

***Dt : 13/7/2023***

***faq:***

***wt is the diff b/w***

***(i)JDK***

***(ii)JRE***

***(iii)JVM***

***(i)JDK:***

***=>JDK stands for 'Java Development Kit' and which internally having the following components:***

***(a)Java Compiler***

***(b)JVM***

***(c)Java Library***

***(a)Java Compiler:***

***=>Java Compiler will check the program constructed according to the rules of language or not, and converts 'Source Code' into 'Byte Code'.***

***(b)JVM:***

***=>JVM stands for 'Java Virtual Machine' and which is used to execute 'Java Byte Code' and generate result.***

***faq:***

***define Virtual Machine?***

***=>The S/w program which internally having behaviour like machine is known as Virtual Machine.***

***(c)Java Library:***

***=>Java Library will provide pre-defined ready constructed programming components(Java Alphabets) used in application development.***

***=>while programming we represent JavaLibrary using a word "java".***

***=>JavaLibrary is collection of "packages"***

***=>Packages are collection of "Classes and Interfaces"***

***=>Classes and Interfaces are collection of "Variables and Methods"***

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***(ii)JRE:***

***=>JRE stands for 'Java Runtime Environment' and which internally having JVM and JavaLibrary***

***=>JRE is part of JDK***

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***(iii)JVM:***

***=>JVM is internal part of JRE***

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***\*imp***

## ***Installing Java S/w(JDK) and Setting path:***

***step-1 : Download JDK from Oracle Website***

***(JDK17 and above)***

***step-2 : Install JDK***

***Note:***

***=>After installation process is Successfull,we can find one folder with name "java" in "ProgramFiles" of C-drive***

***C:\Program Files\Java***

***Step-3 : Set JavaPath in "Environment Variables"***

***RightClick on MyComputer(This PC)->Properties->Advanced System Settings->Environment Variables,click "New" from System Variables***

***Variable name : path***

***Variable value : C:\Program Files\Java\jdk-17.0.4.1\bin;***

***step-4 : Click "ok" for three times,then JavaPath is Setted***

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**Dt : 14/7/2023**

**\*imp**

**Writing, Saving, Compiling and Executing Java Program:**

**=> In Java Writing program means Constructing "class".**

**define "class"?**

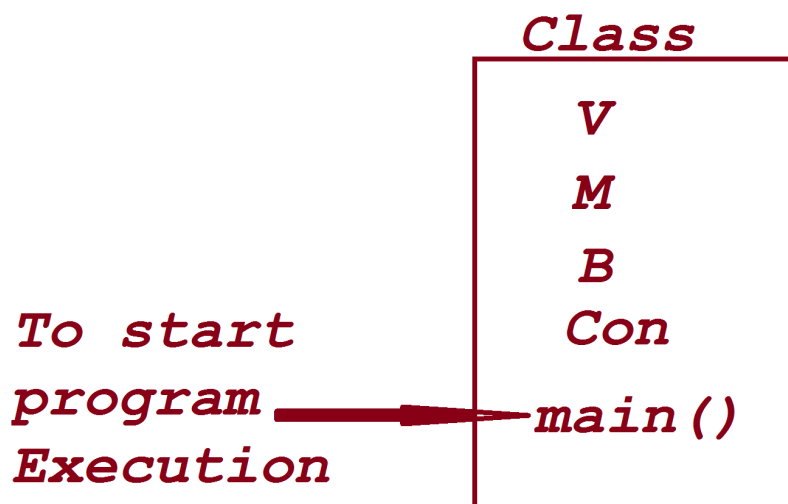
**=> "class" is a 'Structured Layout' in Java and which generate 'Objects'.**

**=> "class" is a collection of Variables, Methods, Blocks, Constructors and main().**

**=> main() is the starting point of program execution and which is having the following pre-defined standard format:**

**public static void main(String args[])**

**=> The following is the structure of "class" in Java:**



**class Class\_name**

```
{  
    //variables  
    //methods  
    //Blocks  
    //Constructors  
    //main()  
}
```

**Coding Rule : class\_names in Java must be started with UpperClass or Capital letter.**

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**Ex-program-1 :**

**Wap to display the msg as "Welcome to Java"?**

```
class Display  
{  
    public static void main(String args[])  
    {  
        System.out.print("Welcome to Java");  
    }  
}
```

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***step-1 : Create one folder in any drive of ComputerSystem to save the programs***

***D:\Demo148***

***step-2 : Open notepad and write the program***

***step-3 : Save the program with language extension as follows:***

***syntax:***

***Class\_name.java***

***Ex:***

***Display.java***

***To Save the program,click on File->Save->Browse the folder->name the file->***

***Save as Type must be "All Files"->Click "save".***

***Note:***

***=>Open CommandPrompt and perform "Compilation and Execution Process"***

***=>To open CommandPrompt,GoTo folder->type "cmd" in AddressBar and press enter.***

***step-4 : Compile the program as follows***

***syntax:***

***javac Class\_name.java***

***Ex:***

***javac Display.java***

***step-5 : Execute the program as follows***

***syntax:***

***java Class\_name***

***Ex:***

***java Display***

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