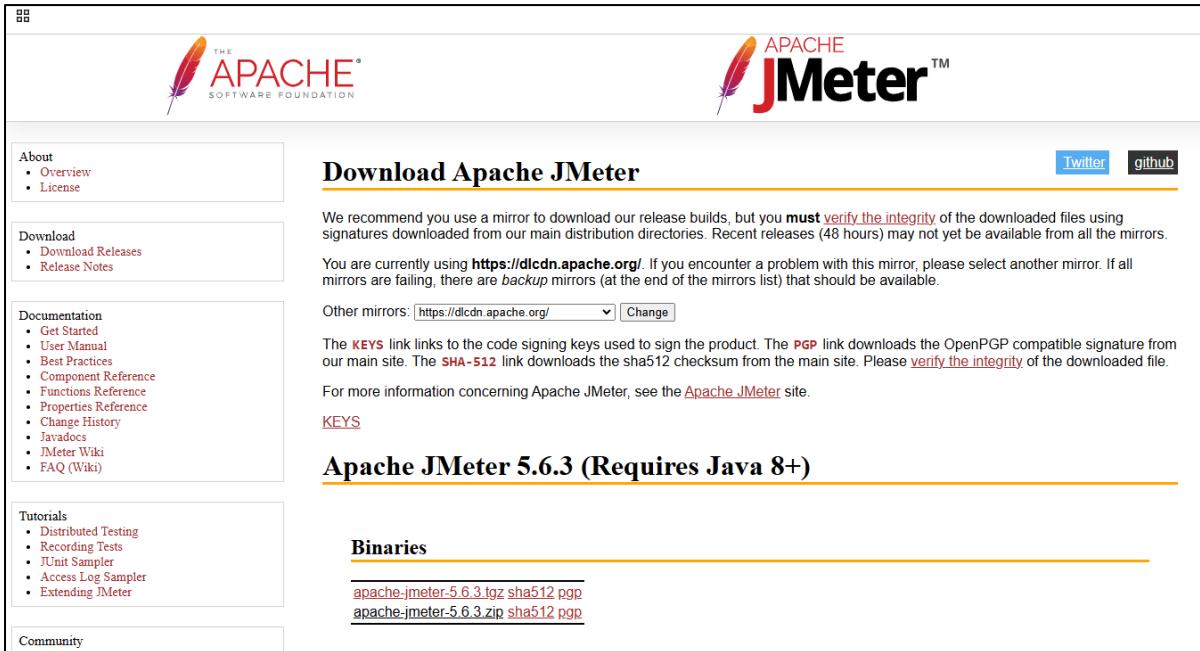


PRACTICAL 13

AIM : Load Testing using JMeter.

1. Install JMeter in your system.



The screenshot shows the Apache JMeter download page. It features the Apache Software Foundation logo and the JMeter logo. The page is divided into sections: About, Download, Documentation, Tutorials, and Community. The 'Download' section is highlighted, showing the 'Download Apache JMeter' heading. Below this, there is a recommendation to use a mirror and a list of mirrors. The 'Documentation' section lists various resources like Get Started, User Manual, Best Practices, etc. The 'Tutorials' section lists Distributed Testing, Recording Tests, JUnit Sampler, etc. The 'Community' section is also visible.

Download Apache JMeter

We recommend you use a mirror to download our release builds, but you **must verify the integrity** of the downloaded files using signatures downloaded from our main distribution directories. Recent releases (48 hours) may not yet be available from all the mirrors.

You are currently using <https://d1cdn.apache.org/>. If you encounter a problem with this mirror, please select another mirror. If all mirrors are failing, there are [backup mirrors](#) (at the end of the mirrors list) that should be available.

Other mirrors: <https://d1cdn.apache.org/> [Change](#)

The **KEYS** link links to the code signing keys used to sign the product. The **PGP** link downloads the OpenPGP compatible signature from our main site. The **SHA-512** link downloads the sha512 checksum from the main site. Please [verify the integrity](#) of the downloaded file.

For more information concerning Apache JMeter, see the [Apache JMeter](#) site.

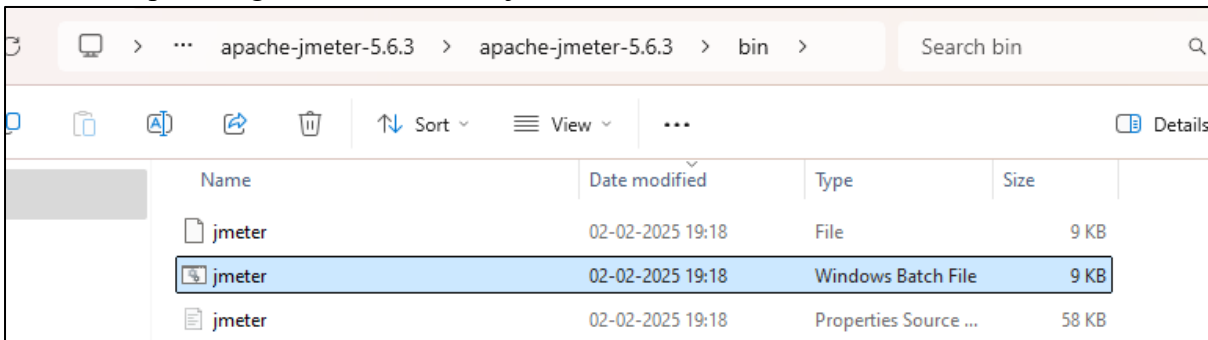
[KEYS](#)

Apache JMeter 5.6.3 (Requires Java 8+)

Binaries

[apache-jmeter-5.6.3.tgz sha512 pgp](#)
[apache-jmeter-5.6.3.zip sha512 pgp](#)

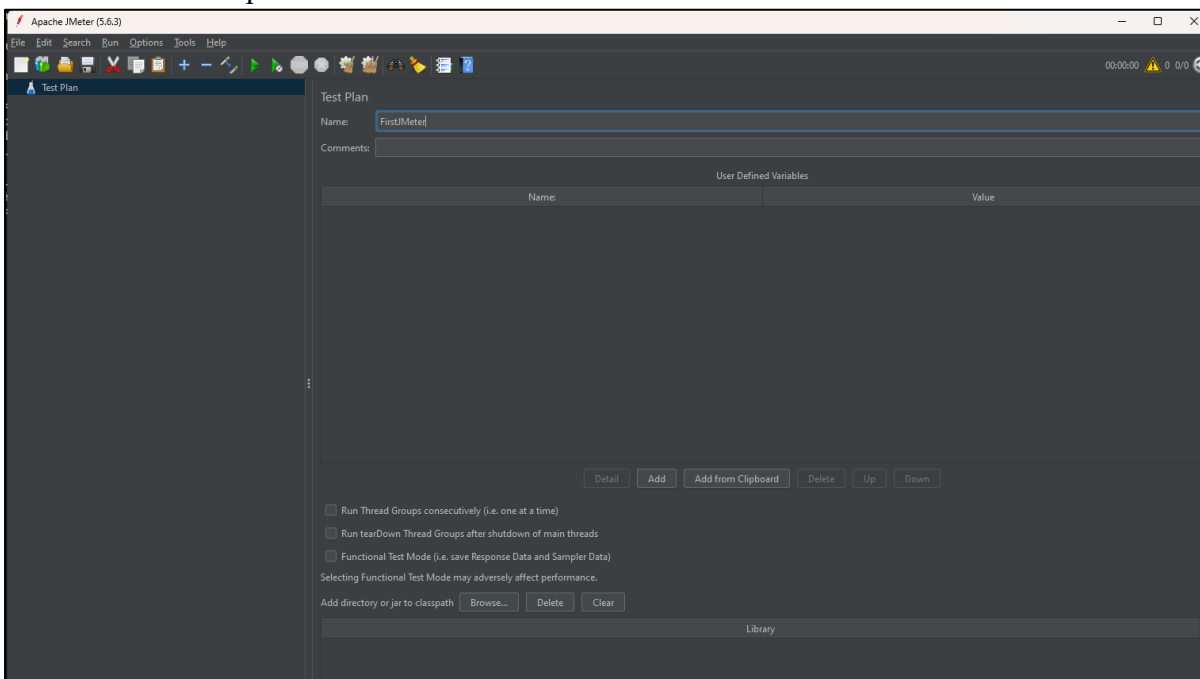
2.Extract zip file > go to bin > click on jmeter batch file.



The screenshot shows a Windows file explorer window. The address bar shows the path: > > > apache-jmeter-5.6.3 > apache-jmeter-5.6.3 > bin >. The search bar is empty. The file list shows three files:

Name	Date modified	Type	Size
jmeter	02-02-2025 19:18	File	9 KB
jmeter	02-02-2025 19:18	Windows Batch File	9 KB
jmeter	02-02-2025 19:18	Properties Source ...	58 KB

3. Rename the test plan as the FirstJMeter.



The screenshot shows the Apache JMeter (5.6.3) interface. The 'Test Plan' is selected in the left sidebar. The 'Test Plan' name is 'FirstJMeter'. The 'Comments' field is empty. The 'User Defined Variables' table is empty. The 'Run' button is highlighted. The 'Run' button is highlighted. The 'Run' button is highlighted.

Test Plan

Name: FirstJMeter

Comments:

User Defined Variables

Name	Value
------	-------

Run Thread Groups consecutively (i.e. one at a time)

Run tearDown Thread Groups after shutdown of main threads

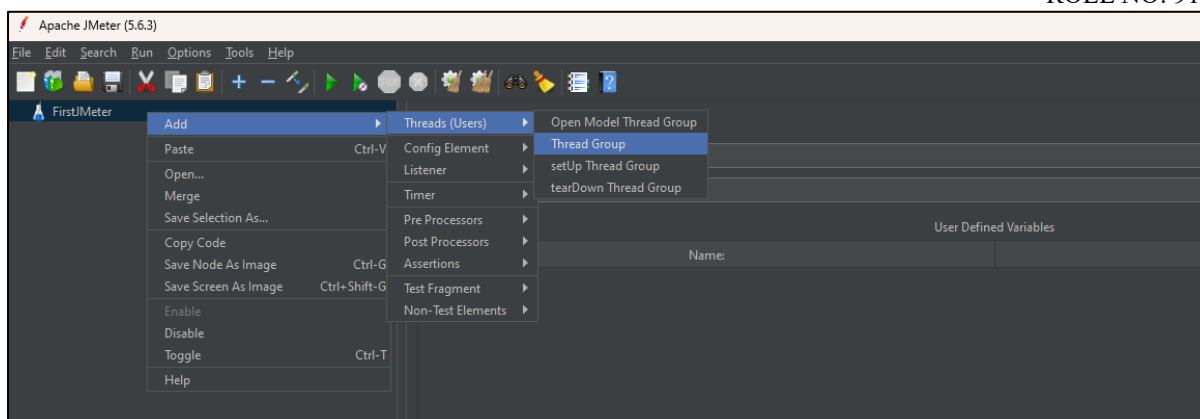
Functional Test Mode (i.e. save Response Data and Sampler Data)

Selecting Functional Test Mode may adversely affect performance.

