REPORT

1.PROBLEM DESCRIPTION

In this problem, it is asked to make an interactive program to play a board game. The size of board must be 4\*4 and must be made of cells that contain letters and \*. The cells of the board can be identified by using coordinates. The cell in the top left corner has coordinate (1,1) whereas the lower right corner has coordinates (4,4). The player plays this game by moving the \* with directions that he/ she gives to the computer about which direction \* is to be moved. There are four directions which are allowed , right , left, up and down. When the player gives the direction, the \* moves and the character that is situated at \*’s right, left ,up or down swaps places with the \*. If the swapped character is G, the user earns 5 points and if the swapped character is P, the user earns 1 point.

The user can determine the initial configuration of the board. Because of that, the game must ask to the player whether the player wants to play with the default board or he/ she wants to choose inital configuration of the board. If the player determines the configuration, we assume that the player will enter the correct number of strings in correct form. When the user enters the rows, he needs to make sure that there is exactly one \* in all of the strings that she enters. And also the user chooses how many moves she wants to make. After each move, the game must show the final configuration and the total score.

2.PROBLEM SOLUTION

My program contains one main method to start the game and learn whether the user wants to default configuration of board or wants to create new board. Then it evaulates the answer and seslkrjfnulkdrsjfgbjkdsgfn. Then it prints the configuration and asks the user how many moves he wants to make and it calls the moves method to make the moves. And also my program contains six method ,one is to create a board, one is to make moves and the others to apply the directions that the user wants to do.Left method shifts the “\*” to the left , right method shifts the “\*” to the right, up method shifts the “\*” to the up and down method shifts the “\*” to the down unless there is a place to go on the right,left , up or down , other way this action will not have any inﬂuence on the board conﬁguration.

I used 8 if/else statements. One is to evaluate the answer yes or no for writing the configuration of board.Other if statement is formed if/else if/else if/else to evaluate the direction that the user wants to do. For example if direction is right , statements inside the if is to specify the changed letter with “\*” ,call the right method to rewrite the board ,print the new board confugiration and calculate the total score and print it. This occurs for each direction that the user wants to do. At right, left ,up and down methods ,briefly methods for directions basicly contains one if else statement.For example ,for right statement, if there is no place to go on the right it returns the last board configuration to the moves method,else, firstly checks the changed letter whether it equals to P or G it changes that letter to I and creates the new board and this new board returns to the moves method. It occurs fort he each direction method. The last method,score, is contains basicly if statements to calculate the last score by checking the changed letter by change.equals(). If changed letter equals to P , score will increase one point,if it equals to G, score will increase 5 points. If the changed letter dos not equal both P and G, this method returns the last score without any change.