Extra programs:

1]

```
import java.util.Scanner;
public class Main
{
  public static void main (String args[])
  {
    Scanner s= new Scanner (System.in);
     int i, j;
    System.out.println ("Enter number of rows:");
    int m = s.nextInt();
    System.out.println ("Enter number of columns:");
     int n= s.nextInt();
     int array [][] = new int [m][n];
     System.out.println( "Enter matrix:");
      for (i=0; i<m; i++)
      {
        for(j=0;j<n;j++)
        {
         array [i] [j] = s.nextInt();
       }
      }
      System.out.println("The above matrix before
                                Transpose is ");
      for (i=0; i<m ; i++)
      {
        for(j=0;j<n;j++)
      {
       System.out.println( array [i][j]+ " ");
```

```
        }
        System.out.println(" ");
    }
    System.out.println("The above matrix after Transpose is");
    for (i=0; i<n; i++)
    {
        for (j=0; j<m; j++)
        {
            System.out.print(array[j][i]+" ");
        }
        System.out.println(" ");
    }
}
}
```

2]

```
import java.util.Scanner;
class CircleDemo{
    double radius;
    double area;
    double perimeter;
    void accept()
    {
        Scanner xx = new Scanner(System.in);
        System.out.println("Enter radius");
        radius = xx.nextDouble();
    }
    double ar()
    {
        area = 3.14 * radius * radius;
        return area;
    }
```

2)

```
double pm()
{
 perimeter = 2 * 3.14 * radius;
  return perimeter;
}
 void display()
 {
  System.out.println("Area of the circle is "+area);
  System.out.println("Perimeter of the circle is "+perimeter);
 }
}
 class Main {
  public static void main(String ss[]) {
   Circle Demo c1 = new Circle Demo();
    c1.accept();
    c1.ar();
    c1.pm();
    c1.display();
   }
  }
```

3)

```
import java.util.Scanner;
 class Actor {
  int id;
  String name;
  int no_of_movies;
  int no_of_years_exp;
  double avg_performance;
  static String highest_name;
  void accept()
  {
```

3]
```
Scanner xx = new Scanner (System.in);
System.out.println(" Enter actor Id");
id = xx.nextInt();
System.out.println(" Enter actor name-");
name = xx.next();
System.out.println(" Enter no_of_movies ");
no_of_movies = xx.nextInt();
System.out.println(" Enter number of years of experience ");
no_of_exp = xx.nextInt();
}
double avg()
{
avg_performance = no_of_movies / no_of_years_exp;
return avg_performance;
}
}
class Main{
public static void main(String args[]){
Scanner xx = new Scanner (System.in);
double highest = 0;
System.out.println(" Enter number of actors - ");
int n = xx.nextInt();
Actor a[] = new Actor[n];
for(int i=0; i<n; i++).
{
a[i] = new Actor();
a[i].accept()
a[i].avg();
if(a[i].avg() > highest)
{
```

```
highest = a[i].avg ();
Actor.highest_name = a[i].name;
}
}
System.out.println("Actor with highest experience is "+Actor.highest_name);
}
}
```

4)

```
class Main{
public static void main (String ss[]){
double [] a= new double [ss.length];
for (int i=0; i<ss.length; i++){
a[i] = Double.parseDouble (ss[i]);
}
System.out.println("original array:");
for (int i=0; i<a.length; i++)
{
System.out.println(a[i] + " ");
}
System.out.println();
double temp=0.0;
for (int i=0; i<a.length; i++){
for (int j=0; j<a.length-1; j++) {
if (a[j]>a[j+1]){
temp = a[j];
a[j] = a[j+1];
a[j+1]= temp;
}
```

```
    }
}
System.out.println("Sorted array :");
for (int i=0; i<a.length; i++) {
System.out.println(a[i]+" ");
}
}
}
```

5)

```
import java.util.Scanner;
class ArrayMain{
public static void main(String ss[]){
Scanner s= new Scanner(System.in);
System.out.println("Enter number of elements :");
int n= s.nextInt();
int i;
int p=0, ne=0, z=0;
double full[]= new double[n];
double pos[]= new double[n];
double neg[]= new double[n];
System.out.println("Enter array elements :");
for (i=0; i<n; i++)
{
full[i]= s.nextDouble();
}
for (i=0; i<n; i++)
{
if (full[i]>0)
{
pos[p]= full[i];
p++;
}
```

5) else if (full[i]==0)

```
z++;
else
{
neg[ne]=full[i];
ne++;
}
}
System.out.println("positive elements array:");
for(i=0;i<p;i++)
{
System.out.print(pos[i]+"  ");
}
System.out.println();
System.out.println("Negative elements array:");
for(i=0;i<ne;i++)
{
System.out.print(neg[i]+"  ");
}
System.out.println();
System.out.println("no.of positive elements:"+p);
System.out.println("no.of zero elements:"+z);
System.out.println("no.of negative elements:"+ne);
}
}
```

6)

```
import java.util.Scanner;
class count main {
public static void main (String args[])
{
int i,vowels= 0, consonants = 0, spaces =0;
Scanner sc= new Scanner (System.in);
System.out.println("Enter Sentence");
String s= sc.nextLine ();
char str[]= s.to CharArray();
int n= str.length;
  for (i=0; i<n; i++)
{
if (str[i]=='a' || str[i]=='e' || str[i]=='i' || str[i]=='o' ||
  str[i]=='u' || str[i]=='A' || str[i]=='E' || str[i]=='I' ||
    str[i]=='O' || str[i]=='U')
{
  vowels++;
}
else if (str[i]>='a' && str[i]<='z') || (str[i]>='A' &&
                                    str[i]<='Z'))
{
 consonants ++;
}
else if (str[i]==' ')
{
  spaces++; }
}
System.out.println("vowels= "+vowels);
System.out.println("consonants = "+consonants);
System.out.println("white spaces= "+spaces);
}
}
```