No-1:

```
public class N0_1 {
    public static void main(String[]args){
        int num=5671,result=0;
        while (num!=0){
            int digit=num%10;
            result=(result*10)+digit;
            num=num/10;
        }
        System.out.println("result= "+result);
    }
}
```

NO-2:

```
public class No_2 {
    public static void main(String[]args){
        String str="this is a string";
        char ch=str.charAt(0);
        int count=0;
        for (int i=1; i<str.length(); i++){
            if (str.charAt(i)==ch) count++;
        }
        System.out.println(count);
    }
}
```

No-3:

```
public class No_3 {
   public static void main(String[]a){



      int first=0,second=1,next=0;
      int [] array=new int[10];
      for (int i=0; i<10; i++){
         array[i]=first;
         next=first+second;
         first=second;
         second=next;
      }
      for (int numbers:array) System.out.print(numbers+"  ");
   }
}
```

N0-4:

```
import java.util.Scanner;
public class No_4 {
   public static void main(String []args){
      Scanner input=new Scanner (System.in);
      System.out.println("enter the number of employees: ");
      int n=input.nextInt();
      int []c1=new int[n];
      int [] c2=new int [n];
      int sum_c1=0,sum_c2=0;
      System.out.println("enter the salaries of company 1: ");
      for (int i=0; i<n; i++){
         c1[i]=input.nextInt();
         sum_c1=sum_c1+c1[i];
      }
      System.out.println("enter the salaries of company 2: ");
      for (int i=0; i<n; i++){
         c2[i]=input.nextInt();
         sum_c2=sum_c2+c2[i];
      }

      if (sum_c1>sum_c2) System.out.println("company 1 has higher average salary.");
      else System.out.println("company 2 has higher average salary.");
   }
```

```
}
```

No-5:

```
public class Time {
   int hours,mins,seconds;
   public Time(int hours,int mins,int seconds){
      this.hours=hours;
      this.mins=mins;
      this.seconds=seconds;

   }

   public static void main(String []args){
      Time start=new Time(5,16,55);
      Time stop=new Time(2,33,59);
      Time result=new Time(0,0,0);

      if (stop.seconds>start.seconds){
         start.seconds+=60;
         stop.mins--;
      }
      result.seconds=start.seconds-stop.seconds;
      if (stop.mins>start.mins){
         start.mins+=60;
         stop.hours--;
```

```
        }
        result.mins=start.mins-stop.mins;
        result.hours=start.hours-stop.hours;

        System.out.printf("the time differece is %d %d %d\n",result.hours,result.mins,result.seconds);

    }
}
```

No-6:

```
import java.util.Scanner;

public class No_6 {
    public static void main(String[]args){
        Scanner input=new Scanner(System.in);
        int n=input.nextInt();
        double  sum=0;
        int a=1;
        for (int i=1; i<=n; i++){
            sum=sum+Math.pow(a,2);
            a+=2;
        }

        System.out.println(sum);
```

```
    }
}
```

No-7:

```
import java.util.Scanner;


public class No_7 {
   public static void main(String []args){
      Scanner input=new Scanner(System.in);
         int n=input.nextInt();
         double  sum=0;
         int a=2;
         for (int i=1; i<=n; i++){
            sum=sum+Math.pow(a,2);
            a+=2;
         }


         System.out.println(sum);


   }
}
```

No-8:

```
import java.util.Scanner;


public class No_8 {
   public static void main(String []args){
      Scanner input=new Scanner(System.in);
      System.out.println("initial velocity: ");
      double u=input.nextDouble();
      System.out.println("acceleration: ");
      double a=input.nextDouble();
      System.out.println("time: ");
      double t=input.nextDouble();
      double s=(u*t)+(0.5*a*t*t);
      System.out.println(s);
   }
}
```

No-9:

```
import java.util.Scanner;


public class No_9 {
   public static void main(String[]args){
      Scanner input=new Scanner(System.in);
      System.out.println("initial velocity: ");
      int u=input.nextInt();
```

```
        System.out.println("time: ");
        int t=input.nextInt();
        double h= (u*t)-(0.5*9.8*t*t);

        System.out.println(h);

    }
}
```

