

Write a class called `Board` that represents a tic-tac-toe board. It should have a 3x3 array of chars ('x', 'o', or a space, where a space would represent an empty square) as a data member, which will store the locations of the players' moves. It should have a default constructor that initializes the 3x3 array to being empty (each element set to a space character). It should have a method called `makeMove` that takes two ints and a char (either 'x' or 'o') as parameters, representing the x and y coordinates of the move (see the example below) and which player's turn it is. If that location is unoccupied, `makeMove` should record the move and return `true`. If that location is already occupied, `makeMove` should just return `false`. There should be a method called `gameState` that takes no parameters and returns one of the four following values: `X_WON`, `O_WON`, `DRAW`, or `UNFINISHED` - use an enum for this, not strings (the enum definition should go in `Board.hpp`, before the class, not inside it). [Optional: write a method called `print`, which just prints out the current board to the screen - this is not required, but will very likely be useful for debugging.]

Write a class called `T3Reader` that uses the `Board` class to re-run a game of `TicTacToe` from moves that it reads from a text file. This class will have a field for a `Board` object and a field to keep track of which player's turn it is. It should have a constructor that takes a char parameter that specifies whether 'x' or 'o' should have the first move. It should have a method called `readGameFile` that takes a string parameter that gives the name of the game file. The `readGameFile` method should keep looping, reading a move from the file, and sending it to the board (with `makeMove`). The `readGameFile` method should return *false* if any of the moves is for a square that was already occupied, or if there are still additional moves in the file after the game has finished. Otherwise it should return *true*. Make sure you close the input file in every case.

Here's an example of the format for the text file:

```
0 1
2 1
2 0
1 2
```

and so on. Which coordinate is the row and which is the column doesn't matter as long as you're consistent.

The files must be named: **Board.cpp**, **Board.hpp**, **T3Reader.cpp**, **T3Reader.hpp**.