Institute of Engineering & Management

Department of Computer Science and Engineering

Object Oriented Programming Lab for 3rd Year 5th Semester 2020

Code : PCC CS 593

PROGRAM 1

Write a program that prints the quadrant number of a point (x,y) on a plane. Recall that points in quadrant 1 have positive x and y values, points in quadrant 2 have a negative x value and a positive y value, points in quadrant 3 have negative x and y values, and the remaining points are in the quadrant 4. If a point is on an axis, choose the quadrant with the lower quadrant number.

SOURCE CODE

```
public class q1
{
    public static void main(String[] args)
    {
        int x=-1, y=2;
        if(x==0 && y==0)
          System.out.println("("+ x+","+y+")"+" - Origin");
        else if(x>=0 && y<0)
          System.out.println("("+ x+","+y+")"+" - Second Quadrant");
        else if(x<=0 && y<0)
          System.out.println("("+ x+","+y+")"+" - Third Quadrant");
        else if(x<0 && y>=0)
          System.out.println("("+ x+","+y+")"+" - Fourth Quadrant");
        else
          System.out.println("("+ x+","+y+")"+" - First Quadrant");
    }
}
```

OUTPUT

```
(base) raveesh@SilverShield:~/Desktop/java-lab/lab 1$ javac q1.java
(base) raveesh@SilverShield:~/Desktop/java-lab/lab 1$ java q1
(-1,2) - Fourth Quadrant
```

PROGRAM 2

Write a program that reads a character from the user and then uses a switch statement to achieve what the following if statement does.

if ((choice == ‘A’) || (choice == ‘a’))

```
    printf(“Action movie fan\n”);
else if ((choice == ‘C’) || (choice == ‘c’))
    printf(“Comedy movie fan\n”);
else if ((choice == ‘D’) || (choice == ‘d’))
    printf(“Drama movie fan\n”);
else
    printf(“Invalid choice\n”);
```

SOURCE CODE

```
import java.util.*;
public class q2
{
     public static void main(String[] args)
     {
          Scanner sc = new Scanner(System.in);
          System.out.println("Enter character");
          char ch = sc.next().charAt(0);
          switch(ch){
          case 'a' :
          case 'A':
          System.out.println(ch +"-Action movie fan");
          break;
          case 'c' :
          case 'C':
          System.out.println(ch +"Comedy movie fan");
          break;
          case 'd' :
          case 'D':
          System.out.println(ch +"Drama movie fan");
          break;

         default:
```

```
            System.out.println("Invalid choice");
        }
    }
}
```

OUTPUT

```
(base) raveesh@SilverShield:~/Desktop/java-lab/lab 1$ javac q2.java
(base) raveesh@SilverShield:~/Desktop/java-lab/lab 1$ java q2
Enter character
a
a-Action movie fan
(base) raveesh@SilverShield:~/Desktop/java-lab/lab 1$ java q2
Enter character
p
Invalid choice
```

PROGRAM 3

The salary scheme for a company is given as follows:

Salary range for grade A: $700 - $899

Salary range for grade B: $600 - $799

Salary range for grade C: $500 - $649

A person whose salary is between $600 and $649 is in grade C if his merit points are below 10, otherwise he is in grade B. A person whose salary is between $700 and $799 is in grade B if his merit points are below 20, otherwise, he is in grade A. Write a program to read in a person's salary and his merit points, and displays his grade.

SOURCE CODE

```
import java.util.*;

public class q3
{
    public static void main(String[] args)
    {
        int salary,merit;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Salary");
        salary=sc.nextInt();
```

```
        System.out.println("Enter Merit");
        merit=sc.nextInt();

        if((salary>=500 && salary<=649)||(salary>=600 && salary<=649 && merit<10))
        System.out.println("salary: $"+salary+ ", merit:"+merit +" - Grade C");

        else if((salary>=650 && salary<=799) || (salary>=700 && salary<=799 && merit
<20))
        System.out.println("salary: $"+salary+ ", merit:"+merit +" - Grade B");

        else if(salary>=800 && salary<=899)
        System.out.println("salary: $"+salary+ ", merit:"+merit +" - Grade A")
    }
}
```

OUTPUT