

WEEK-6 PRACTICE PROGRAMS

PROGRAM 1:

INPUT:

```
1  import java.util.Scanner;
2
3  class Transpose
4  {
5      public static void main (String[] args)
6      {
7          Scanner ss = new Scanner(System.in);
8          int m, n, i, j;
9          System.out.println("\nEnter the NUMBER OF ROWS of the matrix :");
10         m = ss.nextInt();
11         System.out.println("\nEnter the NUMBER OF COLUMNS of the matrix :");
12         n = ss.nextInt();
13         int A[][] = new int[m][n];
14
15         System.out.println("\n<-----ENTER THE ELEMENTS OF THE MATRIX----->\n");
16         for (i = 0; i < m; i++)
17         {
18             for (j = 0; j < n; j++)
19             {
20                 System.out.print("Enter the element ("+(i+1)+", " +(j+1)+") : ");
21                 A[i][j] = ss.nextInt();
22             }
23         }
24
25         System.out.println("\n<-----THE ENTERED MATRIX----->\n");
26         for (i = 0; i < m; i++)
27         {
28             for (j = 0; j < n; j++)
29                 System.out.print(A[i][j] + " ");
30             System.out.println();
31         }
32         System.out.println("\n<----->");
33
34         System.out.println("\n<-----THE RESULTANT TRANSPOSE MATRIX----->\n");
35         for (i = 0; i < n; i++)
36         {
37             for (j = 0; j < m; j++)
38                 System.out.print(A[j][i] + " ");
39             System.out.println();
40         }
41         System.out.println("\n<----->");
42     }
43 }
```

OUTPUT:



```
Command Prompt
Enter the NUMBER OF ROWS of the matrix :
2

Enter the NUMBER OF COLUMNS of the matrix :
3

<-----ENTER THE ELEMENTS OF THE MATRIX----->

Enter the element (1, 1) : 1
Enter the element (1, 2) : 2
Enter the element (1, 3) : 3
Enter the element (2, 1) : 4
Enter the element (2, 2) : 5
Enter the element (2, 3) : 6

<-----THE ENTERED MATRIX----->

1      2      3
4      5      6

<----->

<-----THE RESULTANT TRANSPOSE MATRIX----->

1      4
2      5
3      6

<----->
```

PROGRAM 2:

INPUT:

```
1  import java.util.Scanner;
2
3  class Circledemo
4  {
5      double radius;
6      double area;
7      double perimeter;
8      double pi;
9      Scanner ss = new Scanner(System.in);
10
11     Circledemo()
12     {
13         radius = 0;
14         area = 0;
15         perimeter = 0;
16         pi = 22.0 / 7;
17     }
18
19     void accept()
20     {
21         System.out.println("\nEnter the RADIUS of the circle :");
22         radius = ss.nextDouble();
23     }
24
25     void compute_area()
26     {
27         area = pi * radius * radius;
28     }
29
30     void compue_perimeter()
31     {
32         perimeter = 2 * pi * radius;
33     }
34
35     void display()
36     {
37         System.out.println("\n<----->\n");
38         System.out.printf("AREA of the circle : %.3f",area);
39         System.out.println();
40         System.out.printf("PERIMETER of the circle : %.3f",perimeter);
41         System.out.println();
42         System.out.println("\n<----->\n");
43     }
44     public static void main(String[] args)
45     {
46         Circledemo c = new Circledemo();
47         c.accept();
48         c.compute_area();
49         c.compue_perimeter();
50         c.display();
51     }
52 }
53
54
```

OUTPUT:

```
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_6>javac Circledemo.java

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_6>java Circledemo

Enter the RADIUS of the circle :
5

<----->
AREA of the circle : 78.571
PERIMETER of the circle : 31.429

<----->
```

PROGRAM 3:

