

LEARN JAVA IN தமிழ்

By : Tamil Hacks - தமிழ் HACKS

Java is easy and fun to learn, so lets learn java.

Are you ready !!!!!

Time Stamp for video :

00.0 -> Introduction and requirements

02.24 -> Java facts and scope , job (salary)

07.50 -> Java for everyone ?

11.48 -> Java Setup

18.35-> Inside Java

34.33-> Coding (lets code)

56.54 -> Data Types (primitive)

01.28.34 -> Data Types (reference)

01.50.51 -> Strings , comments

02.06.08 -> Naming conventions

02.18.31 -> Important (operators , precedence , associativity , types)

02.50.02 -> Math class

02.55.53 -> Scanner (inputs)

03.02.27 -> conditions (if , elseif ,if)

03.21.41 -> Switch Statements

03.31.38 -> Loops (for loop , while loop , do while loop , for each loop)



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All the codes shown in the video is available here:

//Basic java program

```
package com.tamilhacks;
import java.util.Scanner;

public class Main {

    public static void main(String[] args) {
        // write your code here
        System.out.println("Tamil hacks");
    }
}
```

//primitive data types

```
byte number = 20 ;
short number2 = 150;
int number3 = 1999;
long number4 = 123456789789L;

float number5 = 11.5F;
double number6 = 1111.99999999;

char alphabet = 'b' ;

boolean bool = false ;

System.out.println(bool);

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



// reference data types

```
int number = 10;  
//5 = 0 ,1, 2, 3, 4
```

```
int[] numbers = {10,11,12,13,15};  
// numbers[0] = 10;  
// numbers[1] = 11;
```

```
char name[] = {'a' , 'b' , 's' , 'a'};  
int len = name.length;
```

```
char name1[] = name.clone();
```

```
System.out.println(Arrays.toString(name1));  
System.out.println((name[0]));  
System.out.println(len);
```

//STRINGS

```
String channelName = "tamil Hacks" + " youtube  
channel";  
System.out.println(channelName.endsWith("channels"));  
System.out.println(channelName);
```

```
int numberOne = 1000 ;  
int ageOfPerson = 25 ;
```

```
int numbers[] = { 1, 2, 3,};
```

```
int numbersOf2Dim[][] = { {1,2 } ,{ 1,3 } };
```

```
byte number = 5;  
number = 10;
```



```

    System.out.println(number);
//constant
    final int ageOfPerson1 = 18;

    //ageOfPerson1 = 21;

//operations
    byte number1 = 20;
    int number2 = 10;

    int number3 = number2 + number1;

    number2 *= 10;

    int number4 = (5 + 5) - 10 * 5 * 6 / 9 / 8 % 20;
    int number5 = 2 / 2;
//BODMAS

//logical operators && , || , !!

    int ageOfPerson = 21;

    boolean indianCitizen = false;

    // condition      true      false
    String name = ageOfPerson >= 18 ? "eligible" : "not
eligible";

    int number10 = 10;
    // -- number10 ;
    int number11 = ++ number10;

```



```
System.out.println(number10);  
System.out.println( number11 );
```

//MATH

```
int number = 100;
```

```
float number1 = 101.13f;
```

```
System.out.println(Math.log(number));
```

```
String name ;  
int number1;  
int number2;
```

//Scanner

```
Scanner input = new Scanner(System.in);
```

```
System.out.println("enter a name :");  
name = input.nextLine();  
number1 = input.nextInt();  
number2 = input.nextInt();
```

```
System.out.println("hi ," + name + " " +  
name.toUpperCase() + " " + name.length());  
System.out.println(number1 + number2);
```

//if conditions

```
int pen = 10;  
int specialPen = 20;  
int cost ;
```



```
Scanner input = new Scanner(System.in);
cost = input.nextInt();
```

```
if (cost > specialPen) //cost > 20
    System.out.println("you can buy the special pen");
else if (cost > pen) { //cost > 10
    System.out.println("you can buy the pen");
    System.out.println("you have " + cost);
}
else
    System.out.println("you have less money to buy the
pen");
```

//switch

```
int number = 10;
String name ;
```

```
Scanner input = new Scanner(System.in);
name = input.nextLine();
```

```
switch (name){
    case "karthik" :
        System.out.println("hi, "+name);
        break;
    case "raj" :
        System.out.println("hi, "+name);
        break;
    case "arun" :
        System.out.println("hi, "+name);
        break;
    case "bharath" :
        System.out.println("hi, "+name);
```



```
break;
default:
    System.out.println("your name is not in list"); }
```

//loops

//for loop , while , do while , for-each loop