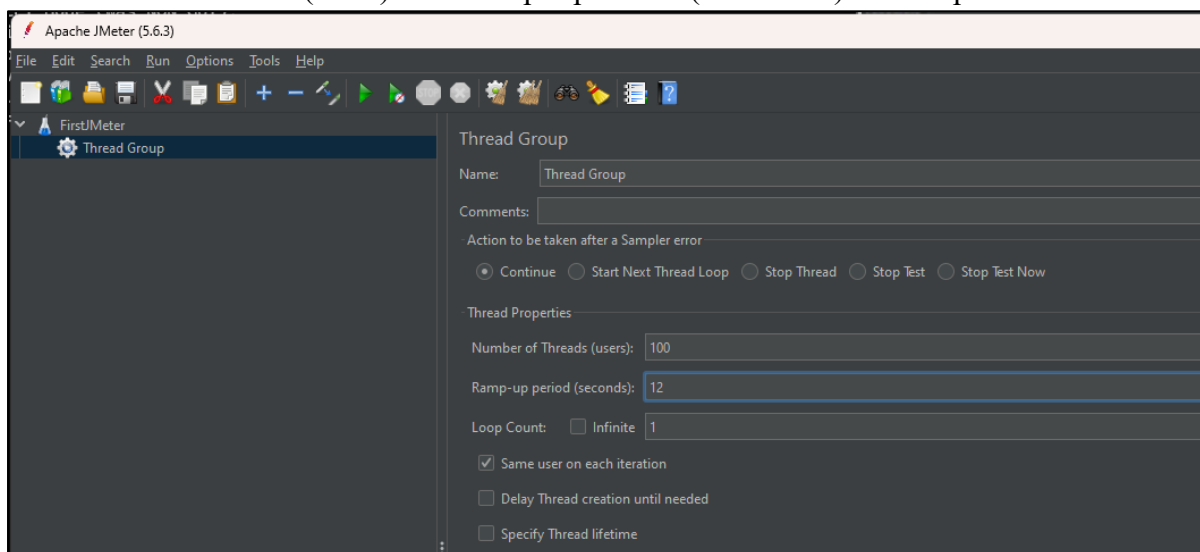
Add directory or jar to classpath [Browse...](#) [Delete](#) [Clear](#)

Library

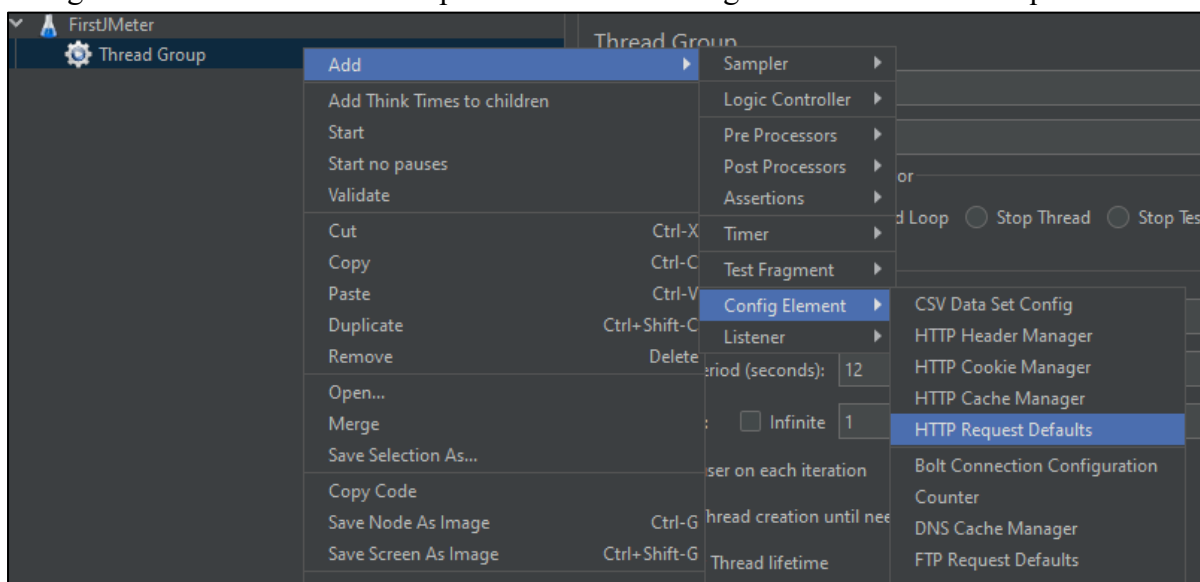
4. Right-click on the test plan. Go to add -> Threads (Users) -> Thread Group



5. click on Thread Group, there are three things on the screen that are important concerning the load test:
The number of threads (users): 100.Ramp-Up Period (in seconds): 12.Loop Count: 1



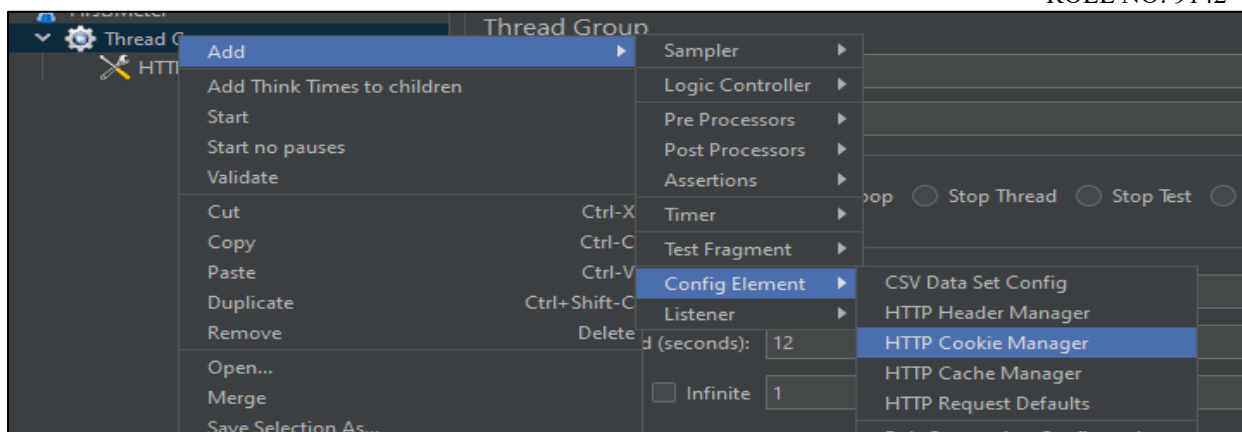
6. Right-click on the Thread Group. Go to Add -> Config Element -> HTTP Request Defaults.



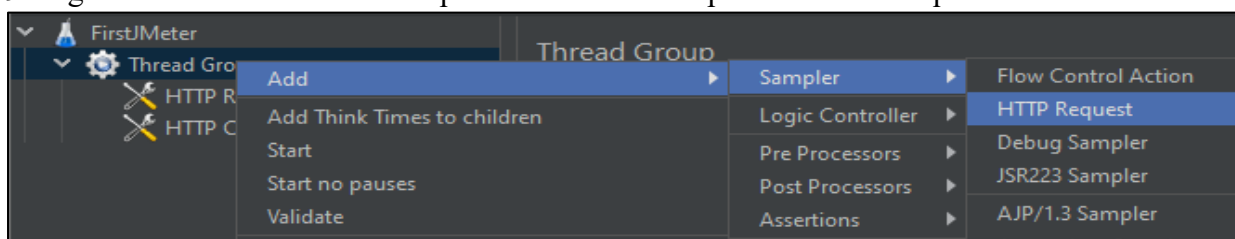
7.Name the server name or IP (www.simplilearn.com).



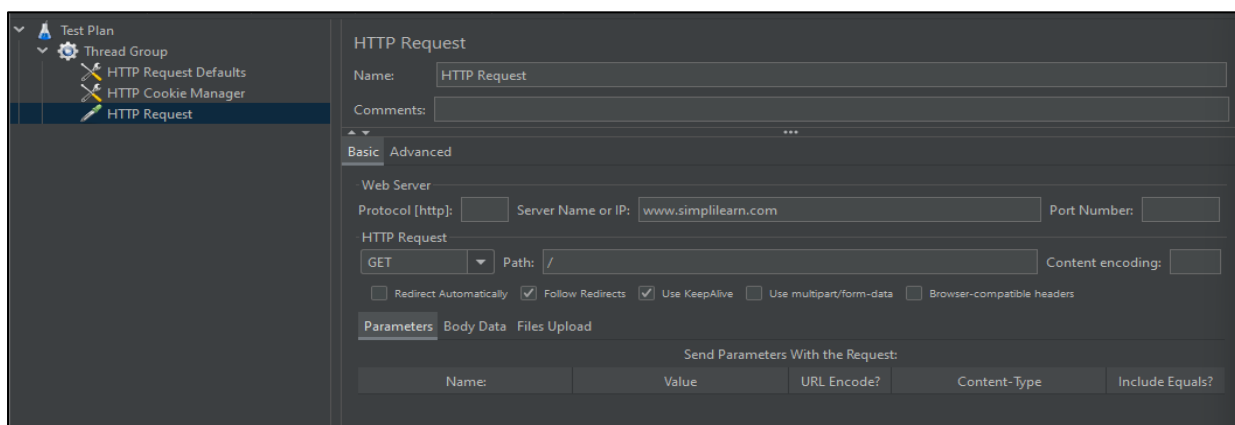
8. Right-click on the Thread Group. Go to Add -> Config Element -> HTTP Cookie Manager



