

c:\Users\Khamille\Documents\Visual Studio ...\2D TIC TAC TOE\2D TIC TAC TOE\Gameplay.cpp 1

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// Khamille A. Sarmiento
// CS 265 - C++ Programming
// Prof. Raheja
// Project 3.2: Tic Tac Toe Game

#include <iostream>
#include <cstdlib>
#include <string>
#include "TicTacToe.h"
using namespace std;

int main() {
    char play;
    do {
        system("cls");
        cout << "// T I C - T A C - T O E //";
        cout << endl;

        const int SIZE = 3; // Size of the board.
        string player1; // String to hold name of Player 1.
        string player2; // String to hold name of Player 2.
        int row1, col1, row2, col2; // Int objects to hold subscripts of possible spaces.
        TicTacToe board; // TicTacToe object.

        cout << endl;

        // Gets the player's names.
        cout << "Player X, what is your name? ";
        getline(cin, player1);
        cout << "Player O, what is your name? ";
        getline(cin, player2);

        system("cls");
        cout << "// T I C - T A C - T O E //" << endl;
        cout << "\nWelcome " << player1 << "! Welcome " << player2 << "! \nWelcome to Tic
        Tac Toe!\n" << endl;
        system("pause");

        // Rules explained.
        system("cls");
        cout << "// T I C - T A C - T O E //" << endl;
        cout << "\nHere are the rules:\n\n";
        cout << "When it is your turn, type the space you'd like to place your \n";
        cout << "marker in this format: row column. Here's an example ==> 1 1 \n";
        cout << "Don't forget the space between your desired row and column! \n";
        cout << "Rows and columns only go from 1 to 3! Lastly, don't forget\n";
        cout << "to take turns! Okay, good luck!\n";
        cout << endl;
        system("pause");

        system("cls");

        cout << "// T I C - T A C - T O E //\n" << endl;
        board.print();
        cout << "\n" << endl;

        while(true) {
            cout << endl;
            // Player 1's turn.
            cout << player1 << "'s turn, what is your move? \n==> ";
            cin >> row1 >> col1;
            cout << endl;

            while (row1 > 3 || row1 < 1 || col1 > 3 || col1 < 1) { // Checks for valid
            row/col input.
                cout << "Invalid row and/or column. Please try again." << endl;
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        cout << "\n" << player1 << "'s turn, what is your move? \n==> ";
        cin >> row1 >> col1;
        cout << endl;
    }
    while(board.isMarked(row1-1,col1-1) == true) { // Checks spot availability
        cout << "That spot is already taken. Please try again." << endl;
        cout << "\n" << player1 << "'s turn, what is your move? \n==> ";
        cin >> row1 >> col1;
        cout << endl;
    }
    board.set('x', row1-1, col1-1); // Sets player1's move onto the board.
    board.print();

    if(board.isWinner() == true) { // Checks if player 1 is a winner.
        cout << player1 << " wins!" << endl;
        break;
    } else if(board.isFilled() == true) { // If the board is full and there was
no win, there was a tie.
        cout << "It's a tie!" << endl;
        break;
    }

    // Player 2's turn.
    cout << player2 << "'s turn, what is your move? \n==> ";
    cin >> row2 >> col2;
    cout << endl;

    while (row2 > 3 || row2 < 1 || col2 > 3 || col2 < 1 ) { // Checks for valid
row/col input.
        cout << "Invalid row and/or column. Please try again." << endl;
        cout << "\n" << player2 << "'s turn, what is your move? \n==> ";
        cin >> row2 >> col2;
        cout << endl;
    }
    while (board.isMarked(row2-1, col2-1)) { // Checks spot availability.
        cout << "That spot is already taken. Please try again." << endl;
        cout << "\n" << player2 << "'s turn, what is your move? \n==> ";
        cin >> row2 >> col2;
        cout << endl;
    }
    board.set('o', row2-1, col2-1); // Sets player2's mark onto the board.
    board.print();

    if (board.isWinner()) { // Checks if player2 is a winner.
        cout << "Player 2 wins!" << endl;
        break;
    }
} // end game loop

cout << "Play again (y/n)? \n==> ";
cin >> play;

while (play != 'n' && play != 'y') { // Loop if wrong response.
    cout << "Invalid answer. Please try again." << endl;
    cout << "Play again (y/n)? \n==> ";
    cin >> play;
}
} while (play == 'y');

system("cls");
cout << "// T I C - T A C - T O E //\n" << endl;
cout << "Thank you for playing tic tac toe. Goodbye!" << endl;
cout << endl;
return 0;
}

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c:\Users\Khamille\Documents\Visual Studio ...\2D TIC TAC TOE\2D TIC TAC TOE\Gameplay.cpp 3