

JAVA Programs

100 Java Programs

Contents

Java	a Programs	1
1.	Simple Java Program.	4
2.	Print Integer in java	4
3.	Command Line Argument	4
4.	How to get Using input using Scanner Program in java	5
5.	How to convert Fahrenheit to Celsius Program in java	5
6.	How to swap 2 no using 3 rd variable Program in java	6
7.	How to swap 2 no without using 3 rd variable Program in java	6
8.	How to add two number Program in java	7
9.	Find Largest no in java Program	8
10.	If Else clause in java	8
11.	If Else clause in java- Program 2	9
12.	Nested If Else clause in java	9
13.	How to check Odd and Even Number in java	10
14.	Find factorial for given no Program in Java	10
15.	How to complete 2 string in Java program	11
16.	Simple For Loop Program in Java	12
17.	Print Star console using Loop	12
18.	Print Star console using Loop	13
19.	While loop Program in java	13
20.	Print Reverse number in java program	14
21.	While loop using break Program in java	14
22.	While loop using break and continue Program in java	15
23.	Print all alphabet using for loop Program in java	15
24.	Enhance loop in java Program	16
25.	Print Multiplication table Program in java	16
26.	Print prime no Program in java	17
27.	Check no is Armstrong or not in java Program	18
28.	Print Floyd's Triangle in java Program	19
29.	Find All substring of string in java Program	19

30.	Print reverse string in java Program	20
31.	Check Given No is palindrome or Not in java Program	21
32.	How to add two matrix in java Program	22
33.	How to multiply two matrix in java Program	23
34.	How to get transpose of matrix in java Program	24
35.	How to compare 2 string in java Program	25
36.	How to string width with specific char in java Program	25
37.	How to use indesOf() in java Program	25
38.	How to replace string with another string in java Program	26
39.	How to split string in java Program	26
40.	How to remove space in string both end in java Program	26
41.	How to convert all char in string lower case in java Program	26
42.	How to create method in java Program	27
43.	Find Length, Concatenate and Replace String in Java Program	27
44.	How Static block working in java Program	28
45.	Difference between Static and Instance method working in java Program	28
46.	How to create Multiple class in java Program	29
47.	How to create constructor in java Program	29
48.	How to create constructor overloading in java Program	30
49.	Exception Handling java Program	30
50.	How to throw exception in java Program	31
51.	Advantage of Finally in Exception Handling java Program	31
52.	How to create Interface in java Program	32
53.	How to print date and time in java Program	32
54.	How to SQL Date in java Program	33
55.	How to Date format in java Program	33
56.	How to Generate random number in java Program	34
57.	How perform garbage collection in java Program	34
58.	How to get own IP Address in java Program	34
59.	How to open notepad in java Program	35
60.	Leaner search Program in java	35
61.	Binary search Program in java	36
62.	Bubble sort Program in java	37
63.	How to connect Database using java Program	37
64.	How to insert data in table using JDBC in java Program	38
65.	How to insert image using JDBC in java Program	38
66.	How to execute Procedure in JDBC in java Program	39

67.	How to check Regular expression in java Program	. 39
68.	How to create Multithreading program in java	. 39
69.	How to join thread in java program	. 40
70.	How to write data in text file using java program	. 40
71.	How to read data from text file using java program	. 40
72.	How to get URL of site using java Programs	. 41
73.	How to get IP address from site URL using java program	. 41
74.	How to create AWT program in java	. 41
75.	How to add lable in AWT program in java	. 42
76.	How to add text area program in java	. 42
77.	How to dropdown in AWT program in java	. 42
78.	How to create Swing program in java	. 43
79.	How to add checkbox in Swing program in java	. 43
80.	How to convert string to integer in java program	. 44
81.	How to convert integer to string in java program	. 44
82.	How to convert string to long in java	. 44
83.	How to convert string to float in java	. 44
84.	How to convert string to double in java program	. 44
85.	How to convert string to date in java program	. 45
86.	Create ArrayList program in java	. 45
87.	How to create LinkedList program in java	. 46
88.	How to ArrayList using list interface program in java	. 46
89.	How to create Hashset program in java	. 47
90.	How to create LinkedHashSet program in java	. 47
91.	How to create TreeSet program in java	. 48
92.	How to create PriorityQueue program in java	. 48
93.	How to create HashMap using map interface program in java	. 49
94.	How to create LinkedHashMap program in java	. 49
95.	How to create TreeMap program in java	. 49
96.	How to create Hashtable program in java	. 50
97.	How to create Array program in java	. 50
98.	How to create Multidimensional array program in java	. 50
99.	How to create Find Factorial No using Recursion Program in java	. 51
100.	How to create Method Overriding program in java	. 51

