

3. Data types in Java

Primitive Data types

Non-Primitive Data Types

built-in data types
that represent basic
values.

- 1) byte.
- 2) short.
- 3) int.
- 4) long.
- 5) float.
- 6) double.
- 7) char.

Logical

- 8) boolean → True.
→ False.

user-defined data types

- 1) String.
- 2) Array.
- 3) class.
- 4) Interface.
- 5) objects.

(c) Primitive Data Types :-

are predefined by language & are named by reserved keywords.

8 primitive datatypes in Java

1 byte = 8 bits.

1. byte	1 byte	8 bits.
2. short	2 bytes	16 bits.
3. int	4 bytes	32 bits.
4. long	8 bytes	64 bits.
5. float	4 bytes	32 bits.
6. double	8 bytes	64 bits.
7. char	2 bytes	16 bits.
8. boolean	1 bit	→ True / False i.e. 0 or 1 ^{1 or 0}

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

```
    // Represents small integer value from (-128 to 127)
    byte myByte = 10;
```

```
    // Represents short integer value from
    // (-32,768 to 32,767 32,767).
    short short myShort = 100;
```

```
    // Represents an integer value from
    // (-231 to 231-1)
    // -231 = -2,147,483,648, 231-1 = 2,147,483,647
```


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```
int myInt = 1000;
```

// Represents an long integer value from $(-2^{63}$ to

// $-2^{63}-1)$ $-2^{63} = -9223372036854775808,$

// $2^{63}-1 = 9,223,372,036,854,775,807.$

```
long myLong = 100000001;
```

↑
Note to write capital L
that tells ~~the~~ computer that
it is a long.

// Represents a floating-point value from with

// single precision.

```
float myFloat = 3.14f;
```

Note to write small f
stands for floating value

// Represents a floating-point value from with

// double precision.

```
double myDouble = 3.14 3.14159;
```

// Represents a single Unicode ~~value~~ character.

~~char myChar~~

```
char myChar = 'A';
```

// Represents a boolean value true or false

```
boolean myBoolean = true;
```

// Represents an integer value as an object

```
Integer myIntegerObject = 42;
```