





# 100 Java Programs

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# 1. Simple Java Program

```
class HelloWorld
{
    public static void main (String args[])
    {
        System.out.println("HelloWorldbyTechnolamror");
    }
}
```

---

## 2. Print Integer in java

```
class Integers{
    public static void main (String[] arguments) {
        int c; //declaring a variable

        /*Using for loop to repeat instruction execution*/

        for (c=1; c<=10; c++) {System.o
            ut.println(c);
        }
    }
}
```





---

## 3. Command Line Argument in java

```
class Arguments{
    public static void main (String[] args) {
        for (String t: args) {System.out.println
            (t);
        }
    }
}
```

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## 4. How to getUsinginputusingScannerProgram in java

```
import java.util.Scanner;

class GetInputFromUser
{
    public static void main (String args[])
    {
        int a; float
        b; Strings;

        Scanner in=new Scanner (System.in);

        System.out.println("Enter a string"); s=
        in.nextLine();
        System.out.println("You entered string"+s);

        System.out.println("Enter an integer"); a=
        in.nextInt();
        System.out.println("You entered integer"+a);

        System.out.println("Enter a float"); b=
        in.nextFloat();
        System.out.println("You entered float"+b);
    }
}
```

## 5. How to convert Fahrenheit to Celsius Program in java

```
import java.util.*;

class FahrenheitToCelsius{
    public static void main (String [] args) {
        float temperatue;
        Scanner in=new Scanner (System.in);





        System.out.println("Enter temperatue in Fahrenheit"); temperatu
        e=in.nextInt();

        temperatue=((temperatue-32)*5)/9;

        System.out.println("Temperatue in Celsius="+temperatue);
    }
}
```

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}

## 6. How to swap 2 no using 3<sup>rd</sup> variable Program in java

```
import java.util.Scanner;

class SwapNumbers
{
    public static void main (String args[])
    {
        int x, y, temp; System.out.println("Enter x and y"); Scanner in = new Scanner (System.in);

        x = in.nextInt(); y = in.nextInt();

        System.out.println("Before Swapping \nx=" + x + "\ny=" + y); temp =

        x;
        x = y;
        y = temp;

        System.out.println("After Swapping \nx=" + x + "\ny=" + y);
    }
}
```

---





## 7. How to swap 2 no without using 3<sup>rd</sup> variable Program in java

```
import java.util.Scanner;

class SwapNumbers
{
    public static void main (String args[])
    {
        int x, y;
```

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```
System.out.println("Enterxandy");Scanner  
rin=newScanner(System.in);  
  
x=in.nextInt();y=  
in.nextInt();  
  
System.out.println("BeforeSwapping\nx="+x+"\ny="+y);
```

```
x=x+y; y=x-y;
y;
x=x-y;

System.out.println("AfterSwapping\nx="+x+"\ny="+y);
}
}
```

---

## 8. How to add two number Program in java

```
import java.util.Scanner;

class AddNumbers
{
    public static void main (String args[])
    {
        int x, y, z;
        System.out.println("Enter two integers to calculate their sum");
        Scanner in = new Scanner (System.in);
        x = in.nextInt(); y =
        in.nextInt(); z = x +
        y;
        System.out.println("Sum of entered integers = " + z);
    }
}
// For Large Number
import java.util.Scanner;
import java.math.BigInteger;

class AddingLargeNumbers {
    public static void main (String[] args) {
        String number1, number2;
        Scanner in = new Scanner (System.in);





        System.out.println("Enter first large number");
        number1 = in.nextLine();

        System.out.println("Enter second large number");
        number2 = in.nextLine();

        BigInteger first = new BigInteger (number1);
        BigInteger second = new BigInteger (number2);
        BigInteger sum;
```

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```
sum=first.add(second);  
  
System.out.println("Resultofaddition="+sum);  
}
```

```
}
```

---

## 9. Find Largest no in java Program

```
import java.util.Scanner;

class LargestOfThreeNumbers
{
    public static void main(String args[])
    {
        int x, y, z;
        System.out.println("Enter three integers"); Scanner in
        = new Scanner(System.in);

        x = in.nextInt(); y =
        in.nextInt(); z = in
        .nextInt();

        if (x > y && x > z)
            System.out.println("First number is largest.");
        elseif (y > x && y > z) System.out.println("Second number is l
        argest.");
        elseif (z > x && z > y) System.out.println("Third number is l
        argest.");
        else
            System.out.println("Entered numbers are not distinct.");
    }
}
```

---





## 10. If Else clause in java

```
class Condition{
    public static void main(String[] args) {
        boolean learning = true;

        if (learning)
            {System.out.println("Java programmer");
            }
        else {
            System.out.println("What are you doing here?");
        }
    }
}
```

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}

---

## 11. If Else clause in java- Program2

//If else in Java code

```
import java.util.Scanner;

class IfElse {
    public static void main (String[] args) {
        int marksObtained, passingMarks;

        passingMarks = 40;

        Scanner input = new Scanner (System.in);

        System.out.println ("Input marks scored by you");

        marksObtained = input.nextInt ();

        if (marksObtained >= passingMarks) { System.out.println ("You passed the exam.");
        }
        else {
            System.out.println ("Unfortunately you failed to pass the exam.");
        }
    }
}
```

---

## 12. Nested If Else clause in java

```
import java.util.Scanner;

class NestedIfElse {
    public static void main (String[] args) {
        int marksObtained, passingMarks;
        char grade; passingM

        arks = 40;

        Scanner input = new Scanner (System.in); System.out.println ("In

        put marks scored by you"); marksObtained = input.nextInt ();

        if (marksObtained >= passingMarks) {
```





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```
if(marksObtained>90) grade=  
    'A';
```

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```
        elseif (marksObtained>75) grade='B';
        elseif (marksObtained>60) grade='C';
        else
            grade='D';

        System.out.println("You passed the exam and your grade is "+grade);
    }
    else{
        grade='F';
        System.out.println("You failed and your grade is "+grade);
    }
}
```

---

## 13. How to check Odd and Even Number in [Java](#).

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

```
class OddOrEven
{
    public static void main (String args[])
    {
        int x;
        System.out.println("Enter an integer to check if it is odd or even");
        Scanner in = new Scanner(System.in);
        x = in.nextInt();

        if (x%2==0)
            System.out.println("You entered an even number.");
        else
            System.out.println("You entered an odd number.");
    }
}
```

---





## 14. Find factorial for given no Program in [Java](#)

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

```
class Factorial
{
    public static void main (String args[])
    {
        int n, c, fact=1;
```

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```
System.out.println("Enteranintegertocalculateit'sfactorial");Scannerin=newScanner(System.in);  
  
n=in.nextInt();
```

```
if(n<0)
    System.out.println("Numbershouldbenon-negative.");
else
{
    for(c=1;c<=n;c++) fact=fact*c;

    System.out.println("Factorialof"+n+"is="+fact);
}
}
```

//Calculatefactorialfor largeNo

