Course Project - IceBreaker

General Information

Python version and IDE: Python 3.3 / WingIDE 101

Due date: End of term

Lab weight: 20%

Submission

- ✓ **All the Python source files must be submitted electronically.** Submit the .py files to your lab Blackboard site.
- ✓ **You must submit a plaintext file named "README.txt" that gives an overview of how you implemented your project**
- ✓ **Comment your code or you will lose marks**

REFERENCES

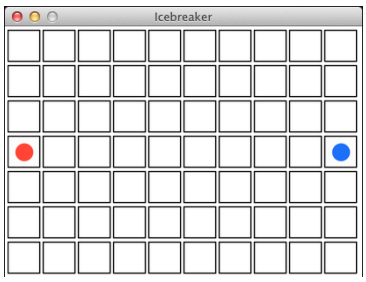
- Graphics.py version 5: http://mcsp.wartburg.edu/zelle/python/
- Graphics Reference ver 5: http://mcsp.wartburg.edu/zelle/python/graphics/graphics.pdf
- Graphics Reference online: http://mcsp.wartburg.edu/zelle/python/graphics/graphics/index.html

IceBreaker

Icebreaker is a two-player game that involves each player alternately performing two tasks

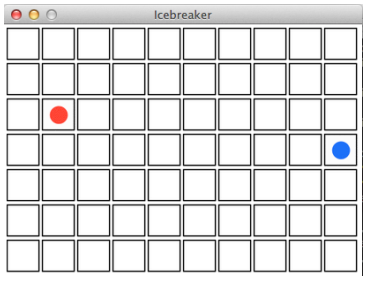
1. Moving their player
2. Breaking a block of ice

The game is played on a board as shown here:

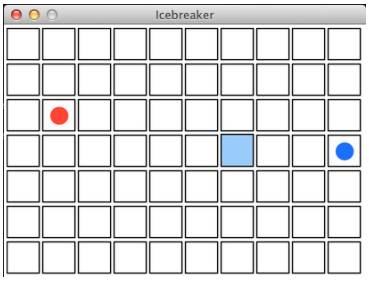


Game play

On a player's turn, the first task is to move their piece. A piece may be moved to any adjacent white square (up, down, left, right or diagonally). For example, if red moves first, the board may change to this:

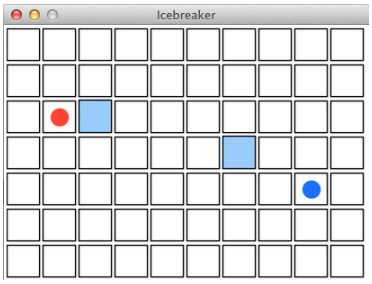


Once moving their piece, the second part of a turn is to break a square of ice. Any unbroken and unoccupied square may be chosen. Once broken, a square remains broken for the duration of the game. The following shows the board after red has broken a square of ice. Broken squares of ice are changed to light blue.



One a player has moved and broken a piece of ice, the turn changes to the other player (in this case, blue).

Blue may move to any unbroken and unoccupied adjacent square. After blue has moved and broken a piece of ice, the game board may look like the following.



How the game ends

The point of the game is to enclose your opponent so they cannot move. ***The first player to not be able to move loses the game.*** A player is not able to move when all squares surrounding them are either broken or are occupied by the other player. For example, Red has won the game below.