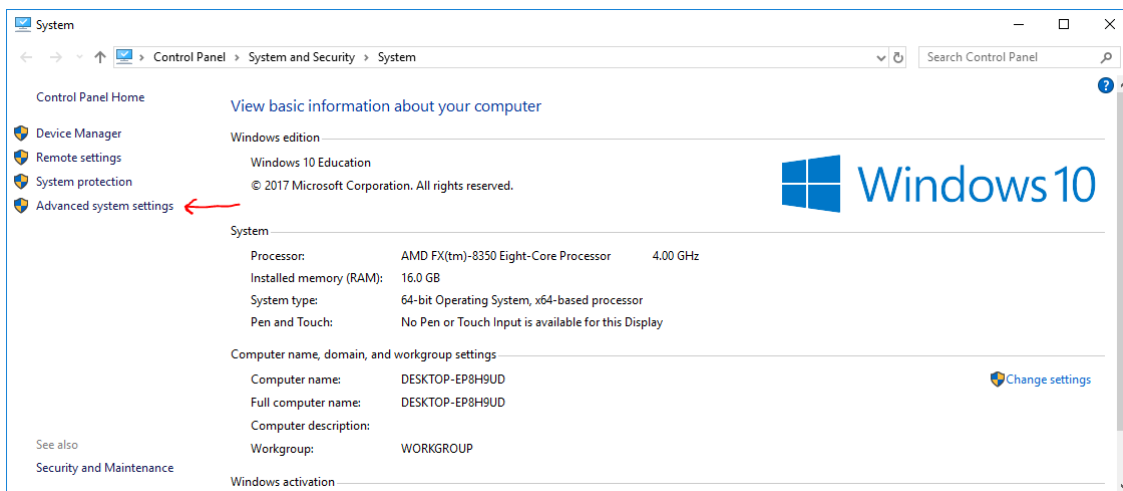📖 **Readme.md**

Created By

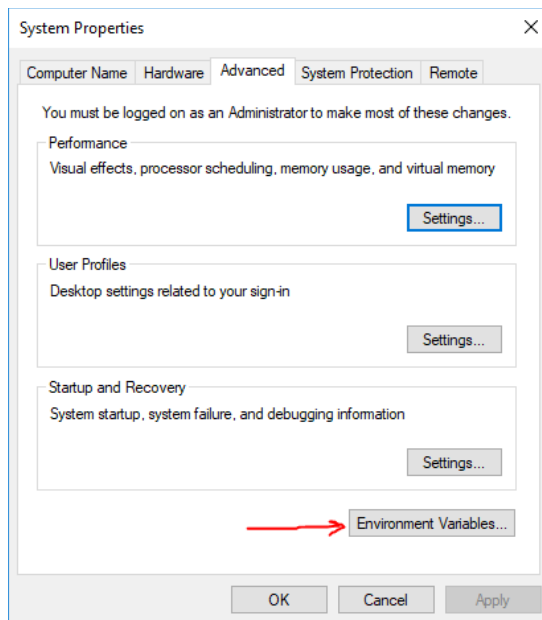Jesse Francis, Natalie Dean, Dustin Doell, Stephen Ng, Murray Evans

Final Project: CPSC 233 (Summer 2018) - Team 6 (Tutorial 2)