INPUT:

```
1  import java.util.Scanner;
2
3  class Actor
4  {
5      int id;
6      String name;
7      int no_of_movies;
8      int no_of_years_exp;
9      Scanner ss = new Scanner(System.in);
10     double average_performance;
11
12     Actor()
13     {
14         id = 0;
15         name = "";
16         no_of_movies = 0;
17         no_of_years_exp = 0;
18         average_performance = 0.0;
19     }
20
21     void accept()
22     {
23         System.out.println("Enter the ACTOR ID :");
24         id = ss.nextInt();
25         System.out.println("Enter the ACTOR NAME :");
26         name = ss.next();
27         System.out.println("Enter the NUMBER OF MOVIES :");
28         no_of_movies = ss.nextInt();
29         System.out.println("Enter the YEARS OF EXPERIENCE of the actor :");
30         no_of_years_exp = ss.nextInt();
31         average_performance = (double)no_of_movies / no_of_years_exp;
32     }
33
34     public static void main(String[] args)
35     {
36         Scanner ss = new Scanner(System.in);
37         System.out.println("\nEnter the number of actors :");
38         int n = ss.nextInt();
39         Actor a[] = new Actor[n];
40         int i;
41         double avg = -1;
42         String nm = "";
43         for(i = 0; i < n; i++)
44         {
45             System.out.println("\n-----ENTER THE DETAILS OF ACTOR " + (i+1) + "-----\n");
46             a[i] = new Actor();
47             a[i].accept();
48             if (a[i].average_performance > avg)
49             {
50                 avg = a[i].average_performance;
51                 nm = a[i].name;
52             }
53         }
54         System.out.println("\n-----\n");
55         System.out.printf("HIGHEST AVERAGE : %.2f", avg);
56         System.out.println();
57         System.out.println("ACTOR : " + nm);
58     }
59 }
```

OUTPUT:

```
Command Prompt

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_6>java Actor

Enter the number of actors :
2

-----ENTER THE DETAILS OF ACTOR 1-----

Enter the ACTOR ID :
123
Enter the ACTOR NAME :
John
Enter the NUMBER OF MOVIES :
175
Enter the YEARS OF EXPERIENCE of the actor :
20

-----ENTER THE DETAILS OF ACTOR 2-----

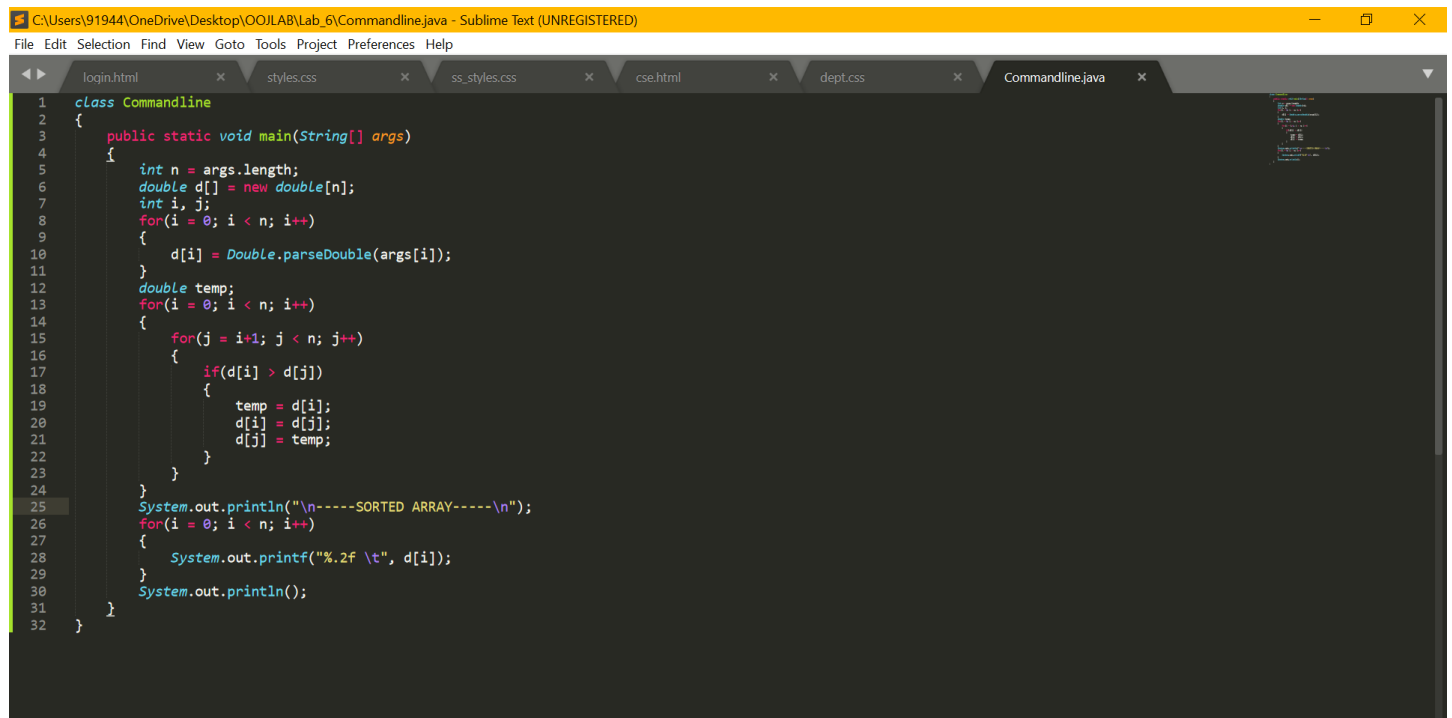
Enter the ACTOR ID :
456
Enter the ACTOR NAME :
Joseph
Enter the NUMBER OF MOVIES :
150
Enter the YEARS OF EXPERIENCE of the actor :
25

-----

HIGHEST AVERAGE : 8.75
ACTOR : John
```

