1.write a program to find maximum between two numbers.

```
import java.util.*;
public class Maximum2
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the first number: ");
        int num1=sc.nextInt();
        System.out.println("Enter thes second number: ");
        int num2=sc.nextInt();
        if(num1>num2)
        System.out.println("number one is maximum");
        else
        System.out.println("number two is maximum");
    }
}
```

2.write a program to find maximum between three numbers.

```
import java.util.*;
public class Maximum
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter three integer: ");
        int num1=sc.nextInt();
        int num2=sc.nextInt();
        int num3=sc.nextInt();
```

```
        if(num1>num2 && num1>num3)
        {
            System.out.println("The largest number is:"+num1);
        }
        else if(num2>num1 && num2>num3)
        {
            System.out.println("The largest number is:"+num2);
        }
        else if(num3>num1 && num3>num2)
        {
            System.out.println("The largest number is:"+num3);
        }
        else
        {
            System.out.println("The numbers are same.");
        }
    }
}
```

3.write a java program to check whether a number is negative,positive or zero.

```
import java.util.Scanner;
public class Zero
{
    public static void main(String args[])
    {
        int number;
        Scanner sc=new Scanner(System.in);
        System.out.println("enter the number you want to check:");
        number=sc.nextInt();
```

```
        if(number>0)
            System.out.println(number+" is positive number");
        else if(number<0)
            System.out.println(number+" is negative number");
        else
            System.out.println(" it's a zero");
    }
}
```

4.write a java program whether a number is divisible by 5 and 11 or not.

```
import java.util.*;
public class Divisible
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter any number to check it is divisible by 5 and 11:");
        int number=sc.nextInt();
        if((number%5==0)&&(number%11==0))
        {
            System.out.println("Given number "+ number + " is Divisible by 5 and 11");
        }
        else
        {
            System.out.println("Given number "+ number + " is Not Divisible by 5 and
11");
        }
    }
}
```

5.write a java program to check whether a number is even or odd.

```
import java.util.Scanner;
class Even
{
    public static void main(String args[])
    {
        int num;
        System.out.println("Enter an integer number:");
        Scanner sc=new Scanner(System.in);
        num=sc.nextInt();
        if(num%2==0)
        {
            System.out.println("Entered number is even");
        }
        else
        {
            System.out.println("Entered number is odd");
        }
    }
}
```

6.write a java program whether a year is leap year or not.

```
import java.util.Scanner;
class Leapyear
{
    public static void main(String args[])
    {
        int year;
        System.out.println("Enter a year:");
        Scanner sc=new Scanner(System.in);
```

```
        year=sc.nextInt();
        if(year%4==0)
        {
            System.out.println("Entered year is leap year");
        }
        else
        {
            System.out.println("Entered year is non-leap year");
        }
    }
}
```

7.write a java program to check whether a character is alphabet or not.

```
import java.util.*;
public class Alphabet
{
    public static void main(String args[])
    {
        Scanner s=new Scanner(System.in);
        char ch;
        System.out.println("Enter the character ");
        ch=s.next().charAt(0);
        if((ch>='A' && ch<='Z')||(ch>='a' && ch<='z'))
        System.out.println(ch+" is an alphabet");
        else
        System.out.println(ch+" is not an alphabet");
    }
}
```

8.write a java program to input any alphabet and check whether it is vowel or constant.

```
import java.util.*;
public class Vowel
{
    public static void main(String[] args)
{
        Scanner sc= new Scanner(System.in);
        System.out.println("Enter alphabet: ");
        char ch= sc.next().charAt(0);
        if((ch=='a' || ch== 'e' || ch== 'i' || ch=='o' || ch=='u') || (ch=='A' || ch=='E' || ch=='I'
|| ch=='O' || ch=='U'))
        {
           System.out.println("vowel");
        }
        else
        {
            System.out.println("consonant");
        }
    }
}
```

9.write a java program to input any character and check whether it is alphabet,digit or special character.

```
import java.util.Scanner;


public class Special
{
    public static void main(String[] args)
    {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter any character : ");
        char ch = scanner.next().charAt(0);
```

```
        if((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z'))
        {
            System.out.println(ch + " is A ALPHABET.");
        }
        else if(ch >= '0' && ch <= '9')
        {
            System.out.println(ch + " is A DIGIT.");
        }
        else
        {
            System.out.println(ch + " is A SPECIAL CHARACTER.");
        }

    }
}
```

