

# Assignment 2 – Report

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## Algorithm

The algorithm used in the code is alpha beta algorithm with iterative deepening. It runs from depth 4 to 7 and returns the best move so far before timeout. The best move is always picked from the result obtained from largest depth.

## Evaluation Function

Evaluation function considers four main sub factors they are

- (i) coin difference
- (ii) corner occupancy
- (iii) corner closeness
- (iv) mobility

coin difference says difference between no. of coins between yours and opponents for a given configuration of board.

Since corner points bear a huge importance we calculate no. of corner occupancies of ours and opponents and take difference, we try to choose the board where we have more corner occupancies than opponents.

When a corner is empty we always try to avoid to place our coin around corner, corner closeness deals with it, we take negative of difference of our coins and opponents coins around corner for a given board configuration.

Mobility deals with minimizing the opponent moves and increasing our moves so we take difference between no. of possible moves for both.