ASSIGNMENT NO :- 1

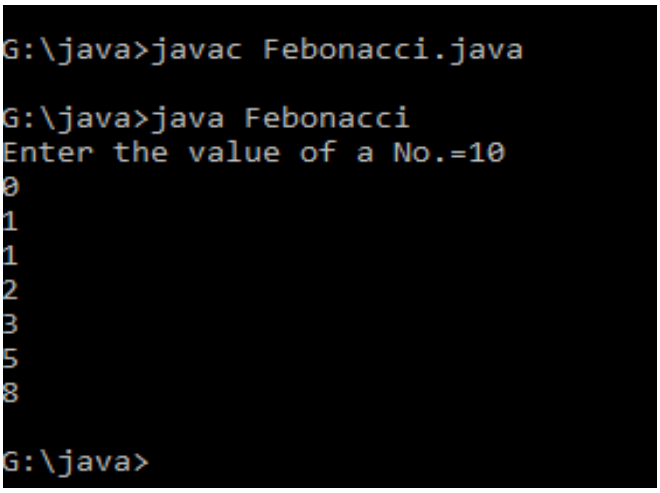
WRITE A JAVA PROGRAM TO DISPLAY THE FEBONACCI SERIES.

PROGRAM CODE:

```
import java.util.*;
class Febonacci
{
    static void febo(int n,int a,int b)
    {
         int c;
         c=a+b;
         if(c<=n)
        {
            System.out.println(c);
            a=b;
            b=c;
            febo(n,a,b);
        }
    }
    public static void main(String[] args)
    {
        int n,a=0,b=1;
        System.out.println("Enter the value of a No.=");
        Scanner sc=new Scanner(System.in);
        n=sc.nextInt();
        System.out.println(a);
       System.out.println(b);
       febo(n,a,b);
    }
}
```

Teacher's Signature.....

OUTPUT:



Teacher's Signature.....

ASSIGNMENT NO :-2

WRITE A JAVA PROGRAM TO CHECK WHEATHER A NUMBER IS PALINDROM OR NOT.

PROGRAM CODE:

```
import java.util.*;
class Palindrom
{
    public static void main(String[] args)
    {
        int n,r,m,s=0;
        System.out.println("Entr a number:");
        Scanner sc=new Scanner(System.in);
        n=sc.nextInt();
        m=n;
        while(n!=0)
        {
            r=n%10;
            s=s*10+r;
            n=n/10;
         }
        if(m==s)
            System.out.println("This number is palindrom");
        else
            System.out.println("This number is not palindrom");
    }
}
```

Teacher's Signature.....

OUTPUT:

```
G:\java>javac Palindrom.java

G:\java>java Palindrom
Entr a number:
121
This number is palindrom

G:\java>java Palindrom
Entr a number:
145
This number is not palindrom
```

Teacher's Signature.....

ASSIGNMENT NO :-3

WRITE A JAVA PROGRAM TO ACCEPT DIFFERENT NUMBER IN AN ARRAY AND SEARCH NUMBER USING LINEAR SEARCH METHOD.

PROGRAM CODE:

```
import java.util.*;
class LinearSearch
{
    public static void main(String[]args)
     {
          int flag=0,i;
          System.out.print("How many number u like to use:");
          Scanner sc=new Scanner(System.in);
          int n=sc.nextInt();
          System.out.print("Enter values of array:");
          for(i=0;i<n;i++)
              a[i]=sc.nextInt();
          System.out.print("Enter the value that u want to search:");
          Scanner sc=new Scanner(System.in);
          int key=sc.nextInt();
          for(i=0;i<n;i++)
          {
             if(a[i]==key)
             {
                flag=1;
                 break;
              }
          }
          if(flag==1)
                System.out.println("Found at the position:"+ (i+1));
           else
                 System.out.println("Not found");
    }
}
```

Teacher's Signature.....

OUTPUT:

```
G:\java>javac LinearSearch.java

G:\java>java LinearSearch
How many number u like to use: 5
Enter values of array: 12 8 23 20 5
Enter the value that u want to search: 23
Found at the possition:3
```

Teacher's Signature.....

