**Iterative Statements**

**1) Print 1 to n numbers with difference 1.**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i;

System.out.println("Enter value of n");

Scanner sc=new Scanner(System.in);

n=sc.nextInt();

for(i=1;i<=n;i++){

System.out.print(i+" ");

}

}

}

**O/P:**

Enter value of n

10

1 2 3 4 5 6 7 8 9 10

**2) Print 10 to n numbers with difference 5.**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i;

System.out.println("Enter value of n");

Scanner sc=new Scanner(System.in);

n=sc.nextInt();

for(i=10;i<=n;i=i+5){

System.out.print(i+" ");

}

}

}

**O/P:**

Enter value of n

100

10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

**3) Print n to 1 numbers with difference 1.**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i;

System.out.println("Enter value of n");

Scanner sc=new Scanner(System.in);

n=sc.nextInt();

for(i=n;i>=1;i--){

System.out.print(i+" ");

}

}

}

**O/P:**

Enter value of n

15

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

**4) Print n to 100 numbers with a difference of 10.**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i;

System.out.println("Enter value of n");

Scanner sc=new Scanner(System.in);

n=sc.nextInt();

for(i=n;i>=100;i=i-10){

System.out.print(i+" ");

}

}

}

**O/P:**

Enter value of n

350

350 340 330 320 310 300 290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100

**5) Print Even numbers upto n.**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i;

System.out.println("Enter value of n");

Scanner sc=new Scanner(System.in);

n=sc.nextInt();

for(i=2;i<=n;i=i+2){

System.out.print(i+" ");

}

}

}

**O/P:**

Enter value of n

20

2 4 6 8 10 12 14 16 18 20

**6) Print Odd numbers upto n.**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i;

System.out.println("Enter value of n");

Scanner sc=new Scanner(System.in);

n=sc.nextInt();

for(i=1;i<=n;i=i+2){

System.out.print(i+" ");

}

}

}

**O/P:**

Enter value of n

20

1 3 5 7 9 11 13 15 17 19

**7) Print Sum of 1 to n numbers**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i,sum=0;

System.out.println("Enter value of n");

Scanner sc=new Scanner(System.in);

n=sc.nextInt();

for(i=1;i<=n;i++){

sum=sum+i;

}

System.out.print("Sum="+sum);

}

}

**O/P:**

Enter value of n

5

Sum=15

**8) Print sum of even numbers upto n**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i,sum=0;

System.out.println("Enter value of n");

Scanner sc=new Scanner(System.in);

n=sc.nextInt();

for(i=2;i<=n;i=i+2){

sum=sum+i;

}

System.out.print("Sum="+sum);

}

}

**O/P:**

Enter value of n

10

Sum=30

**9) Print of Odd numbers upto n**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i,sum=0;

System.out.println("Enter value of n");

Scanner sc=new Scanner(System.in);

n=sc.nextInt();

for(i=1;i<=n;i=i+2){

sum=sum+i;

}

System.out.print("Sum="+sum);

}

}

**O/P:**

Enter value of n

10

Sum=25

**10) Print sum from x to y numbers**

import java.util.\*;

public class Main {

public static void main(String[] args) {

int x, y, sum = 0, i;

System.out.println("Enter value of x & y");

Scanner sc = new Scanner(System.in);

x = sc.nextInt();

y = sc.nextInt();

if (x < y) {

for (i = x; i <= y; i++) {

sum += i;

}

} else {

for (i = y; i <= x; i++) { // Corrected to increment from y to x

sum += i;

}

}

System.out.println("Sum = " + sum);

}

}

**O/P:**

Enter value of x & y

15

10

Sum = 75

**11) Factorial Number**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i,fact=1;

Scanner sc=new Scanner(System.in);

System.out.println("Enter a number");

n=sc.nextInt();

for(i=n;i>1;i--){

fact=fact\*i;

}

System.out.println("Fact="+fact);

}

}

**O/P:**

Enter a number

5

Fact=120

**12) Print Multiplication table**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i;

Scanner sc=new Scanner(System.in);

System.out.println("Enter value of n");

n=sc.nextInt();

for(i=1;i<=10;i++){

System.out.println(n+"\*"+i+"="+(n\*i));

}

}

}

**O/P:**

Enter value of n

5

5\*1=5

5\*2=10

5\*3=15

5\*4=20

5\*5=25

5\*6=30

5\*7=35

5\*8=40

5\*9=45

5\*10=50

**13) Print multiplication table without using “\*” operator.**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i,f1=1;

