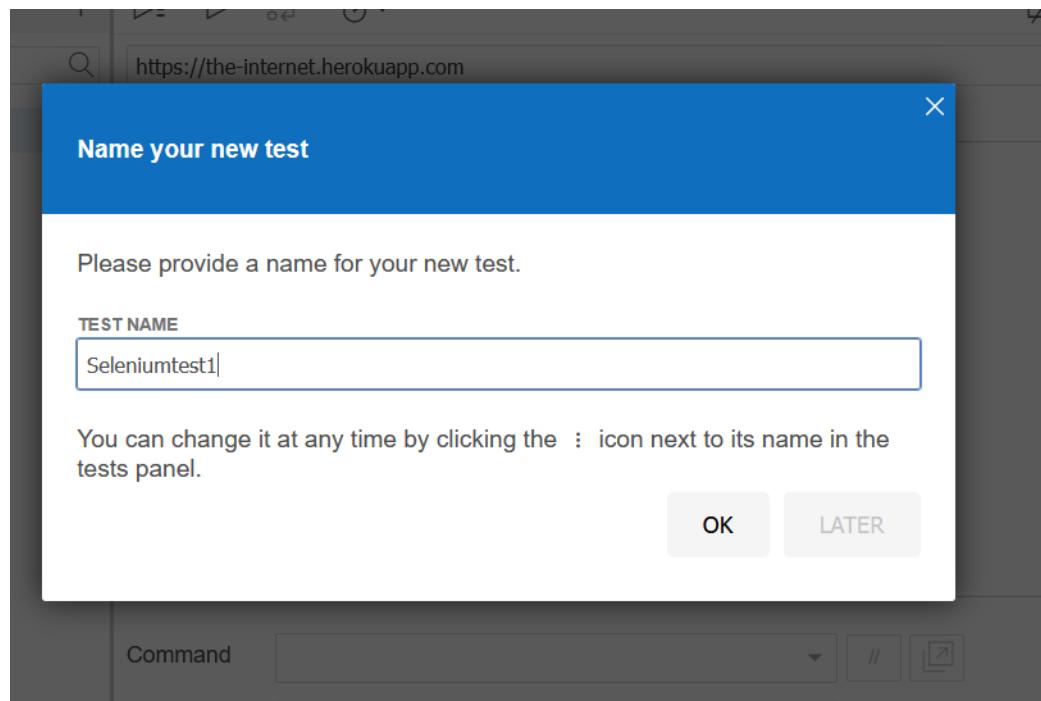
Password

→ Login

Powered by Elemental Selenium

A vertical sidebar on the right shows a progress bar with the text "Fork me on GitHub" at the top, followed by several colored segments: green, red, blue, grey, and white, with the word "done" written next to the grey segment.

After checking all the test cases save the test cases



Project: Selenium1*

Tests	+	▷Ξ	▷																																																								
Search tests... <input type="text"/>																																																											
https://the-internet.herokuapp.com																																																											
<table border="1"> <thead> <tr> <th>Seleniumtest1*</th> <th>Command</th> <th>Target</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>open</td> <td>/login</td> <td></td> </tr> <tr> <td>2</td> <td>set window size</td> <td>800x740</td> <td></td> </tr> <tr> <td>3</td> <td>click</td> <td>id=username</td> <td></td> </tr> <tr> <td>4</td> <td>type</td> <td>id=username</td> <td>tomsmith</td> </tr> <tr> <td>5</td> <td>click</td> <td>id=password</td> <td></td> </tr> <tr> <td>6</td> <td>type</td> <td>id=password</td> <td>123*we</td> </tr> <tr> <td>7</td> <td>click</td> <td>css=.fa</td> <td></td> </tr> <tr> <td>8</td> <td>click</td> <td>id=username</td> <td></td> </tr> <tr> <td>9</td> <td>type</td> <td>id=username</td> <td>123test</td> </tr> <tr> <td>10</td> <td>click</td> <td>id=password</td> <td></td> </tr> <tr> <td>11</td> <td>type</td> <td>id=password</td> <td>SuperSecretPassword</td> </tr> <tr> <td>12</td> <td>click</td> <td>css=.fa</td> <td></td> </tr> <tr> <td>13</td> <td>click</td> <td>id=username</td> <td></td> </tr> </tbody> </table>				Seleniumtest1*	Command	Target	Value	1	open	/login		2	set window size	800x740		3	click	id=username		4	type	id=username	tomsmith	5	click	id=password		6	type	id=password	123*we	7	click	css=.fa		8	click	id=username		9	type	id=username	123test	10	click	id=password		11	type	id=password	SuperSecretPassword	12	click	css=.fa		13	click	id=username	
Seleniumtest1*	Command	Target	Value																																																								
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4	type	id=username	tomsmith																																																								
5	click	id=password																																																									
6	type	id=password	123*we																																																								
7	click	css=.fa																																																									
8	click	id=username																																																									
9	type	id=username	123test																																																								
10	click	id=password																																																									
11	type	id=password	SuperSecretPassword																																																								
12	click	css=.fa																																																									
13	click	id=username																																																									
<table border="1"> <tr> <td>Command</td> <td><input type="text" value="type"/></td> <td>▼</td> <td>//</td> <td><input type="button" value=""/></td> </tr> <tr> <td>Target</td> <td><input type="text" value="id=username"/></td> <td>▼</td> <td><input type="button" value=""/></td> <td><input type="button" value=""/></td> </tr> <tr> <td>Value</td> <td><input type="text" value="tomsmith"/></td> <td colspan="3"></td> </tr> <tr> <td>Description</td> <td colspan="4"><input type="text"/></td> </tr> </table>				Command	<input type="text" value="type"/>	▼	//	<input type="button" value=""/>	Target	<input type="text" value="id=username"/>	▼	<input type="button" value=""/>	<input type="button" value=""/>	Value	<input type="text" value="tomsmith"/>				Description	<input type="text"/>																																							
Command	<input type="text" value="type"/>	▼	//	<input type="button" value=""/>																																																							
Target	<input type="text" value="id=username"/>	▼	<input type="button" value=""/>	<input type="button" value=""/>																																																							
Value	<input type="text" value="tomsmith"/>																																																										
Description	<input type="text"/>																																																										

Run the test to see if the test is completed successfully

Extension: (Selenium IDE) - Selenium IDE - Selenium1* — Mozilla Firefox

Project: Selenium1*

Tests	+	▷Ξ	▷						
Search tests... <input type="text"/>									
Run all tests Ctrl+Shift+R the-internet.herokuapp.com									
<table border="1"> <thead> <tr> <th>Seleniumtest1*</th> <th>Command</th> <th>Target</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>open</td> <td>/login</td> </tr> </tbody> </table>				Seleniumtest1*	Command	Target	1	open	/login
Seleniumtest1*	Command	Target							
1	open	/login							

Extension: (Selenium IDE) - Selenium IDE - Selenium1* — Mozilla Firefox

Project: Selenium1*

Executing ✓ Seleniumtest1*

https://the-internet.herokuapp.com

	Command	Target	Value
19	✓ type	id=username	!@#@\$&
20	✓ click	id=password	
21	✓ type	id=password	sdfads
22	✓ click	css=.radius	
23	✓ click	id=username	
24	✓ type	id=username	tomsmith

Command

Target

Value

Description

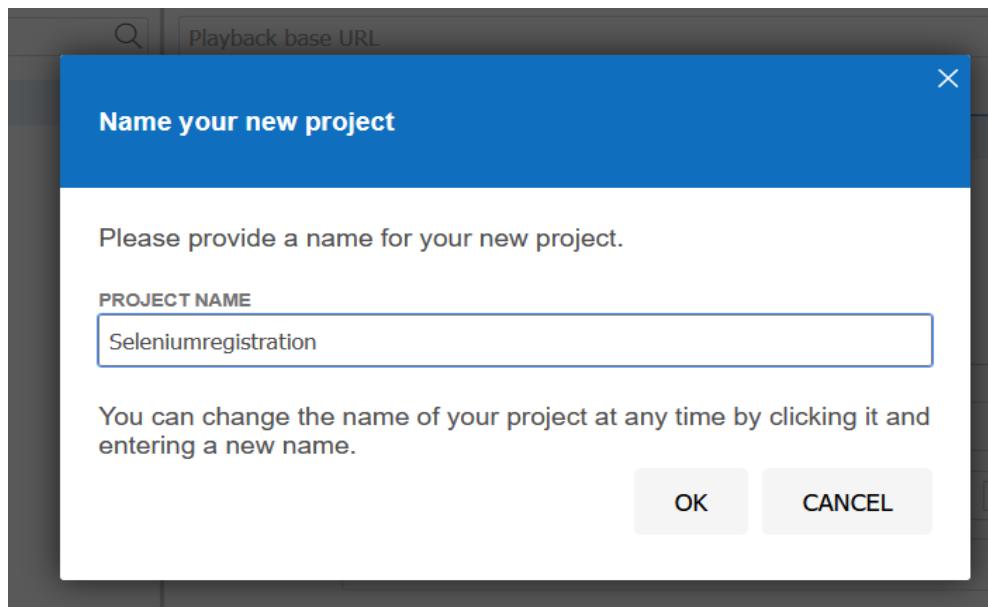
Runs: 1 Failures: 0

Log Reference

Log	Reference	Time
32. click on css=fa OK		22:06:01
33. click on id=username OK		22:06:01
34. type on id=username with value tomsmith OK		22:06:02
35. click on id=password OK		22:06:02
36. type on id=password with value SuperSecretPassword! OK		22:06:02
37. click on css=.radius OK		22:06:02
38. click on css=icon-2x OK		22:06:02
'Seleniumtest1' completed successfully		22:06:03

3. Record and run test cases on Registration form of any website

Create a new project in Selenium IDE and provide the link of the website to be tested.



Test with various types of input in each field provided to see if the system is working properly

A screenshot of a web browser displaying the "GURU99 Demo Site". The URL in the address bar is "demo.guru99.com/test/newtours/register.jhtml". The page shows a "REGISTER" form with sections for "Contact Information", "Mailing Information", and "User Information". The "Contact Information" section includes fields for First Name (abc), Last Name (xyz), Phone (12347890), and Email (abc@gmail.com). The "Mailing Information" section includes fields for Address (dsv), City (mumbai), State/Province (maharashtra), and Postal Code (123447). The "User Information" section includes fields for User Name and Password, with a note "Selenium IDE is recording..." above them. On the left sidebar, there is a navigation menu with links like "home", "Flights", "Hotels", etc., and a "HTML VERSION" link. A sidebar banner for "SAVINGS! Rent A Car" with a "CLICK HERE" button is also visible.

Register: Mercury Tours

GURU99 Demo Site

Unite Dev, IT, and business teams on one platform

Mailing Information

Email:

Address:

City:

State/Province:

Postal Code:

Country:

User Information

User Name:

Password:

Confirm Password: PAssword and con.password does not match

Submit Query

© 2005, Mercury Interactive (v. 011003-1.01-058)

Se | • Selenium IDE is recording...

Register: Mercury Tours

GURU99 Demo Site

Unite Dev, IT, and business teams on one platform

REGISTER

Dear abc xyz,

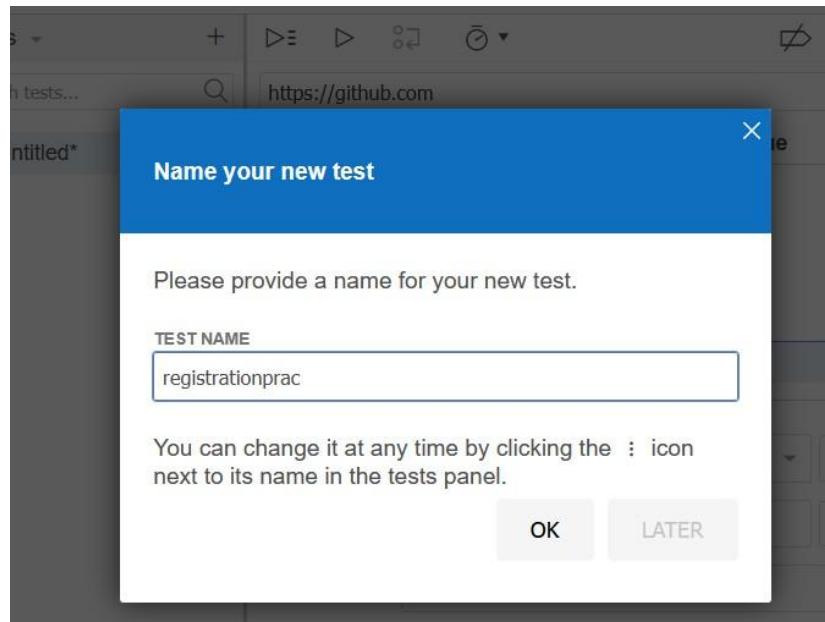
Thank you for registering. You may now [sign-in](#) using the user name and password you've just entered.

Note: Your user name is abcxyz.

© 2005, Mercury Interactive (v. 011003-1.01-058)

Se | • Selenium IDE is recording...

