The pentagon game

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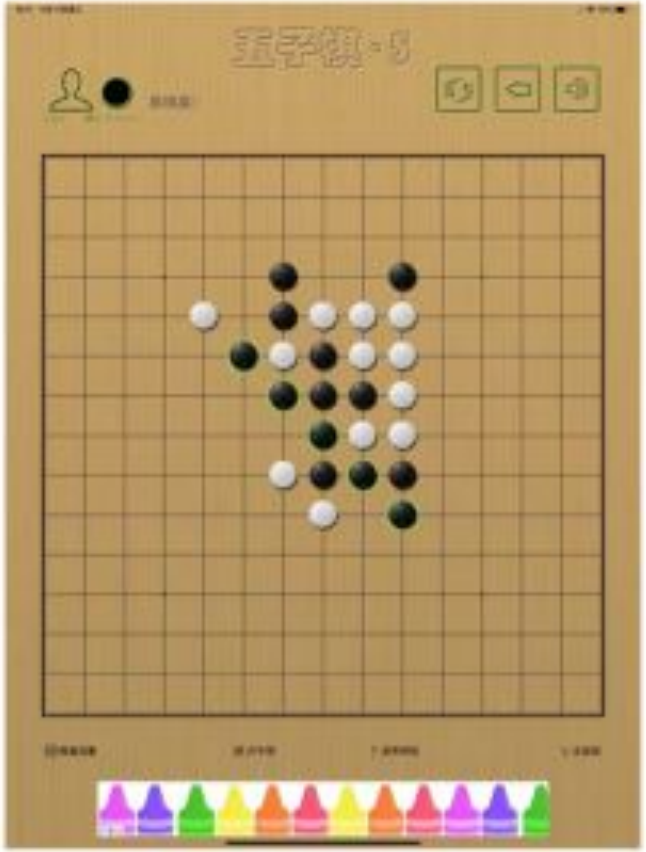
Reference

A game in which two black and white pieces of black and white are successfully joined to form five pieces by alternating.

The two sides take turns playing chess and win by combining five pieces.



Design overview

Code progress

I.Record the positions of both sides of the board with a two-dimensional list

II.The function is used to check whether there are five consecutive pieces in horizontal, vertical, main diagonal and subdiagonal directions.

III.The print_chess_coordinate function is used to print the current board coordinates for debugging and observation

IV.The draw_chessboard function is used to draw the board, drawing the horizontal and vertical lines of the board through loops.

Code progress

V. The search_chess function is used to place pieces where the mouse clicks.The function first calculates the upper-left coordinate of the box where the click is located, and then selects the nearest box as the place to place the chess pieces based on the distance between the four center points.If the selected location is not occupied, the location is added to the chess list and the corresponding chess_coordinate state is updated based on the value of turn.

VI.The draw_chess function is used to draw the effects of pieces and connections.Draw black or white round pieces using the pygame.draw.circuit function based on the location of the pieces stored in the chess list.If there is a connection, a circle of special color (Turquoise1) is drawn to mark the location of the connection.

Code progress

VII.In the main function, do some initialization, and then go to the main loop of the game.In the main loop, by listening for events, when the mouse is pressed and direction is "N", get the mouse click position, update the board status, and call the relevant function to check the connection.The board and pieces are then drawn based on the current state.Finally, update the window display with the pygame.display.update() function.

The result：