Recitation 4 - Requirements

Learning Outcomes

By the end of this activity, a student should be able to:

1. Implement a simple Java class from requirements
2. Use classes to accomplish more complex tasks

Introduction

This recitation requires that you read requirements and design a class that satisfies the requirements.

Requirements

An RPS player is one that can randomly choose between three options, rock, paper, and scissors. The player makes a random choice among those three options. An RPS player challenges other RPS players. The challenge consists of each player randomly choosing one of the three (rock, paper, scissors) options. The winner is based on the following:

- Paper beats rock
- Rock beats scissor
- Scissor beats paper

A challenge will result in the player that won or a draw. The last choice an RPS player makes is saved until the RPS player makes a new choice. Each RPS player maintains their game statistic. Starting a new game requires players to clear their statistic counter(s).

An RPS player may also play multiple RPS players at the same time. However, this requires that the RPS player keep their choice against the first RPS challenger. So, after an RPS player challenges the first RPS challenger, the RPS player keeps and challenges the subsequent RPS challengers.

Extracting the Class and Behavior

In reading the requirements above, it is helpful to highlight the nouns and verbs. The nouns will often indicate a need for a class, and the verbs will be the behaviors that objects of those types need to have.

Recitation Activity

Working in groups of two,

1. Decide on the relevant nouns and verbs.
2. Decide on the class(es) and methods to implement
3. Implement both class(es) and methods

Submitting Your Work

Submit your work on CodeGrade as you did with all previous recitations. You will be provided with more details once the recitation session is completed.