Save the test and run to see if it is successfully completed

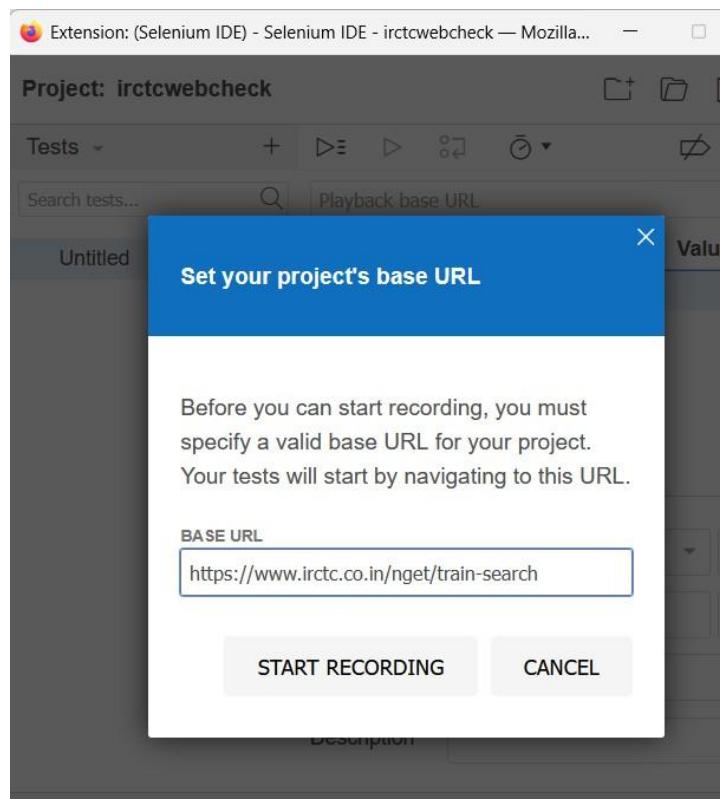
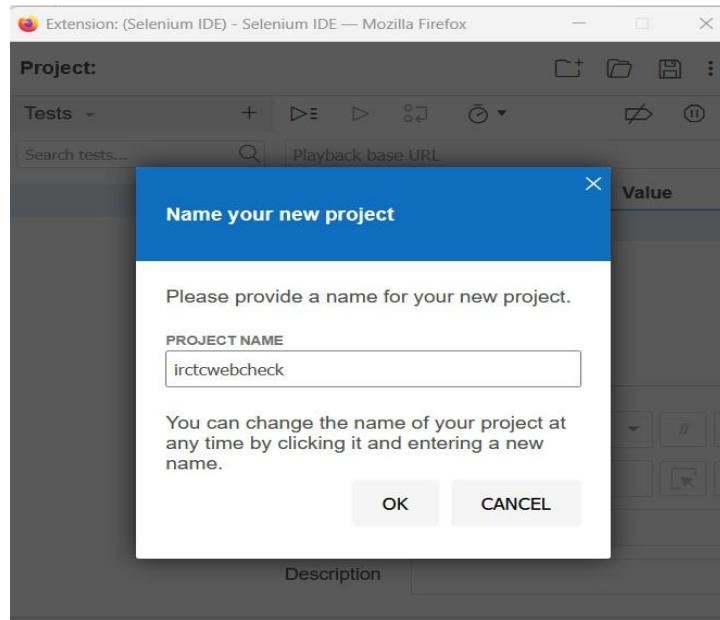


The screenshot displays the Selenium IDE interface. The top part shows a table of recorded commands:

	Command	Target	Value
29	✓ click	name=confirm Password	
30	✓ type	name=confirm Password	1234
31	✓ click	name=submit	

Below the table are four input fields: Command, Target, Value, and Description. At the bottom left, it says "Runs: 1 Failures: 0". The bottom section shows the test log:

Log	Reference	Date
24. click on id=email OK		18:06:04
25. type on id=email with value abxyz OK		18:06:04
26. click on name=password OK		18:06:04
27. type on name=password with value 1234 OK		18:06:05
28. click on name=confirmPassword OK		18:06:05
29. type on name=confirmPassword with value 1234 OK		18:06:05
30. click on name=submit OK		18:06:05
'test' completed successfully		18:06:05

4. Record and run any test cases on any website to check validation of elements.

Screenshot of the IRCTC website showing a search for a train from Kalyan JN (Mumbai) to Ernakulam JN (Kochi / Ernakulam). The search parameters include a departure date of 30/09/2025 and a class of AC 3 Tier (3A). A banner for MP Birla Cement Perfect Plus Concrete Special Cement is displayed.

GENERAL

checkboxes: Person With Disability Concession, Flexible With Date, Train with Available Berth, Railway Pass Concession

Search button, AskOdia24 icon

Selenium IDE recording message: Selenium IDE is recording...

Firefox browser window showing the Selenium IDE interface with test3* selected. The table shows three recorded commands:

	Command	Target	Value
32	✓ click	css=.ng-tns-c65-11:nth-child(8) > .u...	yClass > .n g-tns-c65-11
33	✓ click	css=.form-s wap:nth-child(3)	css=.ng-tns-c65-11:nth-c hild(8) > .u...

Log tab shows the execution history:

```

29. doubleClick on css=ui-datepicker-other-month:nth-child(4) > .ui-state-default OK
00:20:01
30. click on linkText=30 OK
00:20:02
31. click on css=#journeyClass > .ng-tns-c65-11 OK
00:20:02
32. click on css=.ng-tns-c65-11:nth-child(8) > .ui-dropdown-item OK
00:20:02
33. click on css=.form-swap:nth-child(3) OK
00:20:02
'test3' completed successfully
00:20:03

```

Practical No. 5

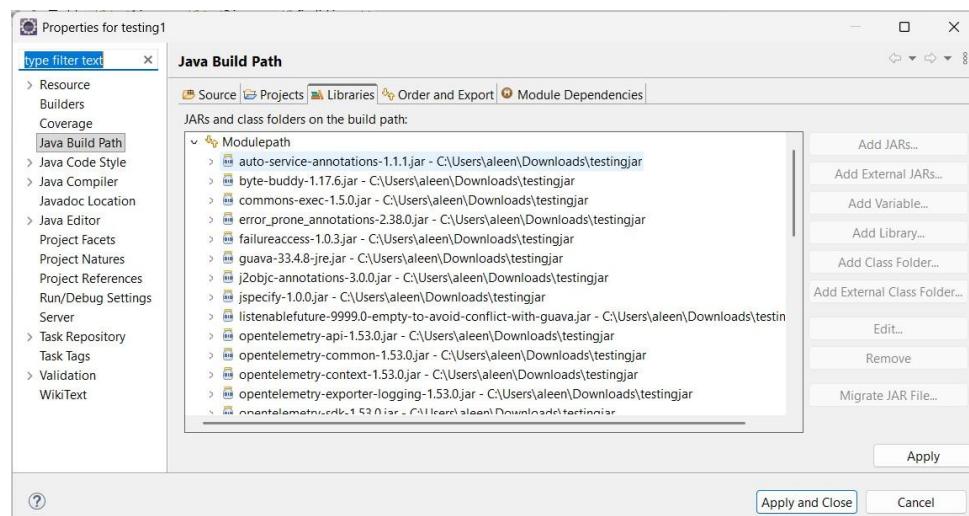
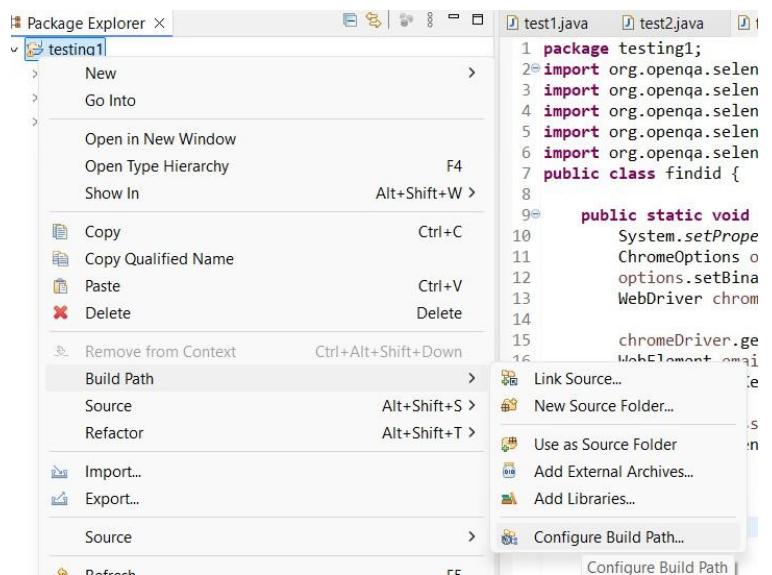
Implement Web Drivers on Chrome & Firefox Browsers.

Install Selenium java drivers, Chrome driver and Gecko driver jar files.

Create a new project in Eclipse IDE.

Create a package and class.

Add all the extracted jar files into the project in the configure build path



Using Chrome driver:

```
package testing1;
```

```
import org.openqa.selenium.WebDriver;
```

```
import org.openqa.selenium.chrome.ChromeDriver;
```

```
import org.openqa.selenium.chrome.ChromeOptions;
```

```

public class test1 {
    public static void main(String[] args) {
        System.setProperty("webdriver.chrome.driver",
C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\chromedriver-win64\\\\chromedriver.exe");

        ChromeOptions options = new ChromeOptions();
        options.setBinary("C:\\\\Program Files\\\\Google\\\\Chrome\\\\Application\\\\chrome.exe");
        WebDriver chromeDriver = new ChromeDriver(options);
        chromeDriver.get("https://www.google.com");
        System.out.println("Title on Chrome: " + chromeDriver.getTitle());
    }
}

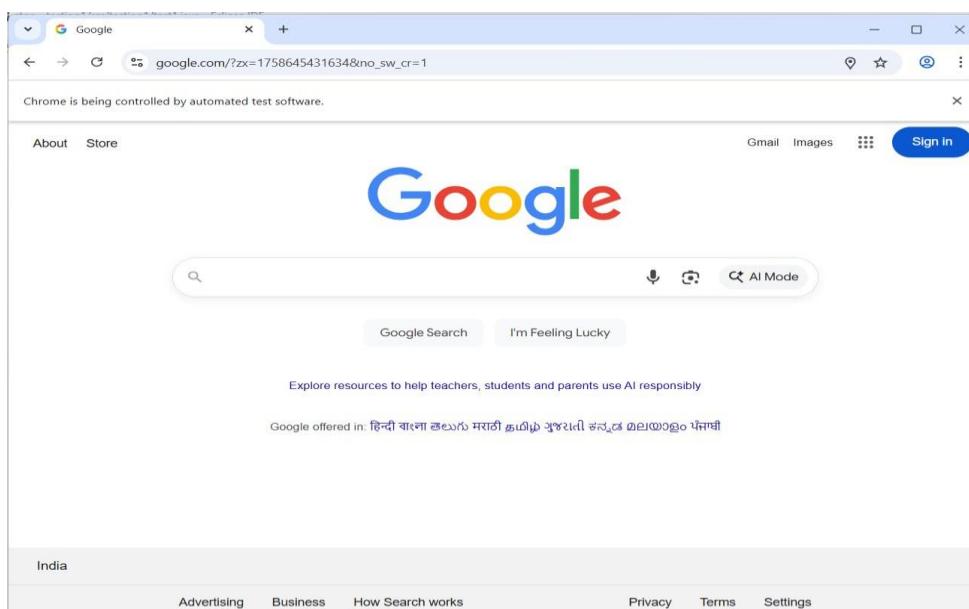
```



```

1 package testing1;
2 import org.openqa.selenium.WebDriver;
3 import org.openqa.selenium.chrome.ChromeDriver;
4 import org.openqa.selenium.chrome.ChromeOptions;
5 public class test1 {
6     public static void main(String[] args) {
7
8         System.setProperty("webdriver.chrome.driver", "C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\chromedriver-win64\\\\chromedriver.exe");
9         ChromeOptions options = new ChromeOptions();
10        options.setBinary("C:\\\\Program Files\\\\Google\\\\Chrome\\\\Application\\\\chrome.exe");
11        WebDriver chromeDriver = new ChromeDriver(options);
12        chromeDriver.get("https://www.google.com");
13        System.out.println("Title on Chrome: " + chromeDriver.getTitle());
14
15    }
16
17 }
18
19

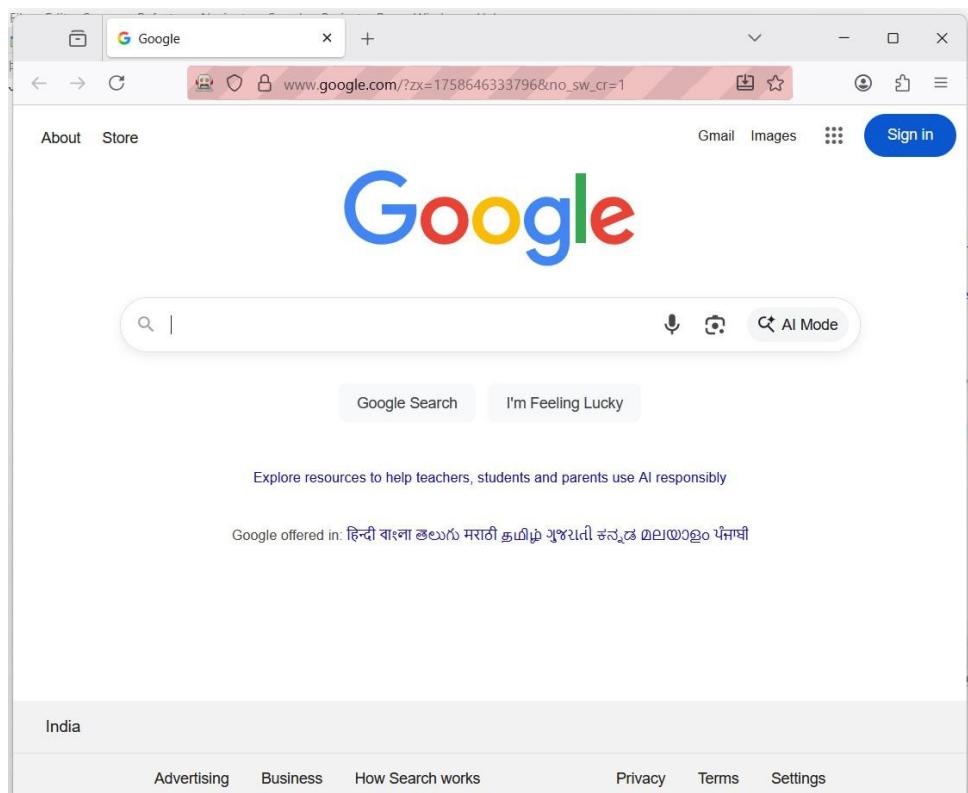
```



