

POORNIMA INSTITUTE OF ENGINEERING & TECHNOLOGY, JAIPUR

Evaluation Report

ne of the Laboratory.....Software.....Testing.....Validation.....Lab

Code.....ECE-Y-T-2.....

To be filled by the student

No.	Name of the experiment	Pg. No.	Date of Allotment	Date of Performance	Attendance	Record* (3)	Performance** (5)	Total (10)	Signature of Faculty With Date
1.	Area of semiinotes of circle	129	01/01/2021	11/02/2021	2	3	✓	10	
2.	Read first 5 set name from console	11/02	11/02/2021	2	3	✓		10	
3.	Quadratic equation	120	03/03/2021	2	3	✓		10	
4.	Read the Commercial Web URL	26/03	26/03/2021	2	3	✓		10	
5.	Program for generated concrete cal.	01/04	01/04/2021	2	3	✓		10	
6.	Program for password console	08/04	08/04/2021	2	3	✓		10	
7.	Analyze performance using Thotnotel(A)	08/04	08/04/2021	2	3	✓		10	
8.	Analyze performance Using Trusteq (B)	15/04	15/04/2021	2	3	✓		10	
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									

Experiment I

Aim: Write a program that calculates the area and perimeters of the circle. And find the coverage of Test Cases of that program using JUnit Tool.

```

import java.util.Scanner;
import java.lang.Math;
public class AreaOfCircle
{
    public static void main (String [] args)
    {
        int option;
        double radius, circumference, diameter, area;
        // object of the Scanner class
        Scanner sc = new Scanner (System.in);
        // options available
        System.out.println ("1. If the radius is known");
        System.out.println ("2. If the diameter is known");
        System.out.println ("3. If the circumference is known");
        System.out.print ("Enter your choice:");
        // taking an option as input from the user
        option = sc.nextInt();
        switch (option)
        {
            // case statements
            Case 1:
                System.out.print ("Enter the radius of the circle:");
                radius = sc.nextDouble();
            Case 2:
                System.out.print ("Enter the diameter of the circle:");
                diameter = sc.nextDouble();
            Case 3:
                System.out.print ("Enter the circumference of the circle:");
                circumference = sc.nextDouble();
        }
    }
}

```

area = (Math.PI * (radius * radius));

System.out.print ("The area of the circle is:" + area);
break;

Case 2:

System.out.print ("The area of the circle Enter the diameter
of the circle :");

diameter = sc.nextDouble();

area = Math.PI * (diameter * diameter) / 4;

System.out.print ("The area of circle is :" + area);
break;

Case 3:

System.out.print ("Enter the circumference of circle");

circumference = sc.nextDouble();

~~area = (circumference * circumference) / [4 * Math.PI];~~

~~System.out.print ("The area of the circle is :" + area);~~

~~break;~~

// default case statement executes when an invalid
choice is entered

default - System.out.println ("invalid choice!");

3

4

5

@Kawhi

Experiment - 2

Aim: Write a program which read the first name and last name from console and matching with expected result by using Java.

Program Code

```
import java.util.Scanner;
```

```
public class Example {
```

```
    public static void main (String [] args) {
```

```
        System.out.print ("Enter a Name :");
```

```
        Scanner scanner = new Scanner (System.in);
```

```
        String inputString = scanner.nextLine();
```

```
        System.out.println ("String read from  
console is : " + inputString)
```

```
}
```

```
}
```

① Kavita

Experiment - 3

Aim: Write a program which read the first name and last name from console and matching with expected result by using Tabular.

Program Code: `gequation.java`

```
public class gequation
```

```
{
```

```
public static void main (String [] args) {
```

```
//value a, b, and c
```

```
double a = 2.3, b = 4, c = 5.5;
```

```
double root1, root2;
```

```
// calculate the determinant ( $b^2 - 4ac$ )
```

```
double determinant = b * b - 4 * a * c;
```

```
// Check if determinant is greater than 0
```

```
if [determinant > 0] {
```

```
//two real and distinct roots
```

~~```
root1 = (-b + Math.sqrt(determinant)) / (2 * a);
```~~
~~```
root2 = (-b - Math.sqrt(determinant)) / (2 * a);
```~~

```
System.out.format ("root1 = %.2f and root2 = %.2f",
```

~~```
root1, root2);
```~~

```
}
```

```
// Check if determinants is equal to 0
```

~~```
else if (determinant == 0) {
```~~
~~```
//two real and equal roots
```~~
~~```
// determinant is equal 0
```~~

$$11 \quad 50 - b + 0 = -b$$

$$\text{root1} = \sqrt{2} = -b / (2 * a);$$

System.out.format ("root1 = sqrt2 = -b / (2 * a);");
 };

11 if determinant is less than zero
 else {

11 roots are complex numbers and distinct

$$\text{double real} = -b / (2 * a);$$

$$\text{double imaginary} = \text{Math.sqrt}(-\text{determinant}) / (2 * a);$$

System.out.format ("root1 = -real + / -imaginaryi",
 real, imaginary);

System.out.format ("root2 = -real - / -imaginaryi",
 real, imaginary);

}

y

3

② Kavish

Aim: Write a program that reads commercial website URL from a URL from file. You should expect that the URL starts with www and ends with .com. Retrieve the name of the site and output it. For instance, if the user inputs www.yahoo.com, you should output yahoo. After that find the test cases and coverage using JUnit.

