

1. Reading Assignment: A Short History of Java

- **Task:** Read about the history and development of Java.
- **Link:** <http://sunsite.uakom.sk/sunworldonline/swol-07-1995/swol-07-java.html>

2. Reading Assignment: Java Language Features

- **Task:** Learn about the main features of Java.
- **Link:** <https://javaalmanac.io/features/>

3. Reading Assignment: Which Version of JDK Should I Use?

- **Task:** Find out which JDK version is right for you.
- **Link:** <https://whichjdk.com/>

4. Reading Assignment: JDK Installation Directory Structure

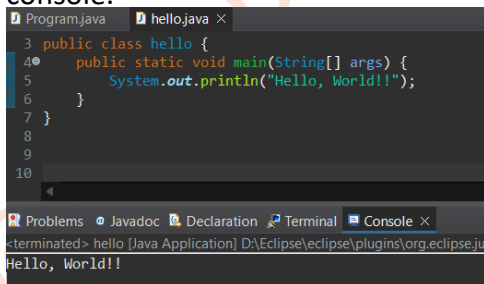
- **Task:** Understand the folder structure and files in the JDK installation.
- **Link:** <https://docs.oracle.com/javase/8/docs/technotes/tools/windows/jdkfiles.html>

5. Reading Assignment: About Java Technology

- **Task:** Read about the basics of Java technology and its components.
- **Link:** <https://docs.oracle.com/javase/tutorial/getStarted/intro/definition.html>

6. Coding Assignments

1. **Hello World Program:** Write a Java program that prints "Hello World!!" to the console.



The screenshot shows an IDE with a file named 'hello.java' open. The code is as follows:

```

3 public class hello {
4     public static void main(String[] args) {
5         System.out.println("Hello, World!!");
6     }
7 }
8
9
10

```

Below the code editor, the 'Console' tab is active, showing the output of the program:

```

<terminated> hello [Java Application] D:\Eclipse\workspace\plugins\org.eclipse.j...
Hello, World!!

```

2. **Compile with Verbose Option:** Compile your Java file using the `-verbose` option with `javac`. Check the output.

ASSIGNMENT NO.1

```
C:\WINDOWS\system32\cmd.exe C:\WINDOWS\system32\cmd.exe X
C:\Users\vibha\OneDrive\Documents\Eclipse\Core java\oopj\org.example\src\org\example>javac -verbose hello.java
[parsing started SimpleFileObject[C:\Users\vibha\OneDrive\Documents\Eclipse\Core java\oopj\org.example\src\org\example\hello.java]]
[parsing completed 30ms]
[loading /modules/java.base/module-info.class]
[loading /modules/jdk.jcmd/module-info.class]
[loading /modules/java.net.http/module-info.class]
[loading /modules/jdk.xml.dom/module-info.class]
[loading /modules/jdk.internal.vm.compiler.management/module-info.class]
[loading /modules/jdk.jsobject/module-info.class]
[loading /modules/java.prefs/module-info.class]
[loading /modules/jdk.unsupported/module-info.class]
[loading /modules/jdk.jshell/module-info.class]
[loading /modules/jdk.security.auth/module-info.class]
[loading /modules/jdk.management.jfr/module-info.class]
[loading /modules/jdk.internal.le/module-info.class]
[loading /modules/java.security.sasl/module-info.class]
```

3. **Inspect Bytecode:** Use the `javap` tool to examine the bytecode of the compiled `.class` file. Observe the output.

```
C:\Users\vibha\OneDrive\Documents\Eclipse\Core java\oopj\org.example\src\org\example>javap -c hello
Warning: File .\hello.class does not contain class hello
Compiled from "hello.java"
public class org.example.hello {
    public org.example.hello();
        Code:
            0: aload_0
            1: invokespecial #1                // Method java/lang/Object."<init>":()V
            4: return

    public static void main(java.lang.String[]);
        Code:
            0: getstatic     #7                // Field java/lang/System.out:Ljava/io/PrintStream;
            3: ldc           #13               // String Hello, World!!
            5: invokevirtual #15               // Method java/io/PrintStream.println:(Ljava/lang/String;)V
            8: return
}
```

7. Reading Assignment: The JVM Architecture Explained

- **Task:** Learn about how the Java Virtual Machine (JVM) works.
- **Link:** <https://dzone.com/articles/jvm-architecture-explained>

8. Reading Assignment: The Java Language Environment: Contents

- **Task:** Explore the content and features of the Java language environment.
- **Link:** <https://www.oracle.com/java/technologies/language-environment.html>