Using Firefox Browser:

```
package testing1;
```

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.firefox.FirefoxOptions;
public class test2 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
"\"C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\geckodriver.exe\"");
        FirefoxOptions options = new FirefoxOptions();
        options.setBinary("C:\\\\Program Files\\\\Mozilla Firefox\\\\firefox.exe");
        WebDriver driver = new FirefoxDriver(options);
        driver.get("https://www.google.com");
        System.out.println("Title on Firefox: " + driver.getTitle());
    }
}
```



Practical No. 6

Implement the Find element command through different Locators

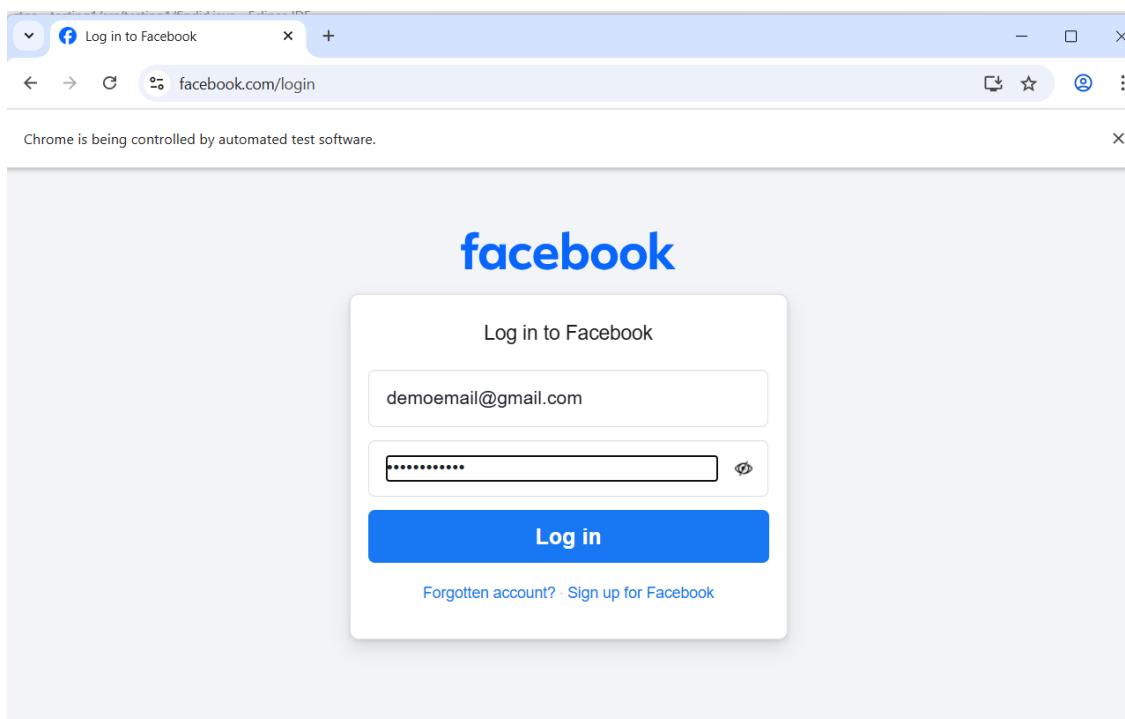
```
package testing1;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.chrome.ChromeOptions;
public class findid {

    public static void main(String[] args) {
        System.setProperty("webdriver.chrome.driver",
        "C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\chromedriver-win64\\\\chromedriver.exe");
        ChromeOptions options = new ChromeOptions();
        options.setBinary("C:\\\\Program Files\\\\Google\\\\Chrome\\\\Application\\\\chrome.exe");
        WebDriver chromeDriver = new ChromeDriver(options);

        chromeDriver.get("https://www.facebook.com/login");
        WebElement emailBox = chromeDriver.findElement(By.id("email")); //using id
        emailBox.sendKeys("demoemail@gmail.com");

        WebElement passwordBox = chromeDriver.findElement(By.name("pass")); //using name
        passwordBox.sendKeys("demopassword");
    }
}
```



```
package test_prac1;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.firefox.FirefoxOptions;

public class xpath1 {

    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
        "C:\\\\Users\\\\admin\\\\Downloads\\\\testing_jar\\\\geckodriver.exe");

        FirefoxOptions options = new FirefoxOptions();
        options.setBinary("C:\\\\Program Files\\\\Mozilla Firefox\\\\firefox.exe");
        WebDriver driver = new FirefoxDriver(options);

        driver.get("https://www.facebook.com/");
        System.out.println(driver.getTitle());
        WebElement
        img=driver.findElement(By.xpath("//*[@id='content']/div/div/div[1]/div/img"));

        System.out.println(img.isDisplayed());
        System.out.println(img.isEnabled());
        System.out.println(img.isSelected());

    }
}
```

facebook

Facebook helps you connect and share with the people in your life.

Email address or phone number

Password

Log in

Forgotten password?

Create new account

Create a Page for a celebrity, brand or business.

English (UK) મરાઠી હિન્દી યુ.પી. ગુજરાતી કન્નಡ પੰਜਾਬી તુલ્ય રાગ તલાવ મહાયાદૂં +

Sign Up Log in Messenger Facebook Lite Video Meta Pay Meta Store Meta Quest Ray-Ban Meta Meta AI Meta AI more content Instagram Threads Online Information Centre Privacy Center Help Create ad Create Page Newsletters Contact AdChoices Terms

```
<terminated> xpath1 [Java Application] C:\Users\admin\Desktop\ex
Facebook - log in or sign up
true
true
false
```

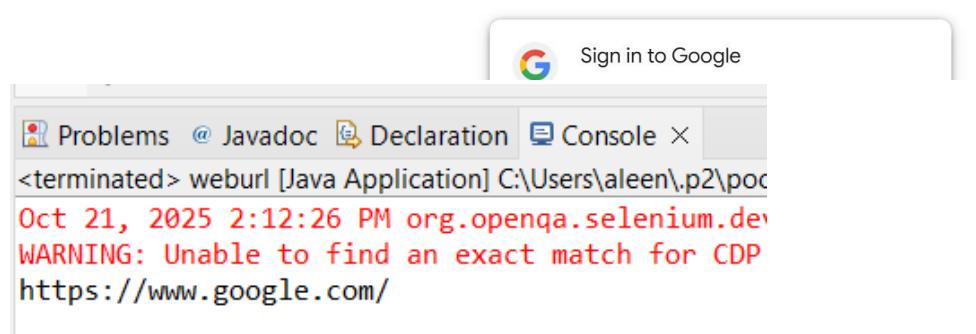
Practical No. 7

Implement Browser command and navigation Commands.

```

package testing1;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
public class weburl {
    public static void main(String[] args) throws InterruptedException {
        System.setProperty("WebDriver.chrome.driver","C:\\Users\\aleen\\Downloads\\testingjar\\chromedriver-win64\\chromedriver.exe");
        WebDriver driver = new ChromeDriver();
        driver.get("https://www.google.com");
        System.out.println(driver.getCurrentUrl());
    }
}

```

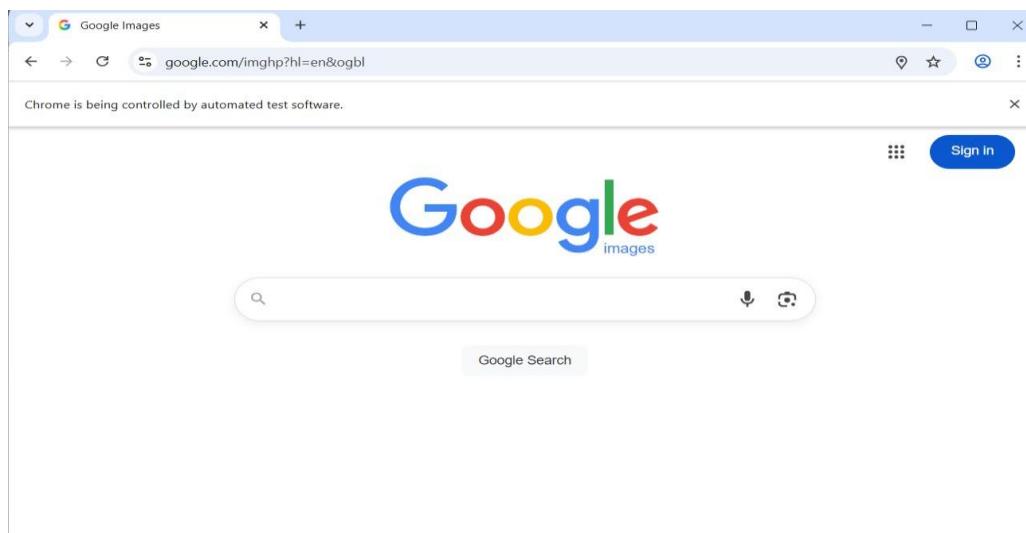


```

package testing1;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
public class navigate {

```

```
public static void main(String[] args) throws InterruptedException {
    System.setProperty("webdriver.chrome.driver",
    "C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\chromedriver-win64\\\\chromedriver.exe");
    WebDriver driver = new ChromeDriver();
    driver.get("https://www.google.com");
    driver.navigate().to("https://www.google.com");
    driver.findElement(By.linkText("Images")).click();
    Thread.sleep(2000);
    driver.navigate().back();
    Thread.sleep(1000);
    System.out.println("back done..... ");
    driver.navigate().forward();
    Thread.sleep(1000);
    System.out.println("Forward done..... ");
    driver.navigate().refresh();
    Thread.sleep(1000);
    System.out.println("refresh done .....");
}
}
```



```
<terminated> navigate [Java Application] C:\\OS
Oct 21, 2025 1:59:36 PM org.openqa.
WARNING: Unable to find an exact ma
back done..... .
Forward done..... .
refresh done.....
```

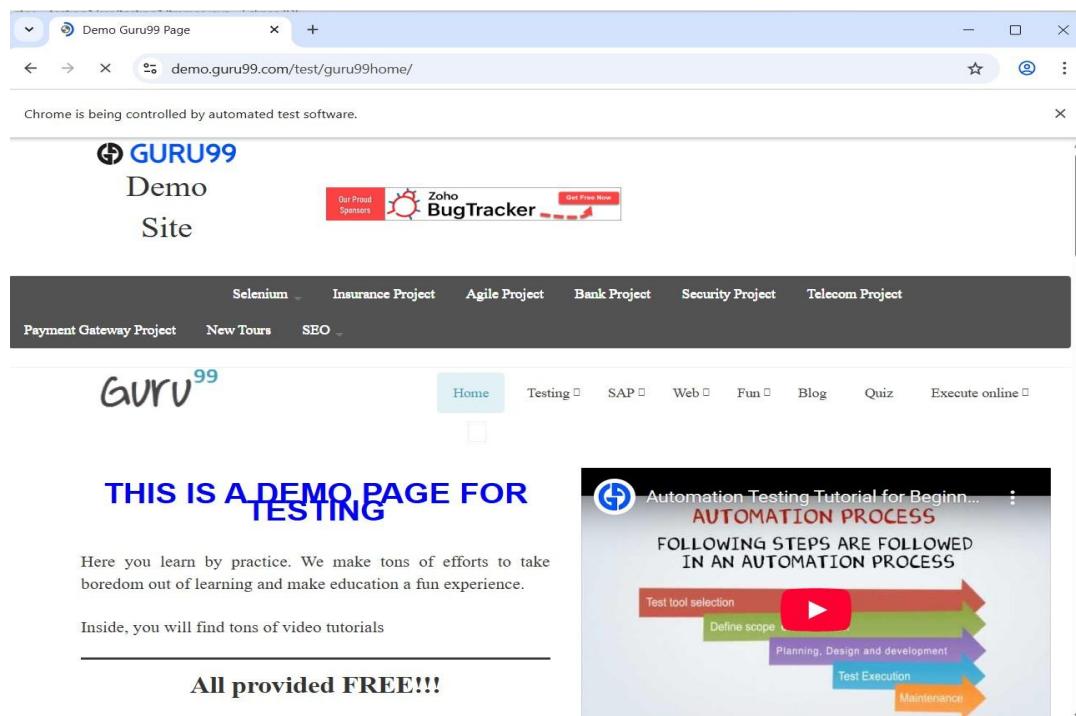
Practical No. 8

Demonstrate handling multiple frames in selenium

```

package testing1;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
public class frames {
    public static void main(String[] args) {
        System.setProperty("webdriver.chrome.driver","C:\\Users\\aleen\\Downloads\\testing
jar\\chromedriver-win64\\chromedriver.exe");
        WebDriver driver = new ChromeDriver();
        driver.get("http://demo.guru99.com/test/guru99home/");
        driver.manage().window().maximize();
        driver.switchTo().frame("a077aa5e");
        System.out.println("We are switch to the iframe");
        driver.findElement(By.xpath("html/body/a/img")).click();
        System.out.println("*We are done*");
    }
}

```



Demo Guru99 Page Selenium Live Project for Practice

guru99.com/live-selenium-project.html

Chrome is being controlled by automated test software.

GURU99 Home Testing SAP Web Must Learn Big Data AI Live Project AI Email

Selenium Live Project for Practice

By: Krishna Rungta Updated August 21, 2025 Add Guru99 on Google



Project Summary

This project will put you in an online Corporate Test Environment. You will be automating Selenium test cases for a demo banking website. You will create & execute automation scripts and have an opportunity to compare it with sample scripts created by our experts in real-time.

The project spans seven days, during which you will receive one email daily with your assigned tasks

Table of contents

- Project Summary
- Completion Time
- Join the Virtual Experience Program Here
- Why join this Virtual Experience Program?
- What's in it for you?
- Who this Project is for?
- What should I know?
- What will you learn?