Scanner sc = new Scanner(System.in);

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

n=sc.nextInt();

int x=sc.nextInt();

for (i=1;i<=x;i++)

{

f1=f1\*n;

}

System.out.println("Power of:"+f1);

    }

}

**O/P**

B Enter your number:

23

89

Power of:-1012144809

**14) Find the power of given number**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int x,n,i,mul=1;

Scanner sc=new Scanner(System.in);

System.out.println("Enter value of x & n");

x=sc.nextInt();

n=sc.nextInt();

for(i=1;i<=n;i++){

mul=mul\*x;

}

System.out.println("Power="+mul);

}

}

**O/P:**

Enter value of x & n

2

3

Power=8

15) Pronic Number

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i,flag=0;

Scanner sc=new Scanner(System.in);

System.out.println("Enter value of n");

n=sc.nextInt();

for(i=1;i<n;i++){

if(n==(i\*(i+1))){

flag=1;

break;

}

}

if(flag==1){

System.out.println("Pronic");

}

else{

System.out.println("Not Pronic");

}

}

}

O/P:

Enter value of n

12

Pronic

**16) Range Of character**

import java.util.\*;

public class Main

{

public static void main(String[] args)

{

char ch;

int n;

Scanner sc=new Scanner (System.in);

System.out.println("Enter character & range");

ch=sc.next().charAt(0);

n=sc.nextInt();

for(int i=1;i<=n;i++)

{

System.out.print("\t"+(ch++));

       }

    }

}

**O/P:**

Enter character & range

1

20

1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D

**17) Using Module**

import java.util.\*;

public class Main

{

public static void main(String args[])

{

int i,n,sum=0;

Scanner sc=new Scanner(System.in);

System.out.println("Enter 1 number");

n=sc.nextInt();

for(i=1;i<=(n/2);i++)

{

if(n%i==0)

{

System.out.print(" "+i);

}

      }

    }

}

**O/P:**

8Enter 1 number

8

1 2 4 8 11 22 44

**18) Prime Number**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i,f1=0;

Scanner sc = new Scanner(System.in);

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

n=sc.nextInt();

for (i=2;i<n;i++)

{

if(n%i==0)

{

f1=1;

break;

}

}

if (f1==0)

{

System.out.println("prime Number");

}

else

{

System.out.println(" not prime Number");

       }

    }

}

O/P:

Enter your number:

23

prime Number

**19) Perfect Number**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,i,sum=0;

Scanner sc = new Scanner(System.in);

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

n=sc.nextInt();

for (i=1;i<n;i++)

{

if(n%i==0)

{

sum=sum+i;

}

}

if (sum==n)

{

System.out.println("perfect Number");

}

else

{

System.out.println(" not perfect Number");

}

}

}

O/P:

Enter your number:

8

not perfect Number

**20)**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,f1=0,f2=1,f3,i;

Scanner sc = new Scanner(System.in);

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

n=sc.nextInt();

if(n<=0)

{

System.out.print("Invalid");

} else if (n==1) {

System.out.print(" "+f1);

}

else

{

System.out.print(f1+" "+f2);

for(i=3;i<=n;i++)

{

f3=f1+f2;

System.out.print(" "+f3);

f1=f2;

f2=f3;

}

}

}

}

**O/P:**

Enter your number:

12

0 1 1 2 3 5 8 13 21 34 55 89

**21)GCD and LCM**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int num1, num2, gcd = 0, lcm, i;

Scanner sc =new Scanner(System.in);

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

num1=sc.nextInt();

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

num2=sc.nextInt();

for(i=1; i<=num1; i++)

{

if(num1%i==0 && num2%i==0)

{

gcd = i;

}

}

lcm = (num1 \* num2)/gcd;

System.out.println("HCF = "+gcd);

System.out.println("LCM = "+lcm);

}

}

**22)Addition and subscription using for loop**

import java.util.\*;

public class Main

{

public static void main(String[] args)

{

int n,m, sum=0;

Scanner sc=new Scanner (System.in);

System.out.println("first number is less to get subscription of m and n and first number big to get addition ");

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

n=sc.nextInt();

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

m=sc.nextInt();

if(n<m)

{

for (int i=n; i<=n; i++)

{

sum=m-i;

}

System.out.println("subscription is n and m: "+sum);

