Unit - 3: Fundamentals of Java Programming

Primitive Data Types

The eight primitive data types supported by the Java Programming language are:

- ❖ **Byte:** - The data type is an 8 bit signed two's complement integer. It has a minimum value of -128 and a maximum value
- ❖ **Short**: The short data type is a 16-bit signed two's complement integer. It has a minimum value of -32768 and a maximum..
- ❖ **Int**: By default, the int data type is a 32-bit signed two's complement integer, which has a minimum value of -2^{31} and a
- ❖ **Long**: The long data type is a 64 bit two's complement integer. The signed long has a minimum value of -2^{63} and a maximum value $2^{63}-1$
- ❖ **Float:** The float data type is a single-precision 32 bit. Its range of values is beyond the scope of this discussion. This data type should never be used for precise values, such as currency.
- ❖ **Double**: The double data type is a double precision 64 bit. Its range of values is beyond the scope of this discussion, but it is specified in the Floating Point types, Formats and Values section of the Java Language Specification. For decimal values, this data type is generally the default choice.
- ❖ **Boolean**:-The Boolean data type has only two possible values True and False. Use this data type for simple flags that track True/False conditions
- ❖ **Char:** The char data type is a single 16 bit Unicode character. It has a minimum value of '\u0000' (or0) and a maximum value of '\uffff' (or 65,535 inclusive).

Data Type	Type of Values	Size
Byte	Integer	8 bit
Short	Integer	16 bit
Int	Integer	32 bit
Long	Integer	64 bit
Float	Floating Point	32-bit
Double	Floating point	64 bit
Char	Character	16 bit
Boolean	True or False	1 bit

Java Primitive Data Types