

ASSIGNMENT 1 CONNECT FOUR
--

Specification

Connect Four is a game for two players, O and X, who take turns dropping discs from the top of a seven-column, six-row vertically suspended grid. The pieces fall straight down, occupying the next available space within the column. The objective of the game is to connect four of one's own discs next to each other vertically, horizontally, or diagonally before your opponent. In this assignment, you are tasked with coding this game.

Your program will prompt a specific player (O or X) to enter the column that they want to drop their disc in. The program will evaluate whether the move is valid. If it is valid, the lowest available slot of the column will be updated with a mark corresponding to the player's symbol. If it is invalid, the player will be asked to enter the column again. The program should run until Player X wins, Player O wins, or when there's a tie. A tie occurs when the board is full and neither player has won. The program ends with the announcement of the game's outcome.

Submission Procedure

Go to the Programming II Blackboard page and select the "Assignments" folder. Submit only one file labelled 'connect_four.cpp' through the "Assignment 1 – Submission Portal". **The submission deadline is 4 PM on 31 October 2015.** Submissions are NOT possible after this deadline.

Example Program Output

Connect Four Game

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----

```

Player O, enter a column: 5

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | |O| | |
-----

```

Player X, enter a column: 2

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| |X| | |O| | |
-----

```

Player O, enter a column: 4

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| |X| |O|O| | |
-----

```

Player X, enter a column: 5

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | |X| | |
-----
| |X| |O|O| | |
-----

```

Player O, enter a column: 3

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | |X| | |
-----
| |X|O|O|O| | |
-----

```

Player X, enter a column: 6

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | |X| | |
-----
| |X|O|O|O|X| |
-----

```

Player O, enter a column: 3

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | |O| |X| |
-----
| |X|O|O|O|X| |
-----

```

Player X, enter a column: 4

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | |O|X|X| |
-----
| |X|O|O|O|X| |
-----

```

Player O, enter a column: 3

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | |O| | | |
-----
| | |O|X|X| |
-----
| |X|O|O|O|X| |
-----

```

Player X, enter a column: 4

```

 1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | | | | | |
-----
| | |O|X| | |
-----
| | |O|X|X| |
-----
| |X|O|O|O|X| |
-----

```

Player O, enter a column: 3

```

  1 2 3 4 5 6 7
| | | | | | |
-----
| | | | | | |
-----
| | |O| | | |
-----
| | |O|X| | |
-----
| | |O|X|X| |
-----
| |X|O|O|O|X|
-----
Player O connects four!
```