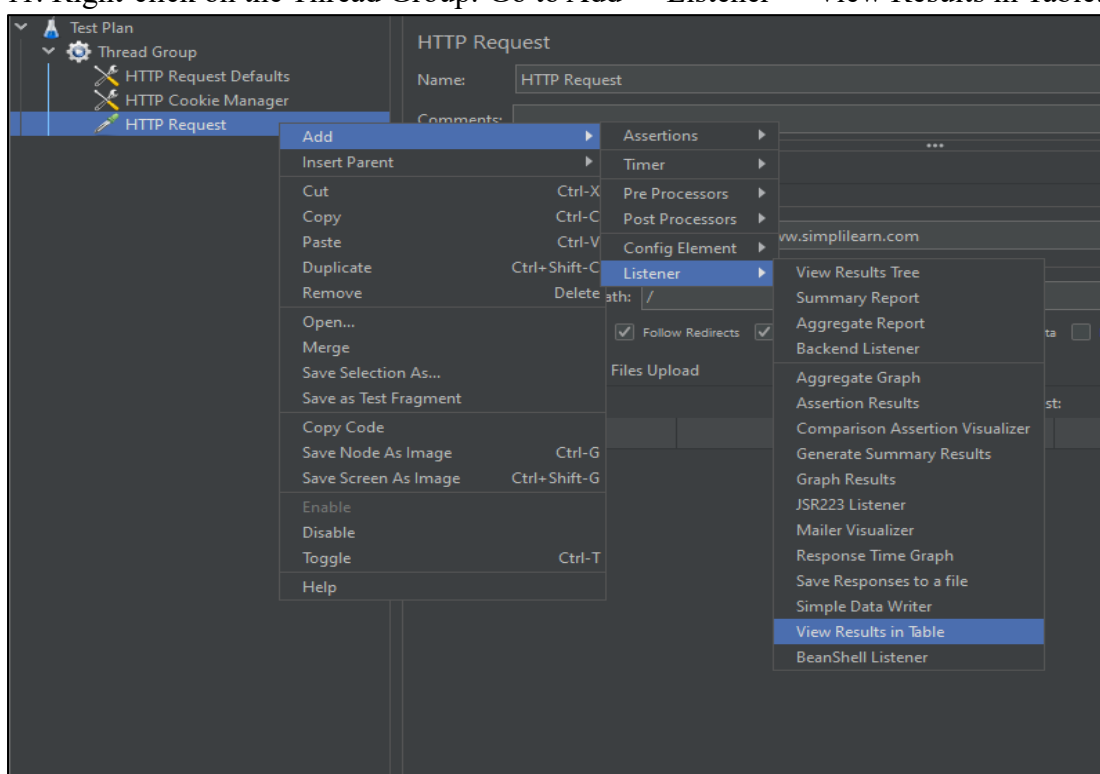
9. Right-click on the Thread Group. Go to Add -> Sampler -> HTTP Request.



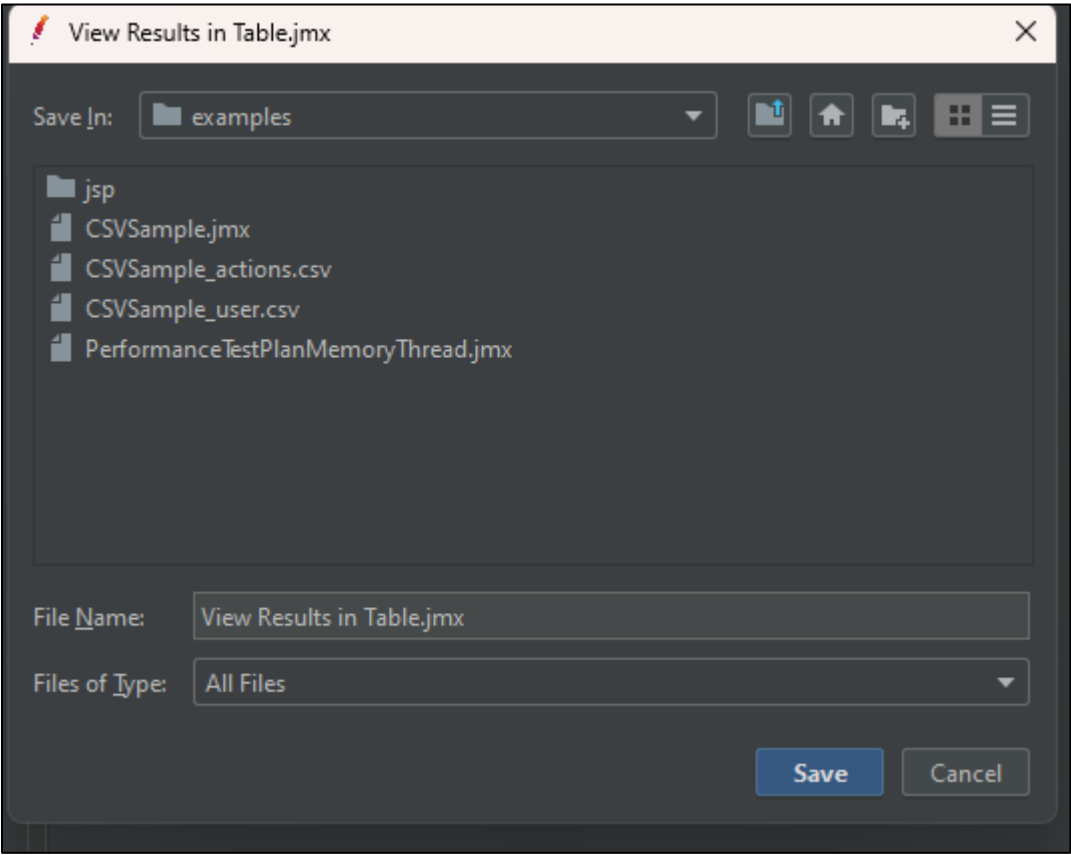
10. Path set it to be "/". Fill Server Name or IP.



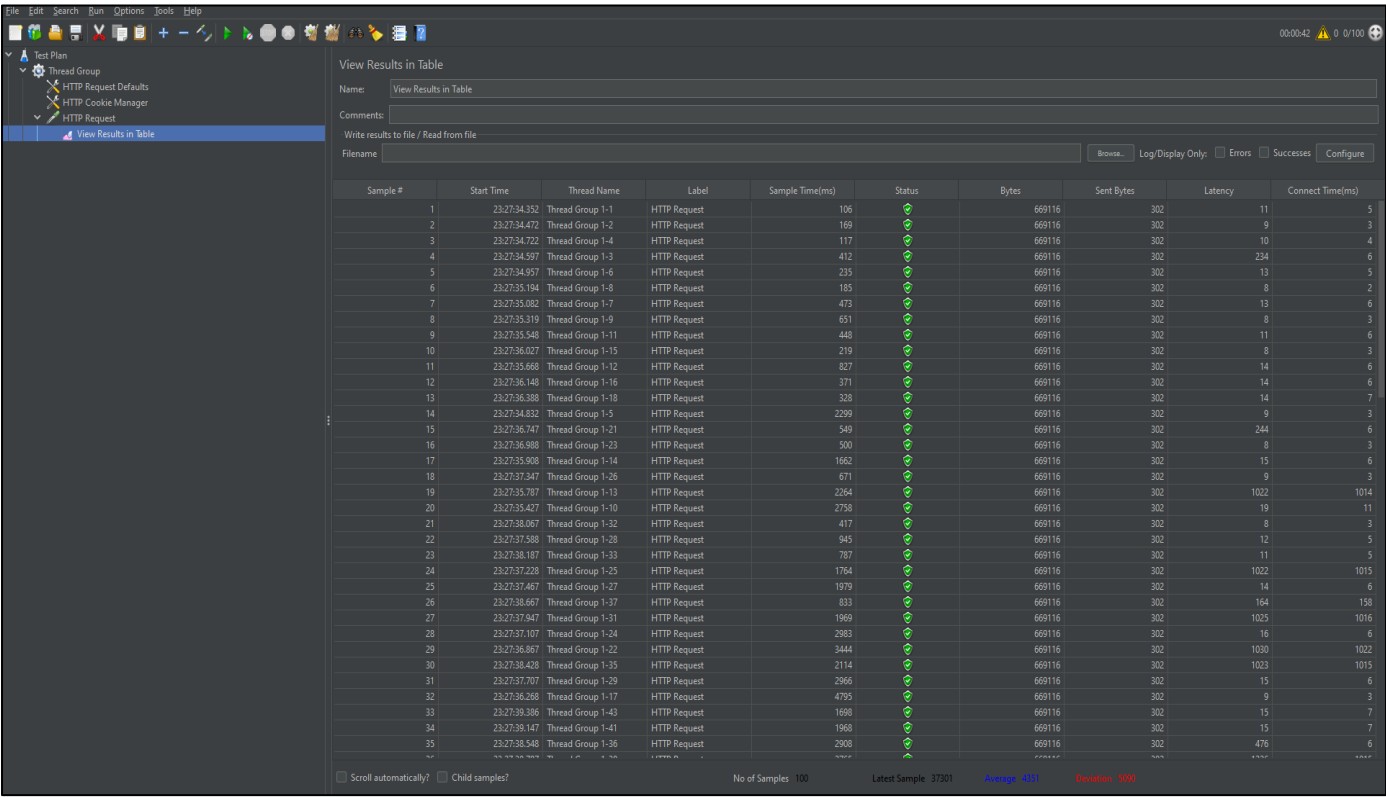
11. Right-click on the Thread Group. Go to Add -> Listener -> View Results in Table.



12. Save the file.



13. Run the Basic Test Plan. Click on View Results in Table. Click on the Run button (green start button).



PRACTICAL 11

AIM: Write and test a program to select the number of students who have scored more than 60 in any one subject (or all subjects).

CODE:

ExcelTest.java

```
package pract11;
import jxl.Sheet;
import jxl.Workbook;
import jxl.read.biff.BiffException;
import org.testng.annotations.DataProvider;
import org.testng.annotations.Test;
import java.io.File;
import java.io.IOException;

public class ExcelTest {
    @DataProvider(name = "studentData")
    public Object[][] readExcelData() throws IOException, BiffException {
        String excelFilePath = "C:\\Users\\student\\Downloads\\Book1.xls"; // Use .xls extension for JXL
        Workbook workbook = Workbook.getWorkbook(new File(excelFilePath));
        Sheet sheet = workbook.getSheet(0);
        int rowCount = sheet.getRows();
        int colCount = sheet.getColumns();
        Object[][] data = new Object[rowCount - 1][colCount]; // Subtracting 1 for header row
        for (int i = 1; i < rowCount; i++) {
            for (int j = 0; j < colCount; j++) {
                data[i - 1][j] = sheet.getCell(j, i).getContents();
            }
        }
        workbook.close();
        return data;
    }

    @Test(dataProvider = "studentData")
    public void testStudentScores(String rollNo, String name, String subject1, String subject2, String
subject3,String total) {
        int scoreSubject1 = Integer.parseInt(subject1);
        int scoreSubject2 = Integer.parseInt(subject2);
        int scoreSubject3 = Integer.parseInt(subject3);
        boolean hasScoredMoreThan60 = (scoreSubject1 > 60) || (scoreSubject2 > 60) || (scoreSubject3 > 60);
        if (hasScoredMoreThan60) {
            System.out.println("Student with Roll No: " + rollNo + " and Name: " + name
                + " has scored more than 60 in any subject.");
        }
    }
}
```

