

Section 3 : First Steps

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Section 1 : Course Introduction

Section 2 : Software Tools Setup

Section 3 : First Steps

JRE : Java Runtime Environment enables java code execution.

JDK : Java Development Kit = It's a software that is used to create and run/execute Java Programs.

IDE : Integrated Development Environment. Edit, build, run debug

IDE -> JDK -> (Java App -> JRE -> Host Environment)

Keywords are case sensitive

```
public class Hello {  
}
```

Public and class are two java keywords.

Method : Collection of statement that performs an operation.

Main method : Entry point of any java code

("Hello World") = This is literal string

Primitive Types : There are 8. => int, boolean, byte, char, short, long, float, double

Wrapper Classes : For int primitive type we have Integer Wrapper class in java

Size of Primitive Types and Width :

Byte = 8 bits, width = 8

Short = 16 bits, width = 16

Int = 32 bits, width = 32

Char = 16 bits, width = 16 (allow to store unicode characters) it can represent one of 65535 different types of characters.

Boolean = in java - True or False (In general - True or False, Yes or No, 1 or 0)

Casting :

Casting means to treat or convert a number from one type to another.

(byte) (myMinByteValue / 2); (use int by default)

Integer is the best data type for whole numbers generally.

Single and Double Precision :

Float : Single precision, 32 bits, width = 32

Double : double precision, 64 bits, width = 64

Strings : Datatype in java, not primitive type. It's actually a Class.

If we try to add a string with int number, java will int number as a string and make new string.

String in java are Immutable.

Operators : That perform specific Operations. Like +, -, *, /

Operand : Term used to describe any object that is manipulated by an **operator**.

Expression : Combination of Operators and Operand. Formed by combining variables, literals, method return values and operators.

Abbreviating Operators :

- $a + 1$ can be written as $a++$.
- $a = a + 2$ can be written as $a += 2$

Logical AND and Logical OR : $\&\&$ and $||$ which operates on boolean operands

Ternary Operator $?:$ = Shortcut of if-then-else statement

Operator Precedence is also Important.