Assignment #1A: Game Playing, using Minimax Search

Artificial Intelligence
Due:

Turtle Jump: Turtles are at war, however they are too nice to kill, and can only convince each other to switch sides. Convincing is a special skill, and in case of turtles, all it takes to convince is a jump. If a turtle can jump over another turtle the, the one jumped over, is convinced to switch sides. Each player as a set of turtles lined up along the opposite sides of a field. The turtles can march in any direction along the lines. They can also jump over turtles of the other colour, and thereby enslave them. Turtles cannot jump over turtles who are in the same side.   The game ends, when one player has a) no turtles left or b) has no moves left for the remaining turtles
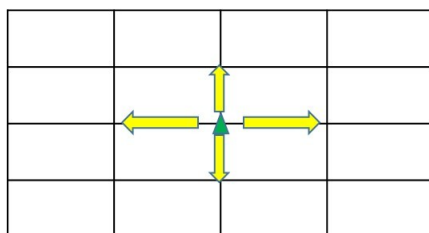
Game Details:

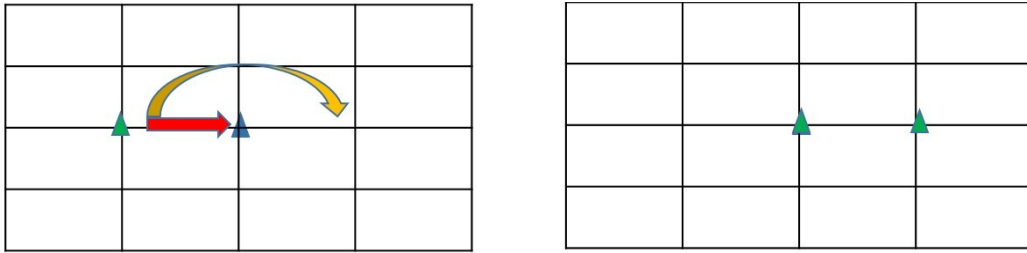- Board: the board is   9 x 8, arranged as in figure
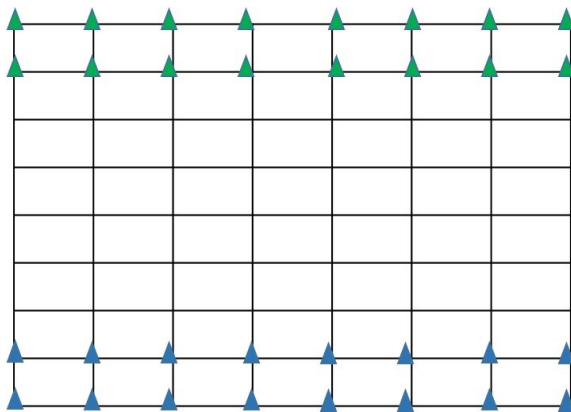
Start : The turtle cant jump over turtles of same colour, thus the game starts with moving the turtles in rows 2 and 8
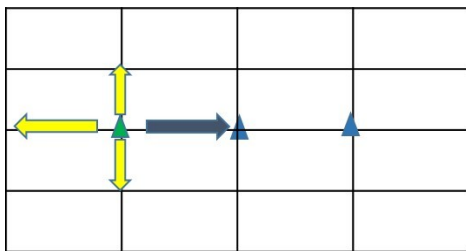
- March:

March : The turtle can move in any direction, one step at a time , along lines

- Jump:

Jump: a turtle can jump over another turtle, if there is free spot along that line, the jumped over turtle switches side. Please note that turtles can be re-possessed too

- Block:

Blocking: Turtles can not jump over more than one turtle, so in this case green is blocked in direction East

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Implementation:

- A Min max implementation for the move selection with proper heuristics [25]
- Alpha-beta pruning [15]
- Interface [10]

Report must have
- Comments on Heuristic choice [15]
- Gameplay example [15]
- Win statistics [10]
- Loss analysis [10]

Bonus

- Implement the same, but allow diagonal moves as well