```
Problems @ Javadoc Declaration Console X
<terminated> frames [Java Application] C:\Users\aleen\.p2\pool\plugins
Oct 21, 2025 2:22:13 PM org.openqa.selenium.devtools
WARNING: Unable to find an exact match for CDP version
We are switch to the iframe
*We are done*
```

Practical No. 9

Demonstrate Synchronisation in Selenium using wait command

```
package testing1;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import java.time.Duration;
public class synchronization {

    public static void main(String[] args) {
        System.setProperty("webdriver.chrome.driver",
        "C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\chromedriver-win64\\\\chromedriver.exe");

        WebDriver driver = new ChromeDriver();
        driver.get("https://demoqa.com/dynamic-properties");
        driver.manage().window().maximize();
        driver.manage().timeouts().implicitlyWait(Duration.ofSeconds(10));

        WebElement visibleAfterButton = driver.findElement(By.id("visibleAfter"));
        System.out.println("Button text: " + visibleAfterButton.getText());
        driver.quit();
    }
}
```

DEMOQA

demoqa.com/dynamic-properties

Chrome is being controlled by automated test software.

TOOLS QA

Dynamic Properties

This text has random Id

Will enable 5 seconds

Color Change

Visible After 5 Seconds

ZeroStack

Build Playwright Tests using A

Try for free →

DEMOQA

demoqa.com/dynamic-properties

Chrome is being controlled by automated test software.

Dynamic Properties

This text has random Id

Will enable 5 seconds

Color Change

Visible After 5 Seconds

Venusia Sun Mineral

AMAZON

```
Problems @ Javadoc Declaration Console 
<terminated> synchronization [Java Application] C:\Users\aleen\.p2\pool\plugins\ 
Oct 21, 2025 2:39:44 PM org.openqa.selenium.devtools.CdpVersionSyncHandler$1 
WARNING: Unable to find an exact match for CDP version 141, falling back to 140 
Button text: Visible After 5 Seconds
```

Practical No. 10

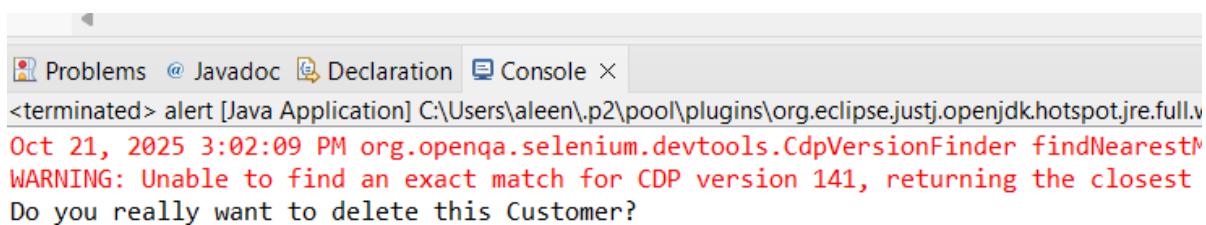
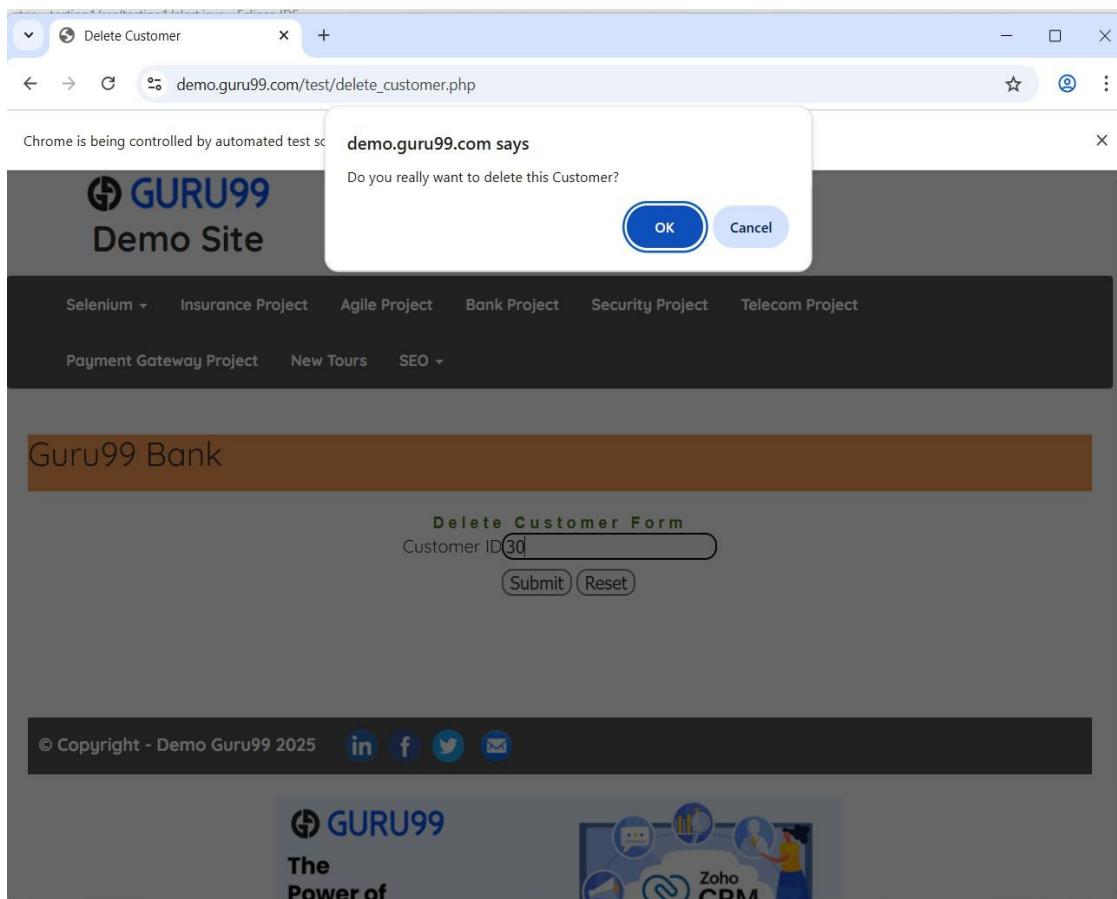
Demonstrate different types of alerts

```
package testing1;

import org.openqa.selenium.Alert;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class alert {
    public static void main(String[] args) throws InterruptedException {
        System.setProperty("webdriver.chrome.driver",
        "C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\chromedriver-win64\\\\chromedriver.exe");
        WebDriver driver = new ChromeDriver();
        driver.get("https://demo.guru99.com/test/delete_customer.php");
        driver.findElement(By.name("cusid")).sendKeys("30");
        driver.findElement(By.name("submit")).click();
        Alert alt = driver.switchTo().alert();

        String alertMessage = alt.getText();
        System.out.println(alertMessage);
        Thread.sleep(5000);
        alt.accept();
        driver.quit();
    }
}
```



Practical No. 11

Demonstrate :

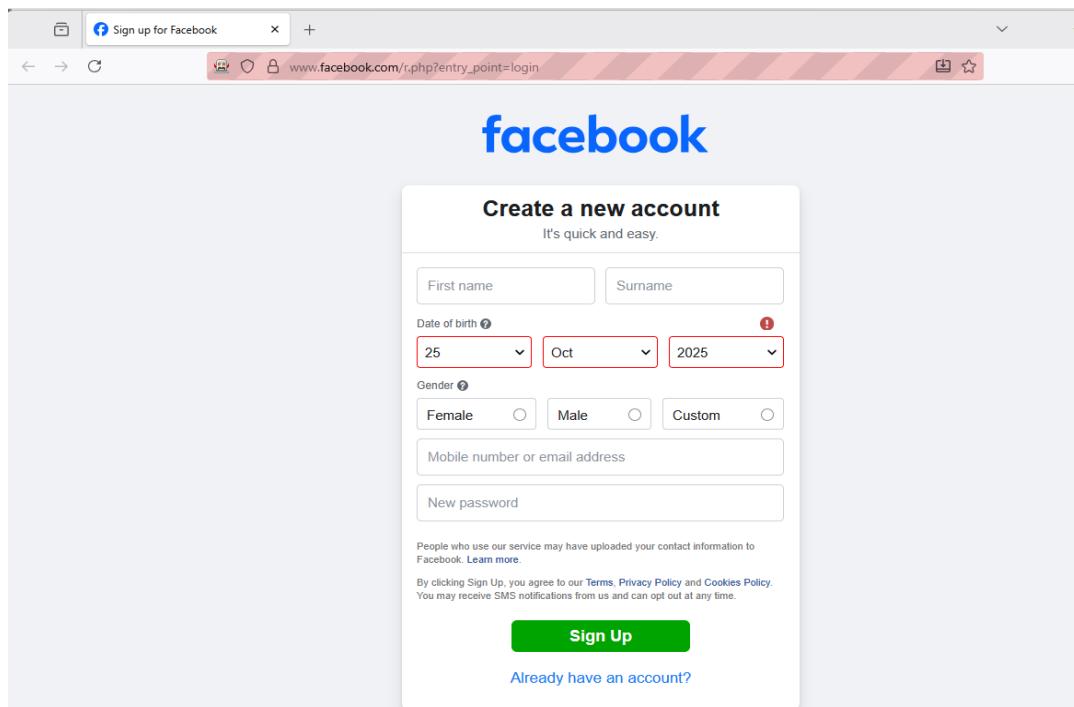
- Handling Drop Down

```
package test_prac1;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.firefox.FirefoxOptions;
import org.openqa.selenium.support.ui.Select;
public class selectmethod {

    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
        "C:\\\\Users\\\\admin\\\\Downloads\\\\testing_jar\\\\geckodriver.exe");

        FirefoxOptions options = new FirefoxOptions();
        options.setBinary("C:\\\\Program Files\\\\Mozilla Firefox\\\\firefox.exe");
        WebDriver driver = new FirefoxDriver(options);
        driver.get("https://www.facebook.com/r.php?entry_point=login");
        Select month=new Select(driver.findElement(By.id("month")));
        month.selectByIndex(9);
        //month.deselectByVisibleText("Sep");

    }
}
```



- **List Boxes**

```
package testing1;

import java.util.List;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import org.openqa.selenium.firefox.FirefoxOptions;

import org.openqa.selenium.WebElement;

public class listbox {

    public static void main(String[] args) throws InterruptedException {

        // TODO Auto-generated method stub

        System.setProperty("webdriver.gecko.driver",
"C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\geckodriver.exe");

        FirefoxOptions options = new FirefoxOptions();

        options.setBinary("C:\\\\Program Files\\\\Mozilla Firefox\\\\firefox.exe");

        WebDriver driver = new FirefoxDriver(options);

        driver.get("https://www.facebook.com/r.php?entry_point=login");

        List<WebElement> gender=driver.findElements(By.name("sex"));

        int cnt=gender.size();

        System.out.println(cnt);

        for(int i=0;i<cnt;i++) {

            String text=gender.get(i).getText();

            System.out.println(text);

            gender.get(i).click();

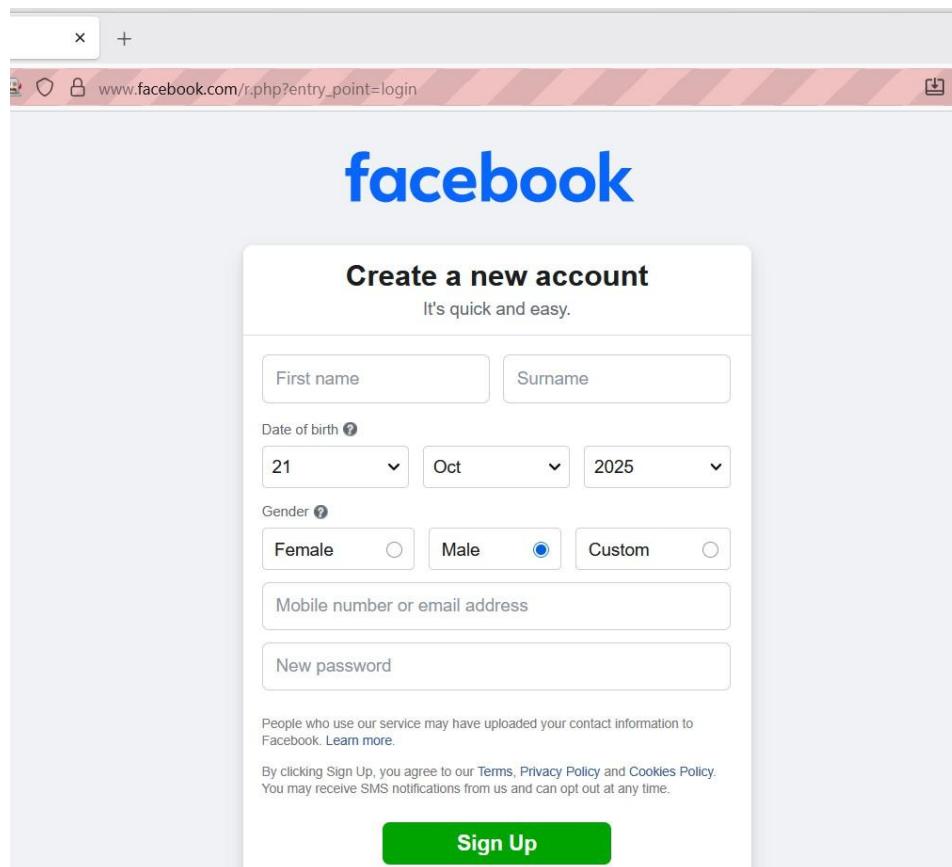
            Thread.sleep(2000);