```
importjava.util.Scanner;
importjava.math.BigInteger;

classBigFactorial
{
    publicstaticvoidmain(Stringargs[])
    {
        intn,c;
        BigIntegerinc=newBigInteger("1");BigInt
        egerfact=newBigInteger("1");

        Scannerinput=newScanner(System.in);

        System.out.println("Inputaninteger");n=
        input.nextInt();

        for(c=1;c<=n;c++){fact=fact.m
            ultiply(inc);
            inc=inc.add(BigInteger.ONE);
        }

        System.out.println(n+"!="+fact);
    }
}
```

---





## 15. Howtocomplete 2 string inJavaprogram

```
importjava.util.Scanner;
```

```
classCompareStrings
{
    publicstaticvoidmain(Stringargs[])
    {
        Strings1,s2;
        Scannerin=newScanner(System.in);
```

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```
System.out.println("Enterthefirststring");s1=i  
n.nextLine();
```

```
System.out.println("Enterthesecondstring");s2=
in.nextLine();

if(s1.compareTo(s2)>0)
    System.out.println("Firststringisgreaterthansecond.");
elseif(s1.compareTo(s2)<0)
    System.out.println("Firststringissmallerthansecond.");
else
    System.out.println("Bothstringsareequal.");
}
}
```

---

## 16. SimpleFor Loop PrograminJava

```
//Javaforloopprogram
classForLoop{
    publicstaticvoidmain(String[]args){
        intc;

        for(c=1;c<=10;c++){System.out.print
            ln(c);
        }
    }
}
```

---





## 17. Print Star consoleusingLoop

```
classStars{
    publicstaticvoidmain(String[]args){
        introw,numberOfStars;

        for(row=1;row<=10;row++){
            for(numberOfStars=1;numberOfStars<=row;numberOfStars++){System.out.p
                rint("*");
            }
            System.out.println();//Gotonextline
        }
    }
}
```

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---

## 18. Print Star console using Loop

```
class Stars{
    public static void main(String[] args) {
        int row, numberOfStars;

        for (row=1; row<=10; row++) {
            for (numberOfStars=1; numberOfStars<=row; numberOfStars++) {System.
                out.print("*");
            }
            System.out.println(); //Gotonextline
        }
    }
}
```

## 19. While loop Program in java

```
import java.util.Scanner;

class WhileLoop{
    public static void main(String[] args) {
        int n;

        Scanner input=new Scanner(System.in); System.out.print
        ln("Input an integer");

        while ((n=input.nextInt())!=0) {System.out.println("Y
            ou entered"+n); System.out.println("Input an integer"
            );
        }

        System.out.println("Out of loop");
    }
}
```

```
}
```

---

## 20. Print Reversenumberin javaprogram

```
import java.util.Scanner;

class ReverseNumber
{
    public static void main (String args[])
    {
        int n, reverse=0;

        System.out.println("Enter the number to reverse");
        Scanner nnerin=new Scanner(System.in);
        n=in.nextInt();

        while (n!=0)
        {
            reverse=reverse*10; reverse=reverse+n%10; n=n/10;
        }

        System.out.println("Reverse of entered number is "+reverse);
    }
}
```

---

## 21. While loop using break Program in java

```
import java.util.Scanner;

class BreakWhileLoop{
    public static void main (String[] args) {
        int n;

        Scanner input=new Scanner(System.in);

        while (true) {
            System.out.println("Input an integer");
            n=input.nextInt();

            if (n==0) {
                break;
            }
            System.out.println("You entered "+n);
        }
    }
}
```

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}

---

## 22. While loop using break and continue Program in java

```
import java.util.Scanner;

class BreakContinueWhileLoop{
    public static void main(String[] args){
        int n;

        Scanner input = new Scanner(System.in);

        while(true){
            System.out.println("Input an integer"); n =
            input.nextInt();

            if(n!=0){
                System.out.println("You entered "+n);
                continue;
            }
            else{
                break;
            }
        }
    }
}
```

---





## 23. Print all alphabet using for loop Program in java

```
class Alphabets
{
    public static void main(String args[])
    {
        char ch;

        for(ch='a'; ch<='z'; ch++) System.out.pr
            intln(ch);
    }
}
```

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## 24. EnhanceloopinjavaProgram

```
classEnhancedForLoop{
    publicstaticvoidmain(String[]args){
        intprimes[]={2,3,5,7,11,13,17,19,23,29};

        for(intt:primes){System.out.println(t);
        }
    }
}
```

### //For String

```
classEnhancedForLoop{
    publicstaticvoidmain(String[]args){
        Stringlanguages={"C","C++","Java","Python","Ruby"};

        for(Stringsample:languages){System.out
        .println(sample);
        }
    }
}
```

## 25. Print Multiplicationtable Program in java

```
importjava.util.Scanner;

classMultiplicationTable
{
    publicstaticvoidmain(Stringargs[])
    {
        intn,c;
        System.out.println("Enteranintegertoprintit'smultiplicationtable"
        );
        Scannerin=newScanner(System.in);n=in
        .nextInt();
        System.out.println("Multiplicationtableof"+n+"is:-");





        for(c=1;c<=10;c++)System.out.println(n+"*"+
        c+"="+ (n*c));
    }
}

//ForAnyNumber
importjava.util.Scanner;

classTables
{
    publicstaticvoidmain(Stringargs[])
```

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```
{  
    int a,b,c,d;
```

```
System.out.println("Enter range of numbers to print their multiplication table");
Scanner in = new Scanner(System.in);

a = in.nextInt(); b =
in.nextInt();

for (c = a; c <= b; c++) { System.out.println("Multiplication table of " + c);

    for (d = 1; d <= 10; d++) { System.out.println(c + "*" + d + " = " + (c * d));
    }
}
}
```

---

## 26. Print prime no Program in java

```
import java.util.*;

class PrimeNumbers
{
    public static void main (String args[])
    {
        int n, status = 1, num = 3;

        Scanner in = new Scanner(System.in);
        System.out.println("Enter the number of prime numbers you want"); n = in.nextInt();

        if (n >= 1)
        {
            System.out.println("First " + n + " prime numbers are:-");
            System.out.println(2);

            for (int count = 2; count <= n; count++)
            {
                for (int j = 2; j <= Math.sqrt(num); j++)
                {
                    if (num % j == 0)
                    {
                        status = 0;
                        break;
                    }
                }
                if (status != 0)
                {
                    System.out.println(num); count++;
                }
            }
        }
    }
}
```

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}

```
        status=1;num++;  
    }  
}  
}
```

---

## 27. Check noisArmstrong or not in java Program

```
import java.util.Scanner;  
  
class ArmstrongNumber  
{  
    public static void main (String args[])  
    {  
        int n, sum=0, temp, remainder, digits=0;  
  
        Scanner in=new Scanner (System.in);  
        System.out.println("Input a number to check if it is an Armstrong number");  
        n=in.nextInt();  
  
        temp=n;  
  
