

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'))
```

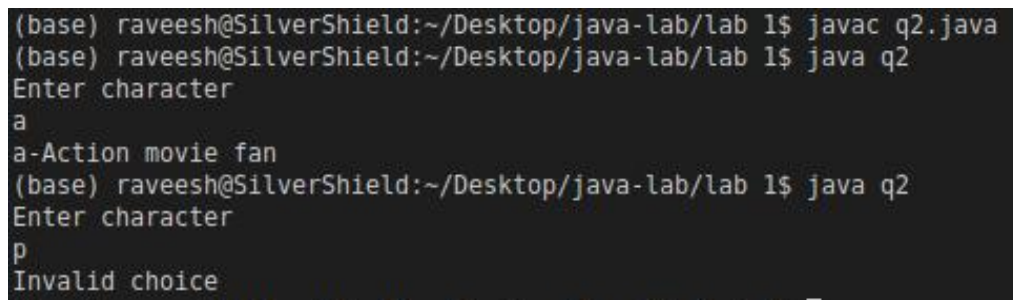
```
printf("Action movie fan\n");  
else if ((choice == 'C') || (choice == 'c'))  
    printf("Comedy movie fan\n");  
else if ((choice == 'D') || (choice == 'd'))  
    printf("Drama movie fan\n");  
else  
    printf("Invalid choice\n");
```

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();
```

Institute of Engineering & Management
Department of Computer Science and Engineering
Object Oriented Programming Lab for 3rd Year 5th Semester 2020
Code : PCC CS 593

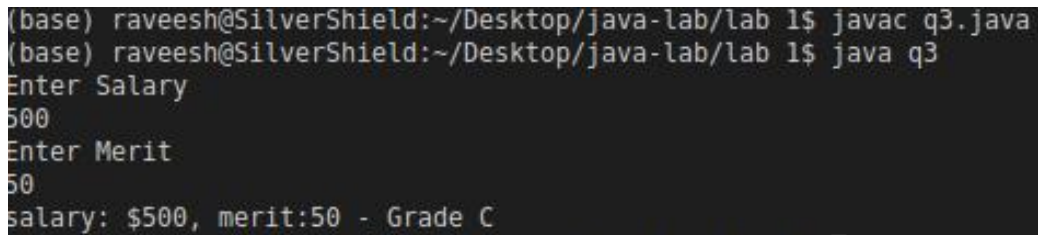
```
System.out.println("Enter Merit");
merit=sc.nextInt();

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



```
(base) raveesh@SilverShield:~/Desktop/java-lab/lab 1$ javac q3.java
(base) raveesh@SilverShield:~/Desktop/java-lab/lab 1$ java q3
Enter Salary
500
Enter Merit
50
salary: $500, merit:50 - Grade C
```