ASSIGNMENT NO :-4

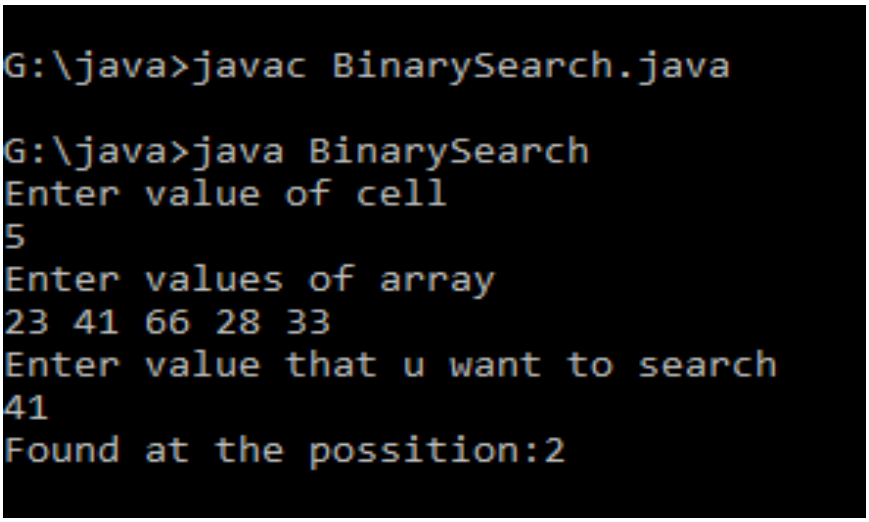
WRITE A JAVA PROGRAM TO ACCEPT DIFFERENT NUMBER IN AN ARRAY AND SEARCH NUMBER USING BINARY SEARCH METHOD.

PROGRAM CODE:

```
import java.util.*;
class BinarySearch
{
    public static void main(String[]args)
    {
          int []a=new int [10];
          int i,key,beg,end,mid;
          System.out.println("Enter value of cell");
          Scanner sc=new Scanner(System.in);
          int n=sc.nextInt();
          System.out.println("Enter values of array");
          for(i=0;i<n;i++)
           {
                a[i]=sc.nextInt();
            }
           System.out.println("Enter value that u want to search");
            key=sc.nextInt();
           beg=0;
           end=n-1;
            mid=(beg+n)/2;
            while(a[mid]!=key&&beg<=end)
            {
                 if(key>a[mid])
                       beg=mid+1;
                  else
                       end=mid-1;
                    mid=(beg+end)/2;
              }
              if(a[mid]==key)
                      System.out.println("Found at the possition:"+(mid+1));
              else
                      System.out.println("Not found");
       }
  }
```

Teacher's Signature.....

OUTPUT:



Teacher's Signature.....

ASSIGNMENT NO :-5

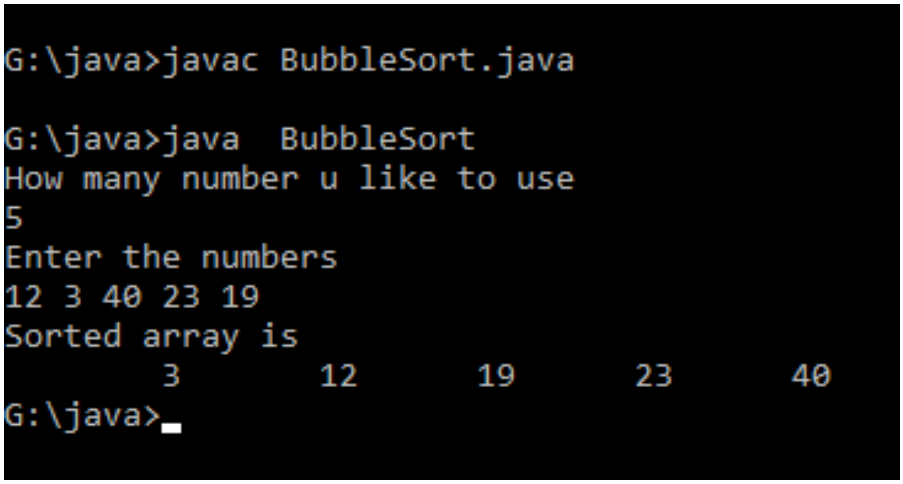
WRITE A JAVA PROGRAM TO ACCEPT NUMBERS IN AN ARRAY AND ARRANGE THOSE NUMBER IN ACCENDING ORDER USING BUBBLE SORT.