        //Count number of digits  
  
        while (temp!=0) {digi  
            ts++;  
            temp=temp/10;  
        }  
  
        temp=n;  
  
        while (temp!=0) {rema inde  
            r=temp%10;  
            sum=sum+power (remainder, digits); temp=temp  
            p/10;  
        }  
  
        if (n==sum)  
            System.out.println(n+" is an Armstrong number.");  
        else  
            System.out.println(n+" is not an Armstrong number.");  
    }  
  
    static int power (int n, int r) {  
        int c, p=1;  
  
        for (c=1; c<=r; c++) p=p*n;  
  
        return p;  
    }  
}
```

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```
}  
}
```

---

## 28. PrintFloyd'sTriangle in java Program

```
import java.util.Scanner;  
  
class FloydTriangle  
{  
    public static void main(String args[])  
    {  
        int n, num=1, c, d;  
        Scanner in=new Scanner(System.in);  
  
        System.out.println("Enter the number of rows of floyd's triangle you want");  
        n=in.nextInt();  
  
        System.out.println("Floyd's triangle:-");  
  
        for (c=1; c<=n; c++)  
        {  
            for (d=1; d<=c; d++)  
            {  
                System.out.print(num+""); num++;  
            }  
  
            System.out.println();  
        }  
    }  
}
```





---

## 29. Find All substring of string in java Program

```
import java.util.Scanner;  
  
class SubstringsOfAString  
{  
    public static void main(String args[])  
    {  
        String string, sub;  
        int i, c, length;  
  
        Scanner in=new Scanner(System.in);  
        System.out.println("Enter a string to print it's all substrings"); string  
            =in.nextLine();
```

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```
length=string.length();
```

```
System.out.println("Substrings of \""+string+"\" are:-");

for (c=0; c<length; c++)
{
    for (i=1; i<=length-c; i++)
    {
        sub=string.substring(c, c+i); System.out.println(sub);
    }
}
}
```

---

## 30. Print reverse string in java Program

```
import java.util.*;

class ReverseString
{
    public static void main (String args[])
    {
        String original, reverse=""; Scanner in=
        new Scanner (System.in);

        System.out.println("Enter a string to reverse"); original=in
        .nextLine();

        int length=original.length();

        for (int i=length-1; i>=0; i--)
            reverse=reverse+original.charAt(i);





        System.out.println("Reverse of entered string is: "+reverse);
    }
}

// Using Internal java Method
class InvertString
{
    public static void main (String args[])
    {
        StringBuffer a=new StringBuffer("Java programming is fun"); System.out.println(
        a.reverse());
    }
}
```

---

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## 31. Check GivenNo ispalindrome orNot injavaProgram

```
import java.util.*;

class Palindrome
{
    public static void main (String args[])
    {
        String original, reverse=""; Scanner in=
        new Scanner (System.in);

        System.out.println("Enter a string to check if it is a palindrome"); original=in.ne
        xtLine();

        int length=original.length();

        for (int i=length-1; i>=0; i--)
            reverse=reverse+original.charAt(i);

        if (original.equals(reverse)) System.out.println("Entered string is a palindrome.");
        else
            System.out.println("Entered string is not a palindrome.");
    }
}

//Another Method
import java.util.*;

class Palindrome
{
    public static void main (String args[])
    {
        String inputString;
        Scanner in=new Scanner (System.in);

        System.out.println("Input a string"); inp
        utString=in.nextLine();

        int length =inputString.length();
        int i, begin, end, middle;

        begin =0;
        end =length-
        1; middle=(begin+end)/2;

        for (i=begin; i<=middle; i++) {
            if (inputString.charAt(begin)==inputString.charAt(end)) {begin++;
                end--;
            }
            else {





```

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```
        break;  
    }  
}
```

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```

if(i==middle+1){System.out.println("Palindr
ome");
}
else{
System.out.println("Notapalindrome");
}
}
}
}

```

## 32. HowtoaddtwomatrixinjavaProgram

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

```

class AddTwoMatrix
{
    public static void main(String args[])
    {
        int m,n,c,d;
        Scanner in=new Scanner(System.in);

        System.out.println("Enter the number of rows and column of matrix"); m=in.next
        Int();
        n =in.nextInt();

        int first[][]=new int[m][n];
        int second[][]=new int[m][n];
        int sum[][]=new int[m][n];

        System.out.println("Enter the element of first matrix");

        for( c=0;c<m;c++)
            for(d=0;d<n;d++) first[c][d]=in.nextI
            nt();

        System.out.println("Enter the element of second matrix");

        for(c=0;c<m;c++)
            for(d=0;d<n;d++) second[c][d]=in.next
            Int();

        for(c=0;c<m;c++)
            for(d=0;d<n;d++)
                sum[c][d]=first[c][d]+second[c][d];        //replace '+' with '-'
        'to subtract matrices





        System.out.println("Sum of entered matrices:-");

        for(c=0;c<m;c++)
        {
            for(d=0;d<n;d++) System.out.print(sum[

```

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```
c][d]+"\\t");
```

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

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```

    }
}

```

## 33. How to multiply two matrix in java Program

```

import java.util.Scanner;

class MatrixMultiplication
{
    public static void main (String args[])
    {
        int m,n,p,q,sum=0,c,d,k;

        Scanner in=new Scanner(System.in);
        System.out.println("Enter the number of rows and columns of first matrix");
        m=in.nextInt();n=
        in.nextInt();

        int first[][]=new int[m][n];

        System.out.println("Enter the elements of first matrix");

        for(c=0;c<m;c++)
            for(d=0;d<n;d++) first[c][d]=in.nextI
                nt();

        System.out.println("Enter the number of rows and columns of second matrix");
;
        p=in.nextInt();q=
        in.nextInt();

        if(n!=p)
            System.out.println("Matrices with entered orders can't be multiplied with ea
chother.");
        else
        {
            int second[][]=new int[p][q];
            int multiply[][]=new int[m][q];

            System.out.println("Enter the elements of second matrix");

            for(c=0;c<p;c++)
                for(d=0;d<q;d++) second[c][d]=in.n
                    extInt();

            for(c=0;c<m;c++)
            {
                for(d=0;d<q;d++)
                {

```

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```
for (k=0; k<p; k++)  
{
```

```

        sum=sum+first[c][k]*second[k][d];
    }

    multiply[c][d]=sum;sum=
    0;
}
}

System.out.println("Product of entered matrices:-");

for(c=0;c<m;c++)
{
    for(d=0;d<q;d++) System.out.print(multiply[c][d]+"\\t");

    System.out.print("\\n");
}
}
}
}

```

## 34. How to get transpose of matrix in java Program

```

import java.util.Scanner;

class TransposeAMatrix
{
    public static void main(String args[])
    {
        int m,n,c,d;

        Scanner in=new Scanner(System.in);
        System.out.println("Enter the number of rows and columns of matrix");m=in.nextInt();
        n=in.nextInt();

        int matrix[][]=new int[m][n];

        System.out.println("Enter the elements of matrix");

        for(c=0;c<m;c++)
            for(d=0;d<n;d++) matrix[c][d]=in.nextInt();

        int transpose[][]=new int[n][m];for(c
=0;c<m;c++)
        {
            for(d=0;d<n;d++) transpose[d][c]=matr

