**Java :** Java is platform independent and pure object oriented programming language.

1970 🡪C

1980 ->C++

1990 🡪 Python and Java

2000🡪 .net

2010 🡪 JavaScript

2020 🡪 Machine learning and AI, Data Science

Object 🡪 object is any real world entity.

Properties or state . have -🡪

Person

Behaviour . do/does -🡪

Bank

Animal

Car

Customer

Employee

Class 🡪 class is blue print of object or template of object or user defined data type which help to create the object or describe the object.

Syntax to write the class.

class ClassName {

variables or fields.

Method or functions.

}

Class name must be follow pascal naming rules.

1. If class contains one word first letter in upper case. Like Test, Demo, Employee,Customer etc
2. If class container more than one word each word first letter upper case EmployeeDetails, CutomerInfo etc.

Java 1.0 1.2 to 1.8, 9, 18 etc.

From java 11 onward java is not open source.

Data types are divided into two types

1. Primitive : it is use to store only value

8 types

1. byte
2. short
3. int
4. long
5. float
6. double
7. char
8. boolean
9. Non primitive or reference data types : it use to store value as well as reference of another data type.

4 types

1. array
2. class (pre defined or user defined) : string
3. interface ( pre defined or user defined) :
4. enum ( pre defined or user defined)

Classname objectReferenceName = new ClassName();

objectReferenceName.methodName();

types of variable or fields.

In Java variable are divided into 3 types.

1. Instance variable
   1. The variable which declared inside a class but outside a method is known as instance variable.
   2. The instance variable hold default value according to their data types

int family value is 0, float family 0.0, char space, Boolean false, string null.

* 1. Instance variable we can access in that class in all method but method must be non static. Inside non static method of same class we can access directly.

1. Local variable
   1. The variable which declared inside a method is known as local variable.
   2. The local variable doesn’t hold default value we have to initialize.
   3. The scope of the variable within that method where it declared.
2. Static variable

Constructor : constructor is a type of special method which help to create the memory.

Pts

1. Constructor have same name as class itself.
2. Constructor no need to call it will call automatically when we create the object of that class.
3. Constructor doesn’t contains return type not even void also.

Inside a constructor if we want to do any initialization that type of logic we have to write it.

Local variable hide the visibility of instance variable when local variable or parameter variable and instance variable have same name.

This keyword : this is a keyword which refer to current object.

When local variable and instance variable have same name to refer to instance variable we have to use this.instancevariableName;

Parameterized constructor