

# Language Study: Erlang

CMPT 333

## – Lab 4 - 75 points

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Goals	<ul style="list-style-type: none"><li>to continue your distributed programming adventure by turning your single-process Tic-Tac-Toe Mid-term Project into distributed client/server apps.</li></ul>
Requirements and Notes	<ul style="list-style-type: none"><li>Separate Tic-Tac-Toe (ttt) into two applications: <b>tttClient</b> and <b>tttServer</b>.</li><li>The <b>tttClient</b> displays the board, prompts the player for a move, and sends a messages to the <b>tttServer</b> until the game is over.</li><li>The <b>tttServer</b> receives messages from <b>tttClient</b>, makes the player's moves, monitors for wins and ties, makes the computer's moves, and sends appropriate messages back to <b>tttClient</b>.</li></ul>
Resources	<ul style="list-style-type: none"><li>Our book, links on our class website, and Erlang itself.</li><li>The <b>ttt.erl</b> source code handed out in class. Feel free to discard it or use it in its entirety. Better yet, use parts of it to improve any parts of your Mid-term Project that were lacking.</li></ul>
Hints	<p>Think about the messages that must be passed back and forth to control the flow of the game.</p> <ul style="list-style-type: none"><li><b>tttClient</b><ul style="list-style-type: none"><li>▶ send: new game request</li><li>▶ send: computer move request</li><li>▶ receive: player move, game state response (including the [board])</li><li>▶ ...and more</li></ul></li><li><b>tttServer</b><ul style="list-style-type: none"><li>▶ receive: new game request</li><li>▶ receive: computer move request</li><li>▶ send: player move, game state response (including the [board])</li><li>▶ ...and more</li></ul></li></ul>
Submitting Your Work	<p>Commit the following to your <i>Lab 4</i> directory in your <b>private</b> GitHub repository on or before the due date (see our syllabus):</p> <ul style="list-style-type: none"><li>all of your source code;</li><li>your test cases demonstrating how you handle errors and unexpected input; and</li><li>a few transcripts or screen shots of gameplay sessions demonstrating the features of your game.</li></ul>