```

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```
ix[c][d];  
}
```

```
System.out.println("Transpose of entered matrix:-");

for (c=0; c<n; c++)
{
    for (d=0; d<m; d++) System.out.print(transpose[c][d]+"\\t");

    System.out.print("\\n");
}
}
```

---

## 35. How to compare 2 strings in java Program

```
public class LastIndexOfExample {
    public static void main(String args[]) {
        String s1 = "hello";
        String s2 = "hello";
        String s3 = "meklo";
        String s4 = "hemlo";
        System.out.println(s1.compareTo(s2));
        System.out.println(s1.compareTo(s3));
        System.out.println(s1.compareTo(s4));
    }
}
```

---

## 36. How to string width with specific character in java Program

```
class StringEndWith {
    public static void main(String args[]) {
        String s1 = "javabyTechnoLamrorn";
        System.out.println(s1.endsWith("r")); //true
        System.out.println(s1.endsWith("Lamrorn")); //true
        System.out.println(s1.endsWith("lamrorn")); //false
    }
}
```





---

## 37. How to use indexOf() in java Program

```
public class IndexOfExample {
    public static void main(String args[]) {
        String s1 = "this is index of example";
        // passing substring
    }
}
```

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```
int index1=s1.indexOf("is");//returnstheindexofissubstring
int index2=s1.indexOf("index");//returnstheindexofindexsubstringSystem
.out.println(index1+" "+index2);//28
```

```
//passingsubstringwithfromindex
int index3=s1.indexOf("is",4);//returnstheindexofissubstringafter4thindexSystem.out.p
rintln(index3);//5i.e.theindexofanotheris

//passingcharvalue
int index4=s1.indexOf('s');//returnstheindexofscharvalueSystem.out.println(index
4);//3
}}
```

## 38. How to replace string with another string in java Program

```
public class ReplaceAllExample2{
    public static void main(String args[]){
        String s1="MynameisRajendra.Mynameislamror.MynameisTechnolamror.";String replaceString
        =s1.replaceAll("is","was");//replaces all occurrences of "is" to "was"
        System.out.println(replaceString);
    }
}
```

## 39. How to split string in java Program

```
public class SplitExample{
    public static void main(String args[]){
        String s1="java strings split method by Technolamror";
        String[] words=s1.split("\\s");//split the string based on whitespace
        //using java foreach loop to print elements of string array
        for(String w:words){System.
        out.println(w);
        }
    }
}
```

## 40. How to remove space in string both ends in java Program





```
public class StringTrimExample{
    public static void main(String args[]){String s1="
        hello string
    ";
    System.out.println(s1+"Technolamror");//without trim()System.out.println(s1.trim
    ()+"Technolamror");//with trim()
}
```

## 41. How to convert all char in string lowercase in java Program

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

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```
Strings1="TECHNOLAMRORbyRajendralamrorHELLOstRIng";Strings1  
lower=s1.toLowerCase();
```

```
System.out.println(s1lower);  
}}
```

---

## 42. How to create method in java Program

```
class Methods {  
  
    //Constructormethod  
  
    Methods() {  
        System.out.println("Constructormethodiscalledwhenanobjectofit'sclassisc  
reated");  
    }  
  
    //Mainmethodwhereprogramexecutionbegins  
  
    public static void main(String[] args) { stati  
        cMethod();  
        Methodsobject=newMethods();obje  
        ct.nonStaticMethod();  
    }  
  
    //Staticmethod  
  
    static void staticMethod() {  
        System.out.println("Staticmethodcanbecalledwithoutcreatingobject  
");  
    }  
  
    //Nonstaticmethod  
  
    void nonStaticMethod() {  
        System.out.println("Nonstaticmethodmustbecalledbycreatinganobject")  
;    }  
}
```





---

## 43. FindLength, Concatenate and Replace String in Java Program

```
class StringMethods  
{  
    public static void main(String args[])  
    {  
        int n;  
        String s="Java programming", t="", u=""; System.out.println(s);  
  
        //Find length of string
```

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```
n=s.length();
System.out.println("Numberofcharacters="+n);

//Replacecharactersinstring

t=s.replace("Java","C++");System.out.p
rintln(s);System.out.println(t);

//Concatenatingstringwithanotherstring

u=s.concat("isfun");Syst
em.out.println(s);System
.out.println(u);
}
}
```

---

## 44. HowStaticblockworkinginjava Program

```
classStaticBlock{
    publicstaticvoidmain(String[]args){System.out.pri
        ntln("Mainmethodisexecuted.");
    }

    static{
        System.out.println("Staticblockisexecutedbeforemainmethod.");
    }
}
//StaticBlockApplication...WeneedtoopenPrograminspeciifwindow
classStaticBlock{
    publicstaticvoidmain(String[]args){
        System.out.println("YouareusingWindows_NToperatingsystem.");
    }





    static{
        Stringos=System.getenv("OS");
        if(os.equals("Windows_NT")!=true){Syst
            em.exit(1);
        }
    }
}
```

---

## 45. Difference betweenStaticandInstancemethod

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## workinginjavaProgram

```
classDifference{  
  
    publicstaticvoidmain(String[]args){displ  
        ay();          //callingwithoutobject
```

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```
Differencet=newDifference();t.sho
w();          //callingusingobject
}

staticvoiddisplay(){System.out.println("Programmi
ngisamazing.");
}

voidshow(){
    System.out.println("Javaisawesome.");
}
}
```

---

## 46. HowtocreteMultipleclass injava Program

```
classComputer{Comput
er(){
    System.out.println("ConstructorofComputerclass.");
}

voidcomputer_method(){
    System.out.println("Powergone!ShutdownyourPCsoon...");
}

publicstaticvoidmain(String[]args){Computermyn
ewComputer();
Laptopyour=newLaptop();

my.computer_method();your.laptop_m
ethod();
}
}

classLaptop{Laptop()
{
    System.out.println("ConstructorofLaptopclass.");
}

voidlaptop_method(){
    System.out.println("99%Batteryavailable.");
}
}
```





---

## 47. Howtocreteconstructor injavaProgram

```
classProgramming{
```

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```
//constructormethod  
Programming(){  
    System.out.println("Constructormethodcalled.");  
}
```

```
publicstaticvoidmain(String[]args){
    Programmingobject=newProgramming();//creatingobject
}
}
```

---

## 48. Howtocreateconstructor overloadinginjava Program

```
classLanguage{Stringname;

    Language(){
        System.out.println("Constructormethodcalled.");
    }

    Language(Stringt){name=t;
    }

    publicstaticvoidmain(String[]args){Languagej
        agecpp
            =newLanguage();Languagej
        ava=newLanguage("Java");

        cpp.setName("C++");

        java.getName();cpp
        .getName();
    }

    voidsetName(Stringt){name=t
        ;
    }

    voidgetName(){
        System.out.println("Languagename:"+name);
    }
}
```