PROGRAM CODE:

```
import java.util.*;
class BubbleSort
{
    public static void main(String[]args)
    {
         int []a=new int [10];
         int i,j,temp;
         System.out.println("How many number u like to use");
         Scanner sc=new Scanner(System.in);
         int n= sc.nextInt();
        System.out.println("Enter the numbers");
        for(i=0;i<n;i++)
              a[i]=sc.nextInt();
       for(i=0;i<n-1;i++)
       {
          for(j=0;j<n-i-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 is");
        for(i=0;i<n;i++)
            System.out.print("\t"+a[i]);
    }
}
```

Teacher's Signature.....

OUTPUT:


G:\java>javac BubbleSort.java
G:\java>java BubbleSort
How many number u like to use
5
Enter the numbers
12 3 40 23 19
Sorted array is
3 12 19 23 40
G:\java>

ASSIGNMENT NO :-6

WRITE A JAVA PROGRAM TO ACCEPT NUMBERS IN A ARRAY AND ARRANGE THOSE NUMBER IN ACCENDING ORDER USING INSERTION SORT.

PROGRAM CODE:

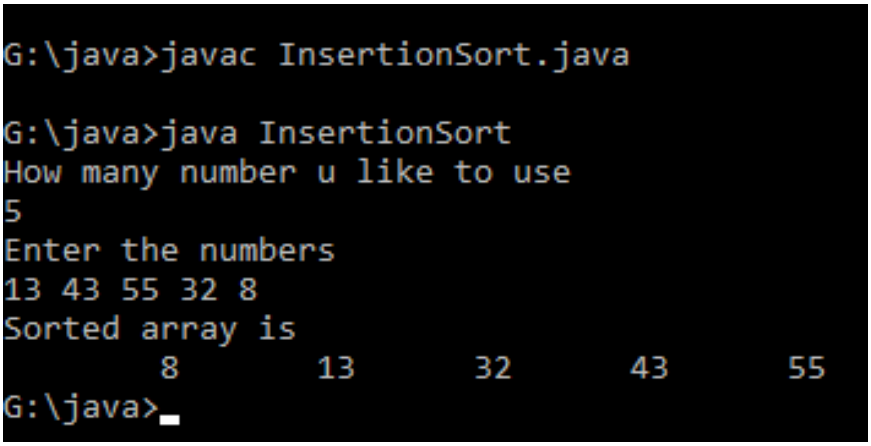
```
import java.util.*;

class InsertionSort
{
    public static void main(String[]args)
    {
        int []a=new int [10];
        int i,j,key;
        System.out.println("How many number u like to use");
        Scanner sc=new Scanner(System.in);
        int n= sc.nextInt();
        System.out.println("Enter the numbers");
        for(i=0;i<n;i++)
        a[i]=sc.nextInt();
        for(j=1;j<n;j++)
        {
           key=a[j];
           i=j-1;
           while((i>-1)&&(a[i]>key))
           {
                 a[i+1]=a[i];
                 i=i-1;
           }
          a[i+1]=key;
     }

    System.out.println("Sorted array is");
    for(i=0;i<n;i++)
              System.out.print("\t"+a[i]);
     }
  }
```

Teacher's Signature.....

OUTPUT:


G:\java>javac InsertionSort.java
G:\java>java InsertionSort
How many number u like to use
5
Enter the numbers
13 43 55 32 8
Sorted array is
8 13 32 43 55
G:\java>

ASSIGNMENT NO :-7

WRITE A JAVA PROGRAM TO FIND THE PRODUCT OF TWO MATRIX.

PROGRAM CODE:

```
import java.util.*;
class MatrixMull
{
    public static void main(String[]args)
    {
        int [][]a=new int [5][5];
        int [][]b=new int [5][5];
        int [][]c=new int [5][5];
        int arow,acol,brow,bcol,i,j,k;
        System.out.println("Enter the order of first matrix");
        Scanner sc =new Scanner(System.in);
        arow=sc.nextInt();
        acol=sc.nextInt();
        System.out.println("Enter the order of the second matrix");
        brow=sc.nextInt();
        bcol=sc.nextInt();
       if(acol==brow)
       {
           System.out.println("Enter the first matrix element");
           for(i=0;i<arow;i++)
           {
             for(j=0;j<acol;j++)
             {
                a[i][j]=sc.nextInt();
             }
           }
           System.out.println("Enter the second matrix element");
           for(i=0;i<brow;i++)
           {
              for(j=0;j<bcol;j++)
              {
                   b[i][j]=sc.nextInt();
              }
           }
           for(i=0;i<arow;i++)
```

```
            {
               for(j=0;j<bcol;j++)
               {
                     c[i][j]=0;
                     for(k=0;k<acol;k++)
                     c[i][j]=c[i][j]+(a[i][k]*b[k][j]);
                  }
                }
                System.out.println("The reultan Matrix is:");
                for (i=0;i<arow;i++)
                {
                   for(j=0;j<bcol;j++)
                   {
                      System.out.print("\t"+c[i][j]);
                    }
                   System.out.println();
                 }
            }
             else
                  System.out.println("Multiplication is not possible");
          }
      }
```

