

Practical 2(A)

Aim: Write a program in java to add two 3 * 3 matrices

Code:

```
import java.util.Scanner;
class pr5 {
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        int m1[][]=new int[3][3];
        int m2[][]=new int[3][3];
        int sum[][]=new int[3][3];
        System.out.println("Enter the Values :");
        for (int i = 0; i < 3; i++) {
            for (int j = 0; j < 3; j++) {
                System.out.println("Enter " + i + " : " + j);
                m1[i][j]=sc.nextInt();
            }
        }
        for (int i = 0; i < 3; i++) {
            for (int j = 0; j < 3; j++) {
                System.out.println("Enter " + i + " : " + j);
                m2[i][j]=sc.nextInt();
            }
        }
        for (int i = 0; i < 3; i++) {
            for (int j = 0; j < 3; j++) {
                sum[i][j]=m1[i][j]*m2[i][j];
            }
        }
        for (int i = 0; i < 3; i++) {
            for (int j = 0; j < 3; j++) {
                System.out.println(i+" : " + j);
                System.out.println(m1[i][j] + " * " + m2[i][j] + " = " + sum[i][j]);
            }
        }
    }
}
```

Output :

```
java -cp /tmp/ZZTS1mG7L1 pr5
Enter the Values :
Enter 0 : 0
1
Enter 0 : 1
2
Enter 0 : 2
3
Enter 1 : 0
4
Enter 1 : 1
12
Enter 1 : 2
23
Enter 2 : 0
34
Enter 2 : 1
45
Enter 2 : 2
3
Enter 0 : 0
32
Enter 0 : 1
345
Enter 0 : 2
453
Enter 1 : 0
556
Enter 1 : 1

45
Enter 1 : 2
56
Enter 2 : 0
23
Enter 2 : 1
45
Enter 2 : 2
2
32
0 : 0
1 * 32 = 32
0 : 1
2 * 345 = 690
0 : 2
3 * 453 = 1359
1 : 0
4 * 556 = 2224
1 : 1
12 * 45 = 540
1 : 2
23 * 56 = 1288
2 : 0
34 * 23 = 782
2 : 1
45 * 45 = 2025
2 : 2
3 * 32 = 96
```

Practical 2(B)

Aim : write a program in java to generate first N prime numbers.

Code:

```
import java.util.Scanner;
class pr6 {
    public static void main(String args[]) {
        int i,j,count=0,n;
        Scanner sc = new Scanner(System.in);
        n = sc.nextInt();
        System.out.println("Prime number :");
        for (i = 2; i <= n; i++) {
            count=0;
            for (j = 1; j <= i; j++) {
                if (i % j == 0) {
                    count++;
                }
            }
            if(count==2){
                System.out.println(i+"\t");
            }
        }
    }
}
```

Output :

```
java -cp /tmp/ZZTS1mG7L1 pr6
5
Prime number :
2
3
5
|
```

Practical-3(A)

AIM:-Write a program in Java which has a class Student having two instance variables enrollment No and name. Create 3 objects of Student class in main method and display student's name.

Code:-

```
import java.util.Scanner;
// pr3a
class student_d
{
    int enrollment;
    String name;
    void getData(){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter student enrollment : ");
        enrollment = sc.nextInt();
        System.out.println("Enter student name : ");
        name = sc.next();
    }
    void putData() {
        System.out.println("Student enrollment : " + enrollment);
        System.out.println("Student name : " + name);
    }
}

class student {
    public static void main(String args[])
    {
        student_d s = new student_d();
        student_d s1 = new student_d();
        student_d s2 = new student_d();
        s.getData();
        s1.getData();
        s2.getData();
        s1.putData();
        s2.putData();
        s3.putData();
    }
}
```