10.write a java program to check whether a character is upper case or lower case alphabet.

```
import java.util.Scanner;
public class Upper
{
public static void main(String args[])
{
    char ch;
 Scanner scan=new Scanner(System.in);
System.out.println("Enter the character  ");
ch=scan.next().charAt(0);
if(ch>='A' && ch<='Z')
{
    System.out.println(ch+" is an upper case letter ");
}
```

```
else if(ch>='a' && ch<='z')
{
   System.out.println(ch+" is a lower case letter ");
}
else
{
   System.out.println(ch+" is not a Alphabets ");
}
}
}
```

11.write a java program to input week number and print week day.

```
import java.util.*;
public class Week
{
   public static void main(String args[])
   {
      Scanner sc=new Scanner(System.in);
      System.out.println("enter weekday number: ");
      int weekday=sc.nextInt();
      if(weekday==1)
      {
         System.out.println("monday");
      }
       else if(weekday==2)
       {
          System.out.println("tuesday");

       }
       else if(weekday==3)
```

```
    {
        System.out.println("wednesday");

    }
    else if(weekday==4)
    {
        System.out.println("thrusday");

    }
    else if(weekday==5)
    {
        System.out.println("friday");

    }
    else if(weekday==6)
    {
        System.out.println("saturday");

    }
    else if(weekday==7)
    {
        System.out.println("sunday");

    }
    else
    {
    System.out.println("please enter weekday number between 1-7");
    }

}
```

```
}
```

12.write a java program to count total number of notes in given amount.

```
import java.util.Scanner;
public class Note {
 public static void main(String []args){
int amt, r2000=0, r500=0, r200=0, r100=0, r50=0, r20=0, r10=0, r5=0, r2=0 , r1=0;
Scanner sc= new Scanner(System.in);
System.out.println("Enter Amount : ");
amt = sc.nextInt();
while(amt >= 2000)
{
r2000 = amt / 2000 ;
amt = amt % 2000;
System.out.print("\nTotal Number Of 2000 Rupees Notes :"+ r2000) ;
break ;
}
while(amt >= 500)
{
r500 = amt / 500 ;
amt = amt % 500;
System.out.print("\nTotal Number Of 500 Rupees Notes : "+ r500) ;
break ;
}
while (amt >= 200)
{
r200 = amt / 200;
amt = amt % 200;
System.out.println("\nTotal Number Of 200 Rupees Notes : "+ r200);
break ;
```

```
}
while(amt >= 100)
{
r100 = amt / 100 ;
amt = amt % 100;
System.out.print("\nTotal Number Of 100 Rupees Notes : "+ r100) ;
break ;
}
while(amt >= 50)
{
r50 = amt / 50 ;
amt = amt % 50;
System.out.print("\nTotal Number Of 50 Rupees Notes : "+ r50) ;
break ;
}
while(amt >= 20)
{
r20 = amt / 20 ;
amt = amt % 20;
System.out.print("\nTotal Number Of 20 Rupees Notes : "+ r20) ;
break ;
}
while(amt >= 10)
{
r10 = amt / 10 ;
amt = amt % 10;
System.out.print("\nTotal Number Of 10 Rupees Notes Or Coin : "+ r10) ;
break ;
}
while(amt >= 5)
```

```
{
r5 = amt / 5 ;
amt = amt % 5;
System.out.print("\nTotal Number Of 5 Rupees Notes Or Coin : "+ r5) ;
break ;
}
while(amt >= 2)
{
r2 = amt / 2 ;
amt = amt % 2;
System.out.print("\nTotal Number Of 2 Rupees Notes Or Coin : "+ r2) ;
break ;
}
while(amt >= 1)
{
r1 = amt / 1 ;
amt = amt % 1;
System.out.print("\nTotal Number Of 1 Rupees Note Or Coin : "+ r1) ;
break ;
}
int sum = r2000 + r500 + r200 + r100 + r50 + r20 + r10 + r5 + r2 + r1;
System.out.print("\nTotal Number Of Notes Require :\n"+ sum) ;
}
}
```

13.write a java program to input marks of five subjects physics,chemistry,biology,mathematics and computer.

