Problem 1:

Write code to play a Tic-tac-toe tournament. Tic-tac toe is a game for two players who take turns marking the spaces with Xs and Os in a 3x3 grid. The purpose of the game is to place three of your marks in a horizontal, vertical or diagonal.

You can use three vectors of strings to make up the 3x3 grid and modify it as the players enter their marks. Create a class called `Game` to store player information and perform the Tic-tac-toe games. Create a class `Person` that includes a name and a running score. The `Game` class should have fields for the players, all of which should be **_pointers_** to a `Person` object.

Write a main function that prompts the user for the name of the players and the number of games to play, then runs the games, and finally shows the overall winner. Compile your code and run your program to check for compile-time errors and logic errors. Figure 1 shows beginning and ending frames of a sample output.
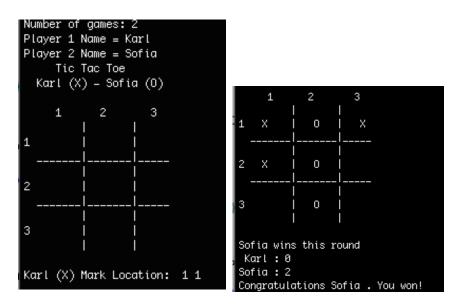

Figure 1: Sample output for Homework 1

Things to have for sure on the hmw1 code:

- code doesn't take wrong coordinates.

- code doesn't take already marked coordinates.

- players must be pointers.

- code doesn't crash if people input letters.

Good Coding Practices:

- think about cross-platform. Don't use Windows or Mac only commands. For example, system(pause) == cin.get() twice, write many \n vs. system(clear) or system('cls).

- passing objects by reference & or const & when appreciate

- using field initializer list when possible in all constructors

Instructions for submission:

- Name your files exactly `hw1.cpp`, `game.h`, `game.cpp`, `person.h`, and `person.cpp`.

- You may not use `#include "stdafx.h"`.

- Add code description in the comment at the beginning of the file.
  A sample description may look like:

```
/*
    PIC 10B 1A, Homework 1
    Purpose: Tic-tac-toe game
    Author: Hanqin Cai
    Date: 10/10/2000
*/
```

- Submit your header files and source codes to CCLE in separate files. Only .h and .cpp files should be uploaded.