1. Simple Java Program

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

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.out.println(c);
  }
}</pre>
```

3. Command Line Argument in java

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

4. How to get Using input using Scanner Program in java

```
import java.util.Scanner;
class GetInputFromUser
  public static void main(String args[])
      int a;
      float b;
      String s;
      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");
      temperatue = in.nextInt();

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

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

6. How to swap 2 no using 3rd 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 3rd variable Program in java

```
import java.util.Scanner;

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

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

System.out.println("After Swapping\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;
    sum = first.add(second);
    System.out.println("Result of addition = " + 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.");
      else if (y > x \&\& y > z)
         System.out.println("Second number is largest.");
      else if (z > x & & z > y)
         System.out.println("Third number is largest.");
      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?");
    }
  }
}
```

11. If Else clause in java- Program 2

```
// 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;

```
else if (marksObtained > 75)
    grade = 'B';
else if (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.

```
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;
      System.out.println("Enter an integer to calculate it's factorial");
      Scanner in = new Scanner(System.in);
      n = in.nextInt();
```

```
if ( n < 0 )
         System.out.println("Number should be non-negative.");
      else
         for (c = 1 ; c \le n ; c++)
           fact = fact*c;
        System.out.println("Factorial of "+n+" is = "+fact);
   }
}
//Calculate factorial for large No
import java.util.Scanner;
import java.math.BigInteger;
class BigFactorial
 public static void main(String args[])
   int n, c;
   BigInteger inc = new BigInteger("1");
   BigInteger fact = new BigInteger("1");
    Scanner input = new Scanner(System.in);
    System.out.println("Input an integer");
    n = input.nextInt();
    for (c = 1; c <= n; c++) {
     fact = fact.multiply(inc);
      inc = inc.add(BigInteger.ONE);
    System.out.println(n + "! = " + fact);
```

15. How to complete 2 string in Java program

```
class CompareStrings
{
   public static void main(String args[])
   {
      String s1, s2;
      Scanner in = new Scanner(System.in);

      System.out.println("Enter the first string");
      s1 = in.nextLine();
```

import java.util.Scanner;

```
System.out.println("Enter the second string");
s2 = in.nextLine();

if ( s1.compareTo(s2) > 0 )
        System.out.println("First string is greater than second.");
else if ( s1.compareTo(s2) < 0 )
        System.out.println("First string is smaller than second.");
else
        System.out.println("Both strings are equal.");
}</pre>
```

16. Simple For **Loop** Program in Java

```
//Java for loop program
class ForLoop {
  public static void main(String[] args) {
    int c;

  for (c = 1; c <= 10; c++) {
      System.out.println(c);
    }
  }
}</pre>
```

17. 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(); // Go to next line
     }
}</pre>
```

```
Input an integer
2
You entered 2
Input an integer
1
You entered 1
Input an integer
6
You entered 6
Input an integer
1
You entered 1
Input an integer
0
Out of loop
```

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(); // Go to next line
    }
}</pre>
```

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.println("Input an integer");

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

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

}

20. Print Reverse number in java program

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);
    }
}
```

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 <u>loop</u> Program in java

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

      for( ch = 'a' ; ch <= 'z' ; ch++ )
            System.out.println(ch);
    }
}</pre>
```

24. Enhance loop in java Program

```
class EnhancedForLoop {
  public static void main(String[] args) {
    int primes[] = { 2, 3, 5, 7, 11, 13, 17, 19, 23, 29};

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

//For String
class EnhancedForLoop {
  public static void main(String[] args) {
      String languages[] = { "C", "C++", "Java", "Python", "Ruby"};
  for (String sample: languages) {
      System.out.println(sample);
    }
  }
}
```