Output:-

```
PS C:\Users\user\Desktop\parshv\A00P> c:; cd "c:\workspaceStorage\1655f39b0604bd13eef95f5d20962ed"
Enter student enrollment :
100
Enter student name :
abc
Enter student enrollment :
200
Enter student name :
def
Enter student enrollment :
300
Enter student name :
ghi
Student enrollment : 200
Student name : def
Student enrollment : 300
Student name : ghi
Student enrollment : 100
Student name : abc
PS C:\Users\user\Desktop\parshv\A00P> █
```

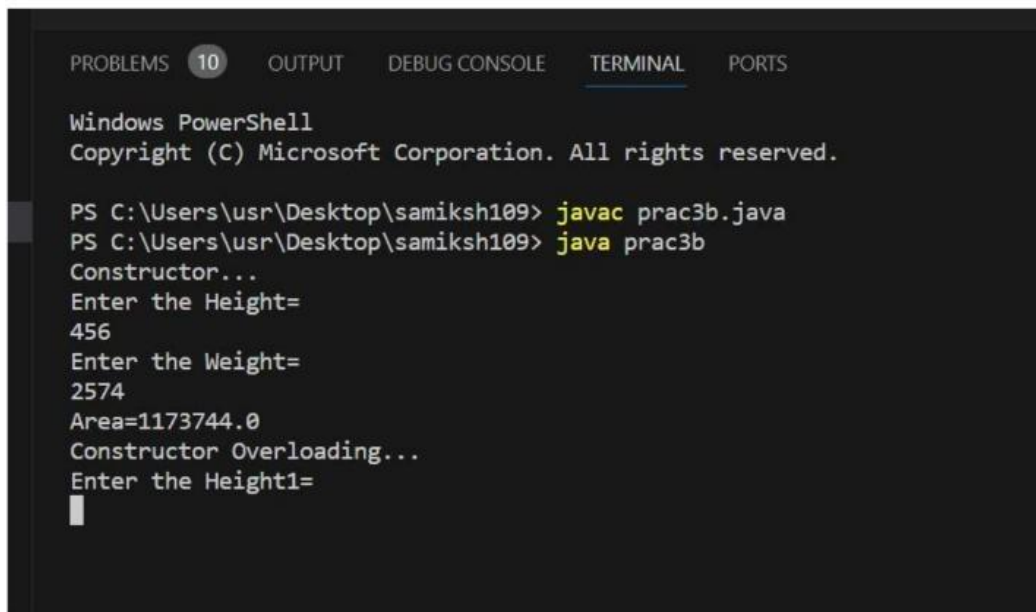
Practical-3(B)

Aim:-Write a program in Java which has a class Rectangle having two instance variables height and weight. Initialize the class using constructor.

Code:-

```
import java.util.Scanner;
class Rectengle {
    Rectengle() {
        float h, w, area;
        Scanner sc = new Scanner(System.in);
        System.out.println("Constructor...");
        System.out.println("Enter the Height=");
        h = sc.nextFloat();
        System.out.println("Enter the Weight=");
        w = sc.nextFloat();
        area = h * w;
        System.out.println("Area=" + area);
    }
    Rectengle(float h, float w) {
        float a = h * w;
        System.out.println("Area=" + a);
    }
}
class prac3b {
    public static void main(String args[]) {
        float hi, wi;
        Rectengle r1 = new Rectengle();
        Scanner sc = new Scanner(System.in);
        System.out.println("Constructor Overloading...");
        System.out.println("Enter the Height1=");
        hi = sc.nextFloat();
        System.out.println("Enter the Weight2=");
        wi = sc.nextFloat();
        Rectengle r2 = new Rectengle(hi, wi);
    }
}
```

Output:-



```
PROBLEMS 10 OUTPUT DEBUG CONSOLE TERMINAL PORTS

Windows PowerShell
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PS C:\Users\usr\Desktop\samiksh109> javac prac3b.java
PS C:\Users\usr\Desktop\samiksh109> java prac3b
Constructor...
Enter the Height=
456
Enter the Weight=
2574
Area=1173744.0
Constructor Overloading...
Enter the Height1=
█
```