

CORE JAVA ASSIGNMENT

DAY - 1

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Q1) What is Platform independent and dependent among JDK, JRE, JVM?

ANSWER:

1. JVM -> platform dependent.

EXPLANATION:

JVM is platform dependent because it takes java byte code and generates bytecode for the current operating system. So Java software is platform dependent but Java language is platform independent because different operating systems have different JVMs.

2. JRE -> platform dependent.

EXPLANATION:

consists of JVM and some other things. Since it includes JVM, it is also platform dependent.

3. JDK -> platform dependent.

EXPLANATION:

consists of JRE, compiler and some other things. Since it includes JRE which in turn includes JVM it is also platform dependent.

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

Q2) Can we USE/DOWNLOAD JRE directly without downloading JDK?

ANSWER:

No, Because the Java compiler, and other Java Development related binaries are available in the JDK only, not in JRE.

But it is not mandatory to have JDK for execution of Machine code.

Application is running in eclipse even without JDK installation as eclipse has its own compiler and JRE installed in my machine.

If the class file is throwing an error like '**couldn't find or load main class filename.java**' even if you are able to see the class file in directory this is because the runtime environment couldn't find the class file as the Javac compiler.

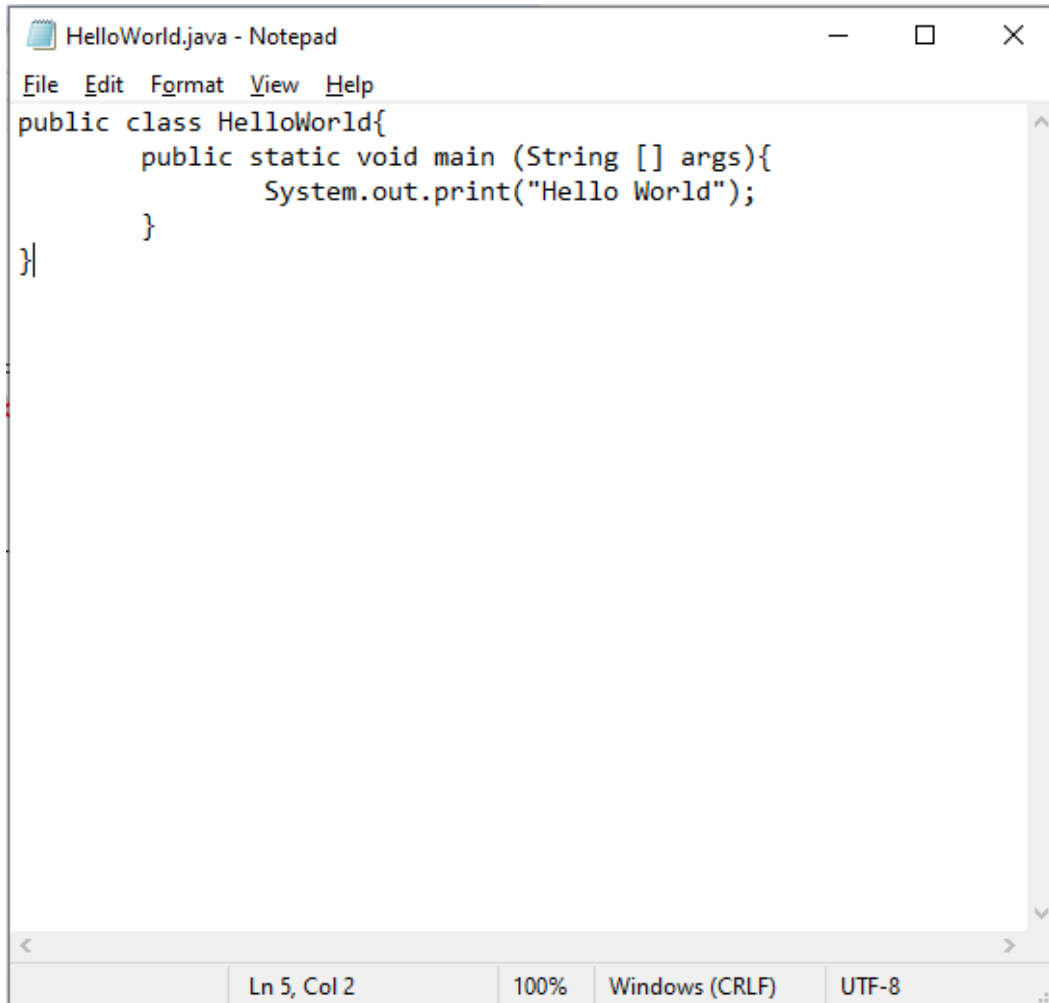
CAN WE USE DIFFERENT VERSIONS OF JRE AND JDK?

Yes, But the condition is JVM must be higher in version as compared to JDK

Like JVM 11 and JDK 8 will run.