```
// 0 < 5
for ( int initial = 1 ; initial > 0 ; initial -- ){
    System.out.println("hi dude");
}
```

//while loop

```
int number = 3;
while(number > 10){ //3>0 //2>0 //1>0 //0>0
    System.out.println("while loop");
    number -- ;
}
```

//do while loop

```
int number1 = 3;
do{
    System.out.println("do while loop");
    number1 -- ;
}while (number1 > 10);
```

//0 , 0<5 , 0+1 =1 , 1<5 , 2<5 , 3<5 , 4<5 , 5<5

//for each - arrays

```
String vegetables[] = {"onion" , "carrot" , "beans"};
```

```
for(int i = vegetables.length-1 ; i > 0 ; i--){
```



```
        System.out.println(vegetables[i]);
    }

    for(String vegetable : vegetables){
        System.out.println(vegetable);    }
```

Some java example programs :

1: Sum of two numbers

```
public class AddTwoNumbers {

    public static void main(String[] args) {

        int num1 = 5, num2 = 15, sum;
        sum = num1 + num2;

        System.out.println("Sum of these numbers: "+sum);
    }
}
```

Output:

```
Sum of these numbers: 20
```

2: Sum of two numbers using Scanner

```
import java.util.Scanner;
public class AddTwoNumbers2 {

    public static void main(String[] args) {

        int num1, num2, sum;
        Scanner sc = new Scanner(System.in);
```




```
System.out.println("Enter First Number: ");
num1 = sc.nextInt();

System.out.println("Enter Second Number: ");
num2 = sc.nextInt();

sc.close();
sum = num1 + num2;
System.out.println("Sum of these numbers: "+sum);
}
}
```

Output:

Enter First Number:

121

Enter Second Number:

19

Sum of these numbers: 140

3:Java Program to check Even or Odd number

```
import java.util.Scanner;

class CheckEvenOdd
{
    public static void main(String args[])
    {
        int num;
        System.out.println("Enter an Integer number:");

        //The input provided by user is stored in num
        Scanner input = new Scanner(System.in);
        num = input.nextInt();

        /* If number is divisible by 2 then it's an even number
        * else odd number*/
        if ( num % 2 == 0 )
```



```
    System.out.println("Entered number is even");
else
    System.out.println("Entered number is odd");
}
}
```

Output 1:

Enter an Integer number:

78

Entered number is even

Output 2:

Enter an Integer number:

77

Entered number is odd

4: Program to check whether the input year is leap or not

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

    public static void main(String[] args) {

        int year;
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter any Year:");
        year = scan.nextInt();
        scan.close();
        boolean isLeap = false;

        if(year % 4 == 0)
        {
            if( year % 100 == 0)
            {
                if ( year % 400 == 0)
                    isLeap = true;
            }
        }
    }
}
```



```

        else
            isLeap = false;
    }
    else
        isLeap = true;
    }
    else {
        isLeap = false;
    }

    if(isLeap==true)
        System.out.println(year + " is a Leap Year.");
    else
        System.out.println(year + " is not a Leap Year.");
    }
}

```

Output:

```

Enter any Year:
2001
2001 is not a Leap Year.

```

5: Program to find the smallest of three numbers using ternary operator

```

import java.util.Scanner;
public class JavaExample
{
    public static void main(String[] args)
    {
        int num1, num2, num3, result, temp;
        /* Scanner is used for getting user input.
        * The nextInt() method of scanner reads the
        * integer entered by user.
        */
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter First Number:");
    }
}

```



```

num1 = scanner.nextInt();
System.out.println("Enter Second Number:");
num2 = scanner.nextInt();
System.out.println("Enter Third Number:");
num3 = scanner.nextInt();
scanner.close();

/* In first step we are comparing only num1 and
 * num2 and storing the smallest number into the
 * temp variable and then comparing the temp and
 * num3 to get final result.
 */

temp = num1 < num2 ? num1:num2;
result = num3 < temp ? num3:temp;
System.out.println("Smallest Number is:"+result);
}
}

```

Output:

```

Enter First Number:
67
Enter Second Number:
7
Enter Third Number:
9
Smallest Number is:7

```

6: Program to display even numbers from 1 to n where n is 100

```

class JavaExample {
    public static void main(String args[]) {
        int n = 100;
        System.out.print("Even Numbers from 1 to "+n+" are: ");
        for (int i = 1; i <= n; i++) {
            //if number%2 == 0 it means its an even number

```



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```

        if (i % 2 == 0) {
            System.out.print(i + " ");
        }
    }
}

```

Output:

Even Numbers from 1 to 100 are: 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100

7 : Program will prompt user for the input number. Once user provide the input, the program will calculate the factorial for the provided input number.