Installing Maven

0. Ensure you read and follow the Maven Prerequisites For Windows.

1. Go to The Maven Download Page and download apache-maven-3.5.4-bin.zip

2. Unzip to a location of your choosing. i.e., `C:\Program Files\apache-maven-3.5.4\`

3. Make sure there are no spaces in the path. Maven does not like spaces.

4. Open up the control panel to `Control Panel\System and Security\System` (WIN + PAUSE)

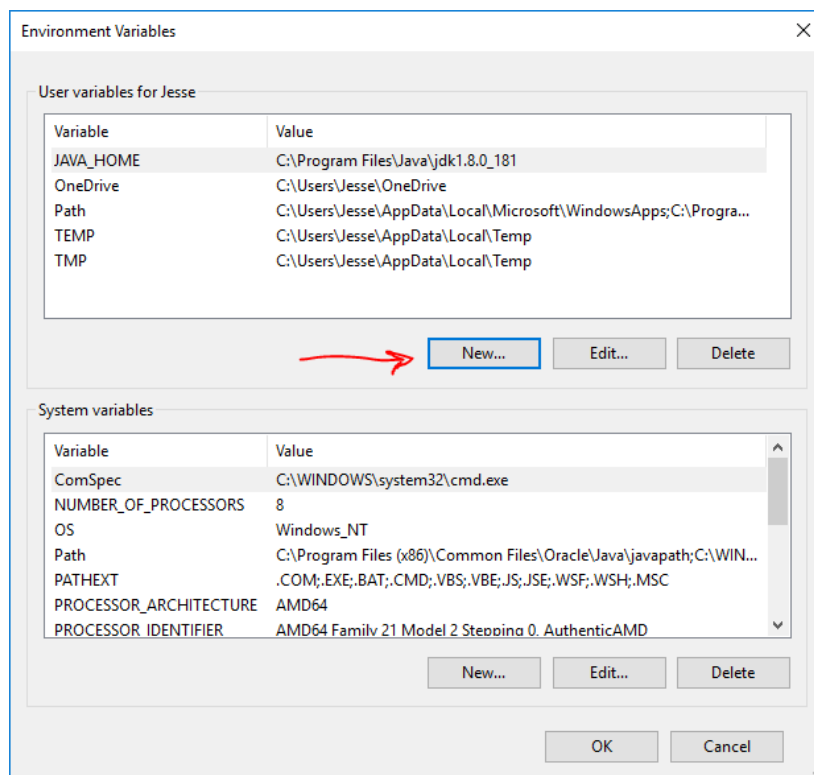5. Go into `Advanced System Settings`.

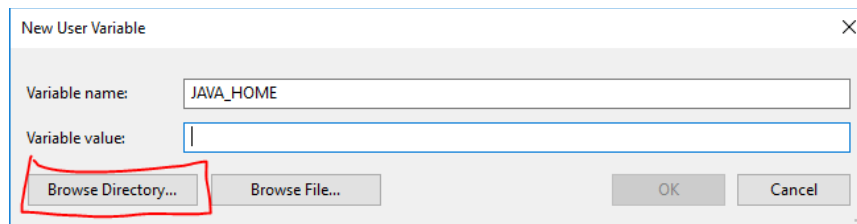6. Press on `Environment Variables`.

7. If you don't have a `JAVA_HOME` environment variable yet then:
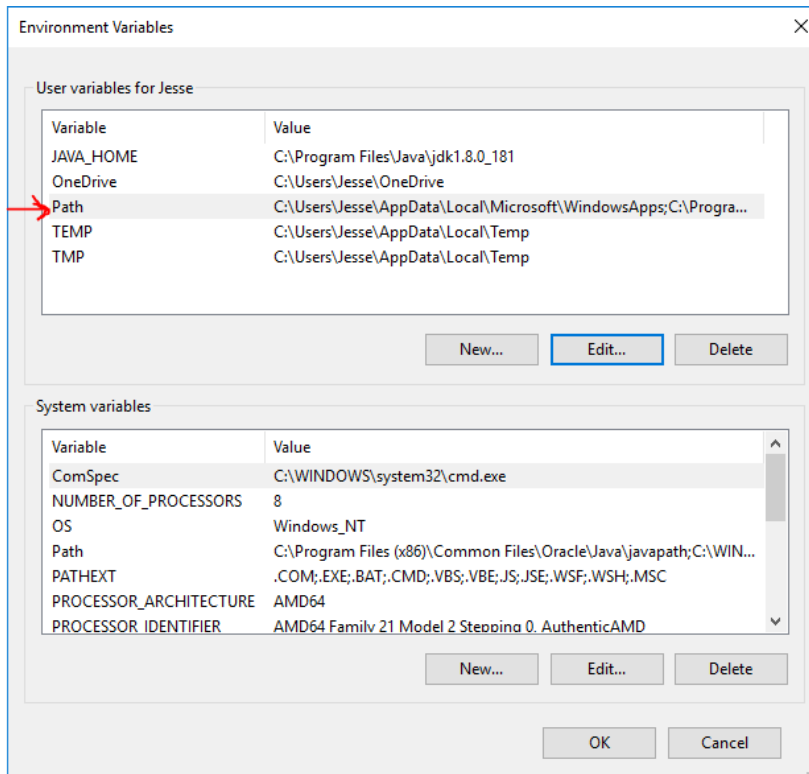
    i. Press `New...`

