This report describes the implementation and intuition of Negamax alpha beta with transposition table lookups.

Negamax with alpha beta pruning

In order for the reader to understand the gist of this report it is important to provide the basic understanding of the negamax algorithm. In essence, negamax is a variation on the minimax algorithm\*\*\*(add image). In minimax the starting player (max) always chooses the move with the highest possibility to win, i.e. aims to maximise its own score. The second player (min) aims to minimize the score of the max player and therefore always selects the move that provides the lowest score to the max player. In negamax both players aim to maximise their own score without considering the impact on the opponent. In theory, it could be seen as there being no min players. Finally, when looking at alpha beta pruning the focus lies on the benefit of reducing the size of the game tree.