

## Chess Assignment

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In this assignment an AI and minimax has been trying to implement.

Minimax algorithm:

This algorithm calculate each move and for each move again calculate the possible moves. In each steps and move calculate the amount of score by heuristic function.

Scores are :Queen 90 rook 50 bishop and horse 30 pawns 10 and king 900

By this scores have maxi and min steps in each steps it will get the max amount or the minimum amount of proper level. Then the branch that has the optimum maximum score will be get as best score.

The implementation is under:

```
public int[] minimax(Chessman[,] tempChessmans, int depth, int maxmax, int minmin, bool
maximizing_player, bool isWhiteturn)
{
    int[] aa = new int[5];
    List<int[]> moves = new List<int[]>();
    List<int[]> maximoves = new List<int[]>();
    List<int[]> minimoves = new List<int[]>();
    int[] bb = new int[5];
    if (depth == 0)
    {
        aa[0] = evaluate(tempChessmans, isWhiteturn);
        for (int k = 1; k < 5; k++) aa[k] = 0;
        return aa;
    }
    for (int i = 0; i < 8; i++)
    {
        for (int j = 0; j < 8; j++)
        {
            if (tempChessmans[i, j] != null)
            {
                if (tempChessmans[i, j].isWhite == true)
                {
                    tempChessmans[i, j].minmaxPossibleMoves().ForEach(n => {
                        minimoves.Add(n); });
                }
                if (tempChessmans[i, j].isWhite == false)
                {
                    tempChessmans[i, j].minmaxPossibleMoves().ForEach(n => {
                        maximoves.Add(n); });
                }
            }
        }
    }
}
```

Some pics of the game:





Thank you! The end.