

42U / FileMaker Programming Challenge – Bonus!

Your assignment is to build a FileMaker app that can play Tic Tac Toe. There are suggestions below for how to architect and code the app, but feel free to deviate as you'd like if you have other ideas you want to explore.

Schema:

You should just need one table, doesn't matter what you name it. Each record will represent a tic tac toe game. Give the option for 1 player vs. computer (PvC) or 2 players (PvP).

You'll need the following fields:

- nine text fields that will hold either an X or an O
- player 1 name
- player 2 name (for PvP)
- number field that indicates whose turn is next (will toggle between 1 and 2 via script)

Layouts:

Create a layout that displays the nine fields and such ... you can either just display the text in the nine fields, or you can have calculated container fields display an image instead if you want a nicer interface ... will require a couple of global container fields to hold the images, and 9 calcs that will test the nine text fields and return one of the images (use a Case statement for this).

Scripts:

You'll likely need the following scripts:

- **Start Game:**
 - Creates a new record, populate the whose turn field to 1
- **Move:**
 - You'll tie this to each of the nine squares on the board, and each will pass via script parameter which square has been clicked on (parameter can simply be 1 through 9).
 - The logic of a move is something like this:
 - Check to see if the square is already populated.
 - If so, display a message to try a different square
 - If it's not, then put an x or an o in the square, depending on whose turn it is
 - Check to see if there's a winner. no simple way to do this ... need to test all the combinations
 - if so, display a message announcing the winner
 - test to see if it's a tie (if all 9 squares are filled and there's no winner)
 - if not, toggle the turn

The move script is the complicated one ... build it up in pieces, testing frequently. Don't code a lot at once without testing, because if there's an issue, you won't know which section caused it.