

(same week 2 programs in Java) Mallika Purohit Sec-B IBM19CS081

3) Accept a number  $n$  from user and print  $n$  rows of :

1  
2 3  
4 5 6  
7 8 9 10

```
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();  
        }  
    }  
}
```



- 5) Java program to accept 2 numbers from user and print all the prime numbers between them.

```
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 (" "+1);
```

```
}
```

```
}
```

```
}
```

```
}
```

- 6) A Java program to create a menu driven calculator to calculate area and volume of a CYLINDER, CONE and SPHERE till the user wishes to exit.

```
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. Cylinder" + " " + "2. Cone" + " " + "3. Sphere");
System.out.println("Select shape option:");
opt = in.nextInt();
switch (opt)
{
    case 1: System.out.println("\n" + "CYLINDER");
        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');  
}  
}
```