Q3) Print Hello World and give file name as "HelloWorld.java"

ANSWER:



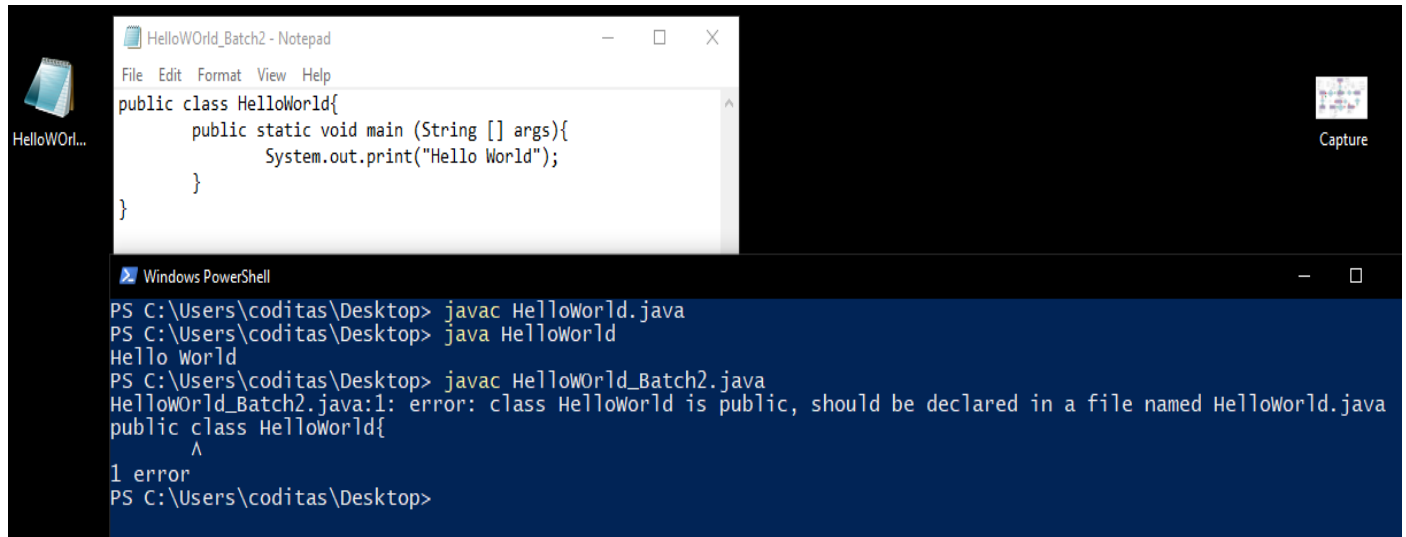
```
File Edit Format View Help
public class HelloWorld{
    public static void main (String [] args){
        System.out.print("Hello World");
    }
}
```

Ln 5, Col 2 100% Windows (CRLF) UTF-8

OUTPUT:

```
PS C:\Users\coditas\Desktop> javac HelloWorld.java
PS C:\Users\coditas\Desktop> java HelloWorld
Hello World
PS C:\Users\coditas\Desktop>
```

Q4) Use the above-mentioned class and save it as "HelloWorld_Batch2.java" and try to execute the code



The screenshot displays a Windows desktop environment. In the foreground, there is a Notepad window titled "HelloWorld_Batch2 - Notepad" containing the following Java code:

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

Below the Notepad window is a Windows PowerShell window. The command history shows the following sequence of commands and their outputs:

```
PS C:\Users\coditas\Desktop> javac HelloWorld.java  
PS C:\Users\coditas\Desktop> java HelloWorld  
Hello World  
PS C:\Users\coditas\Desktop> javac HelloWorld_Batch2.java  
HelloWorld_Batch2.java:1: error: class HelloWorld is public, should be declared in a file named HelloWorld.java  
public class HelloWorld{  
    ^  
1 error  
PS C:\Users\coditas\Desktop>
```

Q5) Create Simple calculator program

ANSWER:

calculator - Notepad
File Edit Format View Help

```
class Calculation{
    static int result;
    static void addition(int num1,int num2){                // calculator logics
        result = num1 + num2;
        System.out.println("Your Answer is " + result);
    }
    static void Multiply(int num1,int num2){
        result = num1 * num2;
        System.out.println("Your Answer is " + result);
    }
    static void division(int num1,int num2){
        result = num1 / num2;
        System.out.println("Your Answer is " + result);
    }
    static void subtraction(int num1,int num2){
        result = num1 - num2;
        System.out.println("Your Answer is " + result);
    }
}

public class Calculator{

    public static void main (String [] args){

        int num1 = 8;
        int num2 = 2;
        calculation.addition(num1,num2);
        calculation.subtraction(num1,num2);                // calling calculator functions
        calculation.Multiply(num1,num2);
        calculation.division(num1,num2);

    }
}
```

Output:

```
PS C:\Users\coditas\Desktop> javac calculator.java
PS C:\Users\coditas\Desktop> java calculator
Your Answer is 10
Your Answer is 6
Your Answer is 16
Your Answer is 4
PS C:\Users\coditas\Desktop>
```