

# Assignment 1

Install Java 17 (ideally OpenJDK), INTELLIJ IDE Ultimate, Maven and then run an ultra-easy Spring Boot Hello World.

This will be an exercise in problem solving for many of you but spend some time and really try to figure it out on your own (with Google!). You'll be glad you did! I will not be holding your hand in this course, and instead expect you to use all legit resources you have available!

## Step 1:

Download JDK 17 (<https://adoptium.net/>)

Use this video as a reference ([https://www.youtube.com/watch?v=\\_o9AhcDnI9M](https://www.youtube.com/watch?v=_o9AhcDnI9M))

## Step 2:

[IntelliJ IDE](#) - Feel free to download IntelliJ from this website and utilize the Ultimate Edition using your sheridan email address. It is free for students. Follow the steps on this website

<https://www.jetbrains.com/community/education/#students>

## Step 3:

[Apache Maven](#)

Download the latest version

## Step 4:

After all the environment variables are set (for Java and Maven)

Try to run these commands on your command prompt or terminal (mac users)

These screenshots are captured from Mac, windows command prompt might be a little different

java --version

```
Last login: Sun May 7 08:02:11 on tty3001
➔ ~ java --version
openjdk 17.0.7 2023-04-18
OpenJDK Runtime Environment Homebrew (build 17.0.7+0)
OpenJDK 64-Bit Server VM Homebrew (build 17.0.7+0, mixed mode, sharing)
➔ ~
```

## mvn -v

```
Last login: Sun May 7 08:07:00 on tty3002
➔ ~ mvn -v
Apache Maven 3.9.1 (2e178502fcd0bffc201671fb2537d0cb4b4cc58f8)
Maven home: /usr/local/Cellar/maven/3.9.1/libexec
Java version: 17.0.7, vendor: Homebrew, runtime: /usr/local/Cellar/openjdk@17/17.0.7/libexec/openjdk.jdk/Contents/Home
Default locale: en_CA, platform encoding: UTF-8
OS name: "mac os x", version: "13.3.1", arch: "x86_64", family: "mac"
➔ ~
```

Alright, at this point, software installations are done

## Step 5:

### Creating a Spring Boot Application

Open this link <https://start.spring.io/> . This is the spring starter initialiser. We will be making use of this in order to create our spring applications.

Change the group field to ca.sheridancollege.<YourUserName>, where <YourUserName> is your Sheridan username or email alias.

The Artifact ID is the name of this project at your URL, and should reflect your project name of A1YourName all by itself.

The Version is fine for now. The Description is fine for something as simple as HelloWorld at least too.

Change the Package field to ca.sheridancollege.<yourUserName> just like we did with the group ID. Click

Project

☐ Gradle - Groovy
☐ Gradle - Kotlin
☒ Java
☐ Kotlin
☐ Groovy

Language

☒ Maven

Spring Boot

☐ 3.1.0 (SNAPSHOT)
☐ 3.1.0 (RC2)
☐ 3.1.0 (M2)
☐ 3.0.7 (SNAPSHOT)
☒ 3.0.6
☐ 2.7.12 (SNAPSHOT)
☐ 2.7.11

Project Metadata

Group

ca.sheridancollege.<YourUserName>

Artifact

A1YourName

Name

A1YourName

Description

HelloWorld

Package name

ca.sheridancollege.<YourUserName>

Packaging

☒ Jar
☐ War

Java

☐ 20
☒ 17
☐ 11
☐ 8

Dependencies

ADD DEPENDENCIES... ⌘ + B

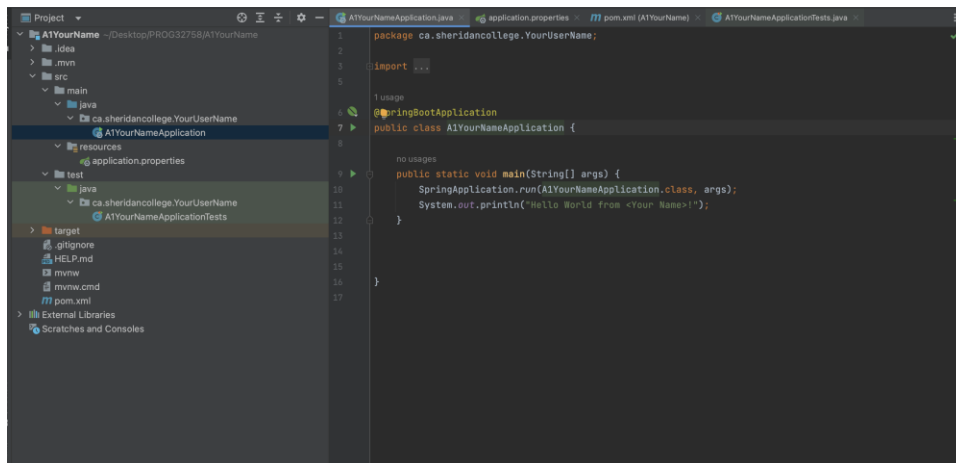
No dependency selected

Once you have made the selections, click on **Generate** and that would download a zip folder for you with the name A1YourName.