    ii. Type in `JAVA_HOME` for the `Variable Name` field.

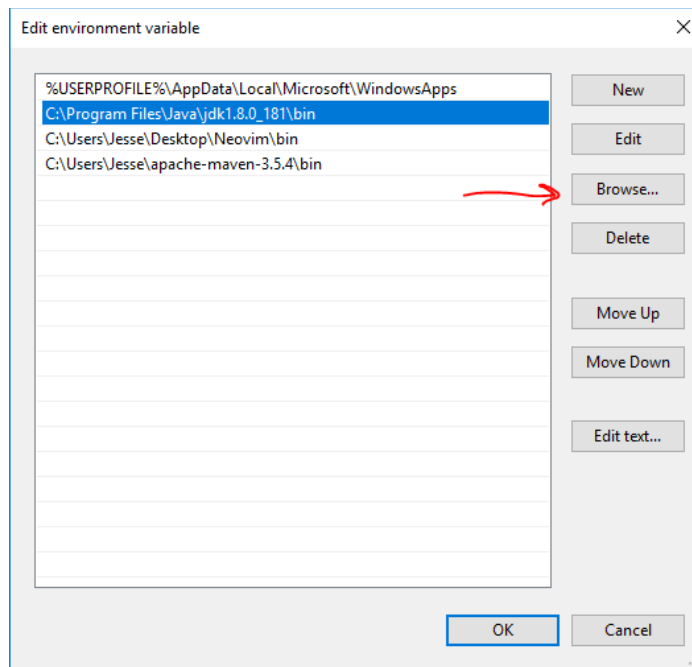iii. Press `Browse Directory...` and choose the directory of your JDK.

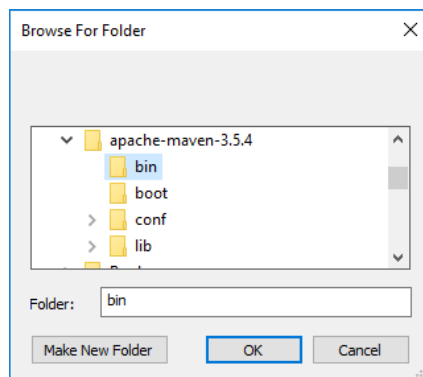iv. Press `OK`

8. Double click on the `Path` variable.

9. Add Maven to your path:

i. Click `Browse...`

ii. Find where you extracted in step 2 and select the bin directory i.e., `C:\Program Files\apache-maven-3.5.4\bin\`

10. Add the JDK to your path if it is not already there:

    i. Click `Browse...`

    ii. Find where your jdk is located and select the bin directory. i.e., `C:\Program Files\Java\jdk1.8.0_181\bin`

11. Open a command prompt and run `mvn -v` to confirm installation.

    Note: If this does not work, but you have followed the steps above then please try restarting your computer

Running The Project

1. Download the zip file from D2L and unzip to a sensible location. i.e, `C:\Users\Jesse\Documents\Projects\Tetris-Group-Project`

2. **MAKE SURE THERE ARE NO SPACES IN THE PATH, MAVEN DOES NOT LIKE SPACES** -- see here for more info.