No-10:

```
import java.util.Scanner;
public class No_10 {
    public static void main(String[]args){
        Scanner input=new Scanner (System.in);
        int n=input.nextInt();
        if (n%4!=0 && n%6==0) System.out.println("this number is divisible by six but not by 4");
        else if (n%4==0 && n%6!=0) System.out.println("this number is divisible by 4 but not by 6");
        else if (n%4==0 && n%6==0) System.out.println("this number is divisible by both 4 and 6");
    }
}
```

N0-11:

```
import java.util.Scanner;


public class No_11 {
    public static void main(String[]args){
       Scanner input=new Scanner (System.in);
       int n=input.nextInt();
       if (n%3!=0 && n%2==0) System.out.println("this number is divisible by 2 but not by 3");
       else if (n%3==0 && n%2!=0) System.out.println("this number is divisible by 3 but not by 2");
       else if (n%3==0 && n%2==0) System.out.println("this number is divisible by both 3 and 2");
   }
}
```

No-12:

```
import java.util.Scanner;


public class No_12 {
   public static void main(String[]args){
       Scanner input=new Scanner(System.in);
       System.out.println("enter total unit: ");
       int unit=input.nextInt();
       int flag=0;
       if (unit>=0 && unit<=199) flag=1;
       if (unit>=200 && unit<=299) flag=2;
       if (unit>=300) flag=3;
```

```
        double bill=0;
        switch (flag){
           case 1: bill = 5*unit;
              break;
           case 2: bill=  ( (unit-199)*10 + (199*5) );
              break;
           case 3: bill= (unit-299)*15 + (100*10) +(199*5);

        }
        System.out.println(bill);
    }
}
```

No-13:

```
import java.util.Scanner;

public class No_13 {
    public static void main(String []args){
        Scanner input=new Scanner(System.in);
        int m=input.nextInt();
        int result=1;
        for (int i=1; i<=m ; i++){
           result=result*i;
        }
        System.out.println(result);
```

```
    }


}
```

No-14:

```
import java.util.Scanner;


public class No_14 {
    public static void main(String[]args){
        Scanner input= new Scanner(System.in);
        System.out.print("enter length: ");
        double length=input.nextDouble();
        System.out.print("enter width: ");
        double width=input.nextDouble();
        double area=length*width;
        System.out.println("area of rectangle = "+area);
    }
}
```

N0-15:

```
public class No_15 {
    public static void main(String[]args){
        for (int i=1; i<=50; i++){
            if (i%2==0) System.out.print(i+"  ");
            else continue;
```

```
        }
    }
}
```

No-16:

```
public class No_16 {
    public static void main(String[]args){
        for (char a='A'; a<='Z'; a++){
            System.out.print(a);
            System.out.print(a);
        }
    }
}
```

No-17:

```
import java.util.Scanner;
public class No_17 {
    public static void main(String []args){
        Scanner input=new Scanner(System.in);
        char letter=input.next().charAt(0);
        System.out.print("the entered alplabet is: ");
        switch(letter){
            case 'a':
                System.out.print(letter+" and it is a vowel");
                break;
```

```
            case 'e':
               System.out.print(letter+" and it is a vowel");
               break;
            case 'i':
               System.out.print(letter+ " and it is a vowel");
               break;
            case 'o':
               System.out.print(letter+" and it is a vowel");
               break;
            default :
               System.out.printf(letter+ " and it is a consonant\n");
         }
      }
}
```

No-18:

```
import java.util.Scanner;

public class No_18 {
   public static void main(String []args){
      Scanner input=new Scanner(System.in);
      System.out.print("Insert bat length in cm: ");
      double length=input.nextDouble();
      double answer=length*0.393;
      System.out.printf("Length in inch is : %f\n",answer);
```

```
    }
}
```

