Data types:

* It is used for storing the values in the variables.
* It is divided into 2 types

1. **Primitive** data types 🡺 8 types 🡪 stack memory

* **boolean** 🡺 false/ true 🡺 default 🡺 false

**Ex: Boolean b = false;**

* **byte**🡺 1 or 0 🡺 1 byte 🡺 8 bits 🡺 -128 to 127

**byte b = 127**

* **int** 🡺 numbers 🡺 4 byte 🡺 -2^31 to 2^31-1 🡺 0 default
* **char** 🡺 single character 🡺 2bytes 🡺 ‘\u000’ to ‘\uffff’ (65535) 🡺 ‘k’,’1’,’@',

**char c = ‘1’**

* **short** 🡺 2 byte 🡺 -32768 to 32767
* **float** 🡺 4 byte 🡺 1.5f 🡺 32 bit integer 🡺 unlimited
* **long** 🡺 8 byte 🡺 12345L 🡺 -2^63 to 2^63-1
* **double** 🡺 8 byte 🡺 12345.6d 🡺 64 bit integer 🡺 unlimited

1. **Non-primitive** data types 🡺 heap memory

* Arrays
* Strings
* Objects
* methods

byte b = 126;

sop(b); // 126;

byte b = 129; )//-127

byte b = (byte)129; 🡺 type casting

sop(b);

A , b ,

123456

Int I = 123457

125,126,127,-128,-127,-126…..0,1,2…

127

Byte b = 129

Sop(b)

**Variables**:

* It is like a placeholder where we will store the data/value.
* It will assigned to any one of the data type.

int a= 50;

50 is **data**

a is **variable**

int is **data type**

Variables are divided into 3 types

* Local Variable

1. It be used inside the method and it cannot be accessed outside the method.

* Instance variable

1. It is declared outside the method and used in multiple places in the different methods

* Static variable

1. It is declared outside the method and static keyword is used.

Unicode System: Universal International standard character encoding

Int a = 10;

Hello 🡺 h=1 e=1. L =2, o =1

Helo

Id: Hello123@, hello123

10/3 == 3.33f

Double d = 150.75d