**Core JAVA || Day1 || 19 july 2022**

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**1)WHAT IS PLATFORM INDEPENDENT AND DEPENDENT AMONG JDK,JRE,JVM?**

JVM, JRE and JDK are platform dependent because configuration of each OS differs. But, Java is platform independent.

All 3 are platform dependent.

1. JVM -> platform dependent.
2. JRE -> consists of JVM and some other things. Since it include JVM, it is platform dependent.
3. JDK -> consists of JRE, compiler and some other things. Since it includes JRE which in turn includes JVM, it is platform dependent.

The java code before and after compilation is platform independant. You can compile on windows and run the byte code on unix using Unix's jvm.

[reference](https://stackoverflow.com/questions/41906203/java-jre-jdk-jvm-platform-independency)

**2)CAN WE USE/DOWNLOAD JRE DIRECTLY WITHOUT DOWNLOADING JDK?**

As all have said that JDK includes JRE, that is perfectly right.

**Yes we can install JRE directly.**

Let me give you one example for better understanding

**“**While an employee works on some project, they need JDK for they need to write code as well as compile it. But after the development process completes, the software is ready to deliver and the client's machine will have to choose whether JDK is needed or the JRE.

I would recommend to install JRE on clients' machines because clients don't have to compile the code. Clients always goes straight forward to execute it.

So, make sure to install JRE on clients' machines, not JDK. It will give the advantage of Memory - Utilization too.”

**So yes we can say we can install or Download JRE directly.**

[reference](https://stackoverflow.com/questions/32988601/do-i-need-both-jdk-and-jre)

**3)Create a simple class "HelloWorld" and print "HelloWorld".**

**class HelloWorld{**

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

**System.out.println("Hello World !!");**

**}**

**}**

**Cmd statement:**

Microsoft Windows [Version 10.0.19042.1706]

(c) Microsoft Corporation. All rights reserved.

C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>javac HelloWorld.java

C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>java HelloWorld

Hello World !!

C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>

**4)Use The above-mentioned class and save this file as "HelloWolrd\_Batch2 java" and try to**

**execute the code.**

**Add the execution commands with proper output.**

If we dont have className and FileName same then

For compilation we need to use javac fileName.java

For running we need to use java className

**CMD Statements;**

C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>javac HelloWorld\_Batch2.java

C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>java HelloWorld

Hello World !!

C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>

**5)Create Simple Calculator program.**

import java.util.\*;

class Calculator{

//this method is for subtraction

public static int addition(int a,int b){

return a+b;

}

//this method is for subtraction

public static int subtraction(int a,int b){

return Math.abs(a-b);

}

//this method is for multiplication

public static int multiplication(int a,int b){

return a\*b;

}

//this method is for Division

public static int division(int a,int b){

if(a<=0 || b<=0)return 0;

return a/b;

}

public static void main(String []args){

int a=40;

int b=20;

System.out.println("Addition :" + addition(a,b));

System.out.println("Substraction :" + subtraction(a,b));

System.out.println("Multiplicaton :" + multiplication(a,b));

System.out.println("Division:" + division(a,b));

}

}

**Cmd Statement:**

**C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>javac Calculator.java**

**Calculator.java:30: error: ';' expected**

**int b=20**

**^**

**1 error**

**C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>javac Calculator.java**

**C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>java Calculator**

**Addition :60**

**Substraction :20**

**Multiplicaton :800**

**Division:2**

**After making DriverClass Separately**

import java.util.\*;

class Calculator{

//this method is for Addition

public static int addition(int a,int b){

return a+b;

}

//this method is for subtraction

public static int subtraction(int a,int b){

return Math.abs(a-b);

}

//this method is for multiplication

public static int multiplication(int a,int b){

return a\*b;

}

//this method is for Division

public static int division(int a,int b){

if(a<=0 || b<=0)return 0;

return a/b;

}

}

class DriverClass{

static int a=40;

static int b=20;

public static void main(String []args){

System.out.println("Addition :" + Calculator.addition(a,b));

System.out.println("Substraction :" + Calculator.subtraction(a,b));

System.out.println("Multiplicaton :" + Calculator.multiplication(a,b));

System.out.println("Division:" + Calculator.division(a,b));

}

}

**C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>javac DriverClass.java**

**C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>java DriverClass**

**Addition :60**

**Substraction :20**

**Multiplicaton :800**

**Division:2**

**C:\devansh-coditas\coditasTrainingAssignment\JAVA\CORE\Day1>javac Calculator.java**