No-19:

```
import java.util.Scanner;
public class No_19 {
    public static void main(String[]args){
        Scanner input=new Scanner (System.in);
        int n=input.nextInt();
        int hour=n/3600;
        if (hour>0){
            n=n-(hour*60*60);
        }
        int min=n/60;
        if (min>0){
            n=n-(min*60);
        }
        int seconds=n;
        System.out.println(hour+"  "+min+" "+seconds);

    }
}
```

No-20:

```
import java.util.Scanner;


public class No_20 {
   public static void main(String[]args){


      Scanner input=new Scanner(System.in);
      int max=-1;
      for(int i=0; ;i++){
         int n=input.nextInt();
         if (n<0) break;


         if (n>max) max=n;


      }
      System.out.println(max);


   }
}
```

No-21:

```
import java.util.Scanner;


public class No_21 {
   public static void main(String[]args){
```

```
        Scanner input=new Scanner(System.in);
        int n=input.nextInt();
        System.out.print("the factors of "+n+" are: ");
        for (int i=1; i<=n; i++){
            if (n%i==0) System.out.print(i+"  ");
        }
    }
}
```

No-22:

```
import java.util.Scanner;

public class No_22 {
    public static void main(String[]args){
        Scanner input=new Scanner(System.in);
        int r= input.nextInt();
        double volume=(3.0/4)*3.142*r*r*r;
        System.out.println("Volume = "+volume);
    }
}
```

No-23:

```
import java.util.Scanner;


public class No_23 {
   public static void main(String[]args){
      Scanner input=new Scanner(System.in);
      int r= input.nextInt();
      double surface_area=4*3.142*r*r;
      System.out.println("Surface area = "+surface_area);
   }
}
```

No-24:

```
import java.util.Scanner;


public class No_24 {
   public static void main(String[]args){
      Scanner input=new Scanner (System.in);
      char ch=input.next().charAt(0);
      if ((ch>='a' && ch<='z') || (ch>='A' && ch<='Z')) System.out.printf("%c is an alphabet\n",ch);
      else if (ch>='0' && ch<='9') System.out.printf("%c is a digit\n",ch);
      else System.out.printf("%c is a special symbol\n",ch);
   }
}
```

No-25:

```
import java.util.Scanner;


public class No_25 {
   public static void main(String[]args){
      Scanner input=new Scanner (System.in);
      int r=input.nextInt();
      double area=3.142*r*r;
      double circumference= 2*3.142*r;
      System.out.println("the area is "+area+" and the circumference is "+ circumference);
   }
}
```

No-26:

```
import java.util.Scanner;
public class No_26 {
   public static void main(String []args){
      Scanner input=new Scanner(System.in);
      System.out.print("Insert book length in cm: ");
      double length=input.nextDouble();
      double answer=length*0.393;
      System.out.printf("Length in inch is : %f\n",answer);
   }
}
```

No-27:

```
import java.util.Scanner;


public class No_27 {
   public static void main(String[]args){


      Scanner input=new Scanner (System.in);
      int n=input.nextInt();
      int sum=0;
      while(n!=0){
         int digit=n%10;
         sum+=digit;
         n=n/10;


      }
      System.out.println(sum);
   }
}
```

No-28:

```
import java.util.Scanner;


public class No_28 {
   public static void main(String[]args){
```

```
        Scanner input=new Scanner (System.in);
        int annual_salary=input.nextInt();
        double monthly_salary=(annual_salary*1.00)/12;
        System.out.println("monthly salary: "+monthly_salary);
    }
}
```

No-29:

```
import java.util.Scanner;

public class No_29 {
    public static void main(String[]args){
        Scanner input=new Scanner (System.in);
        int a= input.nextInt();
        int b=input.nextInt();
        int c=input.nextInt();

        if (a+b+c==180 && a>0 && b>0 && c>0){
            if (a==90 || b==90 || c==90) System.out.println("right angled triangle");
            else if (a<90 && b<90 && c<90) System.out.println("acute triangle ");
            else if (a>90 || b>90 || c>90) System.out.println("obtuse triangle ");
        }
        else System.out.println("this is not a triangle");
    }
}
```