---

## 49. ExceptionHandling javaProgram

```
classDivision{
    publicstaticvoidmain(String[]args){
```

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```
inta,b,result;
```

```
Scannerinput=newScanner(System.in);System.o  
ut.println("Inputtwo integers");
```

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```
a=input.nextInt();b=
input.nextInt();

//tryblock

try{
    result
        =a/b;System.out.println("Result="
+result);
}

//catchblock

catch(ArithmeticException){System.out.println("Exceptionca
ught:Divisionbyzero.");
}
}
```

## 50. Howtothrowexceptionin javaProgram

```
publicclassTestThrow1{
    staticvoidvalidate(intage){
        if(age<18)
            thrownewArithmeticException("notvalid");
        else
            System.out.println("welcometovoteonTechnolamrnr");
    }
    publicstaticvoidmain(Stringargs[]){
        validate(13);
        System.out.println("restofthecode...");
    }
}
```

## 51. Advantage of FinallyinExceptionHandlingjavaProgram

```
classAllocate{
    publicstaticvoidmain(String[]args){

        try{
            longdata[]=newlong[1000000000];
        }
        catch(Exceptione){System.out.println(e);
        }

        finally{
            System.out.println("finallyblockwillexecutealways.");
        }
    }
}
```

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}

}

}



---

## 52. How to create interface in java Program

```
interface Info{
    static final String language="Java";
    public void display();
}

class Simple implements Info{
    public static void main(String[] args){Simple
        obj=new Simple();obj.display();
    }

    //Defining method declared in interface

    public void display(){System.out.println(language
        +"is awesome");
    }
}
```

---

## 53. How to print date and time in java Program

```
public class SQLDateExample{
    public static void main(String[] args){
        long millis=System.currentTimeMillis();java.sql.Date
        date=new java.sql.Date(millis);System.out.println(da
        te);
    }
}
//Another Way
import java.util.*;

class GetCurrentDateAndTime
{
    public static void main(String args[])
    {
        int day, month, year;
        int second, minute, hour;
        GregorianCalendar date=new GregorianCalendar();

        day=date.get(Calendar.DAY_OF_MONTH);mon
        th=date.get(Calendar.MONTH);
        year=date.get(Calendar.YEAR);

        second=date.get(Calendar.SECOND);mi
```

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```
nute=date.get(Calendar.MINUTE);hour  
=date.get(Calendar.HOUR);
```

```

        System.out.println("Currentdateis "+day+"/"+(month+1)+"/"+year);
        System.out.println("Currenttimeis "+hour+":"+minute+":"+second);
    }
}

```

## 54. HowtoSQLDate in javaProgram

```

import java.sql.Date;
public class StringToSQLDateExample{
    public static void main(String[] args){
        String str="2015-03-31";
        Date date = Date.valueOf(str); // converting string into sql date
        System.out.println(date);
    }
}

```

## 55. HowtoDateformat in javaProgram

```

import java.text.ParseException;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.Locale;
public class SimpleDateFormatExample2{
    public static void main(String[] args){
        Date date = new Date();
        System.out.println("Date format by SimpleDateFormat");
        SimpleDateFormat formatter = new SimpleDateFormat("MM/dd/yyyy");
        String strDate = formatter.format(date);
        System.out.println("Date Format with MM/dd/yyyy: "+strDate);

        formatter = new SimpleDateFormat("dd-M-yyyy hh:mm:ss");
        strDate = formatter.format(date);
        System.out.println("Date Format with dd-M-yyyy hh:mm:ss: "+strDate);

        formatter = new SimpleDateFormat("ddMMMMyyyy");
        strDate = formatter.format(date);
        System.out.println("Date Format with ddMMMMyyyy: "+strDate);

        formatter = new SimpleDateFormat("ddMMMMyyyyzzzz");
        strDate = formatter.format(date);
        System.out.println("Date Format with ddMMMMyyyyzzzz: "+strDate);

        formatter = new SimpleDateFormat("E,ddMMMMyyyy HH:mm:ssz");
        strDate = formatter.format(date);
        System.out.println("Date Format with E,ddMMMMyyyy HH:mm:ssz: "+strDate);
    }
}

```

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}  
}

---

## 56. How to Generate random number in java Program

```
import java.util.*;

class RandomNumbers {
    public static void main (String[] args) {
        int c;
        Random r = new Random();

        // random integers in [0, 100]

        for (c = 1; c <= 10; c++) { System.out.println("The nextInt(100)");
        }
    }
}
```

---

## 57. How to perform garbage collection in java Program

```
import java.util.*;

class GarbageCollection
{
    public static void main (String[] args) throws Exception
    {
        Runtime r = Runtime.getRuntime();
        System.out.println("Free memory in JVM before Garbage Collection = " + r.freeMemory());
        r.gc();
        System.out.println("Free memory in JVM after Garbage Collection = " + r.freeMemory());
    }
}
```

---





## 58. How to get own IP Address in java Program

```
import java.net.InetAddress;

class IPAddress
{
    public static void main (String args[]) throws Exception
    {
```

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```
System.out.println(InetAddress.getLocalHost());  
}  
}
```

---

## 59. Howto opennotepad in javaProgram

```
import java.util.*;
import java.io.*;

class Notepad{
    public static void main(String[] args){
        Runtime rs=Runtime.getRuntime();

        try{rs.exec("notepad"
        );
        }
        catch(IOException e){System.out.println(e);
        }
    }
}
```

---

## 60. Linear search Program in java

```
import java.util.Scanner;

class LinearSearch
{
    public static void main(String args[])
    {
        int c,n,search,array[];

        Scanner in=new Scanner(System.in);System.out.println("Enter number of elements");n=in.nextInt();
        array=new int[n];

        System.out.println("Enter "+n+" integers");

        for(c=0;c<n;c++) array[c]=in.nextInt();

        System.out.println("Enter value to find");

        search=in.nextInt();

        for(c=0;c<n;c++)
        {
            if(array[c]==search) /*Searching element is present*/
            {

```

::63::

```
        System.out.println(search+"is present at location "+(c+1)+  
        ".");  
        break;  
    }
```



```
    }  
    if(c==n) /*Searchingelementisabsent*/  
        System.out.println(search+"isnotpresentinarray.");  
    }  
}
```

---





## 61. BinarysearchProgram injava

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

```
class BinarySearch  
{  
    public static void main(String args[])  
    {  
        int c, first, last, middle, n, search, array[];  
  
        Scanner in = new Scanner(System.in); System.out.println("Enter number of elements"); n = in.nextInt();  
        array = new int[n];  
  
        System.out.println("Enter "+n+" integers");  
  
        for(c=0; c<n; c++)  
            array[c] = in.nextInt();  
  
        System.out.println("Enter value to find"); search = in.nextInt();  
  
        first = 0; last = n-1;  
        middle = (first+last)/2;  
  
        while( first<=last )  
        {  
            if( array[middle] < search)  
                first = middle+1;  
            elseif (array[middle] == search)  
            {  
                System.out.println(search+"found at location "+(middle+1)+  
".");  
                break;  
            }  
            else  
                last = middle-1;  
  
            middle = (first+last)/2;  
        }  
        if(first>last)
```

::65::

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```
System.out.println(search+"isnotpresentinthelist.\n");  
}  
}
```

---

## 62. Bubblesort Program in java

