Name: Prashansa Nalawade

Assignment 1

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

Solution: Done with reading the document

2. Reading Assignment: Java Language Features

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

Solution: Done with reading the document

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

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

Solution: Done with reading the document

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

Solution: Done with reading the document

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

Solution: Done with reading the document

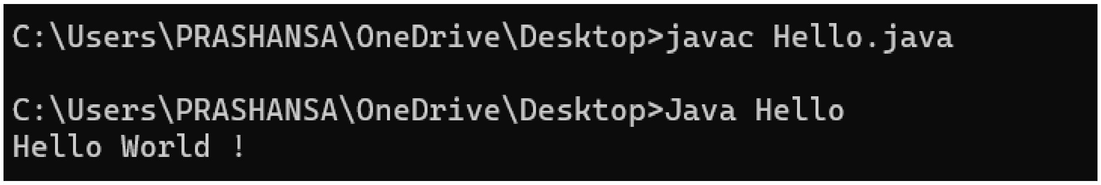
6. Coding Assignments

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

```
class Hello {
```

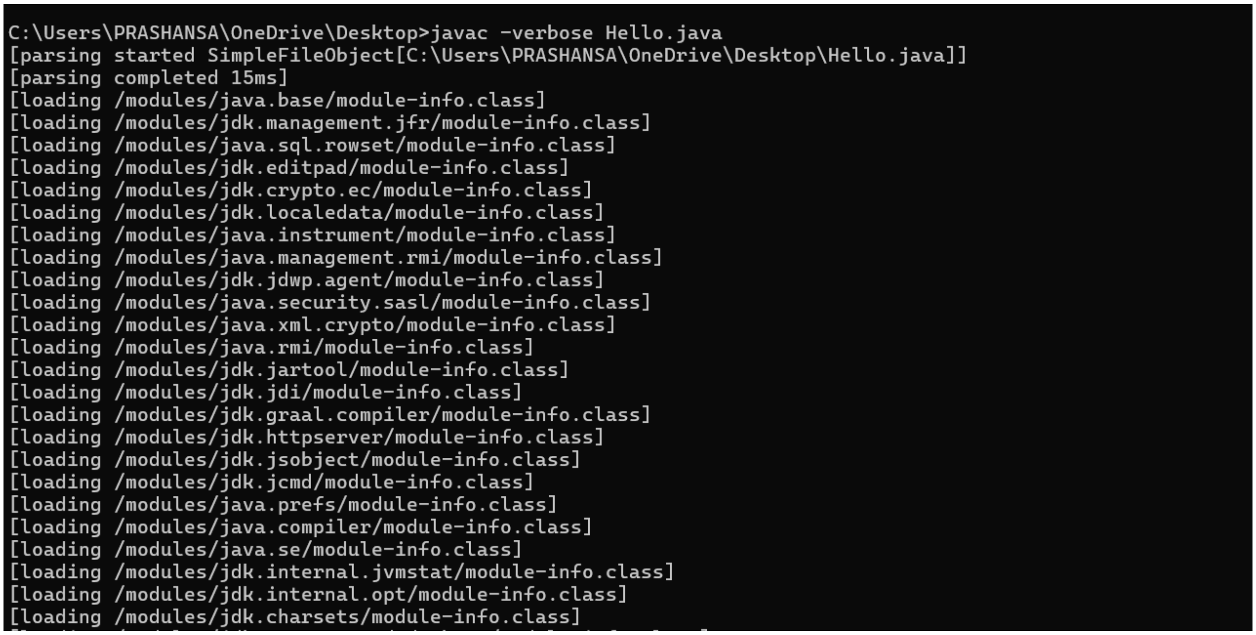
```
public static void main(String[] args) {

        // TODO Auto-generated method stub

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

                }

        }
```

Output:



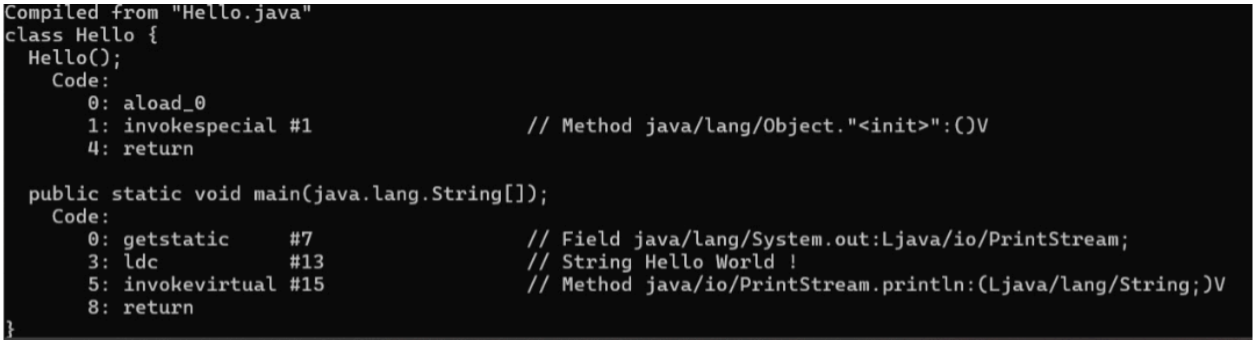
```
C:\Users\PRASHANSA\OneDrive\Desktop>javac Hello.java

C:\Users\PRASHANSA\OneDrive\Desktop>Java Hello
Hello World !
```

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



```
C:\Users\PRASHANSA\OneDrive\Desktop>javac -verbose Hello.java
[parsing started SimpleFileObject[C:\Users\PRASHANSA\OneDrive\Desktop\Hello.java]]
[parsing completed 15ms]
[loading /modules/java.base/module-info.class]
[loading /modules/jdk.management.jfr/module-info.class]
[loading /modules/java.sql.rowset/module-info.class]
[loading /modules/jdk.editpad/module-info.class]
[loading /modules/jdk.crypto.ec/module-info.class]
[loading /modules/jdk.localedata/module-info.class]
[loading /modules/java.instrument/module-info.class]
[loading /modules/java.management.rmi/module-info.class]
[loading /modules/jdk.jdwp.agent/module-info.class]
[loading /modules/java.security.sasl/module-info.class]
[loading /modules/java.xml.crypto/module-info.class]
[loading /modules/java.rmi/module-info.class]
[loading /modules/jdk.jartool/module-info.class]
[loading /modules/jdk.jdi/module-info.class]
[loading /modules/jdk.graal.compiler/module-info.class]
[loading /modules/jdk.httpserver/module-info.class]
[loading /modules/jdk.jsobject/module-info.class]
[loading /modules/jdk.jcmd/module-info.class]
[loading /modules/java.prefs/module-info.class]
[loading /modules/java.compiler/module-info.class]
[loading /modules/java.se/module-info.class]
[loading /modules/jdk.internal.jvmstat/module-info.class]
[loading /modules/jdk.internal.opt/module-info.class]
[loading /modules/jdk.charsets/module-info.class]
```

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



```
Compiled from "Hello.java"
class Hello {
  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

Solution: Done with reading the document

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

Solution: Done with reading the document