No-30:

```
import java.util.Scanner;


public class No_30 {
   public static void main(String[]args){
      Scanner input=new Scanner (System.in);
      int a= input.nextInt();
      int b=input.nextInt();
      int c=180-(a+b);


      if (a+b+c==180 && a>0 && b>0 && c>0){
         if (a==90 || b==90 || c==90) System.out.println("right angled triangle");
         else if (a<90 && b<90 && c<90) System.out.println("acute triangle ");
         else if (a>90 || b>90 || c>90) System.out.println("obtuse triangle ");
      }
      else System.out.println("this is not a triangle");
   }
}
```

No-31:

Output: AABBCCDDEE

No-32:

```
import java.util.Scanner;


public class No_32 {
   public static void main(String[]args){
      Scanner input=new Scanner (System.in);
      System.out.println("enter the number of elements : ");
      int n=input.nextInt();
      int []array=new int [n];
      int []reverse_array=new int[n];
      System.out.print("Arrays: ");
      for (int i=0,j=n-1; i<n; i++,j--){
         array[i]=input.nextInt();
         reverse_array[j]=array[i];
      }


      System.out.println("after reversing the array becomes: ");
      for (int numbers: reverse_array) System.out.print(numbers+"  ");
   }
}
```

No-33:

```
import java.util.Scanner;


public class No_33 {
   public static void main(String []args){
      Scanner input=new Scanner(System.in);
      int []array=new int [9];
      int middle_no=0;
      for (int i=0; i<9; i++){
         array[i]=input.nextInt();
         if (i==9/2) middle_no=array[i];
      }
      int count=0;
      for (int i=0;i<9; i++){
         if (array[i]>middle_no)  count++;
      }
      System.out.println(count);
   }
}
```

No-34:

```
import java.util.Scanner;


public class No_34 {
   public static void main(String []args){
      Scanner input=new Scanner (System.in);
      int []array=new int [5];
      int sum=0;
      for (int i =0; i<5; i++){
         array[i]=input.nextInt();
         sum+=array[i];
      }


      double average=sum/5;
      int count=0;
      for (int i=0; i<5; i++){
         if (array[i]> average) count++;
      }


      System.out.printf("the number of students who scored above average: %d",count);




   }
}
```

No-35:

```
import java.util.Scanner;


public class No_35 {
   public static void main(String[]args){
      Scanner input=new Scanner(System.in);
      String word=input.next();
      char first=word.charAt(0);
      int count=0;
      for (int i=1; i<word.length(); i++){
         if (first==word.charAt(i)) count++;
      }
      System.out.println(count);
   }
}
```

No-36:

```
import java.util.Scanner;


public class No_36 {
   public static void main(String[]args){
       Scanner input=new Scanner(System.in);
       int []array=new int [5];
       for (int i=0; i<5; i++){
          array[i]=input.nextInt();
       }
       int count=0;
       for (int i=0; i<5; i++){
          for (int j=1; j<=array[i]; j++){
             if (array[i]%j==0) count++;
          }
          System.out.printf("no.of factors of %d is %d\n",array[i],count);
          count=0;
       }
   }
}
```

No-37:

```
import java.util.Scanner;
public class No_37 {
   public static void main(String []args){
      Scanner input=new Scanner (System.in);
      int [][]array=new int[50][3];

      for (int i=0; i<50; i++){
         System.out.printf("enter the marks of student %d:\n",(i+1));
         for (int j=0; j<3; j++){
            array[i][j]=input.nextInt();
         }
      }
      int index=0;
      for (int i=0; i<3; i++){
         int max=array[0][i];
         for (int j=0; j<50; j++){
            if (array[j][i]>max){
               max=array[j][i];
               index=j;
```

```
            }
        }
        System.out.printf("Student %d got the highest mark in exam %d\n",(index+1),(i+1));
    }


        }
}
```

