CS 461 | Artificial Intelligence Project II

It is a two-week combined project of theory and lab starting from 17th May 2021.
Submission Deadline is 31st May 2021.
(Eid holidays from May 8th to 16th are not included).

Introduction

A game of chess has several kinds of pieces: pawns, knights, bishops, rooks, queens, and kings. These pieces are arranged on a chessboard as shown in the figure below.
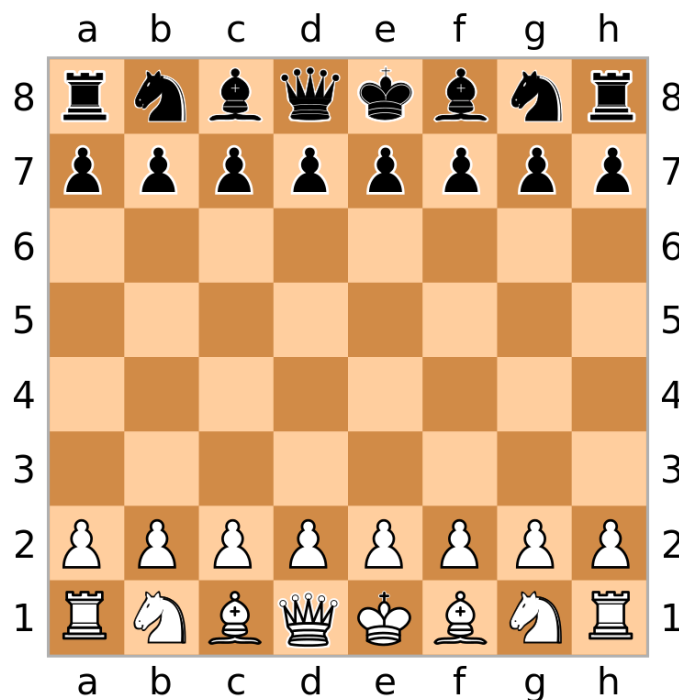
A cell on the board is specified by a (row, column) tuple: rows increasing from bottom to top and columns increasing from left to right. Traditionally the black pieces are arranged in the top two rows as shown.

Each chess piece can move in a specific way. In addition to moving, each chess piece can also kill a chess piece of the opposite color if it moves to its place.

There are 6 main pieces in chess:

Queen: worth 9 points.

Rook: worth 5 points.

Bishop: worth 3 points.

Knight: worth 3 points.

Pawn: worth 1 point.

King: worth infinity points, technically.

The basic rules for each chess piece are discussed in other shared documents. The main goal of chess is to capture the king of the opponent.

Problem Statement

In this assignment, your main goal is to find the best move in a given chess position. You should output in the following format i.e piece name + square it should move. For example, Kingd1 (king moves to square d1) and Queenf3 (queen moves to square f3).

For more information, you can visit the official chess website (Chess.com/rules).
You can practice these rules while playing chess (chess.com).