25. Print Multiplication table Program in java import java.util.Scanner;

```
class MultiplicationTable
  public static void main(String args[])
      int n, c;
      System.out.println("Enter an integer to print it's multiplication
table");
      Scanner in = new Scanner(System.in);
      n = in.nextInt();
      System.out.println("Multiplication table of "+n+" is :-");
      for (c = 1; c \le 10; c++)
        System.out.println(n+"*"+c+" = "+(n*c));
}
//For Any Number
import java.util.Scanner;
class Tables
 public static void main(String args[])
    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));
    }
}</pre>
```

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

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

27. Check no is Armstrong 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) {
        digits++;
        temp = temp/10;
      temp = n;
      while (temp != 0) {
       remainder = temp%10;
        sum = sum + power(remainder, digits);
        temp = temp/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;
```

}

28. Print Floyd's Triangle in java Program

29. Find All substring of string in 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();

   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);
        }
    }
}</pre>
```

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 Methog
class InvertString
  public static void main(String args[])
      StringBuffer a = new StringBuffer("Java programming is fun");
      System.out.println(a.reverse());
```

31. Check Given No is palindrome or Not in <u>java</u> Program

```
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.nextLine();
      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");
    inputString = 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++) {</pre>
      if (inputString.charAt(begin) == inputString.charAt(end)) {
       begin++;
       end--;
      else {
       break;
```

```
if (i == middle + 1) {
    System.out.println("Palindrome");
}
else {
    System.out.println("Not a palindrome");
}
}
```

32. How to add two matrix in java Program

```
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 columns of matrix");
     m = in.nextInt();
      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 elements of first matrix");
      for (c = 0; c < m; c++)
        for ( d = 0 ; d < n ; d++ )
            first[c][d] = in.nextInt();
      System.out.println("Enter the elements of second matrix");
      for ( c = 0 ; c < m ; c++ )
         for ( d = 0 ; d < n ; d++ )
            second[c][d] = in.nextInt();
      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[c][d]+"\t");
         System.out.println();
```

```
}
}
}
```

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.nextInt();
      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 each other.");
      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 
            for (d = 0 ; d < q ; d++)
              second[c][d] = in.nextInt();
         for ( c = 0 ; c < m ; c++ )
            for (d = 0 ; d < q ; d++)
               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");
}
</pre>
```

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] = matrix[c][d];
```

35. How to compare 2 string 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 char in java Program

```
class StringEndwith{
public static void main(String args[]){
String s1="java by TechnoLamror";
System.out.println(s1.endsWith("r")); //true
System.out.println(s1.endsWith("Lamror")); //true
System.out.println(s1.endsWith("lamror"));//false
}
}
```

37. How to use indesOf() in java Program

```
public class IndexOfExample{
public static void main(String args[]){
String s1="this is index of example";
//passing substring
int index1=s1.indexOf("is");//returns the index of is substring
int index2=s1.indexOf("index");//returns the index of index substring
System.out.println(index1+" "+index2);//2 8
```

```
//passing substring with from index
int index3=s1.indexOf("is",4);//returns the index of is substring after 4th index
System.out.println(index3);//5 i.e. the index of another is

//passing char value
int index4=s1.indexOf('s');//returns the index of s char value
System.out.println(index4);//3
}}
```

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

```
public class ReplaceAllExample2{
public static void main(String args[]){
String s1="My name is Rajendra. My name is lamror. My name is Technolamror.";
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 string split method by Technolamror";
String[] words=s1.split("\\s");//splits 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 end 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 lower case in java Program

```
public class StringLowerExample{
public static void main(String args[]){
String s1="TECHNOLAMROR by Rajendralamror HELLO stRIng";
String s1lower=s1.toLowerCase();
```

42. How to create method in java Program

```
// Constructor method
 Methods() {
   System.out.println("Constructor method is called when an object of it's
class is created");
  // Main method where program execution begins
 public static void main(String[] args) {
   staticMethod();
   Methods object = new Methods();
   object.nonStaticMethod();
 // Static method
  static void staticMethod() {
   System.out.println("Static method can be called without creating
object");
  // Non static method
 void nonStaticMethod() {
   System.out.println("Non static method must be called by creating an
object");
 }
```

