

CSCI 2170 Homework 4 Due: midnight, Wednesday, Oct 15th

This homework is modified based on problem 2 on page 660 of the textbook

A software company that develops games has just hired you! Before working on the next version of *Medieval Menace* they have given you the task of implementing the tic-tac-toe game in C++. Tic-tac-toe consists of 3x3 game board of squares whether each square is either empty, has an X marker, or has an O marker. Two players represented by an X or an O play the game. The objective is for one player to get three Xs or three Os in a row first.

Design, implement, and test a TTT class that represent a tic-tac-toe game board as well as the X and O markers. Your class should provide suitable observer and mutator methods for modifying the game board and displaying the state of the game. Use your class to create a game that prompts for player X and player O to place markers at specified locations on the game board. After each move, your program should display the current game board to the console. Your program should also check after each move if there is a winning configuration of the game board. If so, the game should complete indicating which player won.

Name the header file of the class: **ttt.h**, the implementation file: **ttt.cpp**, and the client program **main.cc**.

To submit the program on ranger, type the following command:

```
handin hw4 ttt.h ttt.cpp main.cc
```

To see how this program should run, you can download the executable program for this assignment from the course page. Since the executable is compiled and generated in the ranger system, it will only run properly within the ranger environment.