calculate percentage and grade according to following:

percentage>=90%:grade A

percentage>=80%:grade B

percentage>=70%:grade C

percentage>=60%:grade D

percentage>=40%:grade E

percentage<40%:grade F

```
import java.util.Scanner;

public class Percentage
{
    public static void main(String[] args)
    {
        Scanner in=new Scanner(System.in);
        System.out.println("Enter the marks of five subjects::\n");
        float physics=in.nextFloat();
        float chemistry=in.nextFloat();
        float biology=in.nextFloat();
        float mathematics=in.nextFloat();
        float computer=in.nextFloat();

        float total;
        float average;
        float percentage;
        char grade;
        total=physics+chemistry+biology+mathematics+computer;
        average=(float)(total / 5.0);
        percentage=(float)((total / 500.0) * 100);
        if (average >= 90)
            grade = 'A';
        else if (average>=80 && average<90)
            grade = 'B';
        else if (average>=70 && average<80)
```

```
            grade = 'C';
        else if (average>=60 && average<70)
            grade = 'D';
        else if(average>=40 && average<50)
            grade = 'E';
        else
            grade='F';
        System.out.println("\nThe Total marks   = " + total + "/500.0");
        System.out.println("The Average marks = " + average);
        System.out.println("The Percentage    = " + percentage + "%");
        System.out.println("The Grade         = "' + grade + "'");
    }
}
```

14.write a java program to input basic salary of an employee and calculate its gross salary according to following:

basic-salary<=10000:HRA=20%,DA=80%

basic-salary<=20000:HRA=25%,DA=90%

basic-salary>20000:HRA=30%,DA=95%

```
import java.util.Scanner;
class Salary
{
 public static void main(String args[])
 {
  float Basic_salary,DA,HRA,da1,hra1,GrossPayment;
  Scanner scan=new Scanner(System.in);
  System.out.println("Enter Basic Salary Of Employee: ");
  Basic_salary=scan.nextFloat();
  System.out.println("Enter Basic DA Of Employee: ");
  da1=scan.nextFloat();
  System.out.println("Enter Basic HRA Of Employee: ");
```

```
  hra1=scan.nextFloat();
  DA=(da1*Basic_salary)/100;
  HRA=(hra1*Basic_salary)/100;
  GrossPayment=Basic_salary+DA+HRA;
  System.out.println("Gross Salary Of Employee: "+GrossPayment);
  }
}
```

15.write a java program to input electricity unit charges and calculate total electricity bill according to the given condition:

for first 50 units Rs.0.50/unit

for next 100 units Rs.0.75/unit

for next 100 units Rs.1.20/unit

for unit above 250 Rs.1.50/unit

an additional surcharge of 20% is added to the bill.

```
import java.util.*;
public class electricity
{
    public static void main(String args[])
    {
        int units;
        double billtopay=0;
        Scanner sc=new Scanner(System.in);
        System.out.println("enter number of units for calculating electricity bill:");
        units=sc.nextInt();
        if(units<50)
        {
            billtopay=units*0.50;

        }
        else if(units<150)
```

```
        {
            billtopay=(50*0.50)+((units-100)*0.75);
        }
        else if(units<250)
        {
            billtopay=(50*0.50)+(50*0.75)+((units-150)*1.20);
        }
        else
        {
            billtopay=(50*0.50)+(50*0.75)*((units-200)*1.50);
        }
        System.out.println("the electricity bill for "+units+" is: "+billtopay);
    }
}
```

16.write a java program to print day of week name using switch case.

```
import java.util.*;
public class Switch
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter weekday number: ");
        int weekday=sc.nextInt();
        switch(weekday)
        {
            case 1:
            System.out.println("monday");
            break;
            case 2:
```

```
        System.out.println("tuesday");
           break;
           case 3:
            System.out.println("wednesday");
            break;
           case 4:
            System.out.println("thrusday");
            break;
            case 5:
            System.out.println("friday");
            break;
             case 6:
            System.out.println("saturday");
            break;
        case 7:
            System.out.println("sunday");
        default:
        System.out.println("INVALID CHOICE");
        }

    }
}
```

---

17. Write a Java program to print all natural numbers from 1 to n.using while loop

```
import java.util.Scanner;
public class Number
{
    public static void main(String args[])
    {
```

```
    Scanner s=new Scanner(System.in);
    System.out.println("Enter n value");
    int n=s.nextInt();
    int i=0;
    while(i<=num)
        {
        System.out.print(i+" ");
          i++;
        }
    }
}
```

18.Write a Java program to print all natural numbers in reverse (from n to 1).using while loop

```
import java.util.Scanner;
public class Number1
{
    public static void main(String args[])
    {
    Scanner s=new Scanner(System.in);
    System.out.println("Enter n value");
    int n=s.nextInt();
    int i=0;
    while(i>=1)
        {
        System.out.print(i+" ");
          i--;
        }
    }
}
```