}

OUTPUT:

```
@ Javadoc Declaration Console X Progress Results of running class pract11
<terminated> pract11 [TestNG] C:\Users\Student\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_20.0.1.v20230
[RemoteTestNG] detected TestNG version 7.10.1
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.
Student with Roll No: 4 and Name: manasvi has scored more than 60 in any subject.
Student with Roll No: 6 and Name: rishi has scored more than 60 in any subject.
Student with Roll No: 8 and Name: yash has scored more than 60 in any subject.
PASSED: pract11.pract11.testStudentScores("7", "anshul", "42", "43", "41")
PASSED: pract11.pract11.testStudentScores("8", "yash", "62", "47", "42")
PASSED: pract11.pract11.testStudentScores("4", "manasvi", "67", "23", "46")
PASSED: pract11.pract11.testStudentScores("3", "dipti", "29", "24", "43")
PASSED: pract11.pract11.testStudentScores("10", "chirag", "42", "50", "42")
PASSED: pract11.pract11.testStudentScores("1", "piyush", "40", "32", "50")
PASSED: pract11.pract11.testStudentScores("2", "prakash", "33", "50", "44")
PASSED: pract11.pract11.testStudentScores("5", "disha", "38", "10", "20")
PASSED: pract11.pract11.testStudentScores("6", "rishi", "70", "44", "45")
PASSED: pract11.pract11.testStudentScores("9", "abhinay", "44", "49", "42")

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

=====
Default suite
Total tests run: 10, Passes: 10, Failures: 0, Skips: 0
=====
```

	A	B	C	D	E	F	G
	Roll No	Name	Subject1	Subject2	Subject3	Total	
	1	piyush	40	32	50	122	
	2	prakash	33	50	44	127	
	3	dipti	29	24	43	96	
	4	manasvi	67	23	46	136	
	5	disha	38	10	20	68	
	6	rishi	70	44	45	159	
	7	anshul	42	43	41	126	
	8	yash	62	47	42	151	
0	9	abhinay	44	49	42	135	
1	10	chirag	42	50	42	134	
2							

PRACTICAL 8

AIM: Perform pareto chart for given data.




STEPS:

1. Static Pareto Chart :

1) Data to be used :

	A	B
1		
2	DATA TO BE USED	
3	complaint type	no of complaints
4	delay in registration	43
5	room cleaning	34
6	food quality	17
7	delay in room service	9
8	staff attitude	6
9	room interiors	6
10	air conditioning	3
11	concierge	2
12	mini bar	2

2) Apply the formula for cumulative percent as below for first row and then drag the cell to get cumulative percent for all the rows : - $=\text{SUM}(\$B\$2:B2)/\text{SUM}(\$B\$2:\$B\$10)$

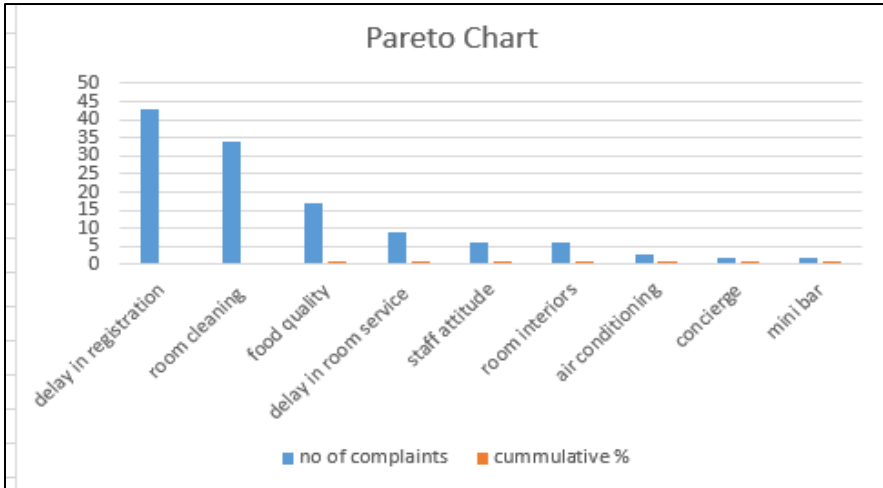
C2	:				=SUM(\$B\$2:B2)/SUM(\$B\$2:\$B\$10)
	A	B	C	D	
1	complaint type	no of complaints	cummulative %		
2	delay in registration	43	0.352459016		
3	room cleaning	34	0.631147541		
4	food quality	17	0.770491803		
5	delay in room service	9	0.844262295		
6	staff attitude	6	0.893442623		
7	room interiors	6	0.942622951		
8	air conditioning	3	0.967213115		
9	concierge	2	0.983606557		
10	mini bar	2	1		

3) Convert cumulative % column to percent type :

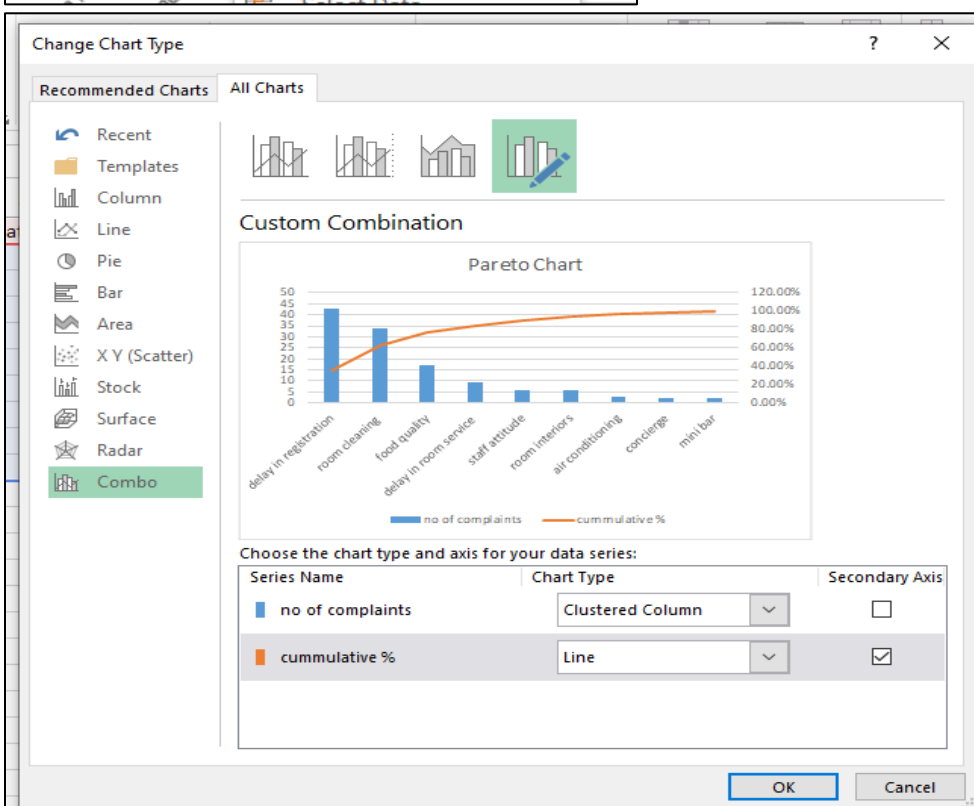
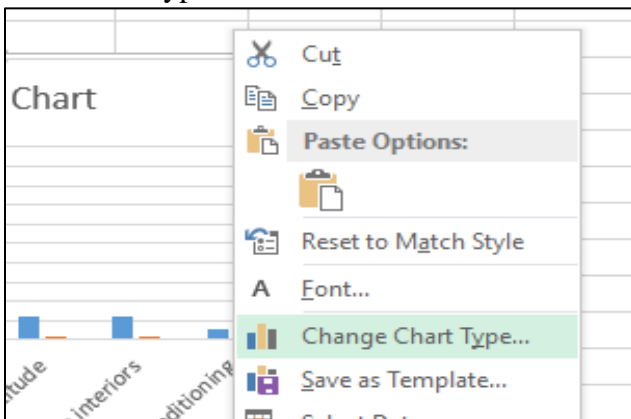
Right Click on cumulative % -> Format Cells... -> Select Percentage -> OK

C4	✕	✓	<i>fx</i>	=SUM(\$B\$4:B4)/SUM(\$B\$4:\$B\$12)
	A	B	C	D
1				
2	DATA TO BE USED			
3	complaint type	no of complaints	cummulative %	
4	delay in registration	43	35.25%	
5	room cleaning	34	63.11%	
6	food quality	17	77.05%	
7	delay in room service	9	84.43%	
8	staff attitude	6	89.34%	
9	room interiors	6	94.26%	
10	air conditioning	3	96.72%	
11	concierge	2	98.36%	
12	mini bar	2	100.00%	

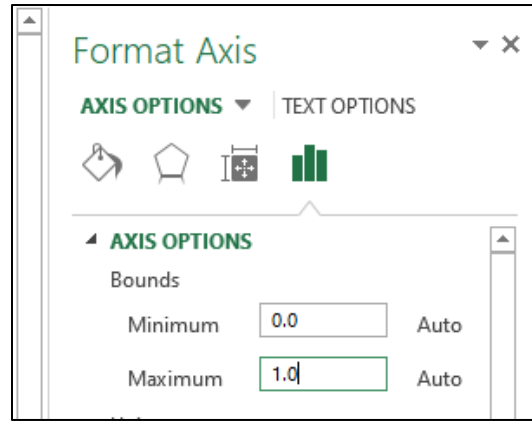
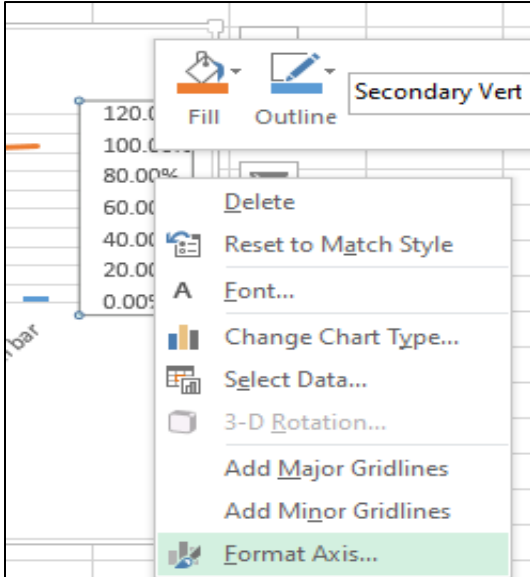
4) To create Bar Graph: Select the entire data -> Insert -> Insert Column Chart -> Clustered Column