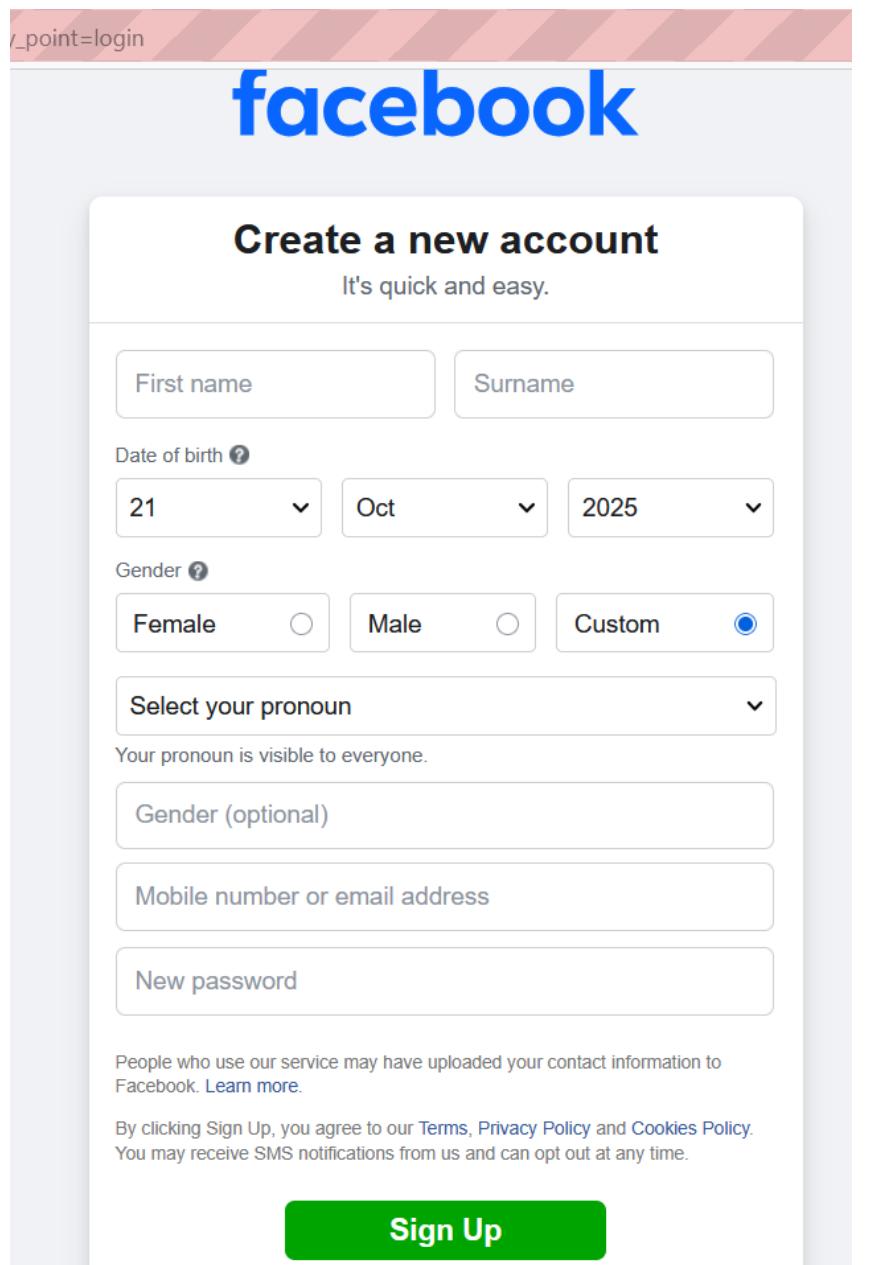
        }

    }

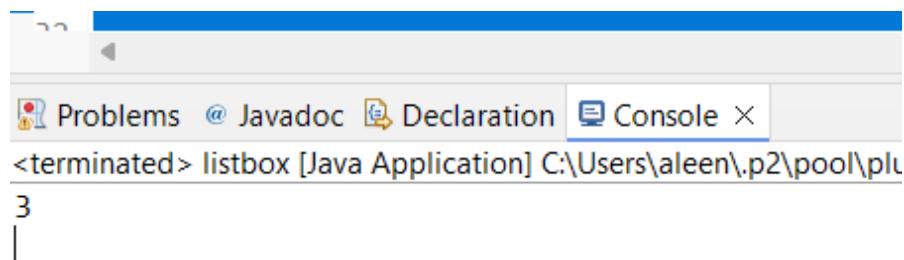
}
```

{}





The image shows the 'Create a new account' form from the Facebook website. At the top, it says 'Create a new account' and 'It's quick and easy.' Below that are fields for 'First name' and 'Surname'. Under 'Date of birth', there are dropdown menus for day (21), month (Oct), and year (2025). Under 'Gender', there are radio buttons for 'Female', 'Male', and 'Custom', with 'Custom' being selected. A dropdown menu for 'Select your pronoun' is shown, with a note below stating 'Your pronoun is visible to everyone.' There is also a field for 'Gender (optional)'. Below these are fields for 'Mobile number or email address' and 'New password'. At the bottom left, there is a note about contact information from other users, and at the bottom right, terms and conditions are mentioned. A large green 'Sign Up' button is at the bottom center.



A screenshot of an IDE showing a Java application named 'listbox'. The code in the editor is as follows:

```
<terminated> listbox [Java Application] C:\Users\aleen\.p2\pool\plu
```

The number '3' is visible in the top-left corner of the code area.

- **Command Button**

```
package testing1;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.firefox.FirefoxOptions;
public class commandbutton {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
        "C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\geckodriver.exe");

FirefoxOptions options = new FirefoxOptions();
options.setBinary("C:\\\\Program Files\\\\Mozilla Firefox\\\\firefox.exe");
WebDriver driver = new FirefoxDriver(options);

driver.get("https://www.facebook.com/");

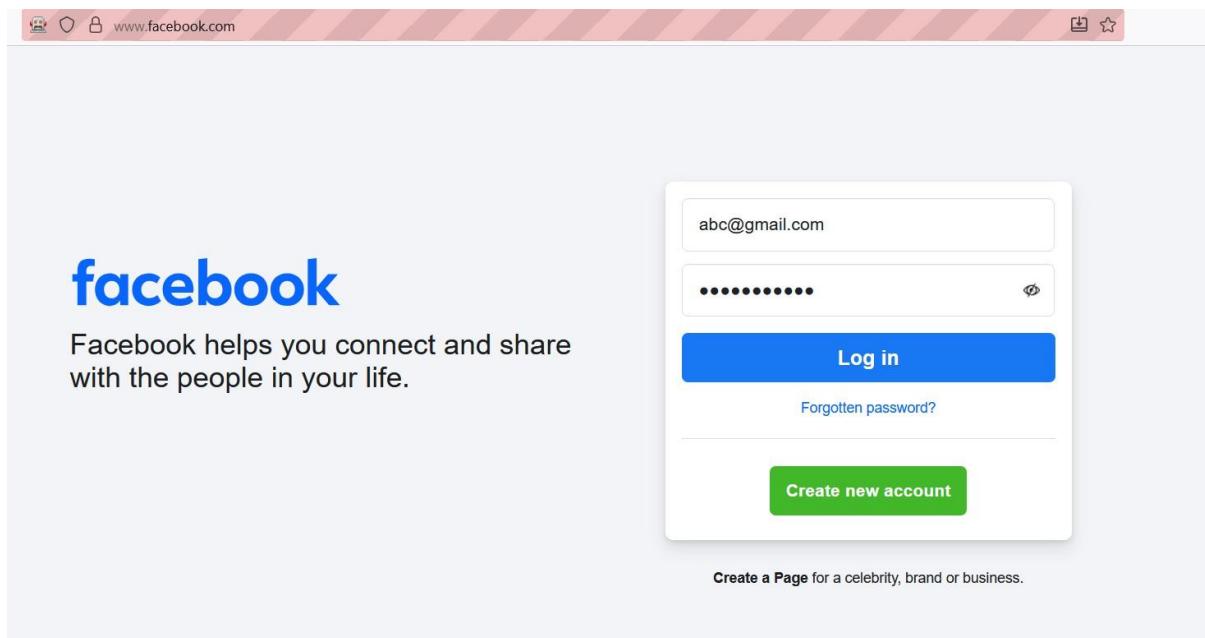
WebElement email = driver.findElement(By.id("email"));
WebElement pass = driver.findElement(By.id("pass"));

WebElement loginBtn = driver.findElement(By.name("login"));

email.sendKeys("abc@gmail.com");
pass.sendKeys("password123");

// click the command button
loginBtn.click();

System.out.println("Command button clicked successfully!");
driver.quit();
}
}
```

A screenshot of an Eclipse IDE interface showing the 'Console' tab. The tab bar includes 'Problems', '@ Javadoc', 'Declaration', and 'Console'. The console output shows the command 'commandbutton [Java Application] C:\Users\aleen\.p2\pool\plugins\org.eclipse.j' was terminated, followed by the message 'Command button clicked successfully!'.

- **Radio buttons & text boxes**

```
package test_prac1;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.firefox.FirefoxOptions;
public class radioclass {

    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
"C:\\\\Users\\\\admin\\\\Downloads\\\\testing_jar\\\\geckodriver.exe");

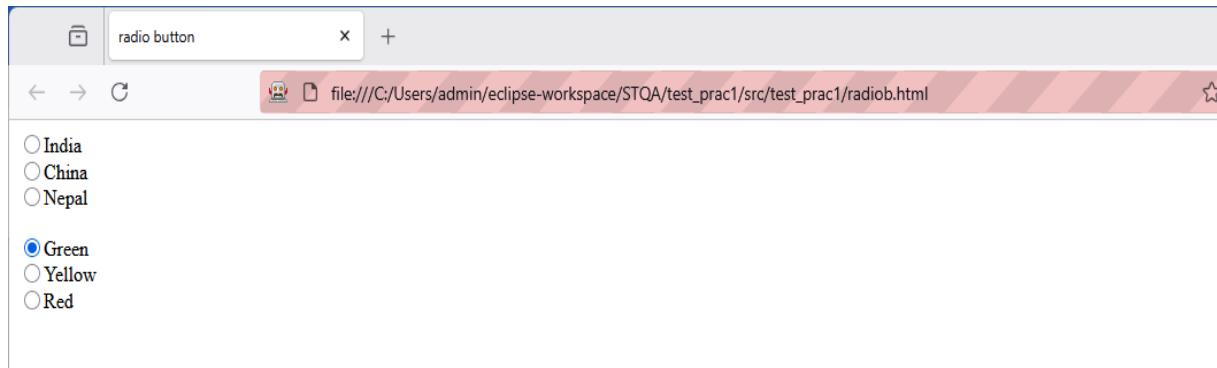
        FirefoxOptions options = new FirefoxOptions();

        options.setBinary("C:\\\\Program Files\\\\Mozilla Firefox\\\\firefox.exe");
        WebDriver driver = new FirefoxDriver(options);
        driver.get("file:///C:/Users/admin/eclipse-
workspace/STQA/test_prac1/src/test_prac1/radiob.html");
        driver.findElement(By.xpath("/html/body/input[4]")).click();
    }
}
```

radiob.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>radio button</title>
</head>
<body>
<input type="radio" name="country" value="c1">India<br>
<input type="radio" name="country" value="c2">China<br>
<input type="radio" name="country" value="c3">Nepal<br><br>
```

```
<input type="radio" name="color" value="a1">Green<br>
<input type="radio" name="color" value="a2">Yellow<br>
<input type="radio" name="color" value="a3">Red<br>
</body>
</html>
```



