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Final Project Proposal

<Dabbling with Scrabbling>

Our project will be a Java version of Scrabble, played by 1 person against the computer or 2 people against each other. The game board will be stored as a 2-D array, and a char array will be used to keep track of each player's letters. Letter point values will be stored as a separate array, using char values minus the char val of "a" to correspond to indices 0-25 and use the position of the letter in the alphabet to access these values. There will be another ArrayList serving as the "bag" with a preset selection of letters which diminishes as they are "removed" and placed into the players' racks. The game will keep track of the points each player scores and maintain a scoreboard, with the possible addition of a long-term leaderboard. Players will input their word by inputting the coordinates of its first letter, the direction(right or down) and the word. The program will then check that all the required spots are in bounds and may be filled by either letters in the player's rack or those already on the board in those spots, and that no invalid words are created. The most rudimentary AI will choose a random location to place a word,then check whether it is legal(same way that the computer checks if a player's word is legal)

Minimum Viable Product

-board with no visible delineation(or vertical as they are easier)
-player receives a "rack" of 7 letters
-moves are conducted by entering first letter pos, direction of word(right or down), and the word

-computer checks legality of word, whether the appropriate letters are available, and the legality of adjoining letters/perpendicular new words