

CMPE 135
Object-Oriented Analysis and Design
Spring 2019
Instructor: Ron Mak

Assignment #5

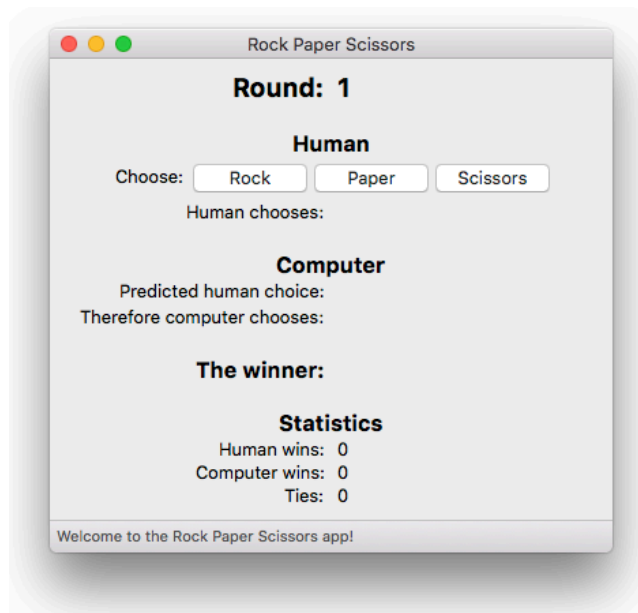
Assigned: Tuesday, March 19
Due: Friday, April 12 at 11:59 PM
Team assignment, 100 points max

GUI-Based RPS Game

Use **wxWidgets** to create a GUI-based version of your RPS game program from Assignment #4. This version of RPS should include the simple machine learning, and it should save the frequency table in a file.

The image below shows how the GUI can appear. Yours can be different, but it should contain at least these elements:

- Which round
- A way for the user to enter a choice for each round.
- The computer's prediction of the human's choice for the round.
- The computer's choice for the round.
- Who the winner is (or is it a tie) of the round.
- The number of human and computer wins, and the number of ties.



Menu commands

Your game application should have the following menu items:

- About
- Exit
- Start a new game

The default is 20 rounds per game but provide a way for the human player to change that number.

Written report

In a short report, describe:

- What events does your game application generate?
- How did you use callback functions to handle the events?
- How were you able to reuse code from Assignment #4 now that you have inversion of control?

Include a screen shot of your GUI in your report.

What to turn in

Make a zip file of all your C++ source files and your report.

Submit it into Canvas: **Assignment #5**. This is a team assignment. Each member of the team will receive the same score.

Rubric

Your program will be graded according to these criteria:

Criteria	Max points
<ul style="list-style-type: none">• GUI components:<ul style="list-style-type: none">○ Which round○ A way for the user to enter a choice for each round.○ The computer's prediction of the human's choice for the round.○ The computer's choice for the round.○ Who the winner is (or is it a tie) of the round.○ The number of human and computer wins, and the number of ties.• Menu items:<ul style="list-style-type: none">○ About○ Exit○ Start a new game• The human player can change the number of rounds per game.• The grader is able to play several games.	<ul style="list-style-type: none">• 60<ul style="list-style-type: none">○ 10○ 10○ 10○ 10○ 10○ 10• 15<ul style="list-style-type: none">○ 5○ 5○ 5• 10• 15