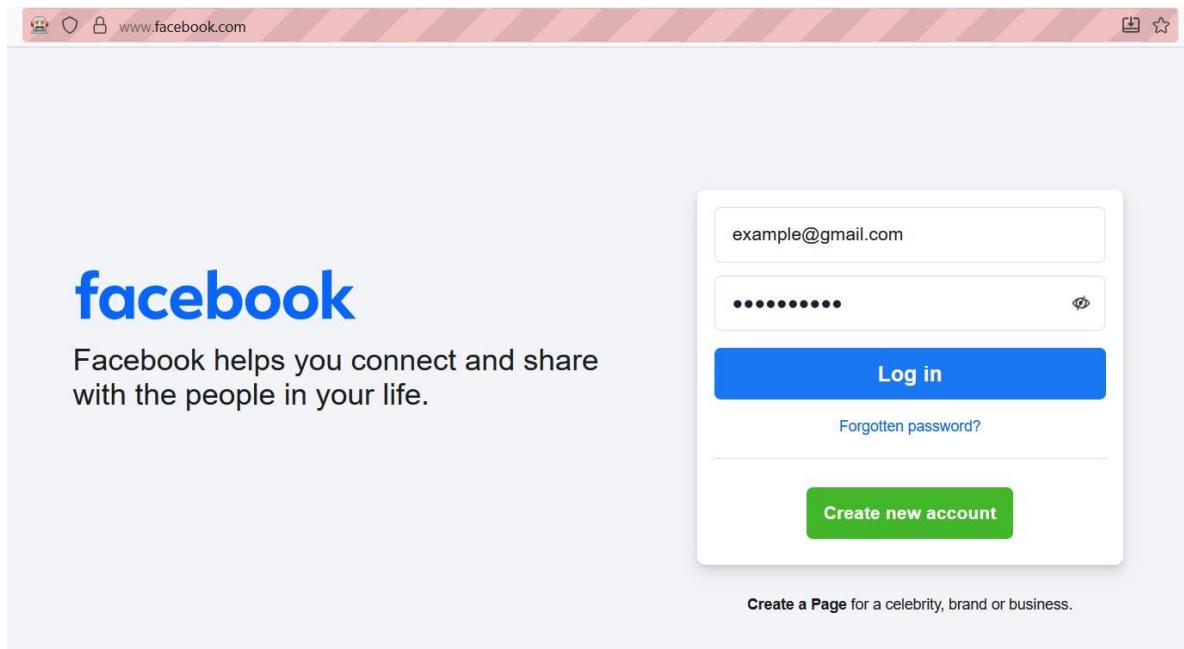
- **Waits command in selenium**

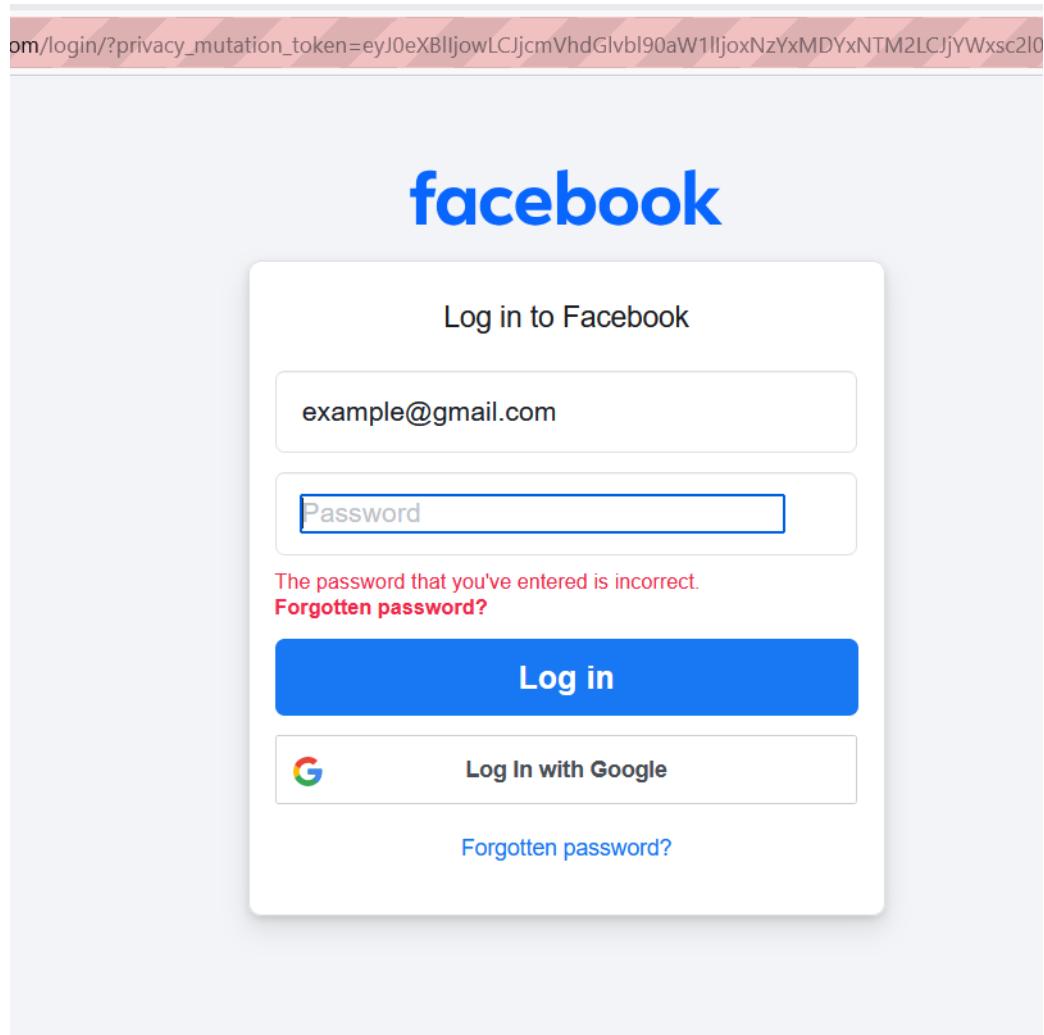
```
package testing1;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.firefox.FirefoxOptions;

import java.time.Duration;
public class waitcom {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
        "C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\geckodriver.exe");
        FirefoxOptions options = new FirefoxOptions();
        options.setBinary("C:\\\\Program Files\\\\Mozilla Firefox\\\\firefox.exe");

        WebDriver driver = new FirefoxDriver(options);
        driver.manage().window().maximize();
        driver.manage().timeouts().implicitlyWait(Duration.ofSeconds(10));
        driver.get("https://www.facebook.com/");
        WebElement emailField = driver.findElement(By.id("email"));
        emailField.sendKeys("example@gmail.com");

        WebElement passwordField = driver.findElement(By.id("pass"));
        passwordField.sendKeys("mypassword");
        WebElement loginBtn = driver.findElement(By.name("login"));
        loginBtn.click();
        System.out.println("Login button clicked successfully!");
    }
}
```

{
}



Practical No. 12

Demonstrate Action Class In Selenium

```
package testing1;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.interactions.Actions;

public class actions {
    public static void main(String[] args) throws InterruptedException {
        System.setProperty("webdriver.chrome.driver",
        "C:\\\\Users\\\\aleen\\\\Downloads\\\\testingjar\\\\chromedriver-win64\\\\chromedriver.exe");
        WebDriver driver = new ChromeDriver();
        driver.get("https://demoqa.com/buttons");
        driver.manage().window().maximize();
        Actions actions = new Actions(driver);
        WebElement doubleClickBtn = driver.findElement(By.id("doubleClickBtn"));
        WebElement rightClickBtn = driver.findElement(By.id("rightClickBtn"));
        WebElement clickBtn = driver.findElement(By.xpath("//button[text()='Click Me']"));
        actions.doubleClick(doubleClickBtn).perform();
        System.out.println("Double Clicked the button!");
        Thread.sleep(2000);
        actions.contextClick(rightClickBtn).perform();
        System.out.println("Right Clicked the button!");
        Thread.sleep(2000);
        actions.click(clickBtn).perform();
        System.out.println("Single Click performed!");
        Thread.sleep(2000);

    }
}
```

Chrome is being controlled by automated test software.

Buttons

Double Click Me

Right Click Me

Click Me

The screenshot shows a web browser window with a sidebar containing links: Radio Button, Web Tables, Buttons (selected), Links, Broken Links - Images, Upload and Download, and Dynamic Properties. On the right, the word "Buttons" is displayed above three blue rectangular buttons. The first button contains the text "Double Click Me", the second "Right Click Me", and the third "Click Me".

Chrome is being controlled by automated test software.

Buttons

Double Click Me

Right Click Me

Click Me

You have done a double click

You have done a right click

You have done a dynamic click

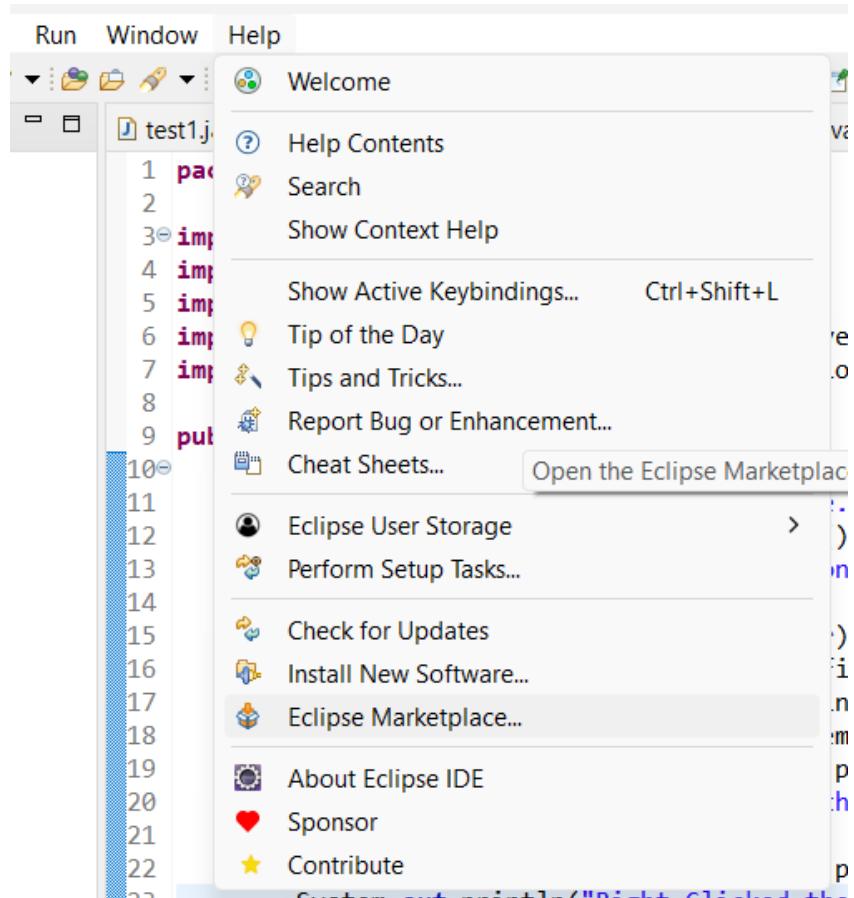
The screenshot shows the same web browser setup as the first one. The sidebar menu is identical. On the right, the word "Buttons" is displayed above the three blue buttons. Below the buttons, three lines of text appear: "You have done a double click", "You have done a right click", and "You have done a dynamic click".

Practical No. 13

Installation of TestNG , running TestNG and TestNG annotations

Installation of TestNG

Create a new project in Eclipse → Help → Eclipse Marketplace



Search for TestNG and then install it

Eclipse Marketplace

Select solutions to install. Press Install Now to proceed with installation.
Press the "more info" link to learn more about a solution.

Search Recent Popular Favorites Installed Research at the Eclipse

Find: All Markets All Categories Go

TestNG for Eclipse

This plug-in lets you run your TestNG tests from Eclipse. You can run suites, groups or individual methods. Errors are reported in a separate tab that lets you... [more info](#)

by [TestNG Team](#), Apache 2.0
[testng junit testing unit integration functional selenium](#)

★ 788 Installs: 2.35M (14,796 last month) [Install](#)

Trust Authorities

Do you trust content originating from the following authorities? Installing content involves performing actions that alter the installation's configuration and may potentially be used for malicious purposes.

Authority / Update Site	Units	Secured
> <input checked="" type="checkbox"/> https://testng.org	16	✓

Remember selected authorities Always trust all authorities Select All Deselect All Expand All Collapse All

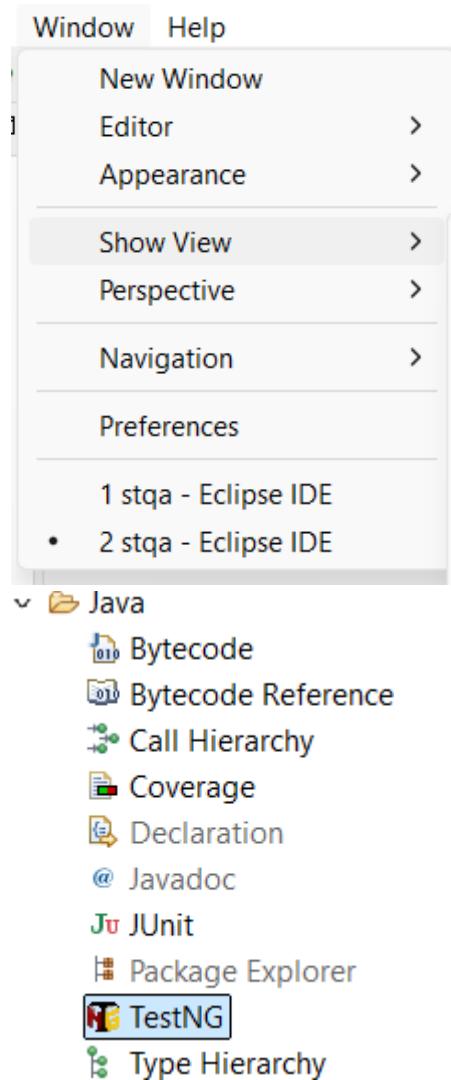
✓ [testing.org](#) R12; Let's Encrypt

Details... Export...