```
import java.util.Scanner;

class BubbleSort{
    public static void main (String[] args) {
        int n, c, d, swap;
        Scanner in = new Scanner (System.in);

        System.out.println("Input number of integers to sort"); n = in
        .nextInt();

        int array[] = new int[n];

        System.out.println("Enter "+n+" integers");

        for (c=0; c<n; c++) array[c] = in.ne
            xtInt();

        for (c=0; c<(n-1); c++) {
            for (d=0; d<n-c-1; d++) {
                if (array[d]>array[d+1]) /*For descending order use <*/
                {
                    swap
                        = array[d]; arr
                    ay[d]
                        = array[d+1]; a
                    rray[d+1] = swap;
                }
            }
        }

        System.out.println("Sorted list of numbers");

        for (c=0; c<n; c++) System.out.pri
            ntln(array[c]);
    }
}
```





---

## 63. How to connect Database using java Program

```
import java.sql.*;
class OracleCon{
```

::67::





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```
publicstaticvoidmain(Stringargs[]){  
try{  
//step1loadthedriverclassClass.forName("oracle.jdbc.driver.OracleDriver");  
//step2create    theconnectionobject
```

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```
Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system",
"oracle");
//step3createthestatementobjectStatement stmt=con.createStatement();
//step4executequery
ResultSet rs=stmt.executeQuery("select*fromemp");
while(rs.next())
System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3));
//step5closetheconnectionobjectcon.close();
}catch(Exception e){System.out.println(e);}

}
```

## 64. How to insert data into a table using JDBC in Java Program

```
import java.sql.*;
class InsertPrepared{
public static void main(String args[]){
try{Class.forName("oracle.jdbc.driver.OracleDriver");
;
Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system",
"oracle");
PreparedStatement stmt=con.prepareStatement("insert into Emp values(?,?)"); stmt.setInt(1,101);
//1 specifies the first parameter in the query stmt.setString(2,"Ratan");
int i=stmt.executeUpdate(); System.out.println(i+" records inserted"); con.close();
}catch(Exception e){System.out.println(e);}

}
```

## 65. How to insert image using JDBC in Java Program

```
import java.sql.*;
import java.io.*;
public class InsertImage{
public static void main(String[] args){
try{Class.forName("oracle.jdbc.driver.OracleDriver");
;Connection con=DriverManager.getConnection(
"jdbc:oracle:thin:@localhost:1521:xe","system","oracle");
PreparedStatement ps=con.prepareStatement("insert into imgtable values(?,?)");
```

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```
ps.setString(1,"Technolamror");
FileInputStream fin=new FileInputStream("d:\\g.jpg");ps.setBinaryStream(2,fin,fin.available());
inti=ps.executeUpdate();System.out.println(i+"recordsaffected");con.close();
}catch(Exceptione){e.printStackTrace();}
}
```

## 66. How to execute Procedure in JDBC in java Program

```
import java.sql.*;
public class Proc{
    public static void main(String[] args) throws Exception{Class.forName(
        "oracle.jdbc.driver.OracleDriver");
        Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system",
        "oracle");
        CallableStatement stmt=con.prepareCall("{call insertR(?,?)}");stmt.
        setInt(1,1011);
        stmt.setString(2,"Amit");stmt.execute(
        );System.out.println("success");
    }
}
```

## 67. How to check Regular expression in java Program


```
import java.util.regex.*;
public class RegexExample1{
    public static void main(String args[]){
        //1st way
        Pattern p=Pattern.compile(".s");//.representssingle character Matcher m=p.m
        atcher("as");
        boolean b=m.matches();
        //2nd way
        boolean b2=Pattern.compile(".s").matcher("as").matches();
        //3rd way
        boolean b3=Pattern.matches(".s","as");System.out.println(b+""+
        b2+""+b3);
    }}
}
```

## 68. How to create Multithreading program in java

```
class Multi extends Thread{
    public void run(){System.out.println("thread i
    s running...");
}
```

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```
public static void main(String args[]){Multi t1=
new Multi();
t1.start();
}
}
```

## 69. How to join thread in java program

```
class TestJoinMethod1 extends Thread{
    public void run(){for(int i
        =1;i<=5;i++){try{
            Thread.sleep(500);
        }catch(Exception e){System.out.println(e);}}System.out.println(i);
    }
}
public static void main(String args[]){TestJoinMethod1 t1=new TestJoinMethod1();TestJoinMethod1 t2=new TestJoinMethod1();TestJoinMethod1 t3=new TestJoinMethod1();t1.start();
try{t1.join();
    ;
}catch(Exception e){System.out.println(e);}

t2.start();
t3.start();
}
}
```

## 70. How to write data in text file using java program





```
import java.io.FileOutputStream;
public class FileOutputStreamExample{
    public static void main(String args[]){
        try{
            FileOutputStream fout=new FileOutputStream("D:\\testout.txt");fout.write(65);
            fout.close();
            System.out.println("success..by Technolamr..");
        }catch(Exception e){System.out.println(e);}
    }
}
```

## 71. How to read data from text file using java program

```
import java.io.FileInputStream;
```

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---

`public class DataStreamExample {`

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```
public static void main(String args[]){
    try{
        FileInputStream fin=new FileInputStream("D:\\Technolamrur.txt");
        int i=fin.read();System.out.p
        rint((char)i);

        fin.close();
    }catch(Exception e){System.out.println(e);}
}
```

## 72. How to get URL of site using java Programs

```
import java.io.*;import
java.net.*;public class
URLDemo{
    public static void main(String[] args){
        try{
            URL url=new URL("http://www.technolamrur.com/java");

            System.out.println("Protocol:"+url.getProtocol());System
            .out.println("HostName:"+url.getHost());System.out.print
            ln("Port Number:"+url.getPort());System.out.println("File
            Name:"+url.getFile());

        }catch(Exception e){System.out.println(e);}
    }
}
```

## 73. How to get IP Address from site URL using java program

```
import java.io.*;import
java.net.*;public class
InetDemo{
    public static void main(String[] args){
        try{
            InetAddress ip=InetAddress.getByName("www.Technolamrur.com");

            System.out.println("HostName:"+ip.getHostName());System.out.p
            rintln("IP Address:"+ip.getHostAddress());
        }catch(Exception e){System.out.println(e);}
    }
}
```

## 74. How to create AWT program in java

```
import java.awt.*;
class First extends Frame{First(){
```

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```
Buttonb=newButton("clickme");b.setBounds(30,100,80,30);/  
/settingbuttonposition
```

```
add(b); //adding button into frame setSize(300,300); //framesize 300 width and 300 height
setLayout(null); //no layout manager
setVisible(true); //now frame will be visible, by default not visible
}
public static void main(String args[]){
    First f = new First();
}
```

## 75. How to add label in AWT program in java

```
import java.awt.*;
class LabelExample{
    public static void main(String args[]){
        Frame f = new Frame("Label Example by TechnoLamr");
        Label l1, l2;
        l1 = new Label("First Label.");
        l1.setBounds(50, 100, 100, 30);
        l2 = new Label("Second Label.");
        l2.setBounds(50, 150, 100, 30);
        f.add(l1);
        f.add(l2);
        f.setSize(400, 400);
        f.setLayout(null);
        f.setVisible(true);
    }
}
```

## 76. How to add text area program in java

