

## **WEEK 2-OOJ LAB PROGRAMES- IN JAVA**

### ***Programs and Output***

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#### ***Program 3-***

```
import java.util.Scanner;

class Pyramid
{
    public static void main(String args[]) {

        Scanner in=new Scanner(System.in);

        int n,i,j,k=1;

        System.out.println("enter number of rows:");

        n=in.nextInt();

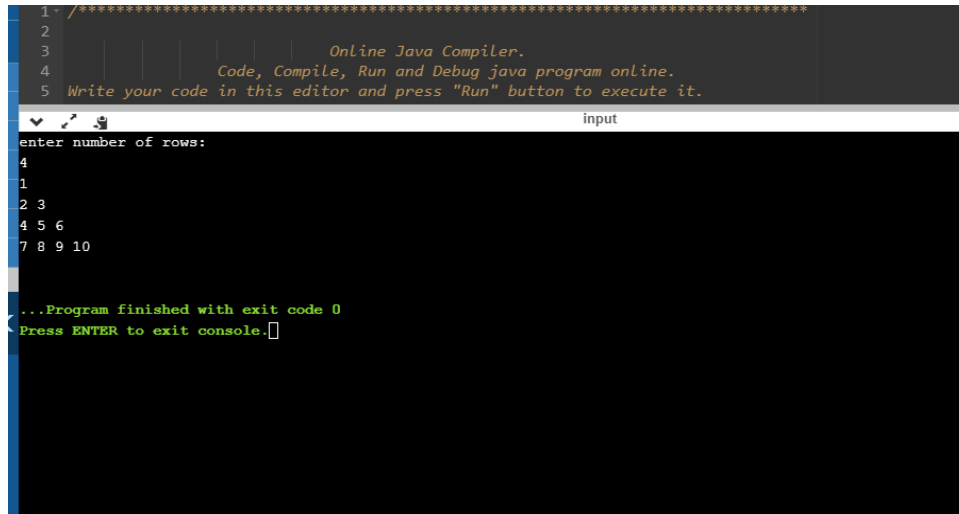
        for(i=1;i<=n;i++)
        {
            for(j=1;j<=i;j++)
            {
                System.out.print(k+" ");

                k++;
            }

            System.out.println();
        }
    }
}
```

}

### **Output-**



```
1- /*****  
2-  
3- Online Java Compiler.  
4- Code, Compile, Run and Debug java program online.  
5- Write your code in this editor and press "Run" button to execute it.  
input  
enter number of rows:  
4  
1  
2 3  
4 5 6  
7 8 9 10  
...Program finished with exit code 0  
Press ENTER to exit console
```

### **Program 5-**

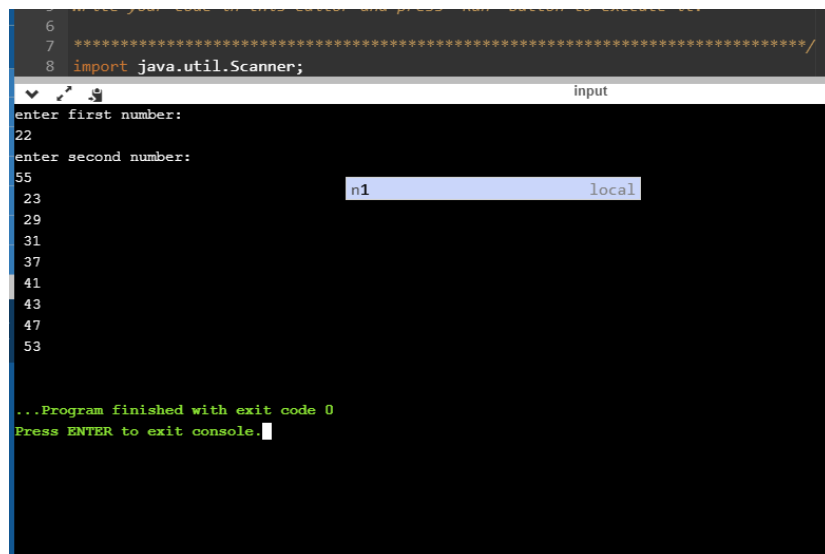
```
import java.util.Scanner;  
  
class Prime  
{  
  
    public static void main(String args[]) {  
  
        Scanner in=new Scanner(System.in);  
  
        int n1,n2,i,j,isprime=1;  
  
        System.out.println("enter first number:");  
  
        n1=in.nextInt();  
  
        System.out.println("enter second number:");  
  
        n2=in.nextInt();  
  
        for(i=n1;i<=n2;i++)  
        {  
            for(j=2;j<=i/2;j++)
```

```

        {
            isprime=1;
            if(i%j==0)
            {
                isprime=0;
                break;
            }
        }
        if(isprime==1)
        {
            System.out.println(" "+i);
        }
    }
}

```

### ***Output-***



The screenshot shows a Java IDE with a code editor at the top and a console window at the bottom. The code editor contains the following code:

```

6
7 *****/
8 import java.util.Scanner;

```

The console window shows the output of the program. It prompts the user to enter the first and second numbers. The first number entered is 22, and the second number entered is 55. The program then prints out the prime numbers between 23 and 53: 23, 29, 31, 37, 41, 43, 47, and 53. The console also shows the message "...Program finished with exit code 0" and "Press ENTER to exit console."

```
6
7 *****/
8 import java.util.Scanner;

input
enter first number:
11
enter second number:
41
11
13
17
19
23
29
31
37
41

...Program finished with exit code 0
Press ENTER to exit console.
```