---

19. Write a Java program to print all alphabets from a to z.using while loop

```
public class Alphabet
{
public static void main(String args[])
{
System.out.println("printing alphabets from a to z:");
char alph='a';
while(alph<='z')
{
System.out.println(alph);
alph++;
}
}
}
```

---

20. Write a Java program to print all even numbers between 1 to 100.using while loop

```
import java.util.Scanner;
public class Even2
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter n value");
        int n=sc.nextInt();
          int i=0;
        while(i<=n)
        {
            if(i%2==0)
            {
```

```
            System.out.println(i+" is even number ");
              i++;
          }
       }
   }
}
```

---

21. Write a Java program to print all odd number between 1 to 100.

```
import java.util.Scanner;
public class OddNumber
{
   public static void main(String args[])
   {
      Scanner sc=new Scanner(System.in);
      System.out.println("enter n value");
      int n=sc.nextInt();
       int i=1;
      while(i<=n)
      {
         if(i%2==1)
         {
            System.out.println(i+" is odd number ");
               i++;
         }
      }
   }
}
```

22.Write a Java program to find sum of all natural numbers between 1 to n.

```
import java.util.Scanner;
```

```
public class SumNatural{
public static void main(String args[])
{
Scanner sc=new Scanner(System.in);
System.out.println("enter number");
int n=sc.nextInt();
int i=1,sum=0;
while(i<=n)
{
sum=sum+i;
i++;
}
System.out.println("sum of first n natural numbers="+sum);
}
}
```

---

23. Write a Java program to find sum of all even numbers between 1 to n.

```
import java.util.Scanner;
class Evensum{
public static void main (String args[]){
int i,num;
int evenSum=0;
Scanner scan=new Scanner(System.in);
System.out.print("Enter the number for num:");
num=scan.nextInt();

i=0;
while(i<=num){
if(i%2==0)
    evenSum=evenSum+i;
```

```
 i++;
}
System.out.println("Sum of all even numbers are: "+evenSum);
}
}
```

24.Write a Java program to find sum of all odd numbers between 1 to n.

```
import java.util.Scanner;
class Oddsum{
public static void main (String args[]){
int i,num;
int oddSum=0;
Scanner scan=new Scanner(System.in);
System.out.print("Enter the number for num:");
num=scan.nextInt();
i=0;
while(i<=num){
if(i%2==1){
    oddSum=oddSum+i;
 i++;
}
}
System.out.println("Sum of all odd numbers are: "+oddSum);
}
}
```

25.Write a Java program to print multiplication table of any number.

```
import java.util.Scanner;
public class Table{
    public static void main(String args[])
```

```
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter number:");
        int n=sc.nextInt();
        for(int i=1;i<=10;i++){
            System.out.println(n+" * "+i+" = "+n*i);
        }
    }
}
```

26.Write a Java program to count number of digits in a number.

```
import java.util.Scanner;
public class Digit
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        int count=0;
        System.out.println("enter a number:");
        int num=sc.nextInt();
        for(int i=0;i<=num;i++)
        {
            num=num/10;
           ++count;
            //count=++count;
        }
        System.out.println("number of digits in the entered integer are: "+count);
    }
}
```

27.Write a Java program to find first and last digit of a number.

```
public class First{
public static void main(String args[]){
int number=23569875;
int firstdigit=0;
int lastdigit=0;
lastdigit=number%10;
System.out.println("last digit:"+lastdigit);
while(number!=0){
firstdigit=number%10;
number=number/10;
}
System.out.println("first digit:"+firstdigit);
}
}
```

28.Write a Java program to find sum of first and last digit of a number.

```
import java.util.Scanner;

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

        int r, n, rev = 0, fd, ld, s;

        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a number:");
        n = sc.nextInt();
```

```
        ld = n % 10;

        while (n > 0) {
            r = n % 10;
            rev = rev * 10 + r;
            n = n / 10;
        }

        fd = rev % 10;
        s = fd + ld;

        System.out.println("Sum of first and last digits:" + s);

    }
}
```

29.Write a Java program to check whether a number is palindrome or not.

```
class PalindromeExample{
 public static void main(String args[]){
  int r,sum=0,temp;
  int n=454;
  temp=n;
  while(n>0){
   r=n%10;  //r=454%10=45
   sum=(sum*10)+r;  //sum=0*10+54  //sum=54*10 545
   n=n/10;     //n=454/10=45
 }
  if(temp==sum)
   System.out.println("palindrome number ");
  else
```

```
   System.out.println("not palindrome");
}
}
```