```
import java.awt.*;
public class TextAreaExample{
    TextAreaExample(){
        Frame f = new Frame();
        TextArea area = new TextArea("Welcome to TechnoLamr");
        area.setBounds(10, 30, 300, 300);
        f.add(area);
        f.setSize(400, 400);
        f.setLayout(null);
        f.setVisible(true);
    }
    public static void main(String args[]){
        new TextAreaExample();
    }
}
```

## 77. How to add dropdown in AWT program in java

```
import java.awt.*;
public class ChoiceExample{
    ChoiceExample(){
```

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```

        Frame f = new Frame(); Choice c = new
        Choice(); c.setBounds(100, 100, 75, 75);
        c.add("Item1 by Rajendra"); c.add("
        Item2 by Lamror"); c.add("Item3 by Te
        chnolamror"); c.add("Item4");
        c.add("Item5"); f.add(c);
        f.setSize(400, 400); f.set
        Layout(null); f.setVisible(
        true);
    }
    public static void main(String args[])
    {
        new ChoiceExample();
    }
}

```

## 78. How to create Swing program in java

```

import javax.swing.*;
public class FirstSwingExample {
    public static void main(String[] args) {
        JFrame f = new JFrame(); // creating instance of JFrame
        JButton b = new JButton("click"); // creating instance of JButton
        b.setBounds(130, 100, 100, 40); // xaxis, yaxis, width, height
        f.add(b); // adding button in JFrame
        f.setSize(400, 500); // 400 width and 500 height
        f.setLayout(null); // using no layout managers
        f.setVisible(true); // making the
        frame visible
    }
}

```

## 79. How to add checkbox in Swing program in java


```

import javax.swing.*;
public class CheckBoxExample {
    CheckBoxExample() {
        JFrame f = new JFrame("CheckBoxExample by Technolamror");
        JCheckBox checkBox1 = new JCheckBox("C++");
        checkBox1.setBounds(100, 100, 50, 50);
        JCheckBox checkBox2 = new JCheckBox("Java", true);
        checkBox2.setBounds(100, 150, 50, 50);
        f.add(checkBox1);
        f.add(checkBox2);
        f.setSize(400, 400);
        f.setLayout(null);
        f.setVisible(true);
    }
    public static void main(String args[])

```

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```
{  
newCheckBoxExample();  
}}
```

---

## 80. Howtoconvertstring to integer injavaprogram

```
publicclassStringToIntExample{publicsta  
ticvoidmain(Stringargs[]){Strings="200"  
;  
inti=Integer.parseInt(s);  
System.out.println(s+100);//200100because+isstringconcatenationoperatorSystem.o  
ut.println(i+100);//300because+isbinaryplusoperator  
}}
```

---

## 81. Howtoconvertinteger tostring injavaprogram

```
publicclassIntToStringExample1{public  
ticvoidmain(Stringargs[]){inti=200;  
Strings=String.valueOf(i);  
System.out.println(i+100);//300because+isbinaryplusoperatorSystem.out.println(s  
+100);//200100because+isstringconcatenationoperator  
}}
```

---

## 82. Howtoconvertstringto long injava

```
publicclassStringToLongExample{public  
ticvoidmain(Stringargs[]){Strings="9  
990449935";  
longl=Long.parseLong(s);Sy  
stem.out.println(l);  
}}
```

---

## 83. Howtoconvertstringtofloat in java





```
publicclassStringToFloatExample{public  
ticvoidmain(Stringargs[]){Strings="23  
.6";  
floatf=Float.parseFloat("23.6");System.out.println  
(f);  
}}
```

---

## 84. Howtoconvertstringtodouble

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## injavaprogram

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

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```
Strings="23.6";
doubled=Double.parseDouble("23.6");System.out.println(d);
}}
```

## 85. Howtoconvertstringtodate injavaprogram





```
import java.text.SimpleDateFormat;
import java.util.Date;
public class StringToDateExample1 {
    public static void main(String[] args) throws Exception {
        String sDate1 = "31/12/1998";
        String sDate2 = "31-Dec-1998";
        String sDate3 = "1231,1998";
        String sDate4 = "Thu,Dec31 1998";
        String sDate5 = "Thu,Dec31 1998 23:37:50";
        String sDate6 = "31-Dec-1998 23:37:50";
        SimpleDateFormat formatter1 = new SimpleDateFormat("dd/MM/yyyy");
        SimpleDateFormat formatter2 = new SimpleDateFormat("dd-MMM-yyyy");
        SimpleDateFormat formatter3 = new SimpleDateFormat("MMdd,yyyy");
        SimpleDateFormat formatter4 = new SimpleDateFormat("E,MMMddyyyy");
        SimpleDateFormat formatter5 = new SimpleDateFormat("E,MMMddyyyyHH:mm:ss");
        SimpleDateFormat formatter6 = new SimpleDateFormat("dd-MMM-yyyyHH:mm:ss");
        Date date1 = formatter1.parse(sDate1);
        Date date2 = formatter2.parse(sDate2);
        Date date3 = formatter3.parse(sDate3);
        Date date4 = formatter4.parse(sDate4);
        Date date5 = formatter5.parse(sDate5);
        Date date6 = formatter6.parse(sDate6);
        System.out.println("String to Date converter by technolamr");
        System.out.println(sDate1 + "\t" + date1);
        System.out.println(sDate2 + "\t" + date2);
        System.out.println(sDate3 + "\t" + date3);
        System.out.println(sDate4 + "\t" + date4);
        System.out.println(sDate5 + "\t" + date5);
        System.out.println(sDate6 + "\t" + date6);
    }
}
```

## 86. Create ArrayList program in java

```
import java.util.*;
class ArrayList_Technolamr {
    public static void main(String args[]) {
        ArrayList<String> list = new ArrayList<String>(); // Creating arraylist
        list.add("Rajendra"); // Adding object in arraylist
        list.add("Raja");
        list.add("Technolamr");
    }
}
```

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```
//Traversing list through Iterator
Iterator itr=list.iterator();while(itr.hasNext())
{System.out.println(itr.next());
}
}
```

## 87. How to create LinkedList program in java

```
import java.util.*;
public class LinkedList technolamr {
    public static void main(String args[]){

        LinkedList<String> al=new LinkedList<String>();

        al.add("Rajendra");//Adding object in LinkedList
        al.add("Mahendra");
        al.add("Raja");al.add("Technolamr");
        ;





        Iterator<String> itr=al.iterator();while(itr.hasNext())
        {System.out.println(itr.next());
        }
    }
}
```

## 88. How to ArrayList using list interface program in java

