C++ PROGRAMMING

Tic-Tac-Toe Using an Array and Functions

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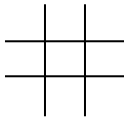
Tic-Tac-Toe

Tic-Tac-Toe.
Three in a row.
Played with an X and an O.

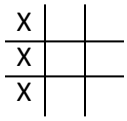


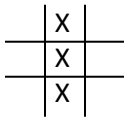
Two players take turns placing an X or an O in one of the squares. The goal is to get three X's or O's in a row to win the game while blocking the other player from getting three in a row.

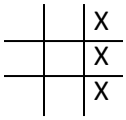
Eight Ways to Win

There are eight ways to win with either X or O.

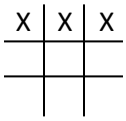
Vertical

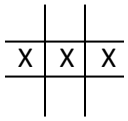


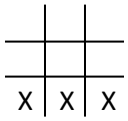




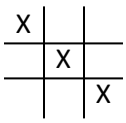
Horizontal

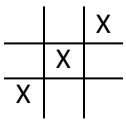






Diagonal





Tic-Tac-Toe Lab Assignment

Create a program using an array and functions that lets two players play the tic-tac-toe game.

1	2	3
4	5	6
7	8	9

The program is to read a number from 1 to 9 from the keyboard alternating between the X and the O.

Ask which square the X player wants, and then ask which square the O player wants. Continue until the game is won by either player, or all the squares have been filled. (Called a Cat's Game)

A Sample Game

X wins by completing the top row

First selection: X chooses 1

Next selection: O chooses 4

X wins filling squares 1-2-3

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Enter a 1 though 9  to select a square.

