

Getting started:

The program is designed to run on the MARS MIPS simulator provided by Missouri State University. The game is a recreation of the popular game "Connect 4" in MIPS. The game is played on a 7 x 6 game board, and the game is meant to be played with two players, but in this case, the game is played between you and the computer. Whenever a piece is placed on the board, it is placed on the bottommost available space in the specified column; this means if there is already a piece in a column chosen, pieces will be placed on top of it. The objective of the game is to connect 4 of your own pieces either vertically, horizontally, or diagonally before the computer can. If the game board is completely filled before the game is won by either you or the computer, the game ends in a draw.

Running the program:

The Connect4 zip file contains all the modules needed to run the game. In order to run the game, open the "Connect4Main" file in the zip in MARS. Then, click "run" at the top of the screen and click "assemble". Then, click "run" again and click "go" in order to start the game.

Playing the game:

When beginning the game, the program welcomes and prints the game board, which at this point is empty.

It's important to note that your pieces are represented by "Y", the computer's pieces by "R", and available spaces by "_".

When the game prompts you for input, enter an integer from 0-6 for the column you want to place your piece in, with 0 being the leftmost column and 6 being the rightmost. It's important to note that entering an integer outside of this range or entering a non-integer character causes the game to prompt you for another integer. Additionally, if the column you chose is already full, the game also prompts you for another integer. Columns fill up when enough pieces have been stacked on each other to completely fill the column. At this point, no other pieces are allowed to be placed in the column. Confirm your selection by pressing the "enter" key.

After you select a valid column to place a piece in, it is placed at the bottommost available space in the column. If pieces are already in the column you specified, but the column isn't completely full, your piece will be stacked on top of them.

Next, the computer will place its own piece on the board. Both you and the computer will take turns putting pieces on the board until either one of you wins, or the board has been completely filled, resulting in a draw.