43. Find Length, Concatenate and Replace String in <u>Java</u> 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
```

```
n = s.length();
System.out.println("Number of characters = " + n);

// Replace characters in string

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

// Concatenating string with another string

u = s.concat(" is fun");
System.out.println(s);
System.out.println(u);
}
```

44. How Static block working in java Program

```
class StaticBlock {
  public static void main(String[] args) {
    System.out.println("Main method is executed.");
  }
  static {
    System.out.println("Static block is executed before main method.");
  }
}
//Static Block Application .... We need to open Program in speciff window class StaticBlock {
    public static void main(String[] args) {
        System.out.println("You are using Windows_NT operating system.");
   }

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

45. Difference between Static and Instance method working in java Program

```
class Difference {
  public static void main(String[] args) {
    display(); //calling without object
```

```
Difference t = new Difference();
    t.show(); //calling using object
}

static void display() {
    System.out.println("Programming is amazing.");
}

void show() {
    System.out.println("Java is awesome.");
}
```

46. How to create Multiple class in java Program

```
class Computer {
  Computer() {
    System.out.println("Constructor of Computer class.");
  void computer method() {
    System.out.println("Power gone! Shut down your PC soon...");
 public static void main(String[] args) {
    Computer my = new Computer();
   Laptop your = new Laptop();
   my.computer method();
   your.laptop method();
}
class Laptop {
  Laptop() {
    System.out.println("Constructor of Laptop class.");
  void laptop method() {
    System.out.println("99% Battery available.");
```

47. How to create constructor in java Program

```
class Programming {
  //constructor method
  Programming() {
    System.out.println("Constructor method called.");
  }
```

```
public static void main(String[] args) {
    Programming object = new Programming(); //creating object
}
```

48. How to create constructor overloading in java Program

```
class Language {
  String name;
  Language() {
    System.out.println("Constructor method called.");
  Language(String t) {
   name = t;
  public static void main(String[] args) {
   Language cpp = new Language();
    Language java = new Language("Java");
    cpp.setName("C++");
   java.getName();
   cpp.getName();
  void setName(String t) {
   name = t;
  void getName() {
    System.out.println("Language name: " + name);
```

49. Exception Handling java Program

```
class Division {
  public static void main(String[] args) {
  int a, b, result;

  Scanner input = new Scanner(System.in);
  System.out.println("Input two integers");
```

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

// try block

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

// catch block

catch (ArithmeticException e) {
    System.out.println("Exception caught: Division by zero.");
}
}
```

50. How to throw exception in java Program

```
public class TestThrow1{
    static void validate(int age){
        if(age<18)
            throw new ArithmeticException("not valid");
        else
            System.out.println("welcome to vote on Technolamror");
    }
    public static void main(String args[]){
        validate(13);
        System.out.println("rest of the code...");
    }
}</pre>
```

51. Advantage of Finally in Exception Handling java Program

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

    try {
      long data[] = new long[1000000000];
    }
    catch (Exception e) {
      System.out.println(e);
    }

  finally {
      System.out.println("finally block will execute always.");
    }
  }
}
```

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(date);
/// 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);
      month = date.get(Calendar.MONTH);
      year = date.get(Calendar.YEAR);
      second = date.get(Calendar.SECOND);
      minute = date.get(Calendar.MINUTE);
      hour = date.get(Calendar.HOUR);
```

```
System.out.println("Current date is "+day+"/"+(month+1)+"/"+year);
System.out.println("Current time is "+hour+" : "+minute+" : "+second);
}
```

54. How to SQL Date in java Program

```
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. How to Date format in java Program

```
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 formate chnage by Technolamror ");
    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("dd MMMM yyyy");
    strDate = formatter.format(date);
    System.out.println("Date Format with dd MMMM yyyy : "+strDate);
    formatter = new SimpleDateFormat("dd MMMM yyyy zzzz");
    strDate = formatter.format(date);
    System.out.println("Date Format with dd MMMM yyyy zzzz : "+strDate);
    formatter = new SimpleDateFormat("E, dd MMM yyyy HH:mm:ss z");
    strDate = formatter.format(date);
    System.out.println("Date Format with E, dd MMM yyyy HH:mm:ss z : "+strDate);
}
}
```