30.Write a Java program to calculate sum of digits of a number.

```
import java.util.Scanner;
public class SumOfDigits
{
public static void main(String args[])
{
int number, digit, sum = 0;
Scanner sc = new Scanner(System.in);
System.out.print("Enter the number: ");
number = sc.nextInt();
while(number > 0)
{
digit = number % 10;
sum = sum + digit;
number = number / 10;
}
System.out.println("Sum of Digits: "+sum);
}
}
```

31.Write a Java program to calculate product of digits of a number.

```
import java.util.Scanner;
public class DigitProduct {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
         int num, temp;
```

```
        int product = 1;
        System.out.print("Enter any number : ");
        num = scanner.nextInt();
        temp = num;
        while(temp != 0) {
            product = product * (temp % 10);
            temp = temp / 10;
        }
             System.out.println("\nProduct of all digits in " + num + " : " + product);
    }

}
```

32.Write a Java program to enter a number and print its reverse.

```
import java.util.Scanner;
public class Reverse{
    public static void main(String args[])
    {
        int number,reminder,rev=0;
        Scanner sc=new Scanner(System.in);
        System.out.println("please enter any number you want to reverse:");
        number=sc.nextInt();
        while(number>0){
            reminder=number%10;
            rev=rev*10+reminder;
            number=number/10;
        }
        System.out.println("reverse of entered number is ="+rev);
    }
}
```

33.Write a Java program to find frequency of each digit in a given integer.

```
import java.util.Scanner;
class Frequency
{
public static void main(String arr[])
{
int number, count, digit, temp;
Scanner sc=new Scanner(System.in);
System.out.println("Enter any Number : ");
number=sc.nextInt();
System.out.println("Digit \t Frequency");
for(int i = 0; i <= 9; i++)
{
count = 0;
temp = number;
while(temp > 0)
{
digit = temp % 10;
if(digit == i)
{
count++;
}
temp = temp/10;
}
if(count > 0)
{
System.out.println(i+ "\t" +count);
}
```

```
}
}
}
```

---

34. Write a Java program to enter a number and print it in words.

```
import java.util.Scanner;
public class DigitNumber
{
    public static void main(String[] args)
    {
        int r, n, num;
        String digitWords = "";
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter number=");
        n = sc.nextInt();
        num = n;
        while (num > 0)
        {
            r = num % 10;
            switch (r)
            {
                case 0:
                    digitWords = "Zero " + digitWords;
                    break;
                case 1:
                    digitWords = "One " + digitWords;
                    break;
                case 2:
                    digitWords = "Two " + digitWords;
                    break;
```

```
            case 3:
                digitWords = "Three " + digitWords;
                break;
            case 4:
                digitWords = "Four " + digitWords;
                break;
            case 5:
                digitWords = "Five " + digitWords;
                break;
            case 6:
                digitWords = "Six " + digitWords;
                break;
            case 7:
                digitWords = "Seven " + digitWords;
                break;
            case 8:
                digitWords = "Eight " + digitWords;
                break;
            case 9:
                digitWords = "Nine " + digitWords;
                break;
        }
        num = num / 10;
    }
    System.out.println("Digit=" + n);
    System.out.println("Words=" + digitWords);
}
}
```

---

35. Write a Java program to print all ASCII character with their values.

```
public class Ascii
{
public static void main(String args[])
{
   for(int i=65;i<=122;i++)
   {
      System.out.println("The ASCII value of "+(char)i+" = "+i);
   }
}
}
```

---

36. Write a Java program to find power of a number using for loop.

```
import java.util.Scanner;
public class Power{
        public static void main(String[] args)
        {
           Scanner sc=new Scanner(System.in);
                int number, i, exponent;
                long power = 1;
                System.out.print(" Please Enter any Number : ");
                number = sc.nextInt();
                System.out.print(" Please Enter the Exponent Value : ");
                exponent = sc.nextInt();
                for(i = 1; i <= exponent; i++)
                {
                        power = power * number;
                }
                System.out.println("\n The Final result of " + number + " power " +
exponent + " = " + power);
        }
}
```

---

37. Write a Java program to find all factors of a number.

```
import java.util.Scanner;
public class Factor1
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter n value");
        int n=sc.nextInt();
        for(int i=1;i<=n/2;i++)
        {
            if(n%i==0)
            {
                System.out.print(i+" ");
            }
}
    }
}
```