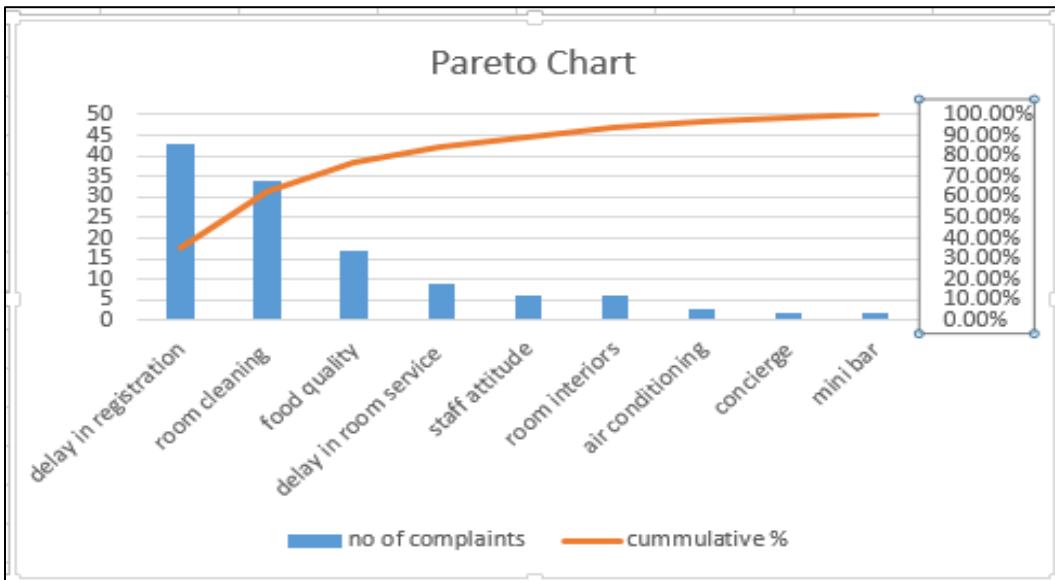
5) To create Static Pareto Chart : Right Click on chart -> Change Chart Type...-> Combo -> For cumulative % , select chart type as Line and tick the checkbox in Secondary Axis -> OK



6) To change the legends range: Right click on the cumulative legend -> Format Axis -> set Maximum as 1.0



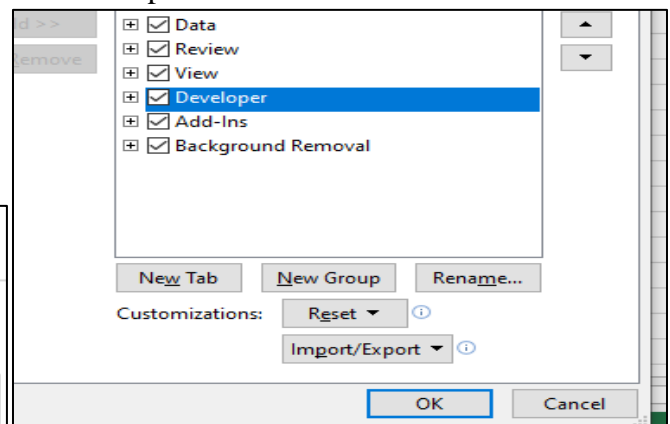
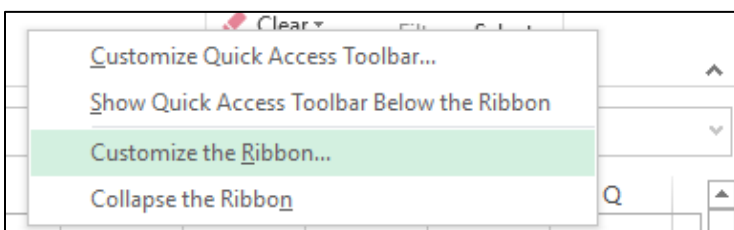
Static Pareto Chart :



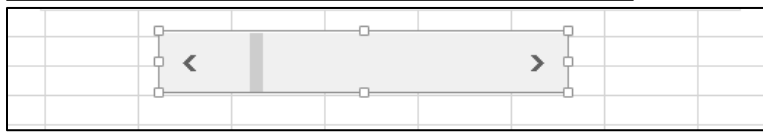
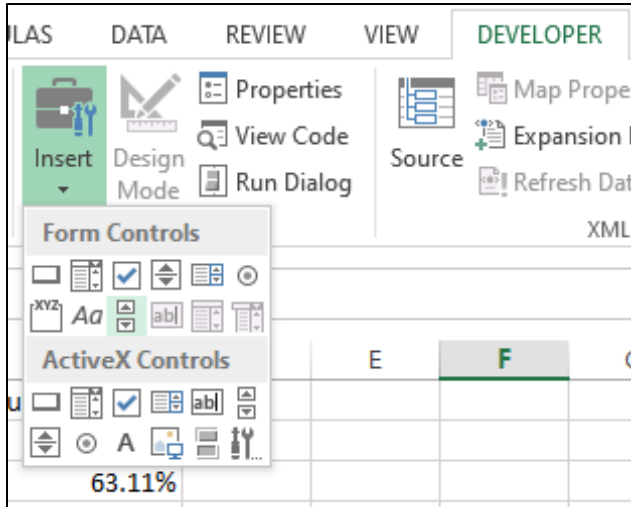
2. Dynamic Pareto Chart :

1) Add Developer option :

Right click on ToolBar -> Customize the Ribbon... -> Select Developer -> OK

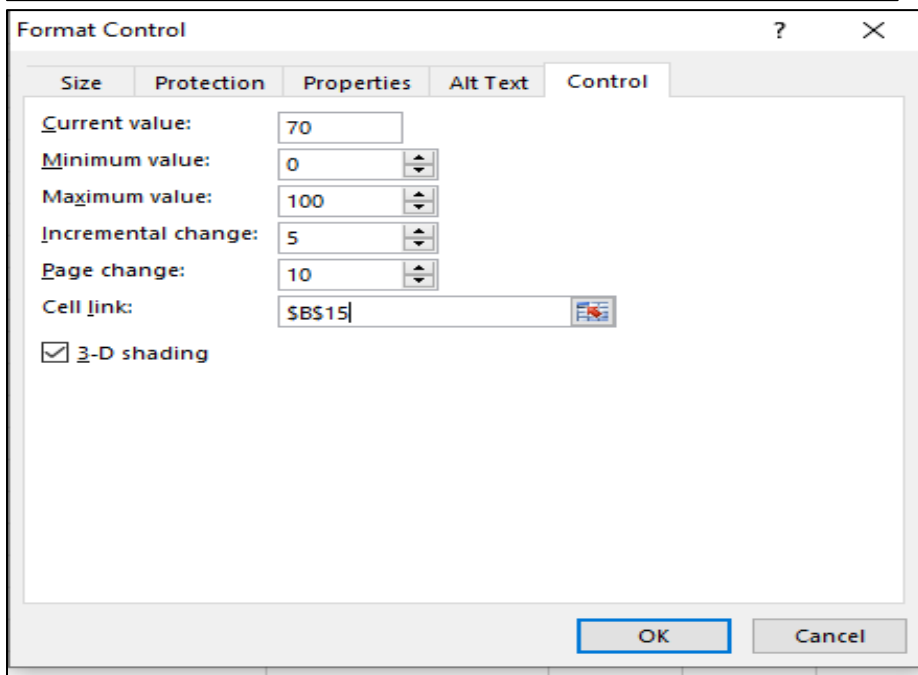
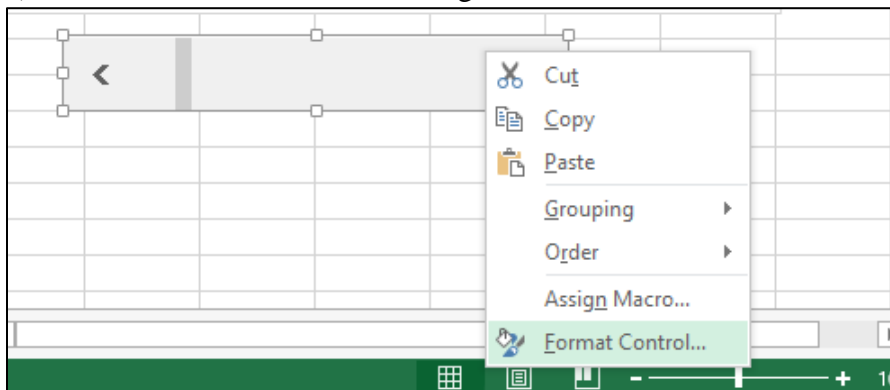


2) Go to Developer -> Insert -> Form Control -> Scroll Bar



3) Add cells such as target, cumulative value , scroll bar link value below data

4) Add control to the Scroll Bar :Right click on Scroll bar -> Format Control -> Set the values as follows -> OK



5) Add Columns as 'highlighted bars' and 'remaining bars' to data and add the following formula for the same & drag drop values for entire column :

highlighted bars : =IF(\$B\$14>=C2,B2,NA())

remaining bars : =IF(\$B\$14<C2,B2,NA())

6) Add the following formula to the target and cumulative value :

target : =B15/100

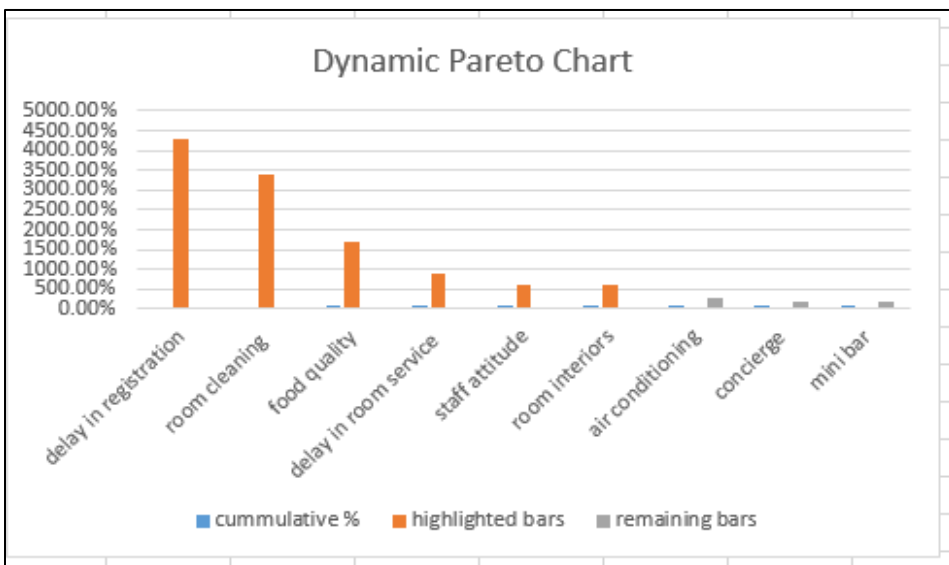
cumulative value : =INDEX(\$C\$2:\$C\$10,MATCH(\$B\$13,\$C\$2:\$C\$10,1)+1)