No-38:

```
import java.util.Scanner;


public class No_38 {
   public static void main(String []args){
      Scanner input=new Scanner (System.in);
      System.out.print("input upper limit: ");
      int n=input.nextInt();
      int sum=0;
      System.out.print("perfect number between 1 to "+n+": " );


      for (int i=1; i<=n; i++){
         for (int j=1; j<=i/2; j++){
            if (i%j==0) sum+=j;
         }
         if (sum==i) System.out.print(i+" ");
         sum=0;
      }
```

```
    }
}
```

No-39:

```
import java.util.Scanner;

public class No_39 {
    public static void main(String[]args){
        Scanner input =new Scanner (System.in);
        int [][]array=new int [3][3];
        int sum_row=0,sum_column=0;
        System.out.println("input numbers in 2D array: ");
        for (int i=0; i<3; i++){
            for (int j=0; j<3; j++){
                array[i][j]=input.nextInt();
            }
        }
        for (int i=0; i<3; i++){
            for (int j=0; j<3; j++){
                sum_row=sum_row+array[i][j];
            }
            System.out.printf("sum of row %d : %d\n",(i+1),sum_row);
            sum_row=0;
        }
```

```
        System.out.println("\n");
        for (int i=0; i<3; i++){
            for (int j=0; j<3; j++){
                sum_column=sum_column+array[j][i];
            }
            System.out.printf("sum of column %d: %d\n",(i+1),sum_column);
            sum_column=0;
        }
    }
}
```

No-40:

```
import java.util.Scanner;

public class No_40 {
    public static void main(String[]args){
        Scanner input=new Scanner (System.in);
        int []array=new int [5];
        int flag=0;
        // assuming a teenager is aged between 13 and 18:
        for (int i=0; i<5; i++){
            array[i]=input.nextInt();
            if (array[i]>=13 && array[i]<=18) flag=1;
        }
        if (flag==1) System.out.println("yes");
```

```
        else System.out.println("no");
    }
}
```

No-41:

```
import java.util.Scanner;
public class No_41 {
    public static void main(String[]args){
        Scanner input=new Scanner (System.in);
        String word=input.next();
        String result="";

        for (int i=0; i<word.length(); i++){
            if (i==0) result=result+word.charAt(i);
            else {
                char ch=word.charAt(i);
                result=result+(++ch);

            }
        }
        System.out.println(result);

    }

}
```

No-42:

```
import java.util.Scanner;


public class No_42 {
    public static void main(String[]args){
        Scanner input=new Scanner(System.in);
        String word=input.next();
        word=word.toLowerCase();
        int count=0;
        for (int i=0; i<word.length(); i++){
            char ch=word.charAt(i);
            if (ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u'){
                count++;
            }
        }
        System.out.println(count);
    }
}
```

No-43:

```
import java.util.Scanner;


public class No_43 {
   public static void main(String[]args){


      Scanner input =new Scanner(System.in);
      int flag=0,count=0;
      for (int i=0; i<10; i++){
         int num=input.nextInt();


         for (int j=2; j<=num/2; j++){
            if (num%j==0) flag=1;
         }
         if (flag==0 && num!=2)  count++;
         else flag=0;
      }
      System.out.println(count+" numbers are prime");


   }
}
```

No-44:

```
import java.util.Scanner;


public class No_44 {
    public static void main(String[]args){
        Scanner input=new Scanner (System.in);
        System.out.println("enter the number of rows and columns");
        int rows=input.nextInt();
        int columns=input.nextInt();
        if (rows==columns){

            int [][]array=new int[rows][rows];
            for (int i=0; i<rows;i++){
                for (int j=0; j<rows;j++){
                    array[i][j]=input.nextInt();
                }
            }
            int flag1=0,flag2=0 ;
            for (int i=0; i<rows; i++){
                for (int j=0; j<rows; j++){
                    if (i==j && array[0][0]==array[i][j]) flag1++;
                    if (i!=j && array[i][j]!=0){
```

```
                flag2=1;
                break;
              }

            }
            if (flag2==1) break;

          }

          if (flag1==rows && flag2==0) System.out.println("scaler matrix");
          else System.out.println("not a scaler matrix");

        }
        else System.out.println("not scaler matrix since it is not a square matrix");
    }
}
```

