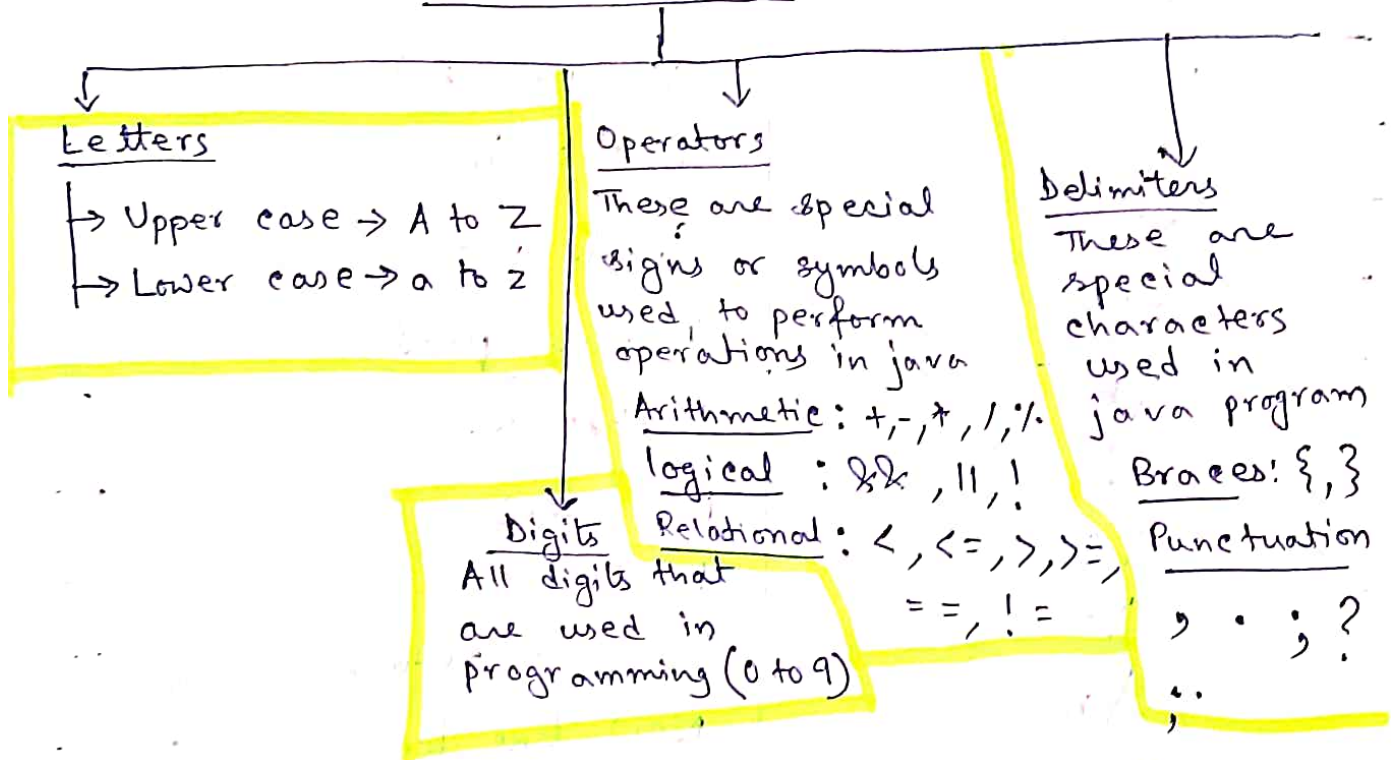


Unit III : Values & Data Types

- ① Each statement in programming is formed by using different word called 'Token'.
- ② characters are the basic and fundamental unit of programming language.

Character sets



ASCII → American Standard Code for Information Interchange

→ It represents these characters as numbers while each character has its unique number.

<u>Codes</u>	<u>Characters</u>
48-57	0-9
65-90	A-Z
97-122	a-z
32	Blank

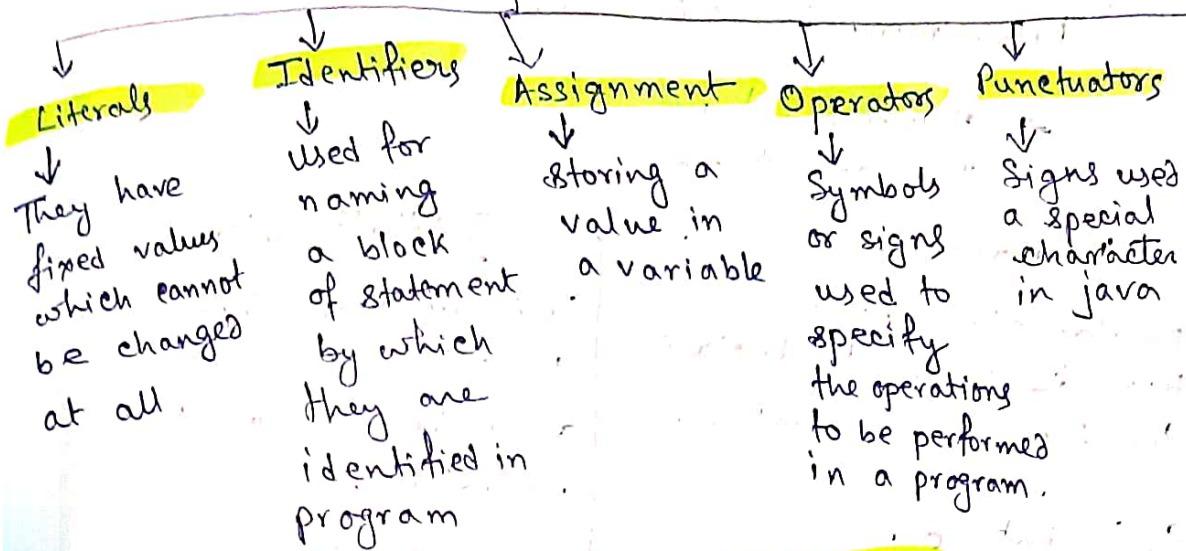
Unicode - Unicode is a wide representation of characters in numeric form containing hexadecimal digits from 0x0000 up to 0xFFFF (i.e 16 bits code)

Escape Sequences	Non-Graphic Character
\t	Horizontal tab
\v	Vertical tab
\	Backslash
\'	Single quote
\"	Double quote
\b	Backspace
\f	Form feed
\0	Null
\r	Carriage return
\n	New line feed

⑧ Escape sequences are basically some characters that are used to control the cursor while displaying the values on the screen

Tokens → Set of valid characters used for writing a statement in java program.

Tokens



Separators

They are special character in java used to separate the variables or characters

Keywords

Words that provide special meaning to the compiler

Primitive Data Types → Basic or fundamental data types used to declare a variable

① Numeric data types

Integer type

- byte
- short
- int
- long

② Real type

Real type

- float
- double

② Non-numeric data types

- character type
- Boolean type

Declaration

Declaration is the term used to declare the type of a variable.

Eg:- `int a;`

Initialization

Initialization refers to assigning or storing a specific value to a variable.

Eg:- `a = 5;`

static initialization

`a = 10;`

`f = 2.45`

Dynamic initialization

`c = a + b`

Non-Primitive Data types → Data type that is derived from primitive datatypes.

Type Conversion

(is defined as set of variables, constants & arithmetical operators)

Implicit

When the datatype of results gets converted into higher most datatype available.

byte
char
short
int
long
float
double

Hierarchy

Explicit

Data type of the result gets converted into specific type as per users choice.