Now as we click the scroll bar , accordingly the reflections will be seen

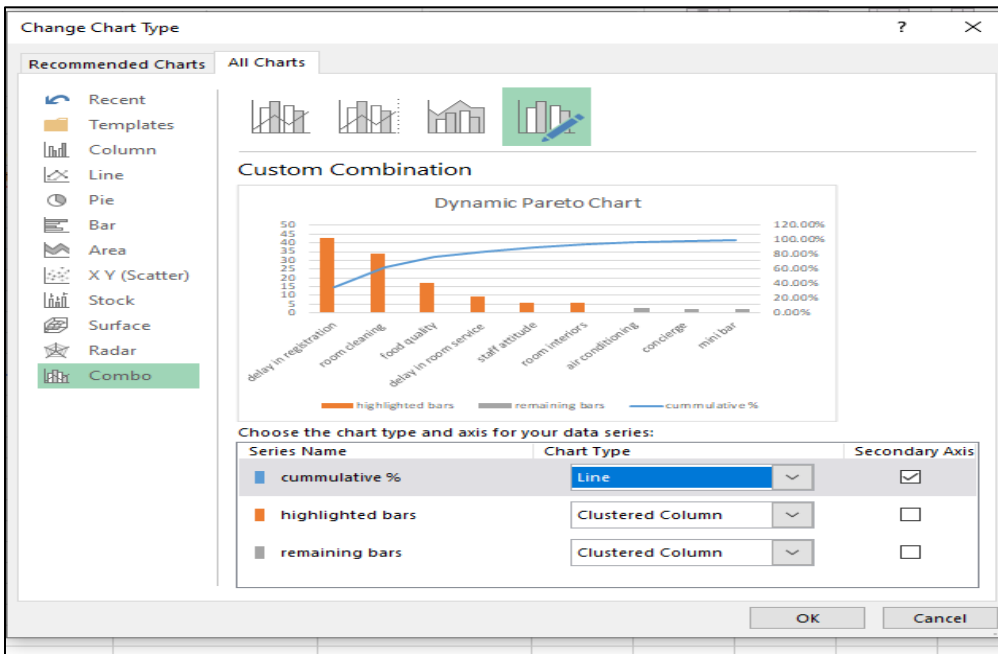
	A	B	C	D	E
1	complaint type	no of complaints	cummulative %	highlighted bars	remaining bars
2	delay in registration	43	35.25%	target : =B15/100	#N/A
3	room cleaning	34	63.11%	34	#N/A
4	food quality	17	77.05%	17	#N/A
5	delay in room service	9	84.43%	#N/A	9
6	staff attitude	6	89.34%	#N/A	6
7	room interiors	6	94.26%	#N/A	6
8	air conditioning	3	96.72%	#N/A	3
9	concierge	2	98.36%	#N/A	2
10	mini bar	2	100.00%	#N/A	2

target	0.72
cummulative value	0.770491803
scroll bar link value	72

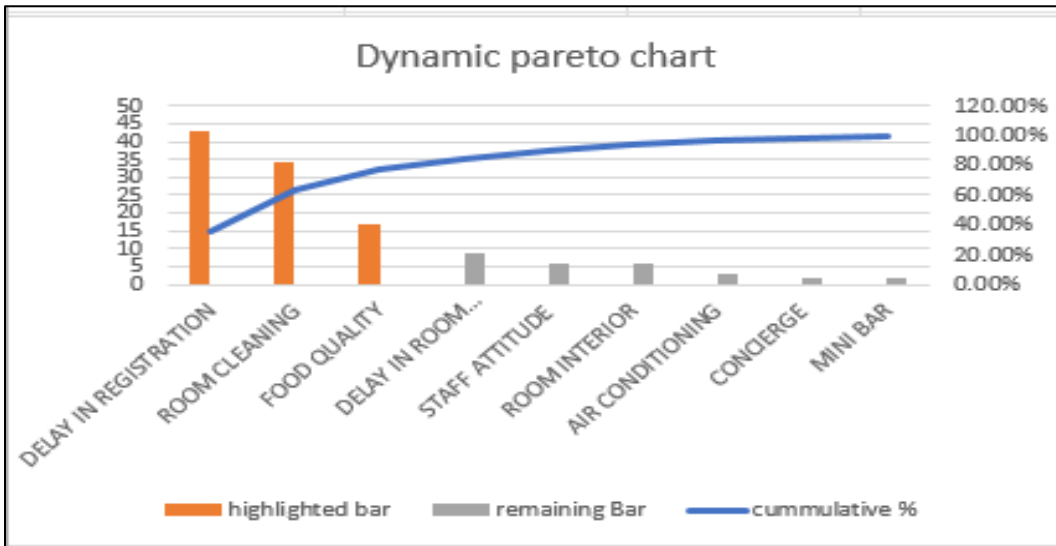
7) Select the columns with data : complaint type , cumulative % , highlighted bars and remaining bars -> Insert -> Insert Column Chart -> Clustered Column



8) Right Click on Chart -> Change Chart Type -> Combo -> For cumulative % , select chart type as Line and tick the checkbox in Secondary Axis -> OK



Now on the click of scroll bar , as the values changes the graph reflect the changes for the same **Dynamic Pareto Chart :**



A	B	C	D	E	
complaint type	no of complaints	cummulative %	highlighted bars	remaining bars	
delay in registration	43	35.25%	43	#N/A	
room cleaning	34	63.11%	34	#N/A	
food quality	17	77.05%	17	#N/A	
delay in room service	9	84.43%	#N/A	9	
staff attitude	6	89.34%	#N/A	6	
room interiors	6	94.26%	#N/A	6	
air conditioning	3	96.72%	#N/A	3	
concierge	2	98.36%	#N/A	2	
mini bar	2	100.00%	#N/A	2	
target	70.00%				
cumulative value	77.05%				
scroll bar link value	70				

PRACTICAL 9

AIM To design Scatter diagram and Run Chart by using excel to perform defect analysis.

STEPS

1. Calculate readmission rate with the formula = (readmission/discharge patient) *1000. Apply same formula to all rows.

Month	readmission	discharge patient	readmission rate
jan	5	345	14.49
feb	5	678	7.37
mar	5	234	21.37
apr	3	890	3.37
may	6	500	12.00
jun	8	345	23.19
jul	9	678	13.27
aug	6	567	10.58
sep	6	234	25.64
oct	6	456	13.16
nov	8	234	34.19
dec	9	678	13.27

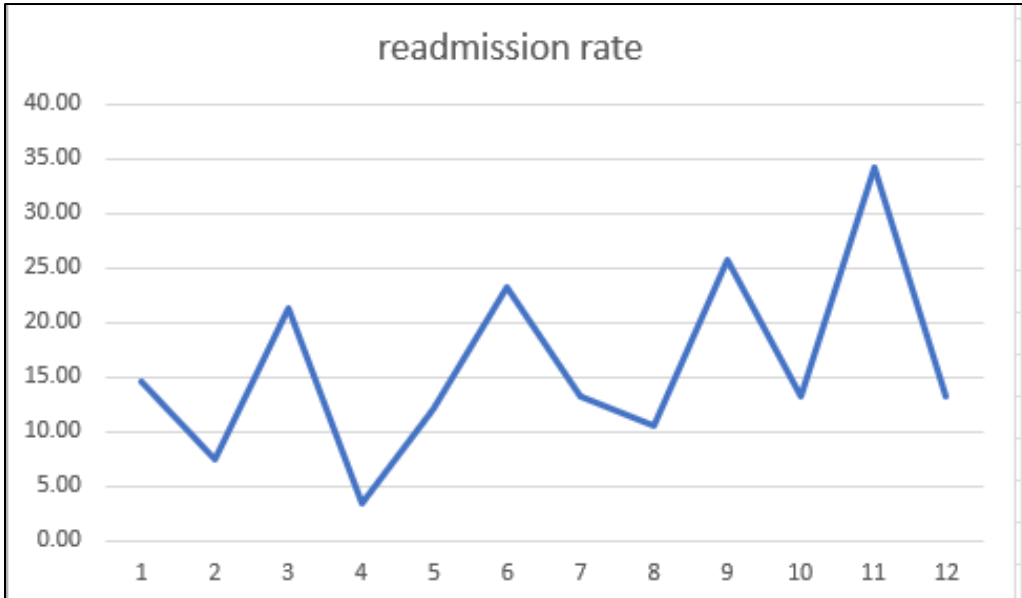
2. Select readmission rate column right click and select format cell and choose 2 decimal places for Number.

The screenshot shows the Excel 'Format Cells' dialog box for the 'readmission rate' column. The 'Number' category is selected, and 'Decimal places' is set to 2. The 'Sample' shows 'readmission rate' with two decimal places. The background shows the Excel spreadsheet with the 'readmission rate' column highlighted.

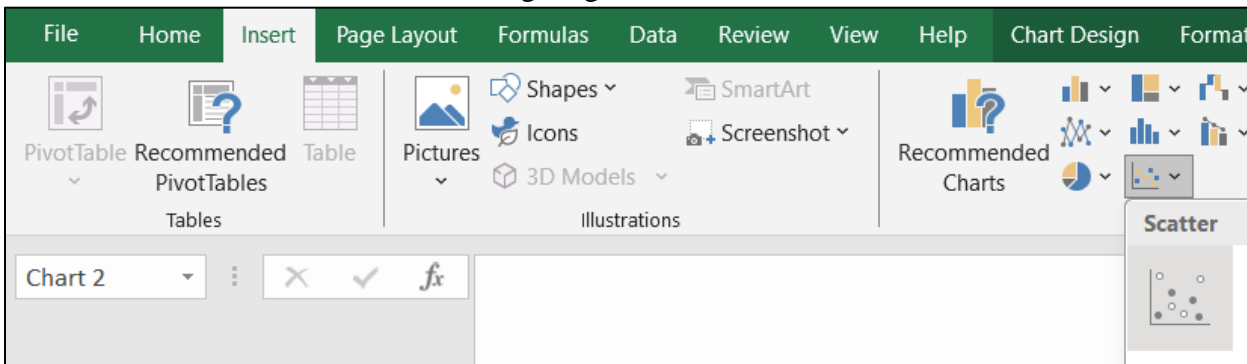
3. Now select readmission rate column again go to Insert and select Line graph to draw Run Chart.

The screenshot shows the Excel 'Insert' tab ribbon. The 'Charts' group is visible, and the '2-D Line' chart type is selected. The background shows the Excel spreadsheet with the 'readmission rate' column highlighted.

4. Run Chart is ready.



5. Now select readmission rate column again go to Insert and select Scatter chart to draw Scatter Diagram.



PRACTICAL 12

AIM: Write and test a program to count the no. of checkboxes on the page checked and unchecked count.

PSEUDOCODE:

1. Start Program
2. Initialize WebDriver to open Edge browser.
3. Navigate to URL: <https://getbootstrap.com/docs/5.3/components/button-group/#checkbox-and-radio-button-groups>.
4. Find Checkboxes using XPath `//input[@type='checkbox']`.
 - Initialize counters checkedCount and uncheckedCount.
 - Loop through checkboxes:
 - If selected, increment checkedCount; else, increment uncheckedCount.
5. Print checkbox stats: Total, Checked, Unchecked.
6. Find Radio Buttons using XPath `//input[@type='radio']`.
7. Print total radio buttons count.
8. Find Labels using tag name label.
9. Print total labels count.
10. Print label texts for each label.
11. End Program.

