**Data vs Information**

Java has 2 types of Data-Type:

1. Primitive Data-type:
   1. Boolean Data type: true , false. Memory size: 1 bit . Ex: boolean result = true;
   2. Byte Data type: -128 to 127. Default value 0. Memory size: 1 byte. Ex: byte num = 125;
   3. Short Data type: -32,768 to 32,767. Default value 0. Memory size: 2 byte. Ex: short num = 10000;
   4. Integer Data type: -231 to 231 - 1. -2,147,483, 648 to 2,147,483, 647. Default value 0. Memory size: 4 byte. Ex: num = 10000000;
   5. Long Data Type: -263 to 263 – 1. Default value 0. Memory size: 8 byte. Ex: long num = 10000000;
   6. Float Data Type: Default value 0.0. Memory size: 4 byte. Ex: float num = 10000000.4444;
   7. Double Data Type: Default value 0.0. Memory size: 8 byte. Ex: double num = 10000000.4444555447788;
   8. Char Data Type: ‘\u0000’ (0) to ‘\uffff’ (65,535). Default value ‘’. Memory size: 2 byte. Ex: char letter = ‘a’;

1. Non-Primitive Data type:
   1. Class, Interface, Arrays, String , Objects

String --- combination letters and/or numbers

1 Byte = 8 Bit

1 KB = 1024 B

1MB = 1024 KB

1GB = 1024 MB

1TB = 1024 GB

**Variable**

**Syntax:**

**data\_type variable\_name; -- Variable Declaration**

**ex: int month;**

**ex: int \_month;**

**ex: int $amount;**

**ex: int monthOfTheYear;**

**ex: String first\_name;**

**ex: char \_initial;**

**Rules:**

1. **It should be start with *lowercase letter* OR *$* OR ­\_.**
2. **Can not start numeric number to declare a variable. Ex: int 1num;**
3. **It should be meaningful name.**

**int month; -- Variable instantiation**

**month = 12; -- Variable Initialization**

**int month = 12;**

**3 different type of variable in Java**

1. **Local variable**
2. **Instance variable**
3. **Static variable**