OUTPUT:

```
G:\java>javac MatrixMull.java

G:\java>java MatrixMull
Enter the order of first matrix
3 3
Enter the order of the second matrix
3 3
Enter the first matrix element
2 4 6
1 7 3
5 2 8
Enter the second matrix element
2 4 1
5 3 7
8 2 4
The reultan Matrix is:
        72      32      54
        61      31      62
        84      42      51
```

Teacher's Signature.....

ASSIGNMENT NO :-8

WRTE A JAVA PROGRAM TO FIND THE TRANSPOSE OF A MATRIX.

PROGRAM CODE:

```
import java.util.*;
class MatrixTranspose
{
    public static void main(String[]args)
    {
        int [][]a=new int [5][5];
        int row,col,i,j;
        System.out.println("Enter the order of first matrix");
        Scanner sc =new Scanner(System.in);
        row=sc.nextInt();
        col=sc.nextInt();
        System.out.println("Enter the first matrix element");
        for(i=0;i<row;i++)
        {
            for(j=0;j<col;j++)
            {
                a[i][j]=sc.nextInt();
            }
        }
        System.out.println("The reultan Matrix is:");
        for(j=0;j<col;j++)
        {
           for(i=0;i<row;i++)
           {
               System.out.print("\t"+a[i][j]);
           }
           System.out.println();
        }
    }
}
```

Teacher's Signature.....

OUTPUT:

```
G:\java>javac MatrixTranspose.java

G:\java>java MatrixTranspose
Enter the order of first matrix
3 3
Enter the first matrix element
1 2 3
4 5 6
7 8 9
The reultan Matrix is:
        1       4       7
        2       5       8
        3       6       9
```

Teacher's Signature.....

ASSIGNMENT NO :-9

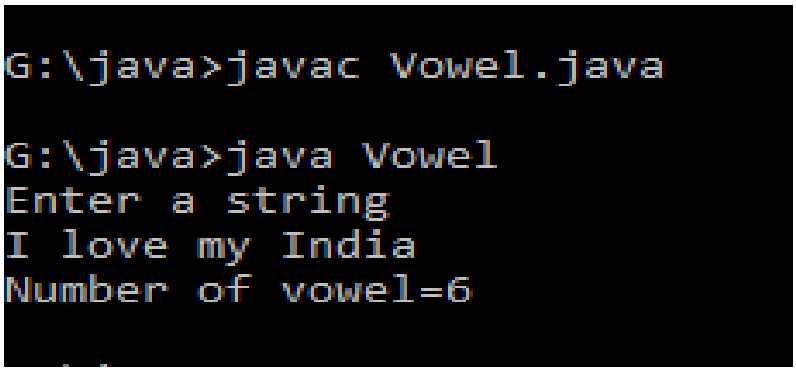
WRITE A JAVA PROGRAM TO ACCEPT A STRING AND FOUND THE NUBER OF VOWEL PRESENT IN THE STRING.

PROGRAM CODE:

```
import java.util.*;
class Vowel
{
    public static void main(String[]args)
    {
        int n,v=0,i;
        System.out.println("Enter a string");
        Scanner sc = new Scanner(System.in);
        String s=sc.nextLine();
        s=s.toLowerCase();
        for(i=0;i<s.length();i++)
        {
           char c=s.charAt(i);
           if(c=='a'||c=='e'||c=='i'||c=='o'||c=='u')
             v++;
         }
         System.out.println("Number of vowel="+v);
     }
  }
```

Teacher's Signature.....

