CSC 210 Intro to Computer Programming
San Francisco State University
Assignment Four

Due : Saturday, February 27th, 2015 @ midnight
PLEASE name your project RPS
Total Points: 45

1. Program One

   Description:
   Write a program that plays the popular rock-paper-scissor game. If you don't know the rules, please look them up. The program will randomly generate a number between 0 and 2, inclusive, representing scissor, rock, and paper for the computer player. Then, the program will prompt the user player to enter a number between 0 and 2, inclusive.

   Example Output:

   ```
   scissor (0), rock (1), paper (2): 1
   The computer is scissor. You are rock. You won.

   scissor (0), rock (1), paper (2): 2
   The computer is paper. You are paper too. Game is a draw.
   ```

   Steps:

   1. Prompt the user for a number between 0 and 2. Where scissor(0), rock (1), and paper (2). Make sure user input is valid!

   2. Generate a random number for the computer player. You will be using the Random class to generate a random number. To declare a random object use the following syntax:

   ```
   //Declares and initializes a Random Object
   Random rnd = new Random();
   //Generates a number between 0 and 2
   int num = rnd.nextInt(3);
   ```

   3. Once you have the user's selected value and the computer's randomly generated value, properly implement decision making in your code that determines the correct winner or if the game is a draw.

   4. Display who is the winner or display if the game is a draw.

Grading Rubric

- (15 points) Does the program correctly read user input. This includes :
  - Only accepting valid values. (i.e. 0, 1, 2), and excludes everything else.
  - In the case of invalid input, does the program let the user know? It is OK if your program exits when it detects invalid input given that you display a good message explaining why the program is exiting.
- (10 points) Does the program correctly determine winners based on user's input and computer's randomly generated number?
- (10 points) Does the program display to the user who wins or loses or if the game is a draw.
- (10 points) Is the program well documented. A well documented program includes good variables names and commenting of non-obvious code.
- (5 POINTS EXTRA CREDIT) Modify your program to run rock-paper-scissors in a best of 3 format, i.e. first player to win 2 out of 3 games wins. This must be done with 1 execution of the program. Running the program 3 times does not count.

Submission:
Submit a java source file named Rps.java to ilearn in the Assignment 4 section.
FAILURE TO SUBMIT A JAVA SOURCE FILE WILL SEVERELY HURT YOUR GRADE