56. How to Generate random number in <u>java</u> Program

```
import java.util.*;

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

     // random integers in [0, 100]

     for (c = 1; c <= 10; c++) {
        System.out.println(t.nextInt(100));
      }
   }
}</pre>
```

57. How perform garbage collection in java Program

```
import java.util.*;

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

59. How to open notepad in java Program

```
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. Leaner 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++)</pre>
      if (array[c] == search) /* Searching element is present */
         System.out.println(search + " is present at location " + (c + 1) +
".");
          break;
```

```
if (c == n) /* Searching element is absent */
    System.out.println(search + " is not present in array.");
}
```

61. Binary search Program in java

```
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 )</pre>
                     if ( array[middle] < search )</pre>
                          first = middle + 1;
                     else if ( array[middle] == search )
                            System.out.println(search + " found at location " + (middle + 1) +
".");
                           break;
                     else
                               last = middle - 1;
                    middle = (first + last)/2;
          if ( first > last )
                     System.out.println(search + " is not present in the list.\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normalfont{\normal
```

62. Bubble sort 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.nextInt();
    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 < */</pre>
                   = array[d];
          swap
          array[d] = array[d+1];
          array[d+1] = swap;
      }
    }
    System.out.println("Sorted list of numbers");
    for (c = 0; c < n; c++)
      System.out.println(array[c]);
```

63. How to connect Database using <u>java</u> Program

```
import java.sql.*;
class OracleCon{
public static void main(String args[]){
  try{
   //step1 load the driver class
  Class.forName("oracle.jdbc.driver.OracleDriver");
   //step2 create the connection object
```

```
Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system","oracl
e");
//step3 create the statement object
Statement stmt=con.createStatement();
//step4 execute query
ResultSet rs=stmt.executeQuery("select * from emp");
while(rs.next())
System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3));
//step5 close the connection object
con.close();
}catch(Exception e){ System.out.println(e);}
```

64. How to insert data in 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(?,?)");
```

```
ps.setString(1,"Technolamror");
FileInputStream fin=new FileInputStream("d:\\g.jpg");
ps.setBinaryStream(2,fin,fin.available());
int i=ps.executeUpdate();
System.out.println(i+" records affected");
con.close();
}catch (Exception e) {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");//. represents single character
Matcher m = p.matcher("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 is running...");
}
```

```
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++){</pre>
   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

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

```
import java.io.FileInputStream;
public class DataStreamExample {
```

```
public static void main(String args[]){
    try{
        FileInputStream fin=new FileInputStream("D:\\Technolamror.txt");
        int i=fin.read();
        System.out.print((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.technolamror.com/java");
   System.out.println("Protocol: "+url.getProtocol());
   System.out.println("Host Name: "+url.getHost());
   System.out.println("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.Technolamror.com");
  System.out.println("Host Name: "+ip.getHostName());
  System.out.println("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(){
Button b=new Button("click me");
b.setBounds(30,100,80,30);// setting button position
```

```
add(b);//adding button into frame
setSize(300,300);//frame size 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 lable in AWT program in java

```
import java.awt.*;
class LabelExample{
public static void main(String args[]){
    Frame f= new Frame("Label Example by Technolamror");
    Label 11,12;
    11=new Label("First Label.");
    11.setBounds(50,100, 100,30);
    12=new Label("Second Label.");
    12.setBounds(50,150, 100,30);
    f.add(11); f.add(12);
    f.setSize(400,400);
    f.setLayout(null);
    f.setVisible(true);
}
```

76. How to add text area program in java

77. How to dropdown in AWT program in java

```
Frame f= new Frame();
   Choice c=new Choice();
   c.setBounds(100,100, 75,75);
   c.add("Item 1 by Rajendra");
   c.add("Item 2 by Lamror");
   c.add("Item 3 by Technolamror");
   c.add("Item 4");
   c.add("Item 5");
   f.add(c);
   f.setSize(400,400);
   f.setLayout(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);//x axis, y axis, 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