}

else

{

for (int i=m; i<=m; i++)

{

sum=n+i;

}

System.out.println(" is n and m: "+sum);

}

}

}

**O/P:**

Enter first number:

23

Enter second number:

32

HCF = 1

LCM = 736

**22) Multiply of n and I.**

import java.util.\*;

public class Main

{

public static void main(String[] args)

{

int n,i, sum=0;

Scanner sc= new Scanner(System.in);

System.out.println("Enter your no:");

n=sc.nextInt();

for(i = 0; i<=n; i++)

{

sum=n\*i;

System.out.print(" "+sum);

      }

    }

}

**O/P:**

Enter your no:

32

0 32 64 96 128 160 192 224 256 288 320 352 384 416 448 480 512 544 576 608 640 672 704 736 768 800 832 864 896 928 960 992 1024

**23)number increment by -2 0 2 4 6 that case**

import java.util.\*;

public class Main

{

public static void main(String[] args)

{

int n,i, sum=0;

Scanner sc= new Scanner(System.in);

System.out.println("Enter your no:");

n=sc.nextInt();

for(i = 0; i<=n; i++)

{

sum=n\*i;

int discount= sum-n;

System.out.print(" "+discount);

      }

    }

}

**O/P:**

Enter your no:

12

-12 0 12 24 36 48 60 72 84 96 108 120 132

**24) Star Printing program**

import java.util.\*;

public class Main

{

public static void main(String[] args)

{

int i,n;

Scanner sc= new Scanner(System.in);

System.out.println("Enter your no:");

n=sc.nextInt();

for(i = 1; i<=n; i++)

{

System.out.print(" \*");

      }

    }

}

**O/P:**

Enter your no:

12

\* \* \* \* \* \* \* \* \* \* \* \*

**25)Program is 0 to less and o to grater**

import java.util.\*;

public class Main

{

public static void main(String[] args)

{

int n,i, i1=0,i2=0;

Scanner sc= new Scanner(System.in);

System.out.println("Enter your no:");

n=sc.nextInt();

for(i = n; i>=1; i-=1)

{

i1=i+1;

System.out.print(" "+i1+"\n");

i2=i-(2\*i);

System.out.print(" "+i2);

       }

    }

**O/P:**

Enter your no:

12

13

-12 12

-11 11

-10 10

-9 9

-8 8

-7 7

-6 6

-5 5

-4 4

-3 3

-2 2

-1

**26)Perfect Spuare**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

int i,n,flag=0;

Scanner sc = new Scanner(System.in);

System.out.print("Enter a number: ");

n = sc.nextInt();

for (i = 1; i \* i <= n; i++)

{

if ((n % i == 0) && (n / i == i)) {

System.out.println(" perfect square.");

flag=1;

break;

}

}

if(flag==0)

System.out.print(" not perfect square.");

}

}

**o/p:**

Enter a number: 90

not perfect square.

**27) Perfect Square**

import java.util.\*;

public class Main {

public static void main(String[] args) {

int i,n,flag=0;

Scanner sc = new Scanner(System.in);

System.out.print("Enter a number: ");

n = sc.nextInt();

for (i = 1; i \* i <= n; i++)

{

if ((n % i == 0) && (n / i == i)) {

System.out.println(" perfect square.");

flag=1;

break;

}

}

if(flag==0)

System.out.print(" not perfect square.");

        }

    }

**O\P:**

Enter a number: 12

not perfect square.

**28)**

import java.util.\*;

public class Main {

public static void main(String[] args) {

int sum=0 ,i,n;

Scanner sc = new Scanner(System.in);

System.out.println("Enter Any Number:");

n=sc.nextInt();

for(i=1;i<=n;i++) {

sum+=i;

}

System.out.print(sum+" = ");

for(i=1;i<n;i++) {

System.out.print(i+"x + ");

}

System.out.println(i+"x");

    }

}

O\P:

Enter Any Number:

12

78 = 1x + 2x + 3x + 4x + 5x + 6x + 7x + 8x + 9x + 10x + 11x + 12x

**29)**

import java.util.\*;

public class Main {

public static void main(String[] args) {

int sum=0 ,i,n;

Scanner sc = new Scanner(System.in);

System.out.println("Enter Any Number:");

n=sc.nextInt();

for(i=1;i<=n;i+=2) {

sum+=i;

