Learn Java In Minutes

How To Learn Java In 8 Minutes

Step 1: Setup

- Download Java SE 12 from
- Download & install Eclipse Java IDE

Step 2: New Project

- In Eclipse click File > New > Java Project
- Name the project and click Finish
- Right click on the src folder click New > Class
- Name the class and click Finish
- Add public static void main method where the Java program processing will start from

Step 3: Comments

//Single line comments are created by adding "//"

/*

Multiple line comments are created by adding "/* */"

*/

Step 4: Output To Console

This line of code will print to the console:

System.out.println("Your text");

- This tells the program to print your text on the next line
- When you execute your code by running the program you will see Your text in the console view.
- You can print text on the same line by calling the same method twice like below:
  - System.out.println("Your text 1");
  - System.out.println("Your text 2");

- You have to add a semicolon at the end of the line in Java or the program will not execute

Step 5: Variables & Data Types

- Variables let you store data
- You can Declare a variable or Initialize it by giving it a value
- Initializing a variable:
    - Int a = 5 (int is the data type integer, a is the variable name = is the operator and 5 is the value assigned to the variable)

Other Data Types:

double is a decimal number

```
double b = 5.5;
```

char represents a symbol

```
char c = ‘c’;
```

boolean represents a true or false value

```
boolean d = true;
```

String is text that can be declared or initialized

```
String name = new String(“Your text”):
```

- You can declare or initialize multiple variables either in a single line separated by commas or in multiple lines

```
int e, f, g;
int h = 7, i = 8, k = 9;
```

- Variables are visible to the package by default
- They can be private and visible to the class only or public visible to every class or protected visible to the class and all subclasses

Step 6: Basic Arithmetic Operations

You can perform basic arithmetic operations with variables

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

        int a = 5;
        int b = 3;
        System.out.println(a+b);
}
```

This will print out the sum of the variables a (5) and b(3) to the console

You can also:

- Subtract (-)
- Multiply (*)
- Divide (/)
- Get Remainder (%)
- Increase By One (++)
- Decrease By One (--)

Step 7: Arrays

Arrays are a collection of elements of the same data type and can be initialized in this way:

int[] arrayName; (data type, opening bracket, closing bracket, arrayName, semicolon)

To see how many elements are available in the array:

arrayName = new int[5]; (this integer array now has 5 slots where integers can be stored

You can also write:

```
int a = 5;
int b = 3;

int[] arrayName = {a, b};
```

Indexing of arrays start from zero not 1
i.e. 0,1,2,3,4

Step 8: if Statements

If statements are used to make decisions in Java

```
int a = 5

if(a == 5) {
    //Execute something
}
```

The code in the {} will be executed if and only if a == 5

You can also write multiple conditions by writing else after the if statement

```
int a = 5

if(a == 5) {
    //Execute something
}
else if (a == 3) {
     //Execute something else

}
```

You can also add else which is executed if non of the statements are true

```
int a = 5

if(a == 5) {
    //Execute something
}
else if (a == 3) {
     //Execute something else
}
else {
    //Execute something else
}
```

== means the variables are equal
!= means the variables are NOT equal
> greater than
< less than

>= greater than or equal to
<= less than or equal to

Logical Operators:

AND (&&) means that both conditions must be true to execute the code in an if statement

OR (||) means that one or the other conditions must be true to execute the code in an if statement

NOT (!) reverses the condition of the operator i.e. if (!(a == 5)) means if a is NOT equal to 5

Step 9: For & While Loops

While Loop:

```
int a = 5;

while(a > 0) {
   //Execute something

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

This will print the value of the variable “a” in the console 5 time and decrease the value by 1 with each iteration i.e. 5,4,3,2,1

For Loop:

```
int a = 5;

for(int i = 0, i < a; i++) {
   //Execute something

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

This will print the value of the variable “i” in the console 5 times and increase the value by 1 with each iteration i.e. 0,1,2,3,4

Step 10: Methods

Methods are a collection of statements

An example of a method in Java is the public static void main(String args[]) method

Step 11: Classes

A class allows you to create individual objects and is like a template that contains variables, methods, etc.

Each class has its own constructors which is the part of the code that is executed when a new object is created