**Data Types in Java**

**Data type** defines the values that a variable can take, for example if a variable has int data type, it can only take integer values.

1) Primitive data types

2) Non-primitive data types – Arrays and Strings are non-primitive data types,

## 1) Primitive data types

In Java, we have eight primitive data types: boolean, char, byte, short, int, long, float and double. Java developers included these data types to maintain the portability of java as the size of these primitive data types do not change from one operating system to another.

**byte**, **short**, **int** and **long** data types are used for storing whole numbers.

**float** and **double** are used for fractional numbers.

**char** is used for storing characters(letters).

**boolean** data type is used for variables that holds either true or false.

### byte:

This can hold whole number between -128 and 127.   
Default size of this data type: 1 byte.  
Default value: 0

### short:

This is greater than byte in terms of size and less than integer. Its range is -32768 to 32767.  
Default size of this data type: 2 byte

**int**: Used when short is not large enough to hold the number, it has a wider range: -2147483648 to 2147483647  
Default size: 4 byte  
Default value: 0

**long:**

Used when int is not large enough to hold the value, it has wider range than int data type, ranging from -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807.  
size: 8 bytes  
**double**: Sufficient for holding 15 decimal digits  
size: 8 bytes  
**float**: Sufficient for holding 6 to 7 decimal digits  
size: 4 bytes

**char**: holds characters.  
size: 2 bytes