No-45:

```
import java.util.Scanner;


public class No_45 {
   public static void main(String[]args){
      Scanner input=new Scanner (System.in);
      System.out.println("enter the number of rows and columns(no.of rows and columns must be same)");
      int rows=input.nextInt();


      int [][]array=new int[rows][rows];
      int sum=0;
      for (int i=0; i<rows;i++){
         for (int j=0; j<rows;j++){
            array[i][j]=input.nextInt();
            if (i==j) sum=sum+array[i][j];
         }
      }
      System.out.println("the sum of the diagonal elements is : "+sum);
   }
}
```

No-46:

```
import java.util.Scanner;
public class No_46 {
    public static void main(String[]a){
        Scanner input=new Scanner(System.in);
        System.out.print("enter the size of the array: ");
        int n=input.nextInt();
        int []array= new int [n];
        System.out.print("entert the elements");
        for (int i=0; i<n; i++){
            array[i]=input.nextInt();
        }

        int flag=0,unique_elements=0;
        for (int i=0; i<n; i++){
            for (int j=0; j<n; j++){
                if (i!=j && array[i]==array[j]) flag=1;
            }
            if (flag==0) unique_elements++;
            else flag=0;
        }
```

```
        System.out.println("no of unique elements are :"+ unique_elements);
    }
}
```

No-47:

```
import java.util.Scanner;
public class No_47 {
    public static void main(String[]args){
        Scanner input=new Scanner (System.in);
        int [][]array=new int[3][12];

        for (int i=0; i<3; i++){
            System.out.println("enter the salries of year "+(i+1));
            for (int j=0; j<12; j++){
                array[i][j]=input.nextInt();
            }
        }
        int sum=0;
        for (int i=0; i<3; i++){
            for (int j=0;j<12; j++){
                sum=sum+array[i][j];
            }
            System.out.println("the total sales for year "+(i+1)+" is "+sum);
            sum=0;
```

```
        }
    }
}
```

No-48:

```
import java.util.Scanner;
public class No_48 {
    public static void main(String[]a){
        Scanner input=new Scanner(System.in);
        System.out.print("enter the size of the array: ");
        int n=input.nextInt();
        int []array= new int [n];
        System.out.print("entert the elements");
        for (int i=0; i<n; i++){
            array[i]=input.nextInt();
        }

        int count=0,repeating_elements=0,flag=0;

        for (int i=0; i<n; i++){
            for (int j=0; j<i; j++){
                if (array[i]==array[j]) flag=1;
            }
```

```
            if (flag==0){
                for (int j=i+1; j<n; j++){
                    if (array[i]==array[j]) count++;
                }

            }

            if (count!=0) repeating_elements++;
            count=0;
            flag=0;

        }

        System.out.println("no.of repeating elements: "+repeating_elements);
    }
}
```

No-49:

```
import java.util.Scanner;

public class No_49 {
    public static void main(String[]a){
        int [][] array=new int [10][3];
        Scanner input=new Scanner(System.in);
```

```
        for (int i=0; i<10; i++){
            System.out.println("enter the marks for Student "+ (i+1));

            for (int j=0; j<3; j++){
                System.out.println("enter the marks of exam "+(j+1));
                array[i][j]=input.nextInt();

            }
        }
        for (int i=0; i<10; i++){
            int max=array[i][0];
            for (int j=0; j<3; j++){
                if (array[i][j]>max) max=array[i][j];
            }
            System.out.printf("for student %d , max mark is %d",(i+1),max);
            System.out.println("");
        }


    }
}
```

No-50:

```
import java.util.Scanner;


public class No_50 {
   public static void main(String[]a){
      Scanner input=new Scanner (System.in);
      String line=input.nextLine();
      String reverseLine="";
      for(int i=line.length()-1,j=0; i>=0; i--,j++){
         reverseLine+=line.charAt(i);


      }
      System.out.println(reverseLine);
   }
}
```