```
import java.util.*;
class Book{
    int id;
    String name,author,publisher;
    int quantity;
    public Book(int id,String name,String author,String publisher,int quantity){
        this.id=id;this.name=name;this.author=author;
        this.publisher=publisher;this.quantity=quantity;
    }
}
public class ListIteratorExample{
    public static void main(String[] args){
        //Creating list of Books
        List<Book> list=new ArrayList<Book>();
        //Creating Books
        Book b1=new Book(101,"LetusC","Yashwant Kanetkar","BPB",8);
```

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```
Bookb2=newBook(102,"JavaProgramQuestation","Rajendra","Technolamror",4);Book  
b3=newBook(103,"OperatingSystem","Galvin","Wiley",6);  
//AddingBookstolist
```

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```
list.add(b1);
list.add(b2);
list.add(b3);
System.out.println("Originalcontentoflistis:");
//Traversinglist
for(Bookb:list){
System.out.println(b.id+" "+b.name+" "+b.author+" "+b.publisher+" "+b.quantity);
}
ListIterator<Book>itr=list.listIterator();System.out.println("Modif
iedcontentoflistinbackwardis:");while(itr.hasNext()){
    Bookst=(Book)itr.next();
    System.out.println(st.quantity+" "+st.publisher+" "+st.author+" "+st.name+" "+st.id
);
}
}
}
```

## 89. HowtcreateHashsetprograminjava

```
import java.util.*;
class TestCollection9{
    public static void main(String args[]){
        //Creating HashSet and adding elements
        HashSet<String> set = new HashSet<String>();
        set.add("Rajendra");
        set.add("Raja");
        set.add("Ravi");
        set.add("Technolamror");
        //Traversing elements
        Iterator<String> itr = set.iterator();
        while(itr.hasNext()){
            System.out.println(itr.next());
        }
    }
}
```

## 90. HowtcreateLinkedHashSet programinjava



```
import java.util.*;
class LinkedHashSet_Technolamror{
    public static void main(String args[]){
        LinkedHashSet<String> al = new LinkedHashSet<String>();

        al.add("Rajendra");
        al.add("Raja");
        al.add("Ravi");
        al.add("Technolamror");

        Iterator<String> itr = al.iterator();
        while(itr.hasNext()){
```

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out

itr

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```
}
}
}
```

## 91. How to create TreeSet program in java

```
import java.util.*;
class TreeSet_Technolamror{
    public static void main(String args[]){
        //Creating and adding elements TreeSet<String>
        >al=new TreeSet<String>();al.add("Rajendra
        ");
        al.add("Raja");
        al.add("Ravi");al.add("Technolamror"
        );
        Iterator<String>itr=al.iterator();while(
        itr.hasNext()){System.out.println(i
        tr.next());
        }
    }
}
```

## 92. How to create PriorityQueue program in java

```
import java.util.*;
class PriorityQueue_Technolamror{
    public static void main(String args[]){PriorityQueue<String>que
    ue=new PriorityQueue<String>();queue.add("Rajendra");
    queue.add("Mahendra");queue.add("Raja"
    );queue.add("Technolamror");queue.add(
    "Rahul");
    System.out.println("head:"+queue.element());System.out
    t.println("head:"+queue.peek());System.out.println("i
    terating the queue elements:");Iterator itr=queue.iterato
    r();
    while(itr.hasNext()){System.out.println(itr
    .next());
    }
    queue.remove();queue.poll
    ();
    System.out.println("after removing two elements:");Itera
    tor<String>itr2=queue.iterator();while(itr2.hasNext()
    ){System.out.println(itr2.next());
    }
    }
}
```

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## 93. How to create HashMap using map interface program in java

```
import java.util.*;
class MapInterfaceExample{
    public static void main(String args[]){Map<Integer,String>map=
        new HashMap<Integer,String>();map.put(100,"Rajendra");
        map.put(101,"Lamror");map.put(102,"TechnoLamror");
        for(Map.Entry m:map.entrySet()){
            System.out.println(m.getKey()+" "+m.getValue());
        }
    }
}
```

## 94. How to create LinkedHashMap program in java





```
import java.util.*;
class LinkedHashMap_TechnoLamror{
    public static void main(String args[]){
        LinkedHashMap<Integer,String>hm=new LinkedHashMap<Integer,String>();
        hm.put(100,"Rajendra");
        hm.put(101,"Vijay");
        hm.put(102,"TechnoLamror");
        for(Map.Entry m:hm.entrySet()){System.out.println(m.getKey()+" "+m.getValue());}
    }
}
```

## 95. How to create TreeMap program in java

```
import java.util.*;
class TreeMap_TechnoLamror{
    public static void main(String args[]){TreeMap<Integer,String>hm=
        new TreeMap<Integer,String>();hm.put(100,"Amit");
        hm.put(102,"Ravi");
        hm.put(101,"Vijay");hm.put(103,"TechnoLamror");
        for(Map.Entry m:hm.entrySet()){
            System.out.println(m.getKey()+" "+m.getValue());
        }
    }
}
```

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}

## 96. How to create Hashtable program in java

```
import java.util.*;
class Hashtable_Technolamr{
    public static void main(String args[]){
        Hashtable<Integer,String> hm=
            new Hashtable<Integer,String>();

        hm.put(100,"Rajendra");
        hm.put(102,"Praveen");
        hm.put(101,"Bipin");
        hm.put(103,"Pankaj");

        for(Map.Entry m:hm.entrySet()){
            System.out.println(
                m.getKey()+" "+m.getValue());
        }
    }
}
```

## 97. How to create Array program in java

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

        int a[]=new int[5]; //declaration and instantiation a[0]=10; //initialization
        a[1]=20;
        a[2]=70;
        a[3]=40;
        a[4]=50;

        //printing array
        for(int i=0;i<a.length;i++){ //length is the property of array
            System.out.println(a[i]);
        }
    }
}
```

## 98. How to create Multidimensional array program in java





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

        //declaring and initializing 2D array
        int arr[][]={{1,2,3},{2,4,5},{4,4,5}};

        //printing 2D array
        for(int i=0;i<3;i++){
            for(int j=0;j<3;j++){
                System.out.print(arr[i][j]+" ");
            }
        }
    }
}
```

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



```
}}
```

---

## 99. How to create Find Factorial Using Recursion Program in java

```
public class RecursionTechnolamr {
    static int factorial(int n) {
        if (n == 1)
            return 1;
        else
            return (n * factorial(n - 1));
    }

    public static void main(String[] args) {
        System.out.println("Factorial of 5 is: " + factorial(5));
    }
}
```

---

## 100. How to create Method Overriding program in java

```
class Bank {
    int getRateOfInterest() { return 0; }
}

class SBI extends Bank {
    int getRateOfInterest() { return 8; }
}

class ICICI extends Bank {
    int getRateOfInterest() { return 7; }
}

class AXIS extends Bank {
    int getRateOfInterest() { return 9; }
}

class Test2 {
    public static void main(String args[]) {
        SBI s = new SBI();
        ICICI i = new ICICI();
        AXIS a = new AXIS();
        System.out.println("SBI Rate of Interest: " + s.getRateOfInterest());
        System.out.println("ICICI Rate of Interest: " + i.getRateOfInterest());
        System.out.println("AXIS Rate of Interest: " + a.getRateOfInterest());
    }
}
```