# EHB 432E Microprocessor System Design Project, 2018



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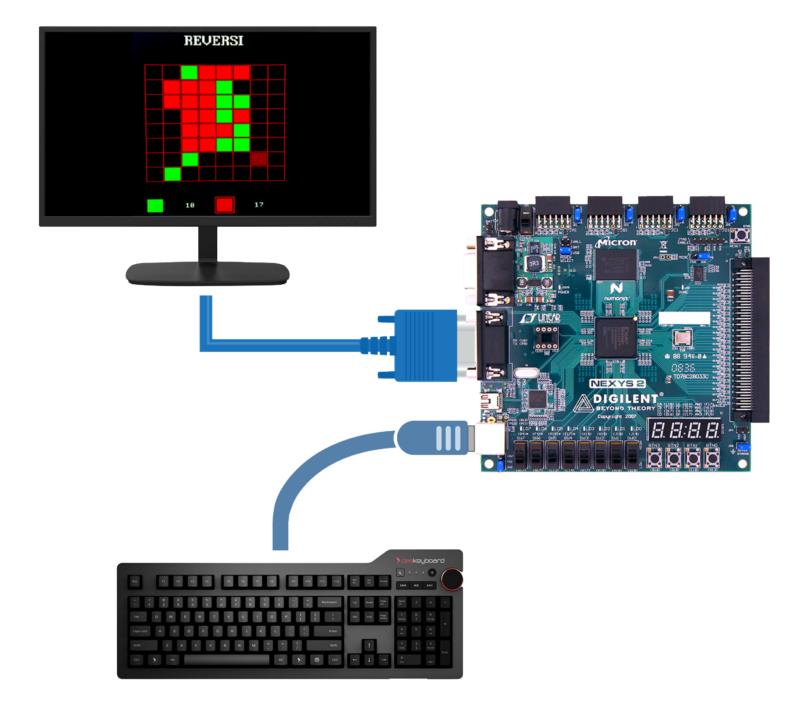
#### Introduction

- Reversi is also known as Othello and is played professionally like other boards game such as chess and go.
- The game is a strategy board game for two players and the objective for each of players is to finish the game with more pieces.

## Methodology

- 8x8 board were drawn after VGA modules implementation, then keyboard modules are implemented.
- The player discs were placed in the designated squares by keyboard keys.
- The main algorithm was implemented which was for every direction scanning and capturing discs.
- Game rules were uploaded.
- After each turn, picoblaze calculates scores of players.
- Makeups and score tables were included.

## **System Overview**



#### **Game Rules**

- Initial starting position is that four discs are placed diagonally in the center of the board.
- Each new disc placement on board must be caused to capture opponent's piece.
- Capturing pieces can be horizontal, vertical or diagonal.
- If one player can not make a valid move, play passes back to the other player.
- When neither player can move, the game ends.

