

PROGRAMMING FUNDAMENTALS

PF Lab 12

Topic: 2D fixed sized array, passing 2D into functions.

Question 1:

Create a **Tic Tac Toe** board using fixed size 2D array and implement the following operations using functions:

Note: You may add more functions if required

- a) Initialize the complete board with -1.
- b) Display the complete board.
- c) Write a function to check if a particular row of the tic tac toe board has same values, if yes then return 1 else return -1.
- d) Write a function to check if a particular column of the tic tac toe board has same values, if yes then return 1 else return -1.
- e) Write a function to check if the left diagonal of the tic tac toe board has same values, if yes then return 1 else return -1.
- f) Write a function to check if the right diagonal of the tic tac toe board has same values if yes then return 1 else return -1.
- g) Write a function named play to play the tic tac toe game, initialize two integer variables to read the move of the player. You have two players who wants to play and you have to ask each player one by one to enter the row number and column number he wants to fill. Make sure that the box he/she wants to fill with his data must be empty (contains -1) , if not then ask him/her to re-enter his/her move .

In main function check once player 1 move completed, check for the win by using above functions created in (c,d,e,f). If he / she wins display the winning message for the player and if not then ask player 2 for his/her turn.