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INFORMATION TECHNOLOGY FOR CLASS 12
(Study materials based on N.C.E.R.T)
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Unit - 3: Fundamentals of Java Programming

I told you previous class, what is variables and types of variables. Now today I discuss about Data type in java, how many types of Data type and his storage.

Data Types in Java:- Data types classify different values to be stored in the variable. In Java, there are two types of Data types.

- **Primitive Data Types**
- **Non-Primitive Data Types**

Primitive Data Types : - Primitive Data Types are predefined and available with in the Java language. Primitive values do not share state with other primitive values.

There are 8 primitive types: byte, short, int, long, char, float, double, and Boolean

Integer data types :- byte (1 byte) short (2bytes) int (4 bytes) long (8 bytes)

Floating Data types :- float (4 byte) double (8 byte)

Logical Data Types : - Boolean (I byte) (true/ false)

Java Data Types

Data Type	Default Value	Default size
Byte	0	1byte
Short	0	2bytes
Int	0	4 bytes
Long	0L	8 Bytes
Float	0.0f	8 Bytes
Double	0.0d	8 Bytes
Boolean	False	1bit
Char	'\u0000'	2 bytes

Points to remember:

- All numeric data types are signed(+/-)
- The size of data types remain the same on all platforms (standardized)

- Char data type in java is 2 bytes because it uses UNICODE character set. By virtue of it, Java supports. UNICODE is a character set which covers all known scripts and language in the world

Java Variable Type Conversion & Type Casting

A variable of one type can receive the value of another type. Here there are 2 cases

Case 1 :- Variable of similar capacity is be assigned to another variable of bigger capacity.

```
double d ;
int i = 10;
d = i;
```

This process is automatic, and non-explicit is known as ***conversion.***

Case-2: Variable of larger capacity is be assigned to another variable of smaller capacity

```
double d  = 10;
int i;
i = (int) d
```

Type Cast Operator

In such cases, you have to explicitly specify the **type cast operator. This process is known as Type casting.**

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