

ECE 411
Homework 3
Requirements
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Revision: 3

Project Requirements:

- Must allow game play of a 2 human player tic tac toe game following standard rules
- Should be portable; small enough to carry around in a backpack unnoticed or to be left on a desk
- Should be comfortable to use while hand-holding
- Should utilize an LED matrix to display game-play
- Should have a decent battery life; enough to play more than a few games and not drain power while in the 'off' state
- Should be ready to allow input from the next player within the time it takes to pass the board to another person
- Should be able to identify if someone wins (three of a kind in rows, columns, or diagonals)
- Should be safe to handle while fully assembled
- Should accurately display user input
- Should hold player's choices visible until the end of the game
- Should reset itself after winning
- Should include an enclosure; may include a custom designed/printed enclosure
- Should be intuitive to use for players 8+

Marketing Requirements:	Engineering Requirements	Justification
2	1. Receive and display user input correctly in no more than 0.5 seconds	Previous simulations of the product dictate that longer delays lead to less intuitive game-play.
1, 3	1. System should not exceed 5"x5"	The game will not be as popular if it is not comfortable to use in a portable manner.
1	1. The device should last for at least 15 minutes of continuous game-play	The ideal system will include batteries which will last long enough to be carried in a backpack or sit on a desk (in the 'off' position in between uses of play.
2, 3	1. The system should distinguish	The use of software to

	between the input of the two users as well as the completion of a game 95% of the time	switch between players allows for less user-inputs and quicker game-play.
Marketing Requirements: <ol style="list-style-type: none"> 1. The system should be portable. 2. The system should have a fast access time; be reasonably responsive to input. 3. The system should be easy to use. 		