3. Open a command prompt and change into the directory you have unzipped it to.

   If you type `dir` your command prompt should look something like:

```
2018-08-12  10:55 PM    <DIR>              .
2018-08-12  10:55 PM    <DIR>              ..
2018-08-12  10:44 PM                    34 HighScore.txt
2018-08-12  08:35 PM                 1,057 pom.xml
2018-08-12  10:55 PM                 1,535 Readme.md
2018-08-12  10:18 PM    <DIR>              tetris-console
2018-08-12  10:18 PM    <DIR>              tetris-gui
2018-08-12  10:18 PM    <DIR>              tetris-logic
```
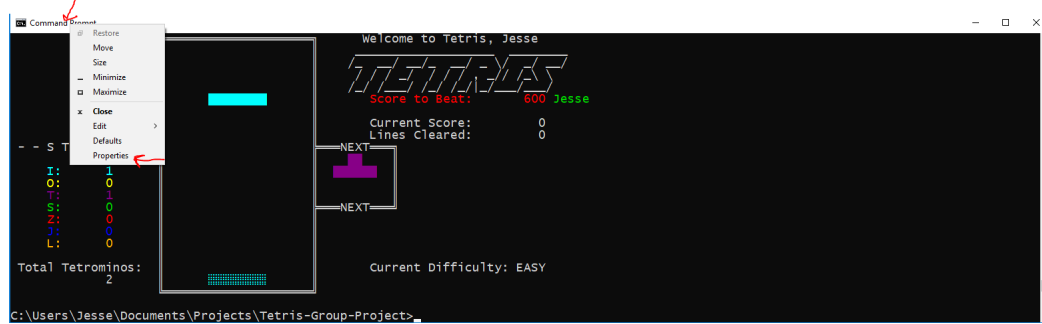
4. Congratulations! You're in the right directory. Now type `mvn clean install` to compile and install the game.

5. Now you can play the game.
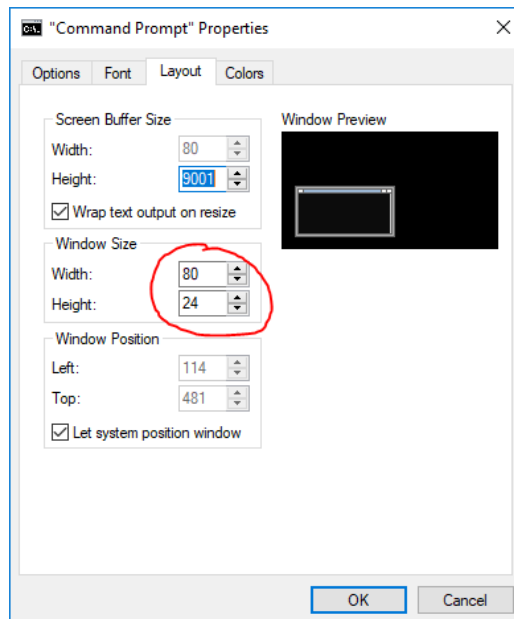
   i. To play in the console, run `mvn -pl tetris-console exec:java`

     For smoother gameplay,

       a. Right click the cmd window and select `properties`

       b. Change the `width` to `80` and the `height` to `24`

     You may also change font size as you wish for larger or smaller graphics.

   ii. To play with the gui, run `mvn -pl tetris-gui exec:java`

Viewing The Source Code

The source code for all modules are in `Tetris-Group-Project\tetris-<MODULENAME>\src\main\java\TeamSix.<MODULENAME>` For example, to see the Console game's source, go to `Tetris-Group-Project\tetris-console\src\main\java\TeamSix.console`

Testing

JUnit Testing

The majority of tests are stored in the `tetris-logic` module. They are in the `Tetris-Group-Project\tetris-logic\src\test\java\TeamSix.logic\` directory.

There is also one test in the `tetris-console` module. It is located at `Tetris-Group-Project\tetris-console\src\test\java\TeamSix.console\ConsoleTest.java`

To Test:

Make sure your command prompt is at `Tetris-Group-Project` as in step 2. of *Running The Project*. Then run: `mvn test` to run all the tests. To run a specific test, i.e., `BlockTest`, use `mvn -pl tetris-logic test -Dtest=BlockTest`. Unless you want to run `ConsoleTest`, then use `mvn -pl tetris-console test -Dtest=ConsoleTest` (as it is in the `tetris-console` module)