CONSTANT, VARIABLES DATA TYPES

Constant :

Numeric Constant
- ↳ Integer Constant
- ↳ Real "

Character Constant
- ↳ Character Constant
- ↳ String "

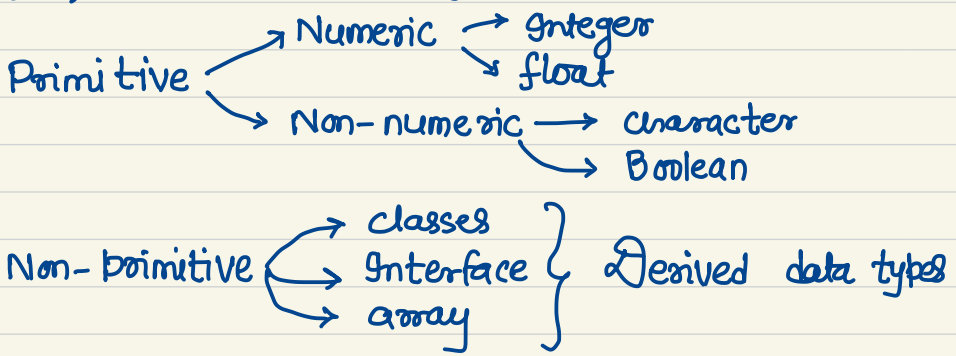
Variable :

Variable name consists of alphabets, digits, underscore (_) and doller.

Conditions :
- ↳ Should not begin with digit.
- ↳ Total ≠ total (Case sensitive)
- ↳ Should not a keyword
- ↳ White space is not allowed
- ↳ Can be any length

Data Types :

Data types specify the size and type of values that can be stored.



Binary Conversion:

- ↳ Decimal to Binary
- ↳ Binary to Decimal

Integer:

byte	1B	-128	127
Short	2B	-32,768	32,767
int	4B	-2,147,483,648	2,147,483,647
long	8B		

Floating:

float	4B
double	8B

Character:

Char → 2B → hold only a Single Character

Boolean :

boolean → 1b < True / False

Declaration of variables:

- ↳ tells compiler what the variable name is.
- ↳ Specifies what type of data the variable holds.
- ↳ place of declaration decides the scope of the variable.
- ↳ declare the variable before it is used.

e.g.

```
type1 variable1, variable2;
type2 variable3;
```

Scope of variables:

- ↳ instance variables : Created when the objects are instantiated and associated with objects.
- ↳ Class variables : Global to a class & belong to the entire set of objects that class creates.
- ↳ Local variables : Declared and used inside the methods.

Type Casting:

Situations where there is a need to store a value of one type into a variable of another type.

E.g. `(data_type) var1 = (data_type) var2;`

Assigning Smaller type → large type

" Larger type → Smaller type

may result in loss of information.