Project Report

**Description:**

Our project a Mips Assembly program that lets the user play against an intelligent ai in the game Othello.

It is an acii based game using x and y inputs to coordinate the player move. The project also can play music while the game is going on.

**Challenges:**

The challenges I faced were how to get the AI to select moves, without having any input, this was made even harder because of the traversal of the array. Another big struggle was trying to us java to create a Mars tool. There was very little documentation on how to get files from the jar, and how to recompile the jar. I over came these struggles by bouncing of ideas with my team mates aswell as trial and error.

**What I Learned:**

I learned how to work in a larger group, how to make a mars, and finally how to traverse arrays quickly and easily in mips.

**About the algorithms:**

The player algorithm is kind of like a maze builder, minus the recursion part. It checks all the surrounding pieces to check for not only and opposite piece but also if there another piece of its kind is there. After confirming this replaces the items with its piece.

The CPU(computer player) was based of randomly selecting moves to try and counter act the player.

**Contributions:**

Myself(Kion Smith) – I helped with the ai algorithm, also created mars mod for music

Brandon Allison developed broad project parts like(player board, inputs, planning). Developed the ai algorithm. He was easy to get a hold of and did his parts well and on time. He was good at guiding us on what to do.

Rating: 10/10

Rafael Sanchez created an accurate player input algorithms, implemented the end game detection algorithm. Helped me create the algorithm for ai when I struggled. He is a fast and out of the box thinker.

Rating: 10/10

Tammy Huynh – never showed up or responded after week 1.

Rating: 1/10

Summary: We worked well together, even though being a man down, and had good communication through out the project, would work with them again(minus Tammy).

**Bonus:**

Our game comes complete with music! Tools -> music player -> connect to mips -> play

**Suggestions:**

Maybe a more well know game, was confusing trying to understand reverse at first because of the lack of good documentation.