### ***Program 6-***

```
import java.util.Scanner;

import java.lang.Math;

class Main

{

    public static void main(String args[]) {

        Scanner in=new Scanner(System.in);

        double r,h,area,vol;

        int opt;

        char ch;

        do

        {

            System.out.println("\n"+"Area and Volume"+"\\n");

            System.out.println("1.Cyliner"+" "+"2.Cone"+" "+"3.Sphere");

            System.out.println("Select shape option:");
```

```
opt=in.nextInt();

switch(opt)

{

    case 1: System.out.println("\n"+"CYLINER");

    System.out.println("enter radius and height");

    r=in.nextDouble();

    h=in.nextDouble();

    area=((2*3.14*r*h)+(2*3.14*r*r));

    vol=(3.14*r*r*h);

    System.out.println("area="+area+" "+"volume="+vol);

    break;

    case 2: System.out.println("\n"+"CONE");

    System.out.println("enter radius and height");

    r=in.nextDouble();

    h=in.nextDouble();

    area=((3.14*r)*(r+Math.sqrt(h*h+r*r)));

    vol=((3.14*r*r*h)/3);

    System.out.println("area="+area+" "+"volume="+vol);

    break;

    case 3: System.out.println("\n"+"SPHERE");

    System.out.println("enter radius");

    r=in.nextDouble();

    area=(4*3.14*r*r);

    vol=((4*3.14*r*r*r)/3);
```

```

        System.out.println("area="+area+" "+"volume="+vol);

        break;

        default: System.out.println("invalid input");

    }

    System.out.println("\n"+"do you want to find area and volume for another
shape? y/n ?");

    ch=in.next().charAt(0);

}

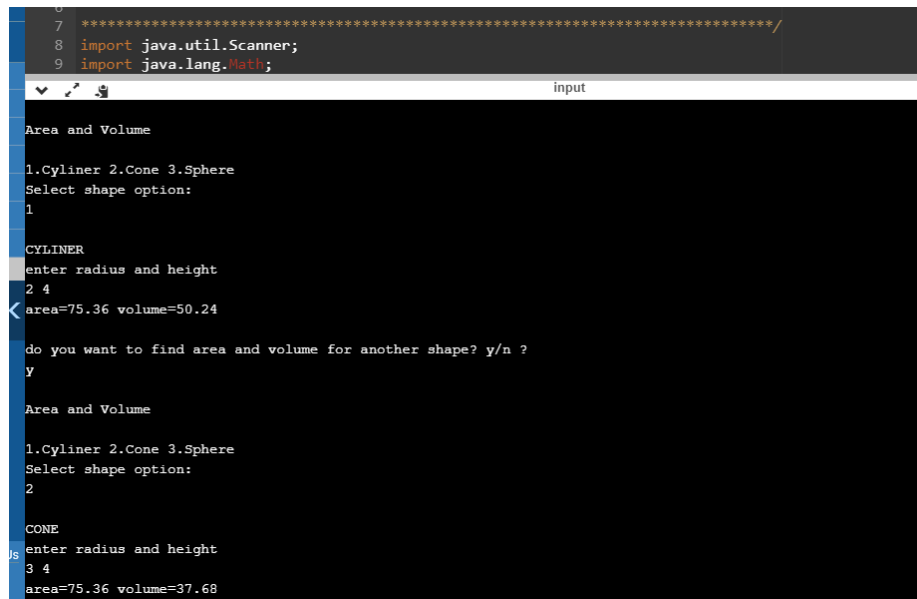
while(ch=='y');

}

}

```

### Output-



```

0
7 *****/
8 import java.util.Scanner;
9 import java.lang.Math;
input
Area and Volume
1.Cyliner 2.Cone 3.Sphere
Select shape option:
1
CYLINER
enter radius and height
2 4
area=75.36 volume=50.24
do you want to find area and volume for another shape? y/n ?
y
Area and Volume
1.Cyliner 2.Cone 3.Sphere
Select shape option:
2
CONE
enter radius and height
3 4
area=75.36 volume=37.68

```

```
6
7 *****/
8 import java.util.Scanner;
9 import java.lang.Math;

input

CONE
enter radius and height
3 4
area=75.36 volume=37.68

do you want to find area and volume for another shape? y/n ?
y

Area and Volume

1.Cyliner 2.Cone 3.Sphere
Select shape option:
3

SPHERE
enter radius
5
area=314.0 volume=523.333333333334

do you want to find area and volume for another shape? y/n ?
n

...Program finished with exit code 0
Press ENTER to exit console.
```

```
6
7 *****/
8 import java.util.Scanner;
9 import java.lang.Math;

input

Area and Volume

1.Cyliner 2.Cone 3.Sphere
Select shape option:
1

CYLINDER
enter radius and height
1.2 2.4
area=27.129599999999996 volume=10.851839999999997

do you want to find area and volume for another shape? y/n ?
y

Area and Volume

1.Cyliner 2.Cone 3.Sphere
Select shape option:
2

CONE
enter radius and height
3.3 4.1
area=88.73062404649609 volume=46.73262
```

```
6
7 *****/
8 import java.util.Scanner;
9 import java.lang.Math;

input

CONE
enter radius and height
3.3 4.1
area=88.73062404649609 volume=46.73262

do you want to find area and volume for another shape? y/n ?
y

Area and Volume

1.Cyliner 2.Cone 3.Sphere
Select shape option:
3

SPHERE
enter radius
5.61
area=395.289576000000007 volume=739.1915071200001

do you want to find area and volume for another shape? y/n ?
n

...Program finished with exit code 0
Press ENTER to exit console.
```