Program Code:

```

package mypkg;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class HelloServlet extends HttpServlet {
    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws IOException, ServletException {
        // set the response message is MIME type
        response.setContentType("text/html; charset=UTF-8");
        // Allocate a output writer the response message
        // into the network socket
        PrintWriter out = response.getWriter();
        // Write the response message, in an HTML page
    }
}

```

try {

```

out.println("<!DOCTYPE html>");  

out.println("<html><head>");  

out.println("<meta http-equiv='Content-Type' content="text/html; charset=UTF-8'>");
```

```
out.println("<title>Hello, World</title></head>");
```

```
out.println("<body>");
```

```
out.println("<h1>Hello, world!</h1>"); // says Hello
```

// Echo client's request information

```
out.println("<p> Request URL : " + request.getRequestURI() + "</p>");
```

```
out.println("<p> Protocol : " + request.getProtocol() + "</p>");
```

```
out.println("<p> Path Info : " + request.getPathInfo() + "</p>");
```

~~out.println("<p> Remote Address : " + request.getRemoteAddr() + "</p>");~~

~~// Generate a random number upon each request~~

```
out.println("<p> A Random Number : <strong>" + Math.random() + "</strong></p>");
```

```
out.println("</body>");
```

```
out.println("</html>");
```

};

finally {

out.close(); // Always close the output writer

Page No.....

Aim: Write a program for a calculator and find the test case and coverage and Prof-use graph

Program Code:

```
import java.util.Scanner;
```

```
class Main {
```

```
public static void main (String [] args) {
```

```
char operator;
```

```
Double number1, number2, result;
```

// Create an object of Scanner class

```
Scanner input = new Scanner (System.in);
```

// Ask user to enter operator

```
System.out.println ("choose an operator: +, -, *, /");
```

```
operator = input.next().charAt(0);
```

~~System.out.println ("Enter first number");~~

```
number1 = input.nextDouble();
```

```
System.out.println ("Enter second number");
```

```
number2 = input.nextDouble();
```

```
switch (operator) {
```

```
case '+':
```

```
result = number1 + number2;
```

```
System.out.println (number1 + "+" + number2 + "=" + result);
```

```
break;
```

// performs division between numbers

case '/':

result = number1 / number2;

System.out.println (number1 + "/" + number2 + "=" + result);

break;

default:

System.out.println ("Invalid operator!");

break;

}

input.close();

}

@Kaewal

Experiment - 6

WAP that reads two words representing passwords from the java console and outputs the number of characters in the smaller of the two.

```
→ import java.util.Scanner;
public class Exercise 11 {
    public static final int PASSWORD_LENGTH = 8;
    public static void main (String args) {
```

Scanner input = new Scanner (System.in);
System.out.print ("1 A password must have at least eight characters\n" + "2 password consists of only letters & digits\n" + "3 password must contain atleast one digit\n" + "Input a password (You are agreeing to the above terms & condition)

```
String s = input.nextLine()
if (isValid>Password(s)) {
```

```
System.out.println ("password is valid: " + s);
```

```
} else {
    System.out.println ("Not a valid password: " + s);
```

1
2

public static boolean is_valid_password (String password) {

if (password.length () < PASSWORD_LENGTH) return
false;

int charCount = 0;

int numCount = 0;

for (int i = 0; i < password.length (); i++) {

char ch = password.charAt (i);

if (isNumeric (ch)) numCount ++;

else if (isLetter (ch)) charCount ++;

else return false;

}

return (charCount >= 2 && numCount >= 2);

}

~~public static boolean isLetter (char ch) {~~

ch = Character.toUpperCase (ch);

return (ch >= 'A' && ch <= 'Z');

}

~~public static boolean isNumeric (char ch) {~~

return (ch >= '0' && ch <= '9');

}

~~Answers~~

Analyze the performance of following website
using Jmeter
Amazon for a 100 users

Step 1) Add thread Group

- a - Start Jmeter
- b - Select test plan on the left
- c - Add thread Group

Right click on the "Test Plan" and add a new thread group : Add → Threads (users) → Thread Group

In the thread group control layer enter
Thread properties as follows -

No. of Threads (users) = 100
Loop Count = 10
~~Jump up period (seconds) = 10~~

Step 2) Adding Jmeter elements

Now we determine what Jmeter elements
in this test. The elements are -

HTTPS Request Default

This element can be added by right clicking
on the thread group and deleting : Add →
config element →

→ PHP Request Defaults

step 3) Adding Graph Result

Jmeter can show the test result in Graph format

Right click test plan → Add → Listener → Graph Results

step 4) Run test and get the test result press the run button (ctrl+R) on the Toolbar to start the software testing process.

OKay

Aim: Analyze the performance of the following website using Jmeter.

flipkart - 10 users

Step 1) Add thread group

- a - Start Jmeter
- b - Select Test plan on the tree
- c - Add Thread group

Right click on the "test plan" and add a new thread group : Add → Threads (users) → Thread Group

In the thread group control - large layer , enter thread properties of following -

No. of threads - 10

Loop count - 10

Ramp up period - 10

Step 2) Adding Jmeter elements Now we determine Jmeter elements are -

HTTP Request Default

Step 3) Adding Graph Result

Jmeter can show the test result in graph format

Right click test plan, Add → listeners
→ Graph Results.

Step 4) Run test and get the test result press
the Run button (ctrl + R) on the Toolbar to
~~start~~ the software testing process.

~~② Fault~~