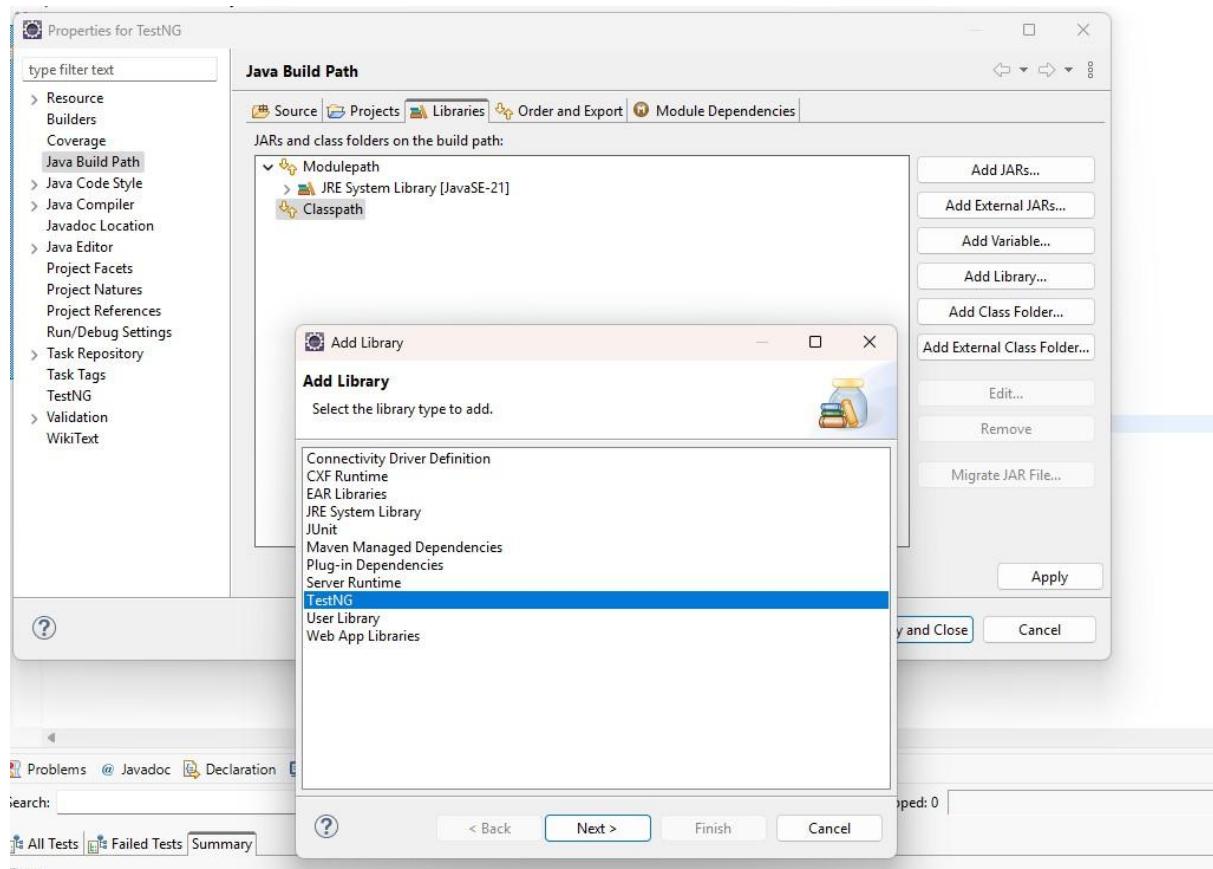
Id	Version
com.beust.jcommander	1.83.0
com.beust.jcommander.source	1.83.0
org.testng	7.11.0.r202503091654
org.testng.eclipse	7.11.0.202503091801
org.testng.eclipse.feature.group	7.11.0.202503091801
org.testng.eclipse.feature.jar	7.11.0.202503091801
org.testng.eclipse.maven	7.11.0.202503091801
org.testng.eclipse.maven.feature.feature....	7.11.0.202503091801
org.testng.eclipse.maven.feature.feature.jar	7.11.0.202503091801
org.testng.p2.feature.feature.group	7.11.0.r202503091654
org.testng.p2.feature.feature.jar	7.11.0.r202503091654

Details... ? Trust Selected Cancel

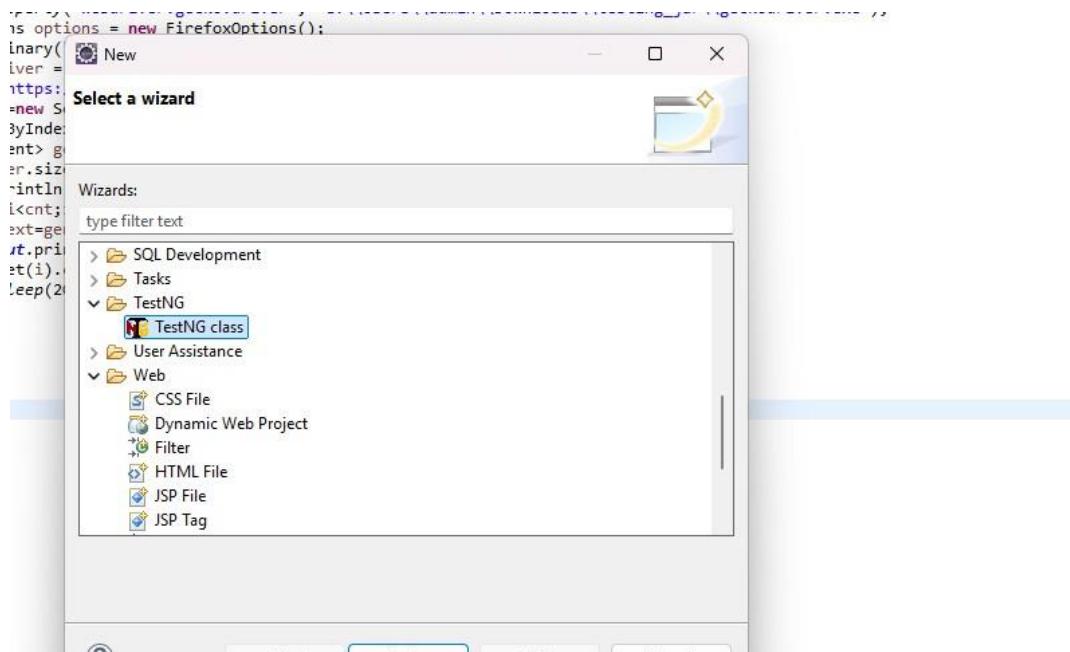
The eclipse IDE will restart
Click on windows → show view → java → TestNG

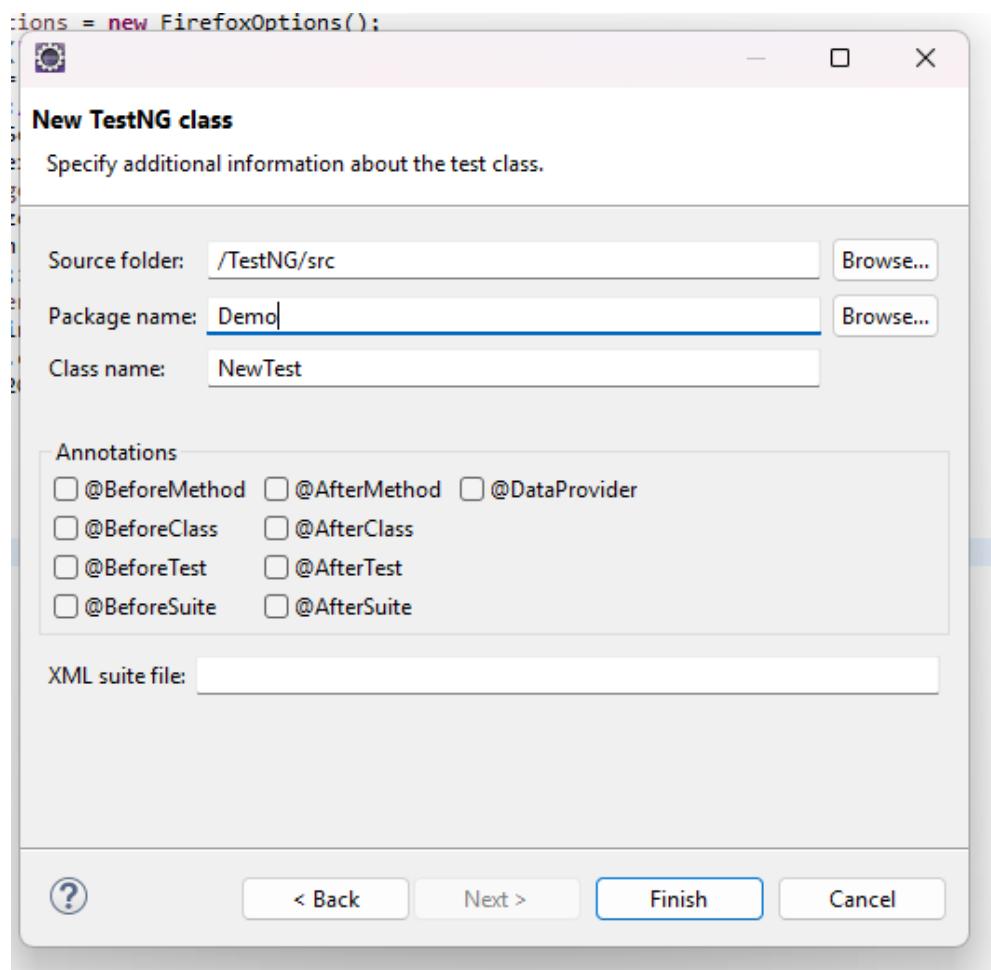


Click on Build Path → Configure Build Path → In classpath, click add Library → Select TestNG → Also add the required JAR files



Click on Src → New → Other → TestNG Class





```
package Demo;
import org.testng.annotations.Test;
import org.openqa.selenium.By;
import org.openqa.selenium.Keys;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class NewTest {
    public String baseUrl = "https://www.google.com/";
    String driverPath = "C:\\\\Users\\\\admin\\\\Downloads\\\\testing_jar\\\\chromedriver-win32\\\\chromedriver.exe";

    public WebDriver driver;

    @Test
    public void f() {
        System.setProperty("webdriver.chrome.driver", driverPath);
        driver = new ChromeDriver();
        driver.get(baseUrl);

        driver.findElement(By.name("q")).sendKeys("DES's NMITD", Keys.ENTER);
        Thread.sleep(2000);
    }
}
```

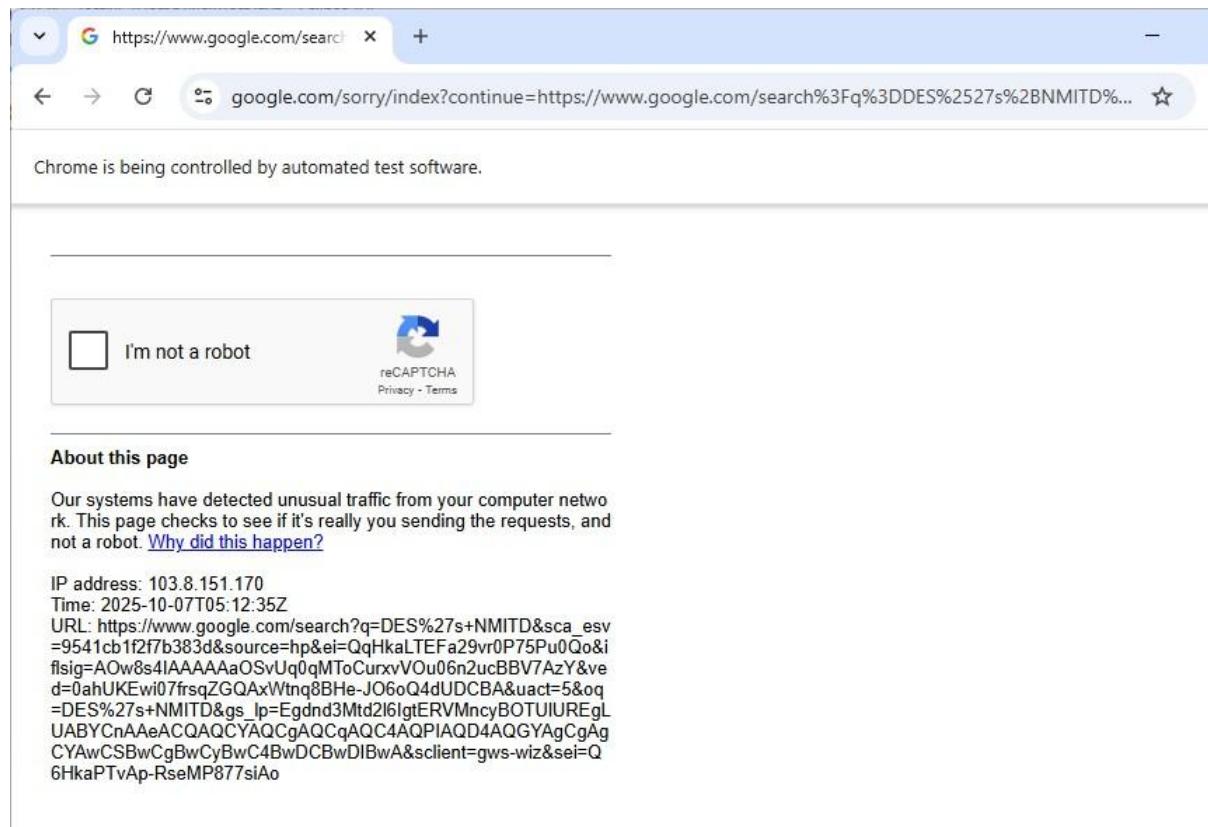
```
driver.quit();

}

=====

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

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



Practical No. 14

Implementation of Data Driven Framework

```
package Demo;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.firefox.FirefoxOptions;
import org.testng.annotations.DataProvider;
import org.testng.annotations.Test;

public class datdriven {

    @Test(dataProvider = "loginData")
    public void loginTest(String username, String password) {
        // Set path to GeckoDriver
        System.setProperty("webdriver.gecko.driver",
        "C:\\\\Users\\\\admin\\\\Downloads\\\\testing_jar\\\\geckodriver.exe");

        // Set path to Firefox binary (if it's not installed in the default location)
        FirefoxOptions options = new FirefoxOptions();
        options.setBinary("C:\\\\Program Files\\\\Mozilla Firefox\\\\firefox.exe"); // Make sure this
path is correct

        // Launch browser
        WebDriver driver = new FirefoxDriver(options);

        // Perform test steps
        driver.get("https://demo.guru99.com/test/newtours/");

        WebElement user = driver.findElement(By.name("userName"));
        user.sendKeys(username);

        WebElement passwd = driver.findElement(By.name("password"));
        passwd.sendKeys(password);

        WebElement submit_btn = driver.findElement(By.name("submit"));
        submit_btn.click();

        String expectedTitle = "Login: Mercury Tours";
        String actualTitle = driver.getTitle();
        System.out.println("Page Title is: " + actualTitle);

        if (actualTitle.equals(expectedTitle)) {
            System.out.println("Login Test Passed");
        } else {
    }
```

