

# PROGRAMMING IN JAVA – CSA0980

## PROGRAMS:

1.

```
import java.util.Scanner;
class week1c1 {
    public static void main(String args[]) {
        int n;
        double p;
        Scanner s = new Scanner(System.in);
        System.out.println("enter an integer:");
        n = s.nextInt();
        p = Math.sqrt(n);
        System.out.println("the square root of integer:" + p);
    }
}
```

## Output:

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java>javac week1c1.java

C:\Users\vishn\OneDrive\Desktop\java2\C-Java>java week1c1
enter an integer:
4
the square root of integer:2.0

C:\Users\vishn\OneDrive\Desktop\java2\C-Java>javac week1c1.java

C:\Users\vishn\OneDrive\Desktop\java2\C-Java>java week1c1
enter an integer:
8
the square root of integer:2.8284271247461903
```

2. `import java.util.Scanner;`

```
class week1c2 {
    public static void main(String args[]) {
        int n,temp,sum = 0,rem = 0;
        Scanner s = new Scanner(System.in);
        System.out.println("enter integer:");
        n = s.nextInt();
        temp = n;
        while(n!=0)
```

```

    {
        rem = n % 10;
        sum = (sum*10) + rem;
        n = n / 10;
    }
    if(temp == sum)
    {
        System.out.println(temp + " is palindrone");
    }
    else
    System.out.println(temp + " is not palindrome");
}
}

```

Output:

```

C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>javac week1c2.java

C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>java week1c2
enter integer:
121
121 is palindrone

```

```

3. import java.util.Scanner;

class week1c3 {
    public static void main(String args[]) {
        int n;
        Scanner s = new Scanner(System.in);
        System.out.println("enter n:");
        n = s.nextInt();
        int i,j;
        for(i=0;i<n;i++)
        {
            for(j=0;j<=i;j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}

```

Output:

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>javac week1c3.java
```

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>java week1c3
enter n:
4
*
**
***
****
```

```
4. import java.util.*;

class week1c4 {
    public int factorial(int i) {
        if(i==0)
            return 1;
        else
        {
            return i*factorial(i-1);
        }
    }
    public static void main(String args[]) {
        int n,i,j;
        Scanner s = new Scanner(System.in);
        n = s.nextInt();
        week1c4 g = new week1c4();
        for(i=0;i<=n;i++)
        {
            for(j=0;j<n-i;j++)
            {
                System.out.print(" ");
            }
            for(j=0;j<=i;j++)
            {
                System.out.print(" " +g.factorial(i) / (g.factorial(i-
j)*g.factorial(j)));
            }
            System.out.println();
        }
    }
}
```

Output:

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>javac week1c4.java
```

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>java week1c4
4
  1
 1 1
1 2 1
1 3 3 1
1 4 6 4 1
```

```
5. import java.util.*;

class week1c5 {
    public static void main(String args[]) {
        Scanner s = new Scanner(System.in);
        int n,i,j;
        n = s.nextInt();
        for(i=n;i>=1;i--)
        {
            for(j=i;j<n;j++)
            {
                System.out.print(" ");
            }
            for(j=1;j<=(2*i-1);j++)
            {
                System.out.print("*");
            }
            System.out.println(" ");
        }
    }
}
```

Output:

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>javac week1c5.java
```

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>java week1c5
4
*****
*****
***
*
```

```
6. import java.util.*;

class week1c6 {
    public static void main(String args[]) {
        int i,j;
```

```

Scanner s = new Scanner(System.in);
for(i=0;i<4;i++)
{
    for(j=0;j<6;j++)
    {
        if(i==0 || i == 3 || j==0||j==5){
            System.out.print("*");
        }
        else
            System.out.print(" ");

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

```

Output:

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>javac week1c6.java
```

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>java week1c6
```

```

*****
*      *
*      *
*****

```

```

7. class week1c7 {

    public static void main(String args[]) {
        int a[][] = {{1,2,3},{4,5,6},{7,8,9}};
        int b[][] = {{1,2,3},{4,5,6},{7,8,9}};
        int c[][] = new int[3][3];
        int i,j,k;
        for(i=0;i<3;i++){
            for(j=0;j<3;j++) {
                c[i][j] = 0;
                for(k=0;k<3;k++) {
                    c[i][j] += a[i][k] * b[k][j];
                }
                System.out.print(c[i][j]+" ");
            }
            System.out.println();
        }
    }
}

```

## Output:

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>javac week1c7.java
```

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>java week1c7
30 36 42
66 81 96
102 126 150
```

```
8. class week1c8 {

    public static void main(String args[]){
        int i,j;
        int a[][] = {{1,2},{1,2}};
        int b[][] = {{1,2},{1,2}};
        int c[][] = new int[2][2];
        for(i=0;i<2;i++) {
            for(j=0;j<2;j++) {
                c[i][j] = a[i][j] + b[i][j];
                System.out.print(c[i][j] + " ");
            }
            System.out.println();
        }
    }
}
```

## Output:

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>javac week1c8.java
```

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>java week1c8
2 4
2 4
```

```
9. import java.util.*;

class week1c9 {

    public static double mean(int a[],int n) {
        int sum = 0;
        for(int i=0;i<n;i++) {
            sum +=a[i];
        }
    }
}
```

```

        return (double)sum/(double)n;
    }
    public static double median(int a[],int n)
    {
        Arrays.sort(a);
        if(n%2!=0){
            return (double)a[n/2];
        }
        else{
            return (double)(a[(n-1)/2] + a[n/2]) / 2.0;
        }
    }
}
public static void main(String args[]) {
    int a[] = {1,3,2,4,6,45,74,2};
    int n=a.length;
    System.out.println("Mean:" + mean(a,n));
    System.out.println("median:" + median(a,n));
}
}

```

Output:

```

C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>javac week1c9.java

C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>java week1c9
Mean:17.125
median:3.5

```

```

10. import java.util.*;

class week1c10 {
    public static void main(String args[]) {
        Scanner s = new Scanner(System.in);
        int r,c;
        // System.out.println("enter rows and columns:");
        //r = s.nextInt();
        // c = s.nextInt();
        for(int i=1;i<4;i++) {
            for(int j=1;j<6;j++) {
                if(i == 1 || i == 3 || j == 1 || j == 5)
                    System.out.print("$");

                else
                    System.out.print(" ");
            }
        }
        System.out.println();
    }
}

```

## Output:

```
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>javac week1c10.java
C:\Users\vishn\OneDrive\Desktop\java2\C-Java\Assignment-1>java week1c10
$$$$$
$   $
$   $
$$$$$
```