Lab 22

Classroom Activity: Installing Java and Writing a Hello World Program

**Task A: Install Java**

To install Java and write a "Hello, World!" program, you'll need to follow these steps:

**1. Install Java:**

- Visit the Oracle website to download the latest version of Java SE Development Kit (JDK). Alternatively, you can use OpenJDK, which is an open-source alternative to Oracle's JDK.

- Download the appropriate installer for your operating system (Windows, macOS, or Linux).

- Follow the installation instructions for your platform.

**2. Verify Java Installation:**

- After installation, open your command prompt (Windows) or terminal (macOS/Linux).

- To check if Java is installed correctly, run the following command:

```

java -version

```

- You should see information about the Java version you installed.

**3. Set Environment Variables (Windows - Optional):**

- On Windows, you may need to set the `JAVA\_HOME` environment variable to the installation directory of Java. To do this, follow these steps:

- Right-click on "This PC" (or "My Computer") and select "Properties."

- Click on "Advanced system settings" on the left.

- Click the "Environment Variables" button.

- Under "System Variables," click "New" and add a variable named `JAVA\_HOME` with the path to your Java installation directory (e.g., `C:\Program Files\Java\jdk1.8.0\_281`).

- Edit the "Path" variable under "System Variables" and add `%JAVA\_HOME%\bin` to it.

**Task B: Write the first Hello World Program**

**1. Write a Hello World Program**:

- Open a text editor (e.g., Notepad, Visual Studio Code, or any code editor you prefer) and create a new file with a `.java` extension, for example, `HelloWorld.java`.

- Write the following Java code in your `HelloWorld.java` file:

public class HelloWorld {

public static void main(String[] args) {

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

}

}

- Save the file.

**2. Compile and Run the Program:**

- Open your command prompt or terminal and navigate to the directory where you saved `HelloWorld.java`.

- Compile the Java code using the `javac` command:

```

javac HelloWorld.java

```

- This will generate a `HelloWorld.class` file in the same directory.

- Run the compiled program using the `java` command:

```

java HelloWorld

```

- You should see the output "Hello, World!" printed to the console.

That's it! You've successfully installed Java, written a "Hello, World!" program, and executed it. You can now start developing Java applications and exploring the language further.