OUTPUT:


G:\java>javac Vowel.java
G:\java>java Vowel
Enter a string
I love my India
Number of vowel=6

ASSIGNMENT NO :-10

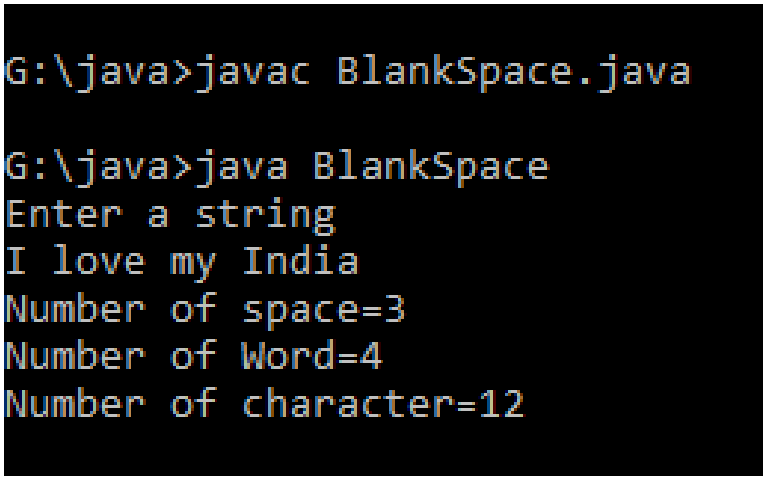
WRITE A JAVA PROGRAM TO ACCEPT A STRING AND FIND THE NUMBER OF BLANK SPACE,WORD AND CHARACTER PRESENT IN THE STRING.

PROGRAM CODE:

```
import java.util.*;
class BlankSpace
{
    public static void main(String[]args)
    {
        int n,sp=0,w=0,ch=0,i;
        System.out.println("Enter a string");
        Scanner sc = new Scanner(System.in);
        String s=sc.nextLine();
        n=s.length();
        for(i=0;i<n;i++)
        {
          if(s.charAt(i)==' ')
          sp++;
        }
        System.out.println("Number of space="+sp);
        System.out.println("Number of Word="+(sp+1));
        System.out.println("Number of character="+(n-sp));
    }
}
```

Teacher's Signature.....

OUTPUT:



Teacher's Signature.....

ASSIGNMENT NO :-11

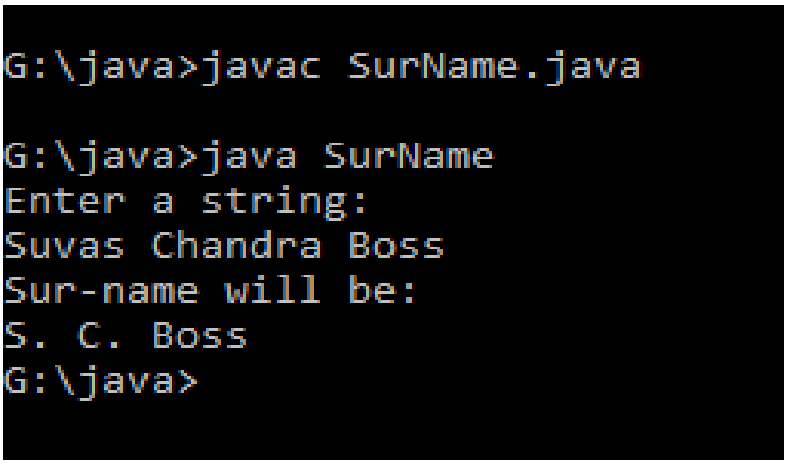
WRITE A JAVA PROGRAM TO ACCEPT A NAME AND DISPLAY THE INITIAL ALONG WITH THE SUR-NAME.

PROGRAM CODE:

```
import java.util.*;
class SurName
{
    public static void main(String[]args)
    {
        int i;
        System.out.println("Enter a string:");
        Scanner sc = new Scanner(System.in);
        String s=sc.nextLine();
        System.out.println("Sur-name will be:");
        System.out.print(s.charAt(0)+".");
        int n=s.length();
        int p=s.lastIndexOf(" ");
        for(i=0;i<p-1;i++)
        {
            char ch=s.charAt(i);
            if(Character.isWhitespace(ch))
            System.out.print(" "+s.charAt(i+1)+". ");
        }
        System.out.print(s.substring((p+1),n))
    }
}
```

Teacher's Signature.....

OUTPUT:


G:\java>javac SurName.java
G:\java>java SurName
Enter a string:
Suvas Chandra Boss
Sur-name will be:
S. C. Boss
G:\java>