1 2 3
4 5 6
7 8 9
---------------------------------

Player X, enter a number (1-9): 1

X 2 3
4 5 6
7 8 9
---------------------------------

Player O, enter a number (1-9): 4

X 2 3
O 5 6
7 8 9
---------------------------------

Player X, enter a number (1-9): 2

X X 3
O 5 6
7 8 9
---------------------------------

Player O, enter a number (1-9): 5

X X 3
O O 6
7 8 9
---------------------------------

Player X, enter a number (1-9): 3

X X X
O O 6
7 8 9
---------------------------------

Player X wins the game
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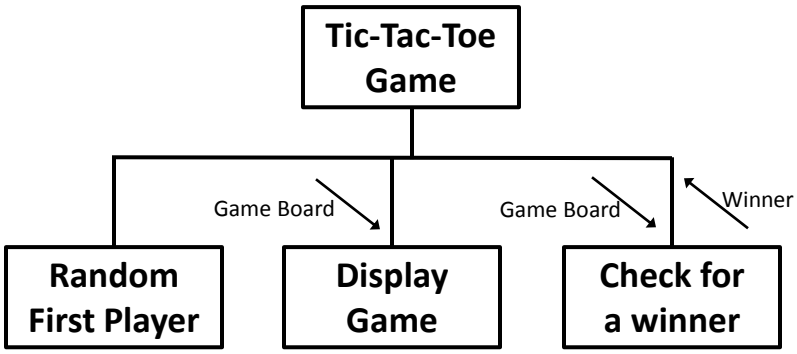
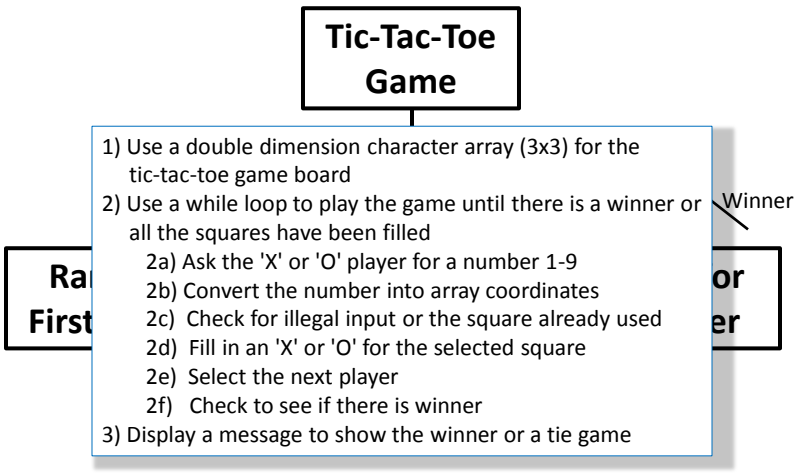
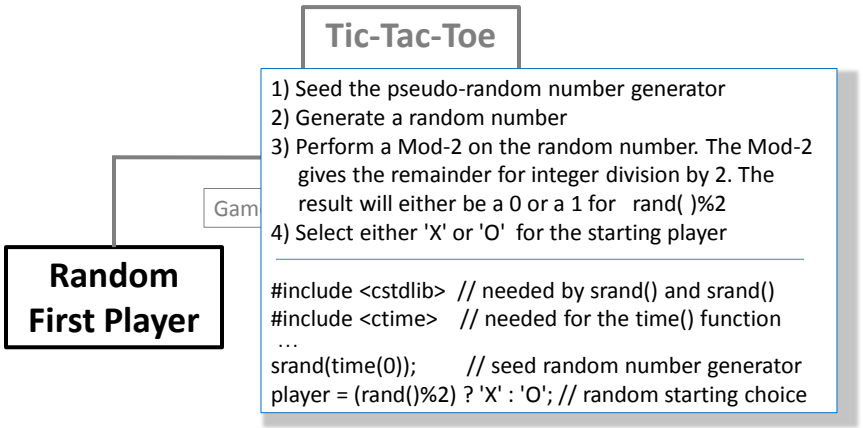
Top Level Design



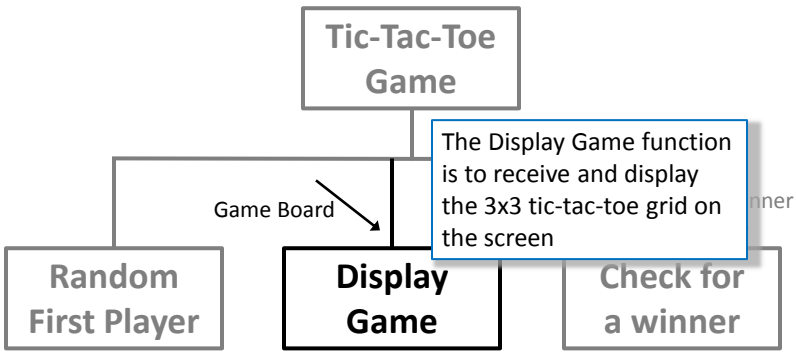
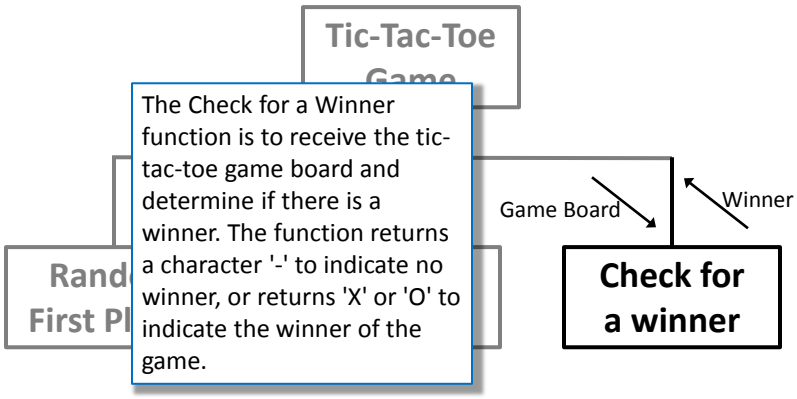
The main( ) Program



Randomize the First Player (X or O)



Display Game Function



Check for a Winner Function