```

import java.util.Scanner;
class FactorialDemo{
    public static void main(String args[]){
        //Scanner object for capturing the user input
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter the number:");
        //Stored the entered value in variable
        int num = scanner.nextInt();
        //Called the user defined function fact
        int factorial = fact(num);
        System.out.println("Factorial of entered number is: "+factorial);
    }
    static int fact(int n)
    {
        int output;
        if(n==1){
            return 1;
        }
    }
}

```



```
//Recursion: Function calling itself!!  
output = fact(n-1)* n;  
return output;  
}  
}
```

Output:

Enter the number:

5

Factorial of entered number is: 120

8: No user interaction

```
*  
class SumOfArray{  
    public static void main(String args[]){  
        int[] array = {10, 20, 30, 40, 50, 10};  
        int sum = 0;  
        //Advanced for loop  
        for( int num : array) {  
            sum = sum+num;  
        }  
        System.out.println("Sum of array elements is:"+sum);  
    }  
}
```

Output:

Sum of array elements is:160



9: Reverse a number using while Loop

```
import java.util.Scanner;
class ReverseNumberWhile
{
    public static void main(String args[])
    {
        int num=0;
        int reversenum =0;
        System.out.println("Input your number and press enter: ");
        //This statement will capture the user input
        Scanner in = new Scanner(System.in);
        //Captured input would be stored in number num
        num = in.nextInt();
        //While Loop: Logic to find out the reverse number
        while( num != 0 )
        {
            reversenum = reversenum * 10;
            reversenum = reversenum + num%10;
            num = num/10;
        }

        System.out.println("Reverse of input number is: "+reversenum);
    }
}
```

Output:

Input your number and press enter:

145689

Reverse of input number is: 986541



10: Program to generate random numbers

```
import java.util.*;
class GenerateRandomNumber {
    public static void main(String[] args) {
        int counter;
        Random rnum = new Random();
        /* Below code would generate 5 random numbers
        * between 0 and 200.
        */
        System.out.println("Random Numbers:");
        System.out.println("*****");
        for (counter = 1; counter <= 5; counter++) {
            System.out.println(rnum.nextInt(200));
        }
    }
}
```

Output:

Random Numbers:

135

173

5

17

15



Java notes :

Java is a simple language: **Java** is easy to **learn** and its syntax is clear and concise. It is based on C++ (so it is easier for programmers who know C++). ... **Java** is an object-oriented programming language: OOP makes the complete program simpler by dividing it into a number of objects.

Why Learn Java?

Java is among the most popular programming languages out there, mainly because of how versatile and compatible it is. Java can be used for a large number of things, including software development, mobile applications, and large systems development. As of 2019, 88% market share of all smartphones run on Android, the mobile operating system written in Java. Knowing Java opens a great deal of doors for you as a developer.

About Java

- **Java is a simple language:** Java is easy to learn and its syntax is clear and concise. It is based on C++ (so it



is easier for programmers who know C++). Java has removed many confusing and rarely-used features e.g. explicit pointers, operator overloading etc. Java also takes care of memory management and it also provides an automatic garbage collector. This collects the unused objects automatically.

- **Java is a platform-independent language:** The programs written in Java language, after compilation, are converted into an intermediate level language called the **bytecode** which is apart of the Java platform irrespective of the machine on which the programs run. This makes java highly portable as its bytecodes can be run on any machine by an interpreter called the Java Virtual Machine(JVM) and thus java provides 'reusability of code'.
- **Java is an object-oriented programming language:** OOP makes the complete program simpler by dividing it into a number of objects. The objects can be used as a bridge to have data flow from one function to another. We can easily modify data and function's as per the requirements of the program.
- **Java is a robust language:** Java programs must be reliable because they are used in both consumer and mission-critical applications, ranging from Blu-ray players to navigation systems.
- **Java is a multithreaded language:** Java can perform many tasks at once by defining multiple threads. For example, a program that manages a Graphical User Interface (GUI) while waiting for input



from a network connection uses another thread to perform and wait's instead of using the default GUI thread for both tasks. This keeps the GUI responsive.

- **Java programs can create applets:** Applets are programs that run in web browsers.
- **Java does not require any preprocessor:** It does not require inclusion of header files for creating a Java application.

Therefore, Java is a very successful language and it is gaining popularity day by day.

Important tips

- **Understand the basics:**
- **Patience is the key:**
- **Practice Coding**
- **Read about Java regularly**
- **Study in a group**

