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Final Project Original Proposal

Period 7

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My program shall be of a game of Japanese chess. It is also known as Shougi or Generals’ Game (将棋). There are only two players. One is black, and the other is white (black goes first). It is a little like the game of normal chess. Each player strives to capture the other’s king. They take turns, moving after the other has made their move. Enemy pieces point toward you (they take the form of a sort-of pentagon tile). The way your pieces are arranged is symmetrical to your enemy’s (like in normal chess, except the setup itself differs from Japanese chess’ setup). There are nine ranks and nine files (for a total of eighty-one squares). The game ends when a king is under checkmate (詰み tsumi), however, it cannot be captured.

The pieces are as follows: the king (K), the rook (飛車 hisha; R), the bishop (角行 kakugyou; B), the gold general (金將 kinshou; G), the silver general (銀將 ginshou; S), the knight (桂馬 keima; N), the lance (香車 kyousha; L), and the pawn (歩兵 fuhyou; P). The king can move like a king in normal chess can: one space in any direction (and the move can not place the king in check). The gold general can move in one space in any direction except for back-left and back-right. The silver general can move in any front direction or back-left and back-right. The knight can make a special move consisting of two spaces forward and either one space left or one space right (an L-shape). The lance can move as many spaces as it wants forward. The bishop moves like a bishop in chess, diagonally. The rook moves just like its Western counterpart. The pawn moves one space forward. A piece can only move onto a square it cannot move from if, when it promotes, can move from that position.

A player can capture pieces like in Western chess, that is, if the piece lands on the enemy piece. One key difference here it that the pawn can only capture by moving forward. When a piece is captured, it is kept “in hand”. When it is a player’s turn, he or she may choose to “drop” a piece back into play on any empty square, instead of making a move with a piece already on the board. There are two restrictions to this, however: 1) unpromoted pawns may not be placed on file with another one of your unpromoted pawn(s), 2) a pawn (promoted ones too) cannot be dropped to checkmate your enemy, and 3) pieces may not be dropped in a space from which they cannot move forward.

Pieces can be promoted. Each piece can promote once it reaches the seventh, eighth, or ninth rank, except for the king-general and gold general. They can promote if a move ends or begins with these ranks. When pieces are promoted, they are flipped (they are red on the back). When the silver general is promoted, it can move like the normal gold general. The promoted knight also moves like a gold general, as with the promoted lance and promoted pawn. A promoted bishop can move like a bishop or king. A promoted rook can move like a rook or king. If a piece is dropped on one of the promotion ranks, it must wait until its next move to be promoted. A piece remains promoted until it is captured or the game ends.

Draws can happen in two ways. The first type of draw is when an instance of the game (the arrangement of the pieces, the pieces on hand, and whose turn it is) occurs 3 times in a row. This is called repetition, or sennichite (千日手). If the instance being repeated is one where someone is in check, the person who was repeating the check loses (otherwise, the game is a draw). Another situation is when the kings have gone into their enemy’s promotion zone. At this point, the players might agree to impasse, or jishougi (持将棋). In jishougi, players add up points (five for rooks and bishops each, all else are worth one, except for the king which is worth none). If both score more than twenty-four, the game is a draw. If only one player scores over that, then they win.

My program is designed to show the board, the pieces, and the trays on which pieces are “in hand”. It will set up the pieces and assign them to each player. The aforementioned rules apply in the program. To select a piece, enter its coordinates (column, row) on the keyboard, the direction (the keys around 5 correspond to each direction), and an = and the number of spaces it will go over (if it can). Knights can only move by entering the directions < or > for their left-forward or right forward attacks, respectively. . To promote a piece, one must press the \* key after the direction (or = and number of spaces). Entering in the target coordinates, the # key, and the number of a piece’s position within the tray drops it. If impasse is possible, pressing the “?” brings the game to a draw.

Class Player

Class Snapshot

Class Board

Class Promotable

Class

Pawn

Class King

Class

Silver

Class

Lance

Class

Bishop

Class

Rook

Interface Piece

Class

Knight

Class

Gold