Overview. The goal of this (non-graded) assignment is to ensure that you have your environment set up for completing and submitting homework assignments 1–6 (MyPL code development).

Step 1. Make sure you have Java (JDK 21 or higher) and Maven (3.8 or higher) installed. See the the "study guide" notes from Lecture 1 for links to download both the JDK and Maven. You should make sure that you can run java, javac, and mvn from the command line of a terminal (shell).

Step 2. Obtain the starter code from GitHub classroom. Details will be provided on piazza. The starter code comes with a simple Maven (pom.xml) build file, a simple "driver" program (written in Java) for MyPL located under src/main/java/cpsc326 with the name MyPL.java, a bash script called mypl that can be used to execute the driver program, and a windows batch script called win_mypl.bat that is similar to the bash script but for windows. Take a few minutes to look through these files.

Step 3. Use **mvn** to compile the source code and generate an executable jar file. To complete this step, run the following from the command line:

```
mvn compile assembly:single
```

After running this command, verify that a new target subdirectory was created and that it contains the jar file mypl-jar-with-dependencies.jar. Note that you can use the mvn clean command to remove this target directory and all of the associated artifacts creating by compiling (building) the project.

Step 4. Use java to run the MyPL driver program¹:

```
java -jar target/mypl-jar-with-dependencies.jar
```

The result should be the following.

```
RUN mode not yet supported
```

To see what options are available, issue the following:

```
java -jar target/mypl-jar-with-dependencies.jar --help
```

The result should be:

```
usage: mypl [-h] [-m {LEX,PARSE,PRINT,CHECK,IR,RUN,DEBUG}] [file]
```

MyPL interpreter.

¹Note that in Windows, you must use a back slash character (\backslash) instead of forward slash character (/)

Try the different "modes" to ensure each is working (i.e., a different "not supported" message is printed for each).

<u>Step 5.</u> If you are using Linux or MacOS, use the **myp1** bash shell script to run the executable jar. For instance:

./mypl --help

Alternatively, if you are using Windows, use the **win_mypl.bat** file. For instance:

win_mypl --help

These scripts are meant to provide a more convenient way to run mypl in later assignments.

<u>Step 6.</u> Change one of the output messages in MyPL.java, recompile the program (using: mvn compile assembly:single), and then rerun the appropriate script command to see the change.

Step 7. Push your changes back to your GitHub repository and double check that they were successfully added to GitHub (e.g., by accessing your repository on GitHub and checking that MyPL.java was modified). At this point, you should have everything set up to do homework assignments 1–6.