---

38. Write a Java program to calculate factorial of a number.

```
import java.util.*;
public class Factorial
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter the number: ");
        int num=sc.nextInt();
        int i=1,fact=1;
```

```
        for(i=1;i<=num;i++)
        {
            fact=fact*i;



        }
        System.out.println("factorial of the number:"+fact);
    }
}
```

---

39. Write a Java program to check whether a number is Prime number or not.

```
import java.util.Scanner;
public class Prime
{
    public static void main(String args[])
    {
        int count=0;
        Scanner sc=new Scanner(System.in);
        System.out.println("enter n value");
        int n=sc.nextInt();
        for(int i=1;i<=n/2;i++)
        {
            if(n%i==0)
            {
                count++;
            }
        }
        if(count==1){
            System.out.println("prime number");
        }
```

```
        else{
            System.out.println("not a prime nmuber");
        }

    }
}
```

---

40. Write a Java program to print all Prime numbers between 1 to n.

```
import java.util.Scanner;

public class PrimeAll {

    private static Scanner scanner = new Scanner( System.in );

    public static void main(String[] args) {

        System.out.println("Enter max number: ");

        String input = scanner.nextLine();
        int maxNumber = Integer.parseInt( input );

        System.out.println("List of the prime number between 1 - " + maxNumber);

        for (int num = 2; num <= maxNumber; num++)
        {
            boolean isPrime = true;
            for (int i=2; i <= num/2; i++)
            {
                if ( num % i == 0)
                {
```

```
                isPrime = false;
                break;
            }
        }

        if ( isPrime == true )
            System.out.println(num);
    }
  }
}
```

---

41. Write a Java program to find sum of all prime numbers between 1 to n.

```
import java.util.Scanner;

public class SumOfPrime {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);
        System.out.print("Find sum of prime numbers upto : ");
        int upto = scanner.nextInt();

        int sum = 0;

        for(int num = 2; num <= upto; num++) {

            int i;

            for(i = 2; i <= (num / 2); i++) {
```

```
            if(num % i == 0) {
                i = num;
                break;
            }
        }


        if(i != num) {
            sum += num;
        }
      }

       System.out.println("\nSum of all prime numbers upto " + upto + " : " + sum);
   }

}
```

---

42. Write a Java program to find all prime factors of a number.

```
import java.util.Scanner;

public class PrimeFactor{
   public static void main(String args[]){
      int number;
      Scanner sc = new Scanner(System.in);
      System.out.println("Enter a number ::");
      number = sc.nextInt();

      for(int i = 2; i< number; i++) {
         while(number%i == 0) {
            System.out.println(i+" ");
```

```
            number = number/i;
          }
       }
       if(number >2) {
          System.out.println(number);
       }
    }
}
```

---

43. Write a Java program to check whether a number is Armstrong number or not.

```
import java.util.Scanner;
public class Armstrong
{
    public  static void main(String args[])
    {
        int num,temp,c=0;
        Scanner sc=new Scanner(System.in);
        System.out.println("enter number:");
        num=sc.nextInt();
        temp=num;
        while(num!=0){
            int d=num%10;
            c=c+(d*d*d);
            num=num/10;
        }
        if(temp==c){
            System.out.println("numbers is armstrong");
        }
        else{
            System.out.println("numbers is not armstrong");
```

```
        }
    }
}
```

---

44. Write a Java program to print all Armstrong numbers between 1 to n.

```
public class ArmstrongAll
{
    public static void main(String[] args)
    {
        int n, count = 0, a, b, c, sum = 0;
        System.out.print("Armstrong numbers from 1 to 1000:");
        for(int i = 1; i <= 1000; i++)
        {
            n = i;
            while(n > 0)
            {
                b = n % 10;
                sum = sum + (b * b * b);
                n = n / 10;
            }
            if(sum == i)
            {
                System.out.print(i+" ");
            }
            sum = 0;
        }
    }
}
```

---

45. Write a Java program to check whether a number is Perfect number or not.

```
import java.util.Scanner;
public class Perfect
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter number");
        int n=sc.nextInt();
        int sum=0;
        for(int i=1;i<=n/2;i++)
        {
            if(n%i==0)
            {
                sum=sum+i;
            }
        }
        if(sum==n){
            System.out.println(n+" is a perfect number");
        }
        else{
            System.out.println(n+" not a perfect number");
        }
    }
}
```

