Data Types

* Definition:
* A data type is a classification of data which tells the compiler how the programmer intends to use the data.
* Explanation:
* If we are storing a data in variables and we are telling to computer which type of data we are storing is called data type.
* Data types are two types:

1. Primitive data types.

* Primitive data types are pre-defined in java.

Integer type (Default values 0)

* byte -1 byte
* short -2 byte
* int- 4 bytes
* long - 8 bytes

Decimal type (Default value 0.0)

* float - 4 bytes
* double - 8 bytes
* boolean - 1 bit (Default value false)
* character - 2 bytes (Default value space)

2. Non- primitive data types

* Non-primitive data types are not pre-defined in java.
* There is no size.
* Arrays: Many values we can store but while storing values we use primitive data types.
* Collections: Many values we can store but while storing values we use primitive data types.
* Interfaces
* Class

Wrapper classes

* There are outer layer if you want to perform some extra operations we use wrapper classes instead of primitive data types.
* Wrapper classes are always start with capital letters.
* Byte
* Short
* Integer
* Long
* Float
* Double

Bit value storage in java

* Bit = binary digit
* 1 Nibble = 4 bits
* 1 Byte = 8 bits
* 1 Kilo byte (kb) = 1024 bytes (1024 \*8 = that many bits)
* 1 Megabyte (MB) =1024 kilobyte
* 1 Giga byte (GB) =1024 megabytes (Available in phones)
* 1 Tara byte (TB) = 1024 giga bytes (In laptops we can see)
* 1 peta byte (PB) = 1024 tera bytes (Only we can see in data centers. there store lot of data)
* To find data type’s size we can check in IDE itself (Already mentioned in Shortcut document)

System.out.println (Wrapper keyword. Size) -->it will give bit value

System.out.println (Wrapper keyword. Size/8) -->it will give byte value

* To find data types max and min values. (Only in number type format we can find min and max value)

System.out.println (wrapper keyword.MAx\_VALUE)

System.out.println (wrapper keyword.MIN\_VALUE)