

CPE 102

Lab 4

Objectives

- More practice reading and interpreting specifications for a programs and classes.
- More practice writing classes in Java from a specification.
- Practice reading documentation for classes in the Java Standard API.
- To learn about and use classes from the Java Standard API.
- More practice using static methods and member variables.

Resources

- The [Random](#) class from the Java Standard API.
- The [Rochambeau](#) class specification (not part of the Java Standard API).
- **The RochambeauPlayer class specification (not part of the Java Standard API).**
- A description of the game Rochambeau ([Rock, Paper, Scissors](#)).
- Provided [RochambeauGame.java](#) (game driver).
- Provided [RochambeauTests.java](#) A starting sample test driver. (Your code MUST pass this to get any points. ADD more to this tester. Your code will be tested more rigorously than this.)

Ground Rules

- None

Orientation

You will be developing two classes to support the game of Rochambeau and that work with the provided [RochambeauGame.java](#) driver. Note that the provided game driver expects mostly correct input from the user – no guarantees if you respond to its prompts with unexpected values! The [RochambeauPlayer](#) class will make use of the [Random](#) class from the Java Standard API to simulate random behavior of picking a Rochambeau "throw". The [Rochambeau](#) class will provide the functionality to determine the winner between two "throws".

Note: The word *throw* is a keyword in Java. Be careful when picking variable names.

Part 1

Develop the [Rochambeau](#) class to meet the specification.

Part 2

Develop the [RochambeauPlayer](#) to meet the specification. Be sure to perform sufficient unit testing as you go to be sure the constructors and methods of this class perform as specified. You must use the Random class to choose a "throw" for one of the makeThrow() methods. Note that this method is *overloaded*, you only need use the Random class for one of the makeThrow() methods. Use the nextInt() method of the Random class that accepts an integer parameter. Be sure to update lastThrow in both of the makeThrow() methods.

Part 3

Download the provided copy of [RochambeauGame.java](#), add it to your project, compile, and test. Be sure you understand everything that is happening in this class, except for the Scanner class. We will cover that next week.

Submission

Submit your code by 11:59pm on the day it is due. Your grade will be based on how many test cases you pass from our final tester. You will receive NO credit if you do not pass the sample given tester (when tested on the UNIX servers)

Submit these files in the PolyLearn Rochambeau.java , RochambeauPlayer.java, Sample of your outputs.