

None of the Module : [5] (Java Standard Edition)

Duration /Session : [3] Session (4 Months) [80% Core Java -> ADV Java]

Sunday classes : Online Sunday classes (9 -10 sessions) [Helping Topics OR Common topics]

Java Version : Java Java 17

LIVE assignment : 1 and provide all the Assignments (MCQs + Sample coding + Business based)

Validity Of Task : 1 day [11AM]

Lab is compulsory : Without a Lab, Permission is not for Core Java classes


After course : 3+ years developer knowledge

Notes : Google Class Room

What is a language ?

* A language is a **communication media** through which we can communicate with each other.

What is a Programming Language ?



```
graph LR; User((User)) -- "User wants to communicate in Java Language" --> JavaLanguage[Java Language]; JavaLanguage --> User;
```

* A Programming language is an intermediate between the user and computer system. By using programming language we can instruct the instructions to get the desired output.

Characterisation of the programming language :

* We have 2 characteristics :

a) Syntax (Rules given by that particular language)

b) Semantics (Meaning OR Structure given by that particular language)

Example :

English Translation :

Surfact (Subject) + Verb + Object

He is a boy. (True)

He is a boy. (False)

* In our Java programming Language we have 2 levels of security :

1) At compiler level :

Now our Java compiler will only **verify** whether the programmer is following the syntax or not ? Compiler will never take care of verifying the instructions of the program. The compiler will generate syntax error if something is wrong syntax wise.

2) At runtime level :

Now the runtime environment will verify whether the code is meaningful OR meaning less. If the code is meaning less then it will generate a runtime error.

By the first translation -> Java compiler will verify the syntax and our runtime environment will verify the semantics (checking OR structure of the code)

What is Java ?

* Java is a High level, Platform independent, secure, robust (strong), multithreaded and object oriented programming language.

* Java was originally developed by sun microsystem in 1995 but the first version of java (or JDK Java Development Kit) 1.0 was released on 2nd January 1996.

* In the year 2010, Java was acquired by Oracle Corporation.

* By using Java language, we can develop various applications like

a) Small-scale application (Desktop OR Software)

b) Mobile application (Android)

c) Enterprise application

d) Gaming application (Gaming)

e) Mobile application

f) Embedded application

https://classroom.google.com/c/ODA1NTEzMTY3MTU0

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