



# 07/09/2023

## ▼ Java Programming

- Java is a OOP language which used to develop desktop, Web, Mobile, Embedded systems etc.
- This is a **high level** programming language which means it's close to human natural language.
- Java is a **case sensitive** language which means you can't mix lowercase and UPPERCASE letters while coding.

## ▼ What is JVM (Java Virtual Machine)?

- This is responsible to **convert Java byte code to machine code**.
- If only You convert that code into machine code then only your computer will realize the instructions that you have provided as a java program.



- Java is a **platform independent programming language** which means codes can be executed in any environment without having any issue.
- The above point is possible because Java application is running on JVM.

## ▼ What is JRE (Java Runtime Environment)?

- This provides necessary class library files to the java application and JVM.

## ▼ What is JDK (Java Development Kit)?

- This is required to create Java Applications.

- Inside JDK there are number of tools integrated such as compilers, Java Doc, Java Debugger, JRE etc.

### ▼ Java Variables

- In java programming variables are being used to store values temporarily inside the application until you close it.
- Since this is temporary memory allocation this will happened inside RAM.
- In programming when you declare a variable, that variable will become a unique identifier hence you can't use the same variable name in the application again.

### ▼ Java Data Types

- Once the application is developed it work with number of data inputs and these data inputs could be either character based data or numerical based data.
- In the developed application these data inputs are handled by using data types.
- By using data types we can declare variables and those variables can be used to handle input data.

example :- **int, string, double, bool etc.**

### ▼ Java Operations

- In Programming special symbols are being used as operators to check the relationship between/to Perform a operation between variables and values.
- In Java Programming following operations are available.
  1. Arithmetic operations
  2. Assignment operations
  3. Relational operations
  4. Logical operations

### ▼ Java Basic Inputs and Outputs

#### ▼ Java Output

- In Java Applications Following three syntaxes are being use to display and output on the screen.
- Below three syntaxes are case sensitive and also they are inbuilt functions which are available from imported class library files.

```
System.out.println()  
System.out.print()  
System.out.printf()
```

### Example

```
public static void main(String[] args)  
{  
    System.out.println("Hello World!");  
}
```

### Task 01

**Display your batch, name and degree Program using a java application.**

```
public static void main(String[] args)  
{  
    System.out.println("22.1");  
    System.out.println("Yasith");  
    System.out.println("Software Engineering - Plymouth");  
}
```