---

46. Write a Java program to print all Perfect numbers between 1 to n.

```
public class PerfectNumbers
{
public static void main(String arg[])
{
```

```
int sum=0;
for(int i=0;i<500;i++)
{
sum=0;
for(int j=1;j<i;j++)
{
if(i%j==0)
{
sum=sum+j;
}
}
if(sum==i && sum!=0)
System.out.print(i+"\t");
}
}
}
```

---

47. Write a Java program to check whether a number is Strong number or not.

```
import java.util.*;
public class Strong
{
public static void main(String[] args) {
int n,i;
int fact,lastdig;
Scanner sc = new Scanner(System.in);
System.out.print("\nEnter the number : " );
n = sc.nextInt();
int total = 0;
int temp = n;
while(n != 0)
```

```
{
i = 1;
fact= 1;
lastdig = n % 10;
while(i <= lastdig)
{
fact = fact * i;
i++;
}
total = total + fact;
n = n / 10;
}
if(total == temp)
System.out.println(temp+ " is a strong number");
else
System.out.println(temp+ " is not a strong number");
}
}
```

---

48. Write a Java program to print all Strong numbers between 1 to n.

```
import java.util.Scanner;
public class StrongAll{

 public static void main(String[] args) {
  Scanner cs=new Scanner(System.in);
  int firstnumber, endnumber, i;
        System.out.println("Enter the First number:");
        firstnumber=cs.nextInt();
        System.out.println("Enter the Last number:");
        endnumber=cs.nextInt();
```

```
    System.out.println("Strong numbers between "+firstnumber+" and "+endnumber+" are:");
    for(i=firstnumber;i<=endnumber;i++)
      {
       int num2=i;
       int num1=i;
       int sum=0;
       int fact=1;
      while(num1!=0)
      {   fact=1;
          int rem=num1%10;
          num1=num1/10;
          for(int j=1;j<=rem;j++)
           fact=fact*j;
          sum=sum+fact;
      }
      if(sum==num2)
       System.out.println(i+" ");
      }
 }
}
```

---

49. Write a Java program to print Fibonacci series up to n terms

```
import java.util.*;

public class Fibonacci
{
          public static void main(String args[])
          {
                  int i,c=0,n;
                    Scanner sc = new Scanner(System.in);
```

```
            System.out.println("Enter a number to generate fibonacci series upto
nth term");
            n=sc.nextInt();
            int a=0;
            int b=1;

            System.out.println("Fibonacci series upto "+n+" is :-");
            while(c<=n)
            {
                  System.out.print(c+" ");
                  a=b;
                  b=c;
                  c=a+b;
            }
      }
}
```

---

50. Write a Java program to print all negative elements in an array.

```
public class Negative {

      public static void main(String[] args) {
            int j = 0;
            int[] Neg_arr = {-40, 15, -4, 11, -8, -13, 22, 16, -11, -99, 55, 18, -60};


            System.out.print("\nList of Negative Numbers in NEG Array : ");
            while(j < Neg_arr.length)
            {
                  if(Neg_arr[j] < 0) {
                        System.out.format("%d ", Neg_arr[j]);
                  }
```

```
                        j++;
                    }
                }
}
```

---

51. Write a Java program to find second largest element in an array.

```
public class SecondLargest {
   public static void main(String args[]){
      int temp, size;
      int array[] = {10, 20, 25, 63, 96, 57};
      size = array.length;

      for(int i = 0; i<size; i++ ){
         for(int j = i+1; j<size; j++){

            if(array[i]>array[j]){
               temp = array[i];
               array[i] = array[j];
               array[j] = temp;
            }
         }
      }
      System.out.println("Third second largest number is:: "+array[size-2]);
   }
}
```

---

52. Write a Java program to find maximum and minimum element in an array.

```
import java.util.*;
public class MaxMin
{
```

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

     Scanner sc=new Scanner(System.in);
     int arr[]=new int[10];
     System.out.println("Enter elements in array");
     int min=Integer.MAX_VALUE;
     int max=Integer.MIN_VALUE;
     for(int i=0;i<=9;i++)
     {
       arr[i]=sc.nextInt();
       if(arr[i]<min)
         {
         min=arr[i];
         }
       if(arr[i]>max)
       {
         max=arr[i];
       }
     }
     System.out.println("Maximum element is "+max);
     System.out.println("Minimum element is "+min);


 }
 }
```

---

53. Write a Java program to count total number of even and odd elements in an array.

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

```
{
int a[]={1,2,5,6,3,2};
System.out.println("Odd Numbers:");
for(int i=0;i<a.length;i++)
{
if(a[i]%2!=0){
System.out.println(a[i]);
}
}
System.out.println("Even Numbers:");
for(int i=0;i<a.length;i++)
{
if(a[i]%2==0)
{
System.out.println(a[i]);
}
}
}
}
```

---

54. Write a Java program to count total number of negative elements in an array.

