Reversi In Python

Yash Srivastav

Subhdeep Saha

Project Mentor: Saurav Shekhar.

August 4, 2016

Project Overview

Reversi is a strategy board game for two players, played on an 88 uncheckered board. There are sixty-four identical game pieces called disks (often spelled "discs"), which are light on one side and dark on the other. Players take turns placing disks on the board with their assigned color facing up. During a play, any disks of the opponent's color that are in a straight line and bounded by the disk just placed and another disk of the current player's color are turned over to the current player's color.

- We decided to use Python3 for the game implementation.
- For graphical interface we used the Pygame library.
- For player vs computer we have implemented the minimax algorithm.

Minimax

We used a slightly advanced version of Minimax called Negamax. Since it is not possible to evaluate to maximum depth, we used a scoring algorithm to generate a score for the board. Initially it used to just count the total number of pieces. Later on we used to assign a score to the pieces as per their location.

10k	-3k	1k	800	800	1k	-3k	10k
-3k	-5k	-450	-500	-500	-450	-5k	-3k
1k	-450	30	10	10	30	-450	1k
800	-500	10	50	50	10	-500	800
800	-500	10	50	50	10	-500	800
1k	-450	30	10	10	30	-450	1k
-3k	-5k	-450	-500	-500	-450	-5k	-3k
10k	-3k	1k	800	300	1k	-3k	10k