

# Java Data Types

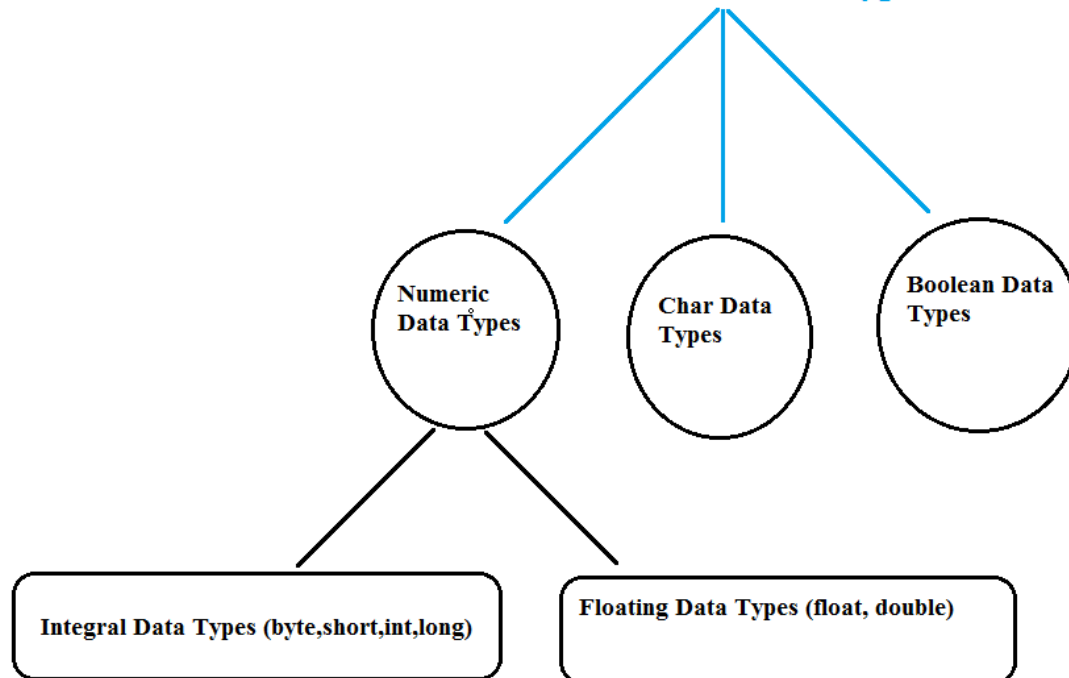
- Data type specifies the size and type of values that can be stored in an identifier
- They are use full to represent how much memory is required to hold the data.
- Represents what type of data to be allowed.
- Java data types are classified in to 2 types

---> Primitive Data types

---> User Defined Data types (Reference)

(String, Array, class, abstract class, interface...etc)

## Primitive Data Types



## **byte:**

- Size: 1byte (8bits)
- Max-value: +127
- Min-value:-128
- Range:-128to 127[ $-2^7$  to  $2^7-1$ ]

## **short:**

- Size: 2 bytes
- Range: -32768 to 32767( $-2^{15}$  to  $2^{15}-1$ )

## **int:**

- Size: 4 bytes
- Range:-2147483648 to 2147483647 ( $-2^{31}$  to  $2^{31}-1$ )

## **long:**

- Size: 8 bytes
- Range:- $2^{63}$  to  $2^{63}-1$

## **float:**

- If we want 5 to 6 decimal places of accuracy then we should go for float.
- Size:4 bytes.
- By default, floating point numbers are double in Java. (you need to cast them explicitly or suffix with 'f' or 'F')

## **double:**

- If we want to 14 to 15 decimal places of accuracy then we should go for double
- Size:8 bytes
- double takes more space than float in Java

## **boolean:**

- Either true or false

## **char:**

- Size:2 bytes
- Range: 0 to 65535

## **Note:**

- Arithmetic operations return result in integer format (int/long).

# Understanding Java Keywords

- There are 50 Java language keywords.
- We cannot use any of the following as identifiers in your programs.
  - 1) Keywords for data types: (8)
  - 2) Keywords for flow control:(11)
  - 3) Keywords for modifiers:(11)
  - 4) Keywords for exception handling:(6)
  - 5) Class related keywords:(6)
  - 6) Object related keywords:(4)
  - 7) Void keyword(1)
  - 8) Enum (1)
  - 9) Reserved keywords (2)

### ***DATA TYPES***

**byte**  
**short**  
**int**  
**long**  
**float**  
**double**  
**char**  
**boolean**

### ***FLOW CONTROL***

**if**  
**else**  
**switch**  
**default**  
**for**  
**do**  
**while**  
**break**  
**continue**  
**return** ,**case**

### ***MODIFIERS***

**public**  
**private**  
**protected**  
**static**  
**final**  
**abstract**  
**synchronized**  
**native**  
**strictfp(1.2 version)**  
**transient**  
**volatile**

### ***Exception Handling***

**try**  
**catch**  
**finally**  
**throw**  
**throws**  
**assert(1.4 version)**

### ***CLASS***

**class**  
**package**  
**import**  
**extends**  
**implements**  
**interface**

### ***OBJECT***

**new**  
**instanceof**  
**super**  
**this**

**void**--->It's a return Type Keyword

**goto & const** ----> Not used in java (Reserved Keywords)

**enum** ---> It is used to define group of named constants

# Comments:

In Java, comments are preceded by two slashes (//) in a line, or enclosed between /\* and \*/ in one or multiple lines.

When the compiler sees //, it ignores all text after // in the same line.

When it sees /\*, it scans for the next \*/ and ignores any text between /\* and \*/.