

CS 445 Lab 1: Java from CLI

Introduction

In this lab, you will practice compiling and executing Java programs from the command line interface (CLI), also known as the terminal or command prompt. It is important that you test your assignment submissions from the CLI, as this will be the environment that will be used to grade your submissions.

In some assignments, you may also be required to organize your code in packages. This is a standard way of organizing large collections of code that comprise different components of different projects. Packages also allow you more fine-grained control over access of member variables and methods in your classes, as we discussed in lecture. This technique of modularization is very important for large-scale programming projects, and is ubiquitous in both industry and open source development.

Your TA will give a brief lesson on CLI compilation and execution, as well as package directory organization.

Java CLI

After the TA's lesson, complete the following steps:

1. Download the lab code from the course website:

- `Lab1Pt1.java` demonstrates basic CLI input and output.
- `Lab1Pt2.java` demonstrates command line arguments.
- `Lab1Pt3.java` demonstrates a class in a package.

2. To ensure you are able to compile and run Java programs from the CLI, compile and run `Lab1Pt1`. Ensure that your input is accepted and the output reflects your input.

3. To ensure you understand command line arguments, compile and run `Lab1Pt2`. Try running it with different numbers of command line arguments. Try wrapping multiple

words in quotes, and note the difference in the output of the program.

4. To ensure you understand Java packages, first create the package directory hierarchy for `Lab1Pt3`, based on the package line at the top of the file. Then, compile and run the program.

Conclusion

More importantly than just following these steps, the goal of these exercises is to prepare you for your assignments. If you have trouble completing these steps, or you do not understand them, ask your TA or come to office hours! Understanding these concepts will be crucial to success in your assignments!