<u>java</u>

```
import javax.swing.*;
public class CheckBoxExample
{
    CheckBoxExample(){
        JFrame f= new JFrame("CheckBox Example 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[])
```

```
{
new CheckBoxExample();
}}
```

80. How to convert string to integer in java program

```
public class StringToIntExample{
public static void main(String args[]){
String s="200";
int i=Integer.parseInt(s);
System.out.println(s+100);//200100 because + is string concatenation operator
System.out.println(i+100);//300 because + is binary plus operator
}}
```

81. How to convert integer to string in java program

```
public class IntToStringExample1{
public static void main(String args[]){
int i=200;
String s=String.valueOf(i);
System.out.println(i+100);//300 because + is binary plus operator
System.out.println(s+100);//200100 because + is string concatenation operator
}}
```

82. How to convert string to long in java

```
public class StringToLongExample{
public static void main(String args[]){
String s="9990449935";
long l=Long.parseLong(s);
System.out.println(l);
}}
```

83. How to convert string to float in java

```
public class StringToFloatExample{
public static void main(String args[]){
String s="23.6";
float f=Float.parseFloat("23.6");
System.out.println(f);
}}
```

84. How to convert string to double in java program

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

```
String s="23.6";
double d=Double.parseDouble("23.6");
System.out.println(d);
}}
```

85. How to convert string to date in java program

```
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 = "12 31, 1998";
    String sDate4 = "Thu, Dec 31 1998";
    String sDate5 = "Thu, Dec 31 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("MM dd, yyyy");
    SimpleDateFormat formatter4=new SimpleDateFormat("E, MMM dd yyyy");
    SimpleDateFormat formatter5=new SimpleDateFormat("E, MMM dd yyyy HH:mm:ss");
    SimpleDateFormat formatter6=new SimpleDateFormat("dd-MMM-yyyy HH: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 technolamror");
    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 Arrylist_Technolamror{
public static void main(String args[]){
   ArrayList<String> list=new ArrayList<String>();//Creating arraylist
   list.add("Rajendra");//Adding object in arraylist
   list.add("Mahendra");
   list.add("Raja");
   list.add("Technolamror");
```

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

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

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

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

88. How to ArrayList using list interface program

```
in <u>java</u>
```

```
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, "Let us C", "Yashwant Kanetkar", "BPB",8);
    Book b2=new Book(102, "Java Program Questation", "Rajendra", "Technolamror", 4);
    Book b3=new Book(103, "Operating System", "Galvin", "Wiley", 6);
    //Adding Books to list
```

```
list.add(b1);
list.add(b2);
list.add(b3);
System.out.println("Original content of list is: ");
//Traversing list
for(Book b:list){
System.out.println(b.id+" "+b.name+" "+b.author+" "+b.publisher+" "+b.quantity);
}
ListIterator<Book> itr=list.listIterator();
System.out.println("Modified content of list in backward is: ");
while(itr.hasNext()){
    Book st=(Book)itr.next();
    System.out.println(st.quantity+" "+st.publisher+" "+st.author+" "+st.name+"
"+st.id);
}
}
}
```

89. How to create Hashset program in java

```
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. How to create LinkedHashSet program in

<u>java</u>

```
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()){
      out itr
```

```
}
}
}
```

91. How to create TreeSet program in java

92. How to create PriorityQueue program in java

```
import java.util.*;
class PriorityQueue Technolamror{
public static void main(String args[]){
PriorityQueue<String> queue=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.println("head:"+queue.peek());
System.out.println("iterating the queue elements:");
Iterator itr=queue.iterator();
while(itr.hasNext()){
System.out.println(itr.next());
queue.remove();
queue.poll();
System.out.println("after removing two elements:");
Iterator<String> itr2=queue.iterator();
while(itr2.hasNext()){
System.out.println(itr2.next());
}
}
```

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_Technolmaror{
  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());
    }
    }
}
```

96. How to create Hashtable program in java

```
import java.util.*;
class Hashtable_Technolamror{
  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_Technolamror{
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]);
}}</pre>
```

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]+" ");
  }
  System.out.println();
}</pre>
```

99. How to create Find Factorial No using Recursion Program in java

```
public class Recursion Technolamror {
    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());
} }
```