EE 599 Lab 6
Summer 2017 Nazarian

Score:___/100

Student ID: _____ **Name: _____**

Assigned: Tuesday, June. 20th

Due: Thursday, June. 29th, at 11:59pm.

Late submissions will be accepted only in the first two days after deadline with a maximum penalty of 15% per day: For each day, submissions between 12 and 1am: 2%, 1 and 2am: 4%, 2 and 3am: 8% and after 3am: 15%.

Notes:

- This lab is based on individual work. No collaboration (no discussions among classmates) is allowed. Please refer to the first lecture for the AI policies of USC and this course and in case of any questions or doubts contact the instructor.

OOP Introduction: Reversi Game Part1

Write a python program named "reversi_game.py" to build the basic structure of the reversi game. The code you write in this lab will be used in future labs. Reversi game details will be presented in future labs. If you are interested, you can search "reversi game" online.

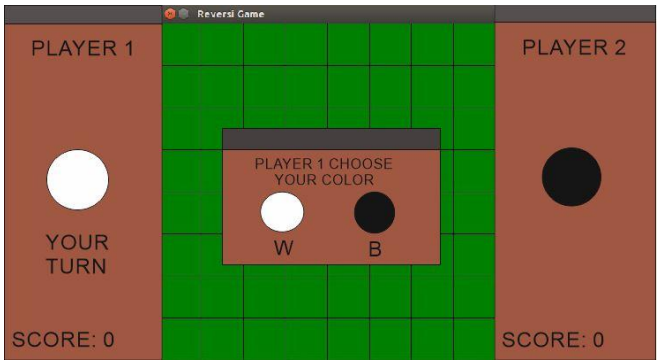
Command format: python reverse_game.py

Step1:

Create a canvas named "Reversi Game". Build a board with 8*8 squares. Each square should be 60*60 size and green color. There will be side columns of the grid, which indicate the color which players have chosen along with their scores. It also indicates whose turn it is to play. After you have created the board, you should be able to see the following figure:

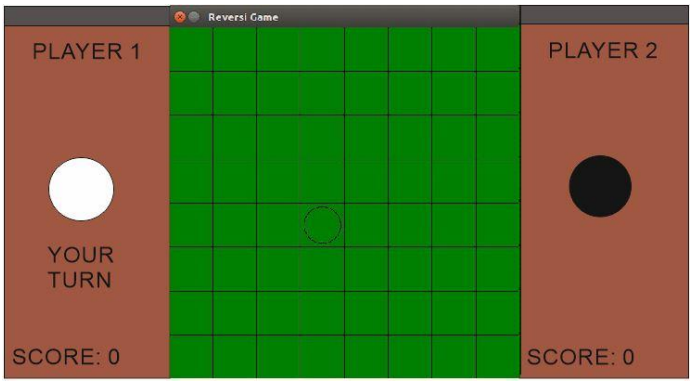
Step2:

When the game is launched along with the game GUI window there should also be a pop up window in the very beginning which allows the player to choose a color. If they type “W” then white is chosen, if they type “B” then black is chosen. This is shown in the following figure:



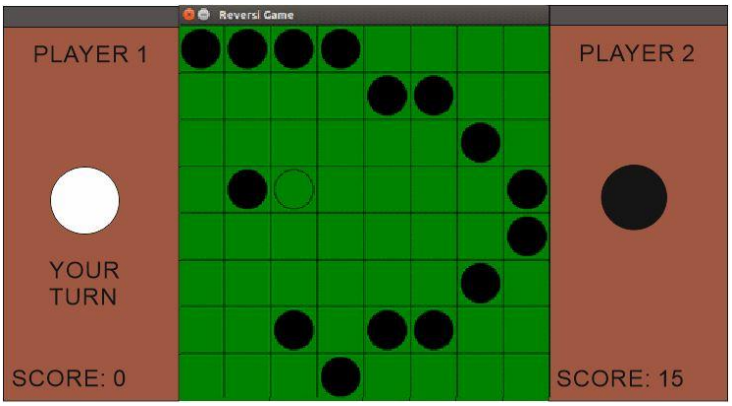
Step3:

Create a moveable empty piece (by setting the color as “green”) with a size of 50*50. You should be able to move the piece by pressing the arrows in your keyboard. **Make sure the piece is always at the center of a square.** You are free to use any control method to determine the corner cases (i.e., What will happen when the moveable piece is at a right most square and you press <Right>? How about the bottom right corner?). After you have created the moveable piece, you should be able to see the following figure:



Step4:

Add a function of the moveable piece so that when you press space (self.canvas.bind_all("<space>", …)), a fixed piece is created at the current location of the moveable piece. The fixed piece should be “black” colored and also 50*50 size. **Use any method to make sure that the moveable piece will never overlap with the fixed piece.** Once all the squares are filled with fixed pieces, exit the game. You can refer to the following figure:



Requirements:

Must create a class for each square in the board

Must create a class for the moveable piece

Must create a class for the fixed piece

You can choose to combine the class of the moveable piece and the fixed piece or create a class with several subclasses

Submissions:

Submit one file “reversi_game.py” on black board.

Submission

1. Zip all the files you need to submit into a zip file named: "firstname_lastname_lab2".zip.
2. Your zip file should include all the coding parts the assignment asks for, and also a Readme.pdf.
3. In your Readme.pdf, include any information that you think the course staff, especially the grader should know while grading your assignment: references, any non-working part, any concerns, etc.
   a. Any non-working part should be clearly stated
   b. The citations should be done carefully and clearly, e.g.: “to write my code, lines 27 to 65, I used the Diijkstra's shortest path algorithm c++ code from the following website: www.SampleWebsite.com/...”
4. Use the provided BB submission link to submit your zip file for this assignment