```
        System.out.println("Login Test Failed");
    }

    driver.quit() // Always close the browser after test
}

@DataProvider(name = "loginData")
public Object[][] getData() {
    return new Object[][] {
        {"mercury", "mercury"},
        {"tutorial", "tutorial"}
    };
}
}
```

```
http://www.automationtesting.in/B/coolsoft.html#provider-test
Page Title is: Login: Mercury Tours
Login Test Passed
Page Title is: Login: Mercury Tours
Login Test Passed
PASSED: Demo.datdriven.loginTest("tutorial", "tutorial")
PASSED: Demo.datdriven.loginTest("mercury", "mercury")

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

=====
Default suite
Total tests run: 2, Passes: 2, Failures: 0, Skips: 0
=====
```

demo.guru99.com/test/newtours/

GURU99 Demo Site

Zoho BugTracker

Selenium ▾ Insurance Project Agile Project Bank Project Security Pro

one cool summer ARUBA

Featured Destination ARUBA

This island is surrounded by coral reefs, offers guaranteed sunshine and is blessed with beautiful beaches. Luxury resorts have taken up residence along most of the beachfronts on the southern coast, but there are still undeveloped areas on the exposed northern coast, and much of the interior is inhabited by nothing more substantial than goats.

Specials

Atlanta to Las Vegas	\$398
Boston to San Francisco	\$513
Los Angeles to Chicago	\$168
New York to Chicago	\$198
Phoenix to San Francisco	\$213

TIP Always carry a travel first aid kit

SIGN-ON REGISTER SUPPORT CONTACT

Jul 6, 2017

Find A Flight

Registered users can sign-in here to find the lowest fare on participating airlines.

User Name: mercury

Password: *****

Submit

Destinations

Find detailed information about your destination.

Vacations

Read about our featured vacation destinations.

Register

Register here to join Mercury Tours!

Links

[Business Travel @ About.com](#)
[Salon Travel](#)

demo.guru99.com/test/newtours/login_sucess.php

GURU99 Demo Site

Unite Dev, IT, and business teams on one platform

Selenium ▾ Insurance Project Agile Project Bank Project Security Pro

one cool summer ARUBA

SIGN-OFF REGISTER SUPPORT CONTACT

Login Successfully

Thank you for Loggin.

© 2005, Mercury Interactive (v. 011003-1.01-058)

HTML VERSION

Implementation of Data Parametrization

```

package Demo;
import org.testng.annotations.Parameters;
import org.testng.annotations.Test;

public class dataparametrization {
    @Test
    @Parameters({"Reviewer_1", "Reviewer_2"})
    public void check_if_shortlisted(int marks_1,int marks_2)

    {

        float average = (marks_1 + marks_2)/2;

        System.out.println("The average achieved by the writer is " + average);

        if(average >= 4){

            System.out.println("The Writer is shortlisted");

        } else {

            System.out.println("The Writer is not shortlisted");

        }
    }
}

```

Testing.xml

```

<suite name = "dataparametrization">

<test name="dataparametrization">

<parameter name="Reviewer_1" value="2"/>

<parameter name="Reviewer_2" value="3"/>

<classes>

<class name="Demo.dataparametrization" />

</classes>

```

```
</test>
```

```
</suite>
```

```
Problems @ Javadoc Declaration Console X Results of running suite i Install Java 25 Su
terminated> TestNG_testng.xml [TestNG] C:\Users\admin\Desktop\eclipse\plugins\org.eclipse.justj.openjdk.hot
SLF4J(W): Defaulting to no-operation (NOP) logger implementation
SLF4J(W): See https://www.slf4j.org/codes.html#noProviders for further details.
The average achieved by the writer is 2.0
The Writer is not shortlisted

=====
@dataparametrization
Total tests run: 1, Passes: 1, Failures: 0, Skips: 0
=====
```

Implementation of Cross Browser Testing

package Demo;

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.firefox.FirefoxOptions;
import org.testng.annotations.BeforeTest;
import org.testng.annotations.Parameters;
import org.testng.annotations.Test;

public class crossbrowser {
    WebDriver driver;

    @BeforeTest
    @Parameters("browser")
    public void setup(String browser) throws Exception {
        if (browser.equalsIgnoreCase("firefox")) {

            System.setProperty("webdriver.gecko.driver",
                    "C:\\\\Users\\\\admin\\\\Downloads\\\\testing_jar\\\\geckodriver.exe");

            FirefoxOptions options = new FirefoxOptions();
            options.setBinary("C:\\\\Program Files\\\\Mozilla Firefox\\\\firefox.exe");

            driver = new FirefoxDriver(options);

        } else if (browser.equalsIgnoreCase("chrome")) {
            System.setProperty("webdriver.chrome.driver",
                    "C:\\\\Users\\\\admin\\\\Downloads\\\\testing_jar\\\\chromedriver-win32\\\\chromedriver.exe");
            driver = new ChromeDriver();
        }
    }
}
```

```
} else {
    throw new Exception("Browser is not correct");
}
}

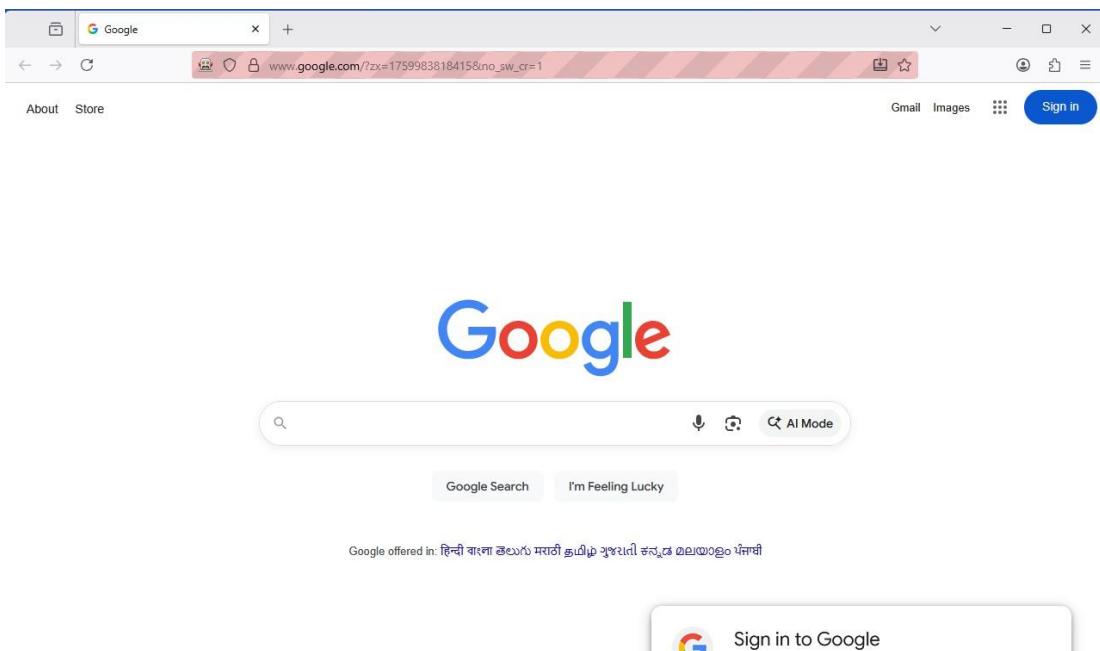
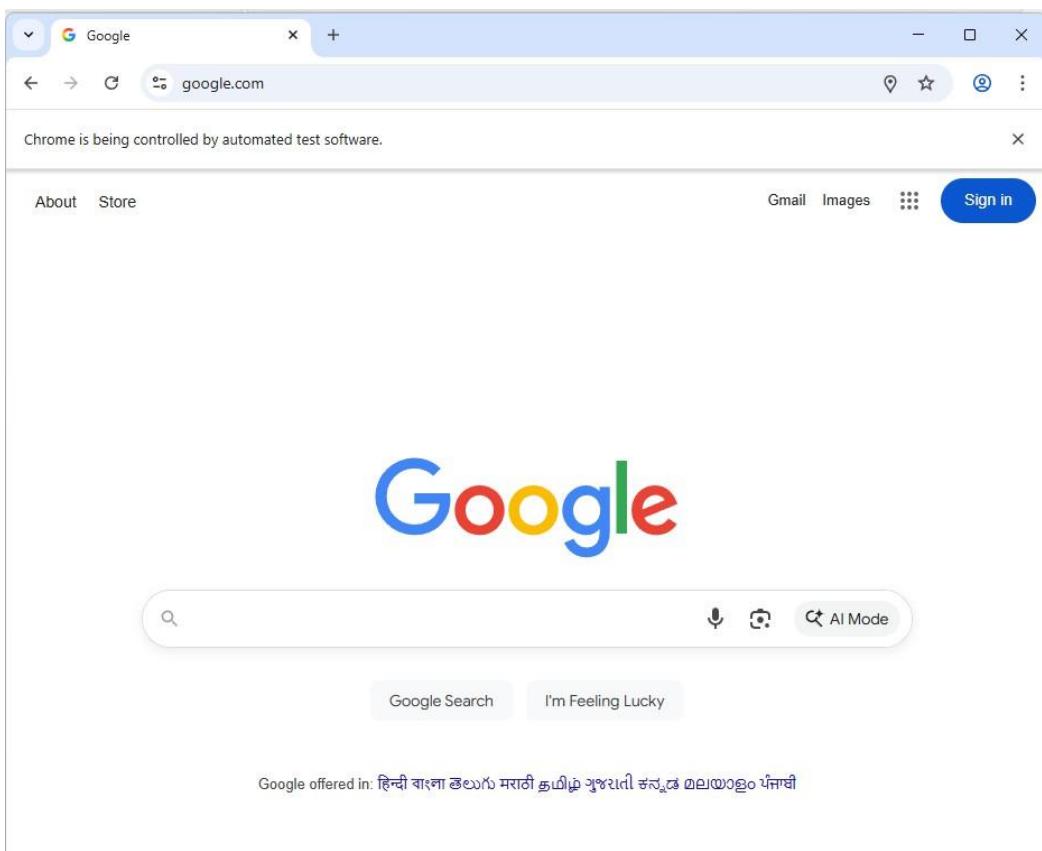
@Test
public void PrintTitle() {
    driver.get("https://www.google.com/");
    String actualTitle = driver.getTitle();
    System.out.println("The Title is " + actualTitle);
}
}
```

Cb.xml

```
<suite name="CrossBrowserSuite" parallel="tests" thread-count="2">
<test name="ChromeTest">
    <parameter name="browser" value="chrome"/>
    <classes>
        <class name="Demo.crossbrowser"/>
    </classes>
</test>

<test name="FirefoxTest">
    <parameter name="browser" value="firefox"/>
    <classes>
        <class name="Demo.crossbrowser"/>
    </classes>
</test>
</suite>
```

```
The Title is Google
The Title is Google
=====
CrossBrowserSuite
Total tests run: 2, Passes: 2, Failures: 0, Skips: 0
=====
```



Practical no. 15

Demonstrate Validation testing

ValidationTesting.java

package Demo;

```
import org.openqa.selenium.*;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.Assert;
import org.testng.annotations.*;

public class ValidationTesting {

    WebDriver driver;

    @BeforeMethod
    public void setup() {
        System.setProperty("webdriver.chrome.driver",
                           "C:\\\\Users\\\\admin\\\\Downloads\\\\testing_jar\\\\chromedriver-
win32\\\\chromedriver.exe");
        driver = new ChromeDriver();
        driver.get("https://the-internet.herokuapp.com/login");
    }

    @Test
    public void validLogin() {
        driver.findElement(By.id("username")).sendKeys("tomsmith");
        driver.findElement(By.id("password")).sendKeys("SuperSecretPassword!");
        driver.findElement(By.cssSelector("button[type='submit']")).click();

        String message = driver.findElement(By.id("flash")).getText();
        Assert.assertTrue(message.contains("You logged into a secure area!"));
        System.out.println("Valid Login Passed");
    }

    @Test
    public void invalidLogin() {
        driver.findElement(By.id("username")).sendKeys("wrong");
        driver.findElement(By.id("password")).sendKeys("wrongpass");
        driver.findElement(By.cssSelector("button[type='submit']")).click();

        String message = driver.findElement(By.id("flash")).getText();
        Assert.assertTrue(message.contains("Your username is invalid!"));
        System.out.println("Invalid Login Passed");
    }
}
```

```
@AfterMethod  
    public void close() {  
        driver.quit();  
    }  
}
```

```
Validationtesting.xml  
<suite name="ValidationSuite">  
    <test name="ValidationTest">  
        <classes>  
            <class name="Demo.ValidationTesting"/>  
        </classes>  
    </test>  
</suite>
```

```
[terminated> testing_validationtesting.xml [testNG] C:\Users\lucky\p2\pool\plugins\org.eclipse.jdt.openjdt\ntspot\re.full.wms2x80_04_23.0.0\20240919-1700\re\bin\javaw.exe (Oct 24, 2025, 10:59:27 AM - 10:59:38 AM) [pid: 8150]  
[RemoteTestNG] detected TestNG version 7.11.0  
SLF4J(W): No SLF4J providers were found.  
SLF4J(W): Defaulting to no-operation (NOP) logger implementation  
SLF4J(W): See https://www.slf4j.org/codes.html#noProviders for further details.  
Oct 24, 2025 10:59:29 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch  
WARNING: Unable to find an exact match for CDP version 141, returning the closest version; found: 139; Please update to a  
 Invalid Login Passed  
Oct 24, 2025 10:59:34 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch  
WARNING: Unable to find an exact match for CDP version 141, returning the closest version; found: 139; Please update to a  
 Valid Login Passed
```

```
=====  
ValidationSuite  
Total tests run: 2, Passes: 2, Failures: 0, Skips: 0  
=====
```

