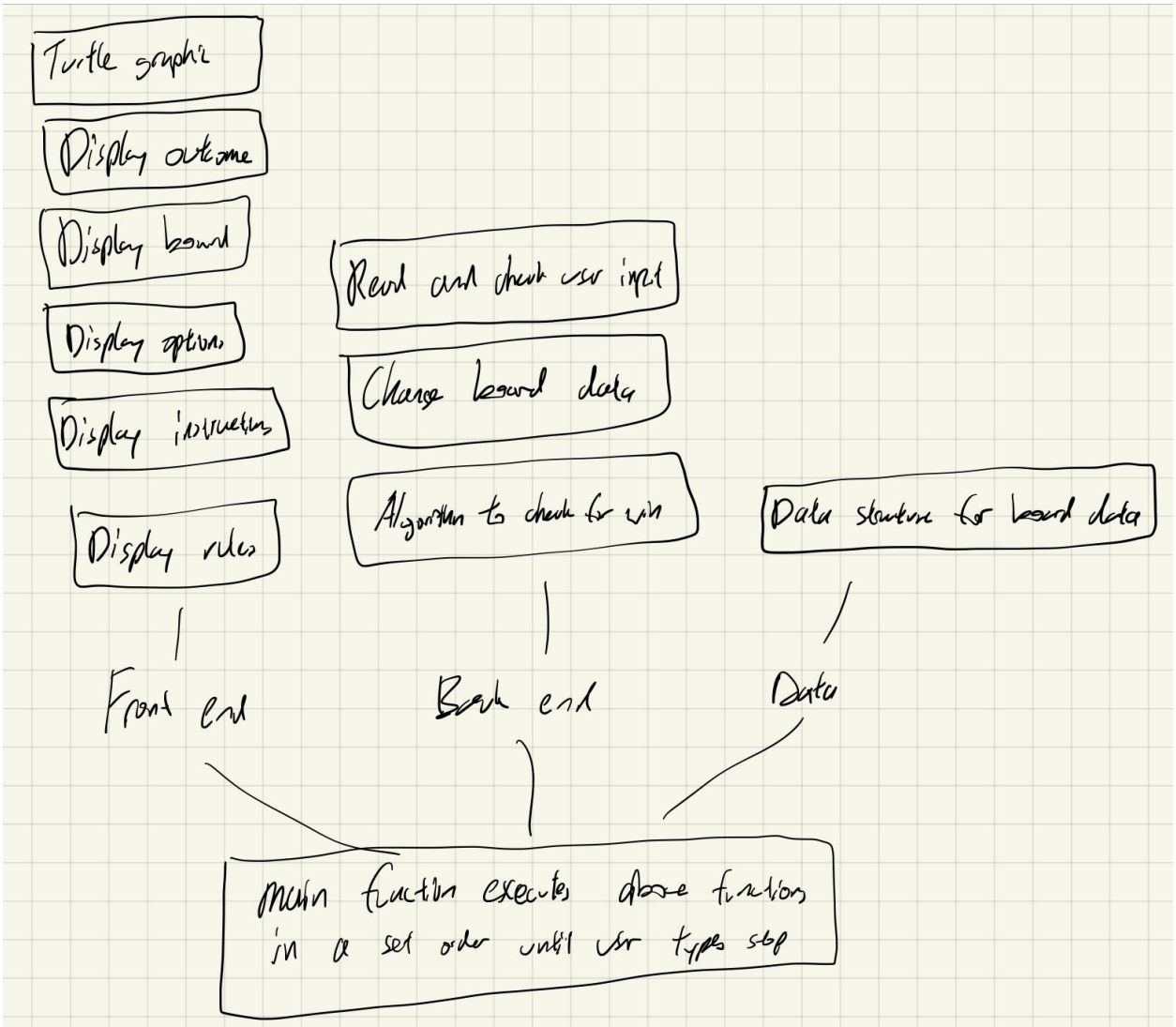
Activity #1: Planning our Program

Group Members: Kevin Lei, Quinn Hamilton, Joaquin Torres, Jinyu Zhou

Game Idea: Connect 4

Why Connect 4: We chose connect 4 because we found it easier to plan than bingo. It is much simpler than Bingo and is not as random and luck based. Connect Four is a solved game, where the first player can always win by playing the right moves. We practiced a similar game back in one of the previous lectures that used arrays and loops in one program.



How to run the game: When the game is first run, a set of options is displayed numbered 1 through 5 asking the players if they would like to view the instructions, view the rules, play the game, open a saved game, or exit. If the users choose to play, the board is displayed with letters above each column (A through G) and player 1 is asked to move. Player one can either enter Q to quit the game, S to save the game, or enter the letter of a column to play their move. Players 1 and two switch turns each round and the board is displayed each time. The first player to get 4 pieces in a horizontal, diagonal, or vertical line wins.

Valid inputs and expected outputs: When the options are displayed, the player can choose numbers 1 through 5 to display either instructions, rules, start the game, open a saved game, or exit in that order. Once they start playing, valid inputs include the letter of the column from A to G, Q to quit, and S to save the game. Expected output is after each play, the board is displayed with the piece in the column the player chose, a line saying which player's turn it is, and another line asking the player to enter a column for their next move.

How the code works: Our code has one class and 6 functions. The Game class creates outlines of the function and variables necessary for the game to work. The 6 functions can be called by the user with input 1-5 which can 1. Show instructions, 2. Show rules, 3. Play, 4. Open saved game, and 5. Exit.