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/ZZTSlmG7L1 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\AOOP>  c:; cd 'c
workspaceStorage\1655f39b0604bd13eef95f5d20962ec
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\AOOP>
```

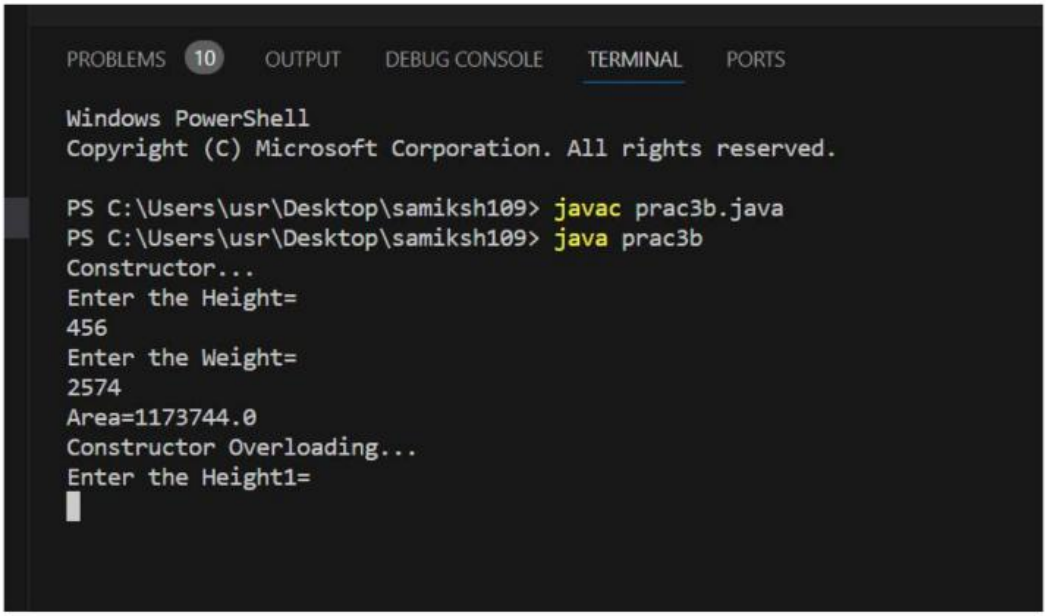
Practical-3(B)

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
Copyright (C) Microsoft Corporation. All rights reserved.
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=