

CO222: Programming Methodology

Lab: 05

In today's lab you are going to implement a program to scan and print a Tic-Tac-Toe board, and to determine whether the game has been won and if so by which player.

Tic-tac-toe is a game for two players, X and O, who take turns marking the spaces in a grid. The player who succeeds in placing three respective marks in a horizontal, vertical, or diagonal row wins the game (see the following link for details: <http://en.wikipedia.org/wiki/Tic-tac-toe>).

When scanning the board, you should assume that 0 stands for NOUGHTS, 1 for CROSSES and 2 for an EMPTY cell. Note that you do not have to consider the case where both players have achieved full row, column or diagonal at the same time since this can never occur in a real game.

Input and output of your program should look like this:

```
./TicTacToe
Please enter the board:
0 1 1
0 1 1
0 0 2
Here is the board:
O X X
O X X
O O .
Noughts win
```

You are given a skeleton code called **E16XXXTicTacToe.c**. Your task is to complete the functions (called scanBoard, printBoard and getWinner). The main function is done for you.