```
public class CountNegative{

	public static void main(String[] args) {
		int i = 0, count = 0;
		int[] count_NegArr = {-40, 15, -4, 11, -8, -13, 22, 16, -11, -99, 55, 18, -
60};

		while(i < count_NegArr.length)
		{
			if(count_NegArr[i] < 0) {
```

```
                    count++;
                }
                i++;
            }
            System.out.println("\nThe Total Number of Negative Array Items = " +
count);
        }
}
```

---

55. Write a Java program to copy all elements from an array to another array.

```
public class CopyArray
{
public static void main(String[] args)
   {
      int [] arr1 = new int [] {1, 2, 3, 4, 5};
      int arr2[] = new int[arr1.length];
      for (int i = 0; i < arr1.length; i++)
      {
         arr2[i] = arr1[i];
      }
      System.out.println("Elements of original array: ");
      for (int i = 0; i < arr1.length; i++)
      {
        System.out.print(arr1[i] + " ");
      }
      System.out.println();
      System.out.println("Elements of new array: ");
      for (int i = 0; i < arr2.length; i++)
      {
        System.out.print(arr2[i] + " ");
      }
```

```
    }
}
```

---

56. Write a Java program to delete an element from an array at specified position.

```
import java.util.Scanner;
public class Specific
{
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        int n;
        System.out.println("Enter the number of elements :");
        n=sc.nextInt();
        Integer arr[]=new Integer[n];
        System.out.println("Enter the elements of the array :");
        for(int i=0;i<n;i++)
        {
            arr[i]=sc.nextInt();
        }
        System.out.println("Enter the element you want to remove ");
        int elem = sc.nextInt();

    for(int i = 0; i < arr.length; i++)
    {
      if(arr[i] == elem)
      {
        for(int j = i; j < arr.length - 1; j++)
        {
            arr[j] = arr[j+1];
        }
```

```
        break;
      }
    }

      System.out.println("Elements after deletion " );
      for(int i = 0; i < arr.length-1; i++)
      {
           System.out.print(arr[i]+ " ");
      }
    }
}
```

---

57. Write a Java program to count frequency of each element in an array.

```
public class Frequency
{
public static void main(String[] args)
{
int [] arr = new int [] {1, 2, 8, 3, 2, 2, 2, 5, 1, 5, 7, 3, 5, 9, 8};
int [] fr = new int [arr.length];
int visited = -1;
for(int i = 0; i < arr.length; i++)
{
int count = 1;
for(int j = i+1; j < arr.length; j++)
{
if(arr[i] == arr[j])
{
count++;
fr[j] = visited;
}
```

```
}
if(fr[i] != visited)
fr[i] = count;
}
System.out.println("---------------------------------------");
System.out.println(" Element | Frequency");
System.out.println("---------------------------------------");
for(int i = 0; i < fr.length; i++){
if(fr[i] != visited)
System.out.println("    " + arr[i] + "    |    " + fr[i]);
}
System.out.println("---------------------------------------");
}
}
```

---

58. Write a Java program to print all unique elements in the array.

```
public class Unique{

    public static void main(String args[]){
        int count=1;
      int arr[]={23,45,67,67,90,23,23,50};

      for(int i=0;i<arr.length;i++){

          for(int j=i+1;j<arr.length;j++){

              if(arr[i]==arr[j]){
                  count++;
                  arr[j]=0;
```

```
            }
        }
        if(arr[i]!=0 && count==1){
        System.out.println(arr[i]+" : "+count);
        }
        count=1;
     }



   }
}
```

---

59. Write a Java program to count total number of duplicate elements in an array.

```
public class Duplicate{

    public static void main(String args[]){
       int count=1;
     int arr[]={23,45,67,67,90,23,23,50};

     for(int i=0;i<arr.length;i++){

        for(int j=i+1;j<arr.length;j++){

            if(arr[i]==arr[j]){
                count++;
                arr[j]=0;
            }
        }
        if(arr[i]!=0 && count>1){
```

```
            System.out.println(arr[i]+" : "+count);
            }
            count=1;
        }



    }
}
```