CODE:

countLink.java

```
package p12_9142;

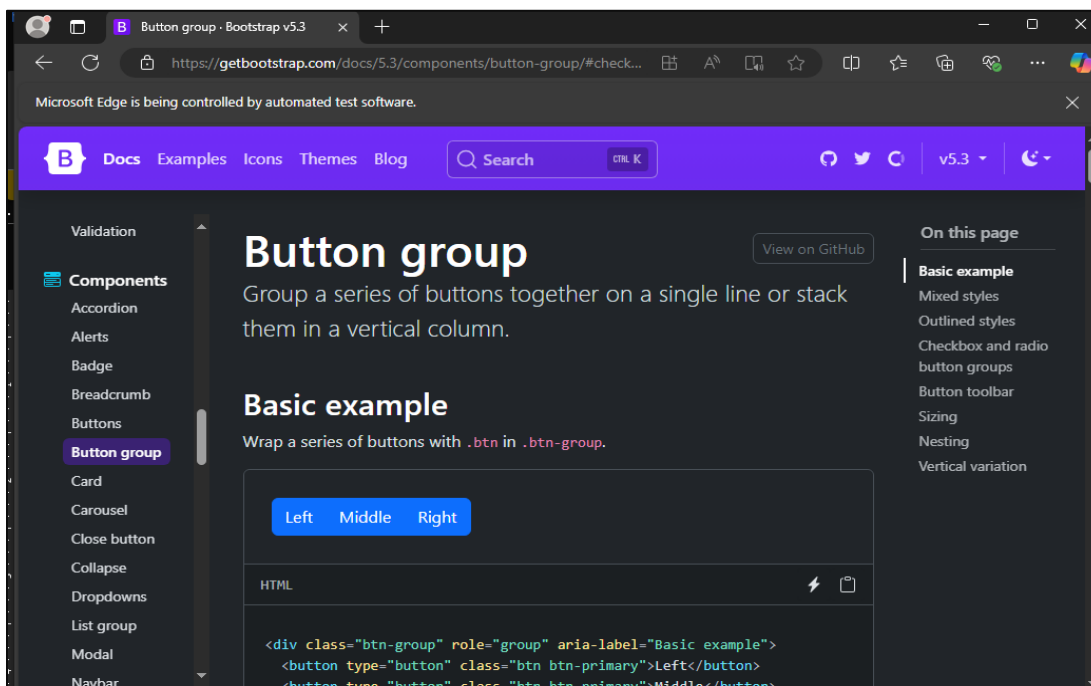
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.edge.EdgeDriver;

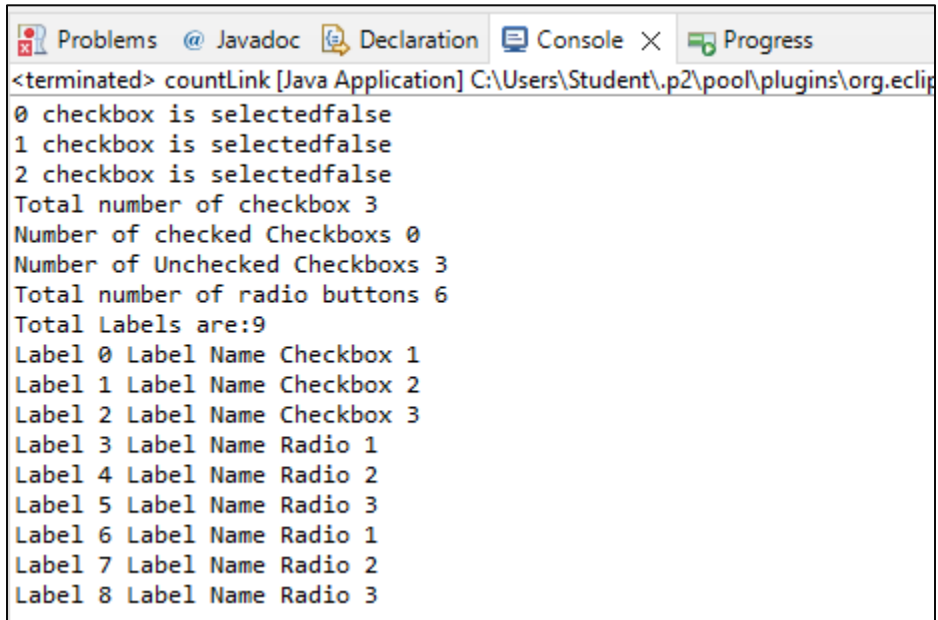
public class countLink {
    public static void main(String args[])
    {
        //System.setProperty("webdriver.edge.driver", "D:\\STQA\\msedgedriver.exe");
        WebDriver driver = new EdgeDriver();
```

```
driver.get("https://getbootstrap.com/docs/5.3/components/button-group/#checkbox-and-radio-button-groups");
```

```
List<WebElement> checkbox =  
    driver.findElements(By.xpath("//input[@type='checkbox']"));  
int checkedcount = 0;  
int unchecked = 0;  
for (int i = 0; i < checkbox.size(); i++) {  
    System.out.println(i+" checkbox is selected" + checkbox.get(i).isSelected());  
    if (checkbox.get(i).isSelected() == true) {  
        checkedcount++;  
    } else {  
        unchecked++;  
    }  
}  
  
System.out.println("Total number of checkbox " + checkbox.size());  
System.out.println("Number of checked Checkboxes " + checkedcount);  
System.out.println("Number of Unchecked Checkboxes " + unchecked);  
List<WebElement> radiobutton=  
    driver.findElements(By.xpath("//input[@type='radio']"));  
System.out.println("Total number of radio buttons " + radiobutton.size());  
List<WebElement> labels = driver.findElements(By.tagName("label"));  
  
System.out.println("Total Labels are:" + labels.size());  
for (int i=0; i<labels.size(); i=i+1){  
    System.out.println("Label "+ i + " Label Name " +labels.get(i).getText());  
}  
}
```

OUTPUT:





```
<terminated> countLink [Java Application] C:\Users\Student\p2\pool\plugins\org.eclip
0 checkbox is selectedfalse
1 checkbox is selectedfalse
2 checkbox is selectedfalse
Total number of checkbox 3
Number of checked Checkboxes 0
Number of Unchecked Checkboxes 3
Total number of radio buttons 6
Total Labels are:9
Label 0 Label Name Checkbox 1
Label 1 Label Name Checkbox 2
Label 2 Label Name Checkbox 3
Label 3 Label Name Radio 1
Label 4 Label Name Radio 2
Label 5 Label Name Radio 3
Label 6 Label Name Radio 1
Label 7 Label Name Radio 2
Label 8 Label Name Radio 3
```

PRACTICAL 7

AIM: Write and test a program to provide a total number of object present/available on the page.

(A)

PSEUDOCODE:

1. Start
2. Set the system property for EdgeDriver with the path to the EdgeDriver executable
3. Initialize the WebDriver instance for Edge browser
4. Open the website "http://www.yahoo.com/" and "http://www.gogoanimes.fi/"
5. Find all elements with the tag name "a" (anchor tags) on the webpage
6. Store the list of anchor tags in a variable "links"
7. Print the total number of links found
8. Loop through each link in the "links" list:
 - a. For each link, print its index (position) and its text content (link name)
9. End

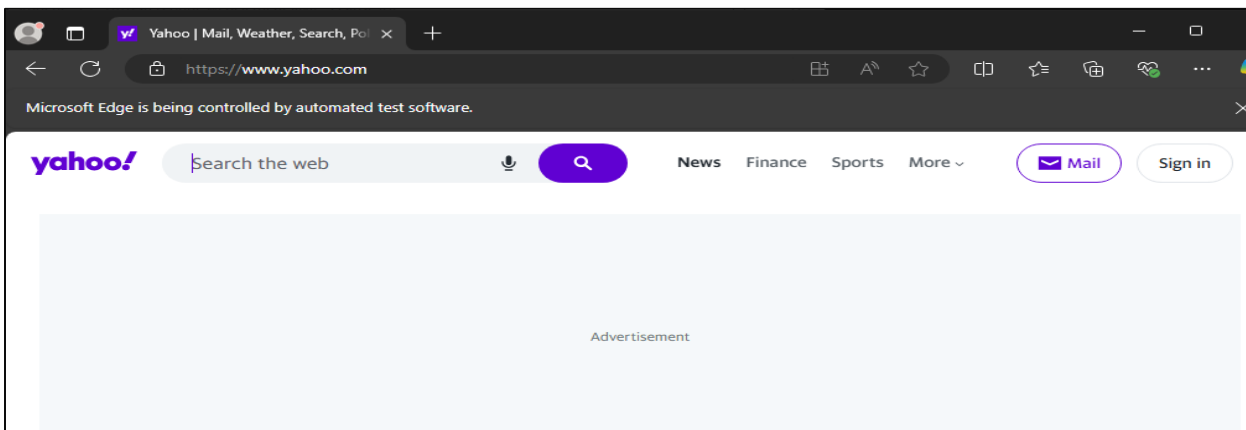
CODE:

```
import java.util.List;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.edge.EdgeDriver;

public class count_webelement {
    public static void main(String args[]) {
        System.setProperty("webdriver.edge.driver", "D:\\stqa\\msedgedriver.exe");
        WebDriver driver=new EdgeDriver();
        driver.get("http://www.yahoo.com");
        List<WebElement>links=driver.findElements(By.tagName("a"));
        System.out.println("Total links are: "+ links.size());
        for(int i=0;i<links.size();i=i+1) {
            System.out.println("Link" + i + "LinkName" + links.get(i).getText());
        }
    }
}
```

OUTPUT:



```
<terminated> test_9142 [Java Application] C:\Users\Student\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.j
Total links are:373
Link0LinkName
Link1LinkName
Link2LinkName
Link3LinkName
Link4LinkName
Link5LinkName
Link6LinkName
Link7LinkName
Link8LinkName
Link9LinkName
Link10LinkName
Link11LinkName
Link12LinkName
Link13LinkName
```

(B)

