

CS 42 C++ Programming Essentials:

Project TicTacToe:

Activity 0: Draw TicTacToe Game Board.

1. Please download the activity0.zip from piazza.com or eCodeHacker.com course C++ Programming Essentials TicTacToe project (after chapter 11).
2. Make sure you understand

tictactoe.cpp:

```
1  #include <iostream>
2  #include "Board.h"
3  using namespace std;
4
5  Board b;
6
7  int main(int argc, char** argv) {
8      b.draw();
9      b.set(1, 1, Board::X);
10     b.set(2, 1, Board::O);
11     b.set(1, 2, Board::X);
12     b.set(0, 0, Board::O);
13     cout << endl << endl;
14     b.draw();
15     return 0;
16 }
```

Board.h:

```
1  #ifndef BOARD_H
2  #define BOARD_H
3  #define ROW 3
4  #define COLUMN 3
5  class Board{
6  public:
7      static const char X = 'X';
8      static const char O = 'O';
9      static const char S = '_';
10     Board(){}
11     char get(int row, int col);
12     void set(int row, int col, char sym);
13     void draw();
14 private:
15     int rows = ROW;
16     int columns = COLUMN;
17     // unused cell set to underline first, then space for bebugging purpose
18     char cell[ROW][COLUMN]={
19         {S, S, S},
20         {S, S, S},
21         {S, S, S}
22     };
23 };
24 #endif
```

3. Please write the Board.cpp to complete this activity. (Note: there are more activity to complete this project.)
So, that the program execution result will looks like this:

```
Game  1 2 3
a     - - -
b     - - -
c     - - -

Game  1 2 3
a     0 - -
b     - X X
c     - 0 -
```

Note:

1. Practice the following ideas:
2D array, class, class variable accessed at main program, display of 2D array, writing member methods.