That is the project that you would be working on in your IDE.

Import the project to your IDE

This is how your folder structure should look like.



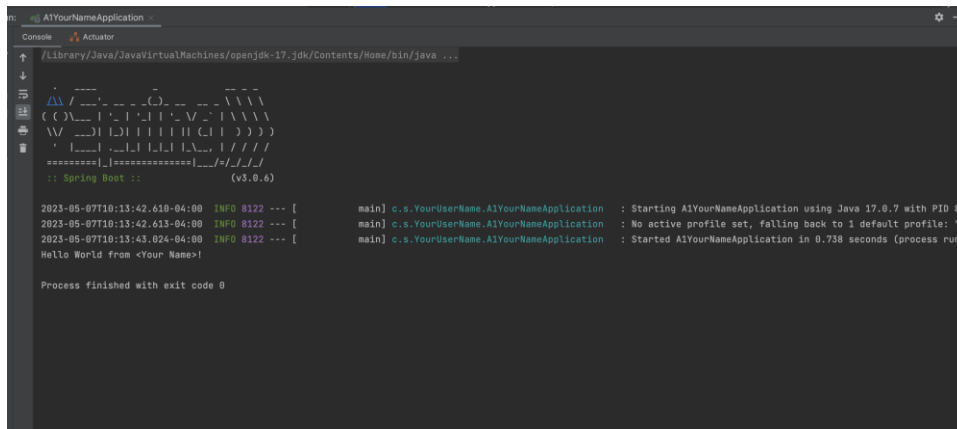
Type

***System.out.println("Hello World from <Your Name>!");***

at the bottom of the A1YourNameApplication main method. (as in the screenshot)

Now Run your application by clicking on that green inverted triangle with A1YourNameApplication, then clicking Run A1YourNameApplication.

This is how your application should look like.



```

n: AIYourNameApplication
Console
Actuator
/Library/Java/JavaVirtualMachines/openjdk-17.jdk/Contents/Home/bin/java ...

  ____  _
 / ___|| | | |
| |___| |_| |
|___|_||_|_|_|

:: Spring Boot :: (v3.0.6)

2023-05-07T10:13:42.610-04:00 INFO 8122 --- [main] c.s.YourUserName.AIYourNameApplication : Starting AIYourNameApplication using Java 17.0.7 with PID 81
2023-05-07T10:13:42.613-04:00 INFO 8122 --- [main] c.s.YourUserName.AIYourNameApplication : No active profile set, falling back to 1 default profile: "dev"
2023-05-07T10:13:43.024-04:00 INFO 8122 --- [main] c.s.YourUserName.AIYourNameApplication : Started AIYourNameApplication in 0.738 seconds (process runn
Hello World from <Your Name>!

Process finished with exit code 0

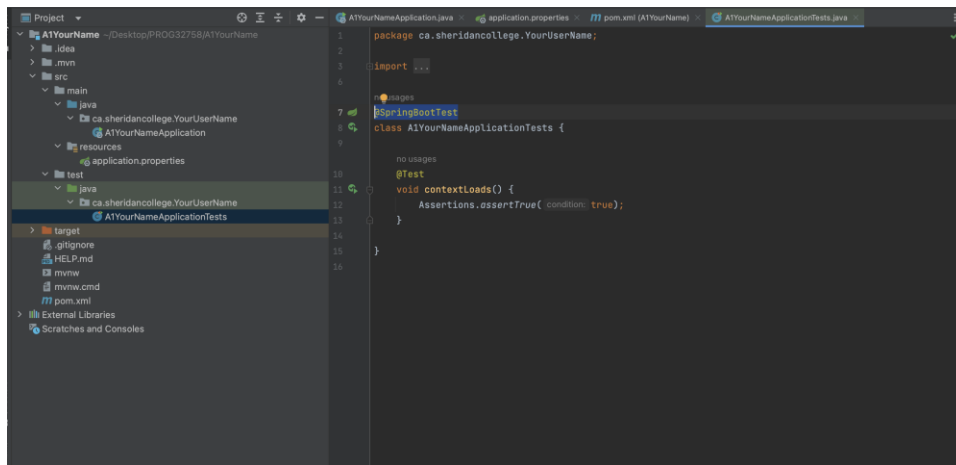
```

Take a screenshot of this, save it as a JPEG or PNG with your name as the filename (YourName.PNG, for example), and upload it to the exercise submission folder.