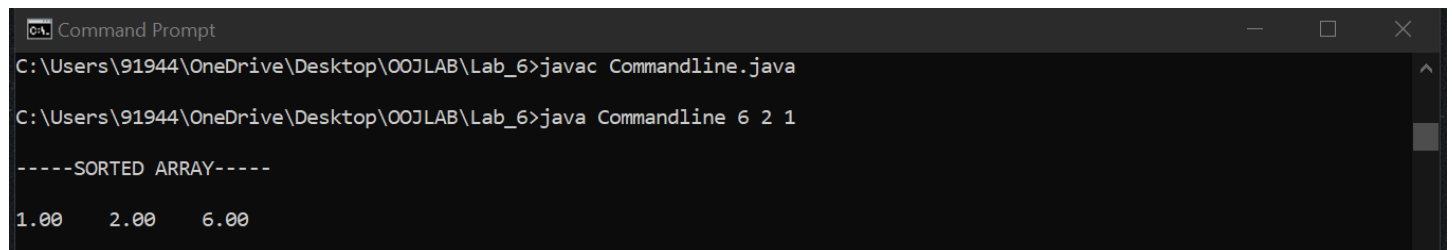
PROGRAM 4:

INPUT:



```
1 class Commandline
2 {
3     public static void main(String[] args)
4     {
5         int n = args.length;
6         double d[] = new double[n];
7         int i, j;
8         for(i = 0; i < n; i++)
9         {
10             d[i] = Double.parseDouble(args[i]);
11         }
12         double temp;
13         for(i = 0; i < n; i++)
14         {
15             for(j = i+1; j < n; j++)
16             {
17                 if(d[i] > d[j])
18                 {
19                     temp = d[i];
20                     d[i] = d[j];
21                     d[j] = temp;
22                 }
23             }
24         }
25         System.out.println("\n-----SORTED ARRAY-----\n");
26         for(i = 0; i < n; i++)
27         {
28             System.out.printf("%.2f \t", d[i]);
29         }
30         System.out.println();
31     }
32 }
```

OUTPUT:



```
Command Prompt
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_6>javac Commandline.java
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_6>java Commandline 6 2 1

-----SORTED ARRAY-----
1.00    2.00    6.00
```