CODE:

```
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.edge.EdgeDriver;

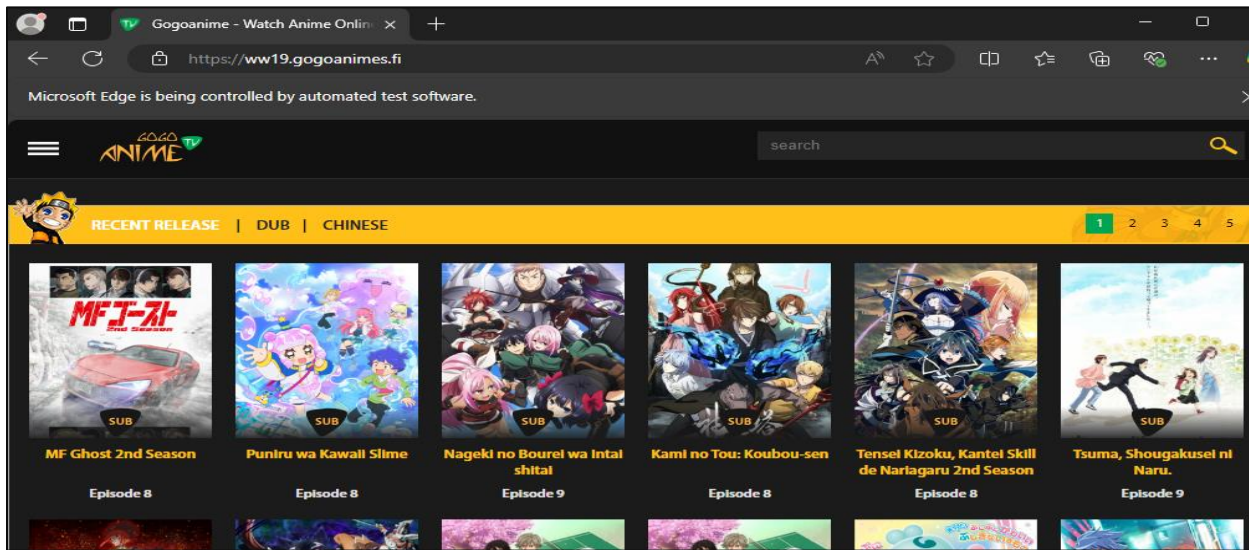
public class count_webelement {
    public static void main(String args[]) {
        System.setProperty("webdriver.edge.driver", "D:\\stqa\\msedgedriver.exe");
        WebDriver driver=new EdgeDriver();
        driver.get("http://www.gogoanimes.fi/");
        List<WebElement>links=driver.findElements(By.tagName("a"));
        System.out.println("Total links are: "+ links.size());
        for(int i=0;i<links.size();i=i+1) {
            System.out.println("Link" + i + "LinkName" + links.get(i).getText());
        }
    }
}
```

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CLASS: TYCS-A

ROLL NO: 9142

OUTPUT:



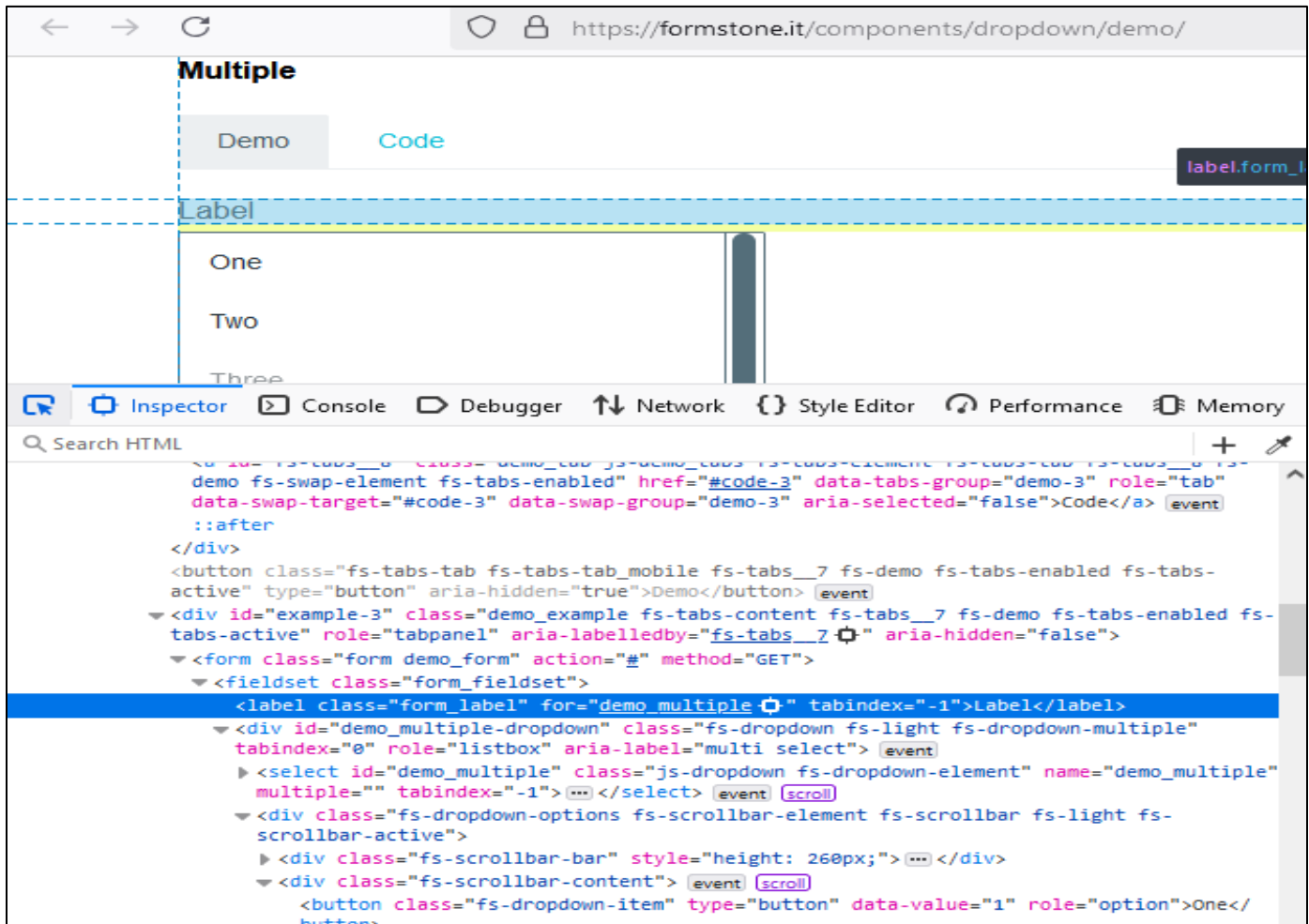
```
@ Javadoc Declaration Console X Progress
<terminated> test_9142 [Java Application] C:\Users\Student\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.wi
Total links are:1259
Link0LinkName
Link1LinkName
Link2LinkName
Link3LinkName
Link4LinkName
Link5LinkName
Link6LinkName
Link7LinkName
Link8LinkNamenull
```

PRACTICAL 6

AIM: Write and test a program to get the number of items in a list/ combo box.

PSEUDOCODE

1. start
2. set webdriver_path = "d:\\stqa\\msedgedriver.exe"
3. initialize driver as edgedriver
4. open url "https://formstone.it/components/dropdown/demo"
5. find dropdown element by id "demo_multiple"
6. create select object for the dropdown element
7. get all options in the dropdown and store in options_list
8. get the size of options_list (number of dropdown options)
9. print "total number of items in dropdown list:" followed by size of options_list
10. close browser
11. end



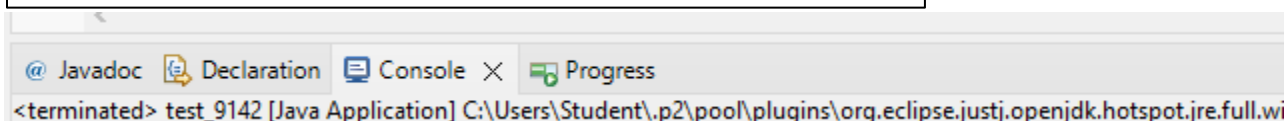
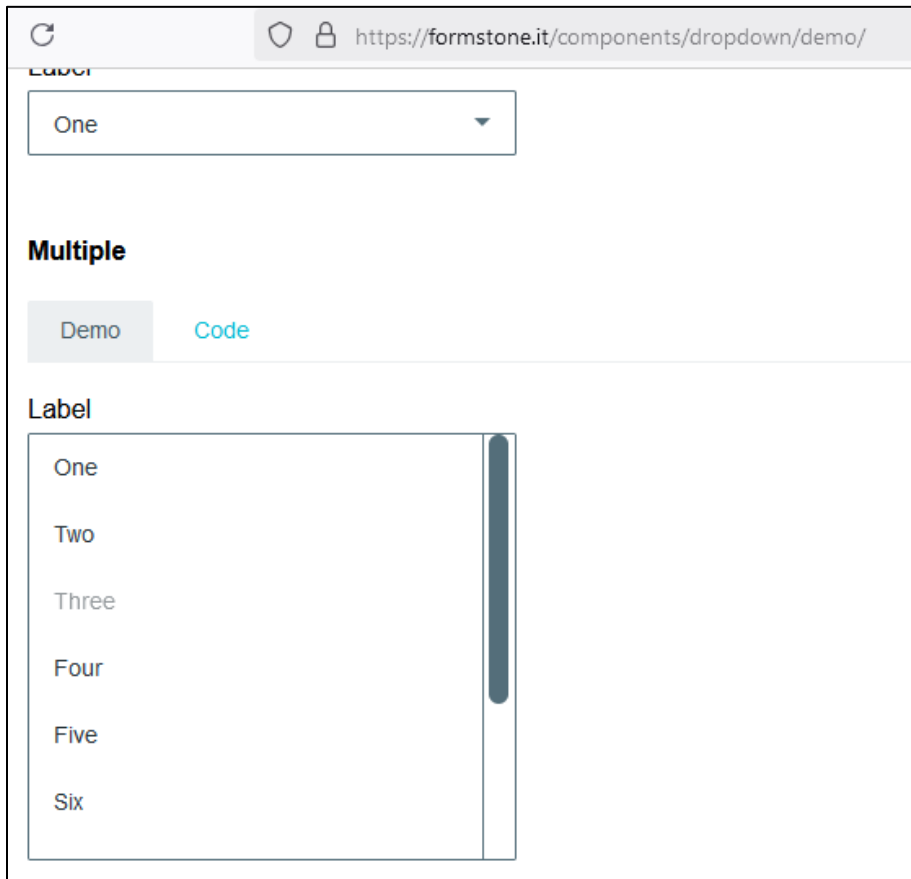
CODE

```
package pr6_9142;  
  
import java.util.List;  
import org.openqa.selenium.By;
```

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.edge.EdgeDriver;
import org.openqa.selenium.support.ui.Select;

public class p9142 {
    public static void main(String args[]) {
        System.setProperty("webdriver.edge.driver","D:\\stqa\\msedgedriver.exe");
        WebDriver driver=new EdgeDriver();
        driver.get("https://formstone.it/components/dropdown/demo");
        Select selectDropdown=new Select(driver.findElement(By.id("demo_multiple")));
        List<WebElement> listOptionDropdown=selectDropdown.getOptions();
        int dropdownCount=listOptionDropdown.size();
        System.out.println("Total Number of item count in dropdown list:"+ dropdownCount);
        driver.close();
    }
}
```

OUTPUT:



Total Number of item count in dropdown list:10