Type

**`Assertions.assertTrue(true);`**

in the contextLoads method as in the screenshot below.



```

Project
  AIYourName
    src
      main
        java
          ca.sheridancollege.YourUserName
            AIYourNameApplication
        resources
      test
        java
          ca.sheridancollege.YourUserName
            AIYourNameApplicationTests
    target
    .gitignore
    HELP.md
    mvnw
    mvnw.cmd
    pom.xml
  External Libraries
  Scratches and Consoles

AIYourNameApplication.java
application.properties
pom.xml (AIYourName)
AIYourNameApplicationTests.java

package ca.sheridancollege.YourUserName;

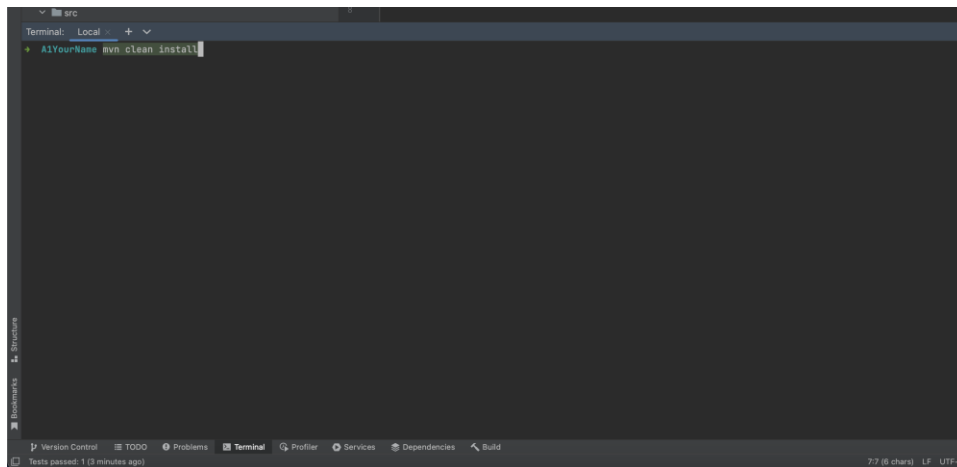
import ...

@SpringBootTest
class AIYourNameApplicationTests {

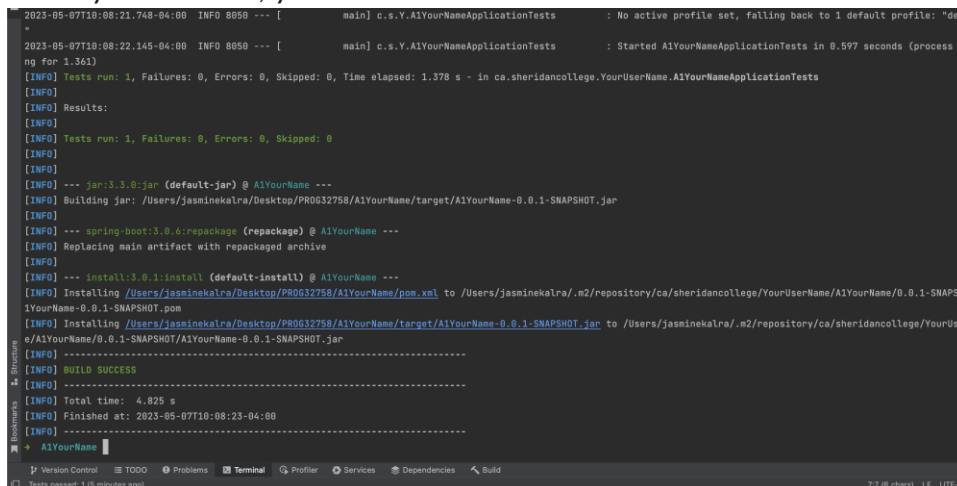
    no images
    @Test
    void contextLoads() {
        Assertions.assertTrue(condition, true);
    }
}

```

Now run this command, mvn clean install in the terminal window of your IntelliJ IDE as shown in the below screenshot

A screenshot of an IDE's terminal window. The terminal title is 'Terminal: Local'. The command prompt shows the user is in a directory named 'AIYourName' and has entered the command 'mvn clean install'. The IDE interface includes a sidebar on the left with 'Structure' and 'Bookmarks' tabs, and a bottom status bar showing 'Tests passed: 1 (3 minutes ago)' and '7.7 (8 chars) LF UTF-8'.

Once you run this, you should see a screen like this.

A screenshot of an IDE's terminal window showing the output of the 'mvn clean install' command. The output includes timestamps, log levels (INFO), and various messages such as 'No active profile set, falling back to 1 default profile: "default"', 'Started AIYourNameApplicationTests in 0.597 seconds', 'Tests run: 1, Failures: 0, Errors: 0, Skipped: 0', 'Building jar: /Users/jasminakalra/Desktop/PROG32758/AIYourName/target/AIYourName-0.0.1-SNAPSHOT.jar', 'Replacing main artifact with repackaged archive', 'BUILD SUCCESS', 'Total time: 4.825 s', and 'Finished at: 2023-05-07T10:08:23-04:00'. The IDE interface is the same as in the first screenshot.

At this stage, take another screenshot, save it as a JPEG or PNG with your name as the filename (YourName-2.PNG, for example), and upload it to the exercise submission folder.

Do not upload screenshots in a Word doc or a zip of them or anything else. With images I can easily and directly connect to you through your filename, the marking on my end is simplified. I will eventually deduct marks if you refuse to follow this simple procedure.