}

System.out.print("odd\n"+sum+" = ");

for(i=1;i<n;i+=2) {

System.out.print(i+"x + ");

}

System.out.println(i+"x");

    }

}

**O\P:**

Enter Any Number:

12

odd

36 = 1x + 3x + 5x + 7x + 9x + 11x + 13x

**30) Write a program to print number divisible by 5 and 7 upto 1 to n no.**

import java.util.\*;

public class Main {

public static void main(String[] args) {

int i, n;

Scanner sc = new Scanner(System.in);

System.out.println("Enter Any Number:");

n = sc.nextInt();

for (i = 1; i < n + 1; i++) {

if (i % 5 == 0 || i % 7 == 0) {

System.out.print(i + " ");

}

       }

    }

}

**O\P:**

Enter Any Number:

34

5 7 10 14 15 20 21 25 28 30

**31) Sum=1+3+5+7+--------n**

import java.util.\*;

public class Main {

public static void main(String[] args) {

int i, n, sum=1;

Scanner sc = new Scanner(System.in);

System.out.println("Enter Any Number:");

n = sc.nextInt();

for (i = 1; i <= n ; i+=2)

{

sum=sum+i;

System.out.print(i+" + ");

}

        }

    }

**O\P:**

Enter Any Number:

12

1 + 3 + 5 + 7 + 9 + 11 +

**32) Sum=1.0+1.1+1.2+1.3----------n**

import java.util.\*;

public class Main {

public static void main(String[] args) {

float i, n, sum=0;

Scanner sc = new Scanner(System.in);

System.out.println("Enter Any Number:");

n = sc.nextFloat();

for (i = 0; i <= n ; i+=0.1)

{

System.out.print(i+" + ");

}

        }

    }

**O/P:**

Enter Any Number:

6

1. + 0.1 + 0.2 + 0.3 + 0.4 + 0.5 + 0.6 + 0.70000005 + 0.8000001 + 0.9000001 + 1.0000001 + 1.1000001 + 1.2000002 + 1.3000002 + 1.4000002 + 1.5000002 + 1.6000003 + 1.7000003 + 1.8000003 + 1.9000003 + 2.0000002 + 2.1000001 + 2.2 + 2.3 + 2.3999999 + 2.4999998 + 2.5999997 + 2.6999996 + 2.7999995 + 2.8999994 + 2.9999993 + 3.0999992 + 3.199999 + 3.299999 + 3.399999 + 3.4999988 + 3.5999987 + 3.6999986 + 3.7999985 + 3.8999984 + 3.9999983 + 4.0999985 + 4.1999984 + 4.2999983 + 4.399998 + 4.499998 + 4.599998 + 4.699998 + 4.799998 + 4.8999977 + 4.9999976 + 5.0999975 + 5.1999974 + 5.2999973 + 5.399997 + 5.499997 + 5.599997 + 5.699997 + 5.799997 + 5.8999968 + 5.9999967 +

**33) Sum=1/2+3/4+5/6-------------**

import java.util.\*;

public class Main {

public static void main(String[] args) {

int i, n;

Scanner sc = new Scanner(System.in);

System.out.println("Enter Any Number:");

n = sc.nextInt();

for (i =1; i <= n ; i++)

{

if(i%2==0)

{

System.out.print(i+"+");

}

else {

System.out.print(i+"/");

}

}

        }

    }

**O\P:**

Enter Any Number:

12

1/2+3/4+5/6+7/8+9/10+11/12+

**34) Sum=1+4+9+16------------**

import java.util.\*;

public class Main {

public static void main(String[] args) {

int i, n, sum=0;

Scanner sc = new Scanner(System.in);

System.out.println("Enter Any Number:");

n = sc.nextInt();

for (i =1; i <= n ; i++)

{

System.out.print((i\*i)+"+");

}

        }

    }

**O\P:**

Enter Any Number:

12

1+4+9+16+25+36+49+64+81+100+121+144+

**35) Sum=1+8+27+-----------**

import java.util.\*;

public class Main {

public static void main(String[] args) {

int i, n, sum=0;

Scanner sc = new Scanner(System.in);

System.out.println("Enter Any Number:");

n = sc.nextInt();

for (i =1; i <= n ; i++)

{

System.out.print((i\*i\*i)+"+");

}

        }

    }

**O/P:**

Enter Any Number:

12

1+8+27+64+125+216+343+512+729+1000+1331+1728+