

# System Programming (MEEC/MEAer)

## Project Assignment 2019/2020

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<b>Server minimum functionalities</b> <ul style="list-style-type: none"><li>• Server that reads the board</li><li>• Accepts multiple clients</li><li>• Sends board to clients</li><li>• Receives characters movements</li><li>• Send character updates to clients</li><li>• Correct movement</li></ul> <b>Client minimum functionalities</b> <ul style="list-style-type: none"><li>• Client reads movements</li><li>• Client updates board</li><li>• Color assignment</li><li>• </li></ul>	<b>8.0 Values</b>	<b>Concluded/Correct (100 %)</b>
<b>player connection</b> <ul style="list-style-type: none"><li>• kick out if there is no space</li><li>• update of the number of fruits</li><li>• unique ID</li></ul>	<b>+ 0.5 Values</b>	<b>Concluded/Correct (100 %)</b>
<b>2 movements per second</b>	<b>+ 1.0 Values</b>	<b>Concluded/Correct (95 %)</b>  <b>Pode existir um pequeno delay</b>
<b>Character inactivity (30 s + random)</b>	<b>+ 1.0 Values</b>	<b>Concluded/Correct (95 %)</b>  <b>Pode existir um pequeno delay</b>
<b>Fruits eating</b>	<b>+ 0.5 Values</b>	<b>Concluded/Correct ( 100 %)</b>
<b>Superpowerd pacman</b> <ul style="list-style-type: none"><li>• Transformation</li><li>• Counting of fruits</li></ul>	<b>+ 0.5 Values</b>	<b>Concluded/Correct ( 100 %)</b>
<b>Character interaction (MM MP SPM)</b> <ul style="list-style-type: none"><li>• Same player</li><li>• Montsre – pacman</li><li>• Superpowered pacman - monster</li></ul>	<b>+ 1.0 Values</b>	<b>Concluded/Correct ( 100 %)</b>

<b>Bounce on bricks</b>	<b>+ 0.5 Values</b>	<b>Concluded/Correct ( 100 %)</b>
<b>Bounce on walls</b>	<b>+ 0.5 Values</b>	<b>Concluded/Correct ( 100 %)</b>
<b>Game score board sending</b>	<b>+ 0.5 Values</b>	<b>Concluded/Correct ( 30 %)</b>  <b>É guardada a informação validada, mas não é enviada nem imprimida para o cliente.</b>
<b>player disconnect (release resources</b> <ul style="list-style-type: none"> <li>• Correct disconnect of clients</li> <li>• Correct management (destruction) of threads, sockets, memory</li> <li>• Update fruits</li> </ul>	<b>+ 0.5 Values</b>	<b>Concluded/Correct ( 95 %)</b>  <b>Quando o server se desconecta, a libertação de memória utilizada pode não ser total.</b>
<b>Project organization/quality</b> <ul style="list-style-type: none"> <li>• Correct structures (threads, communication channels)</li> <li>• Use of the correct algorithms</li> <li>• Correct code organization</li> <li>• Efficient communication</li> </ul>	<b>+ 1.0 Values</b>	<b>Concluded/Correct ( 85 %)</b>  <b>O server.c podia estar mais organizado.</b>
<b>Synchronization</b> <ul style="list-style-type: none"> <li>• Definition of the various critical regions and implementation of correct synchronization</li> </ul>	<b>+ 2.0 Values</b>	<b>Concluded/Correct ( 95 %)</b>  <b>Tudo sincronizado, mas algumas critical regions são grandes, embora não comprometam performance.</b>
<b>Errors treatment</b> <ul style="list-style-type: none"> <li>• Verification, correction of communication errors</li> <li>• Verification, correction of execution errors</li> </ul>	<b>+ 1.0 Values</b>	<b>Concluded/Correct ( 90 %)</b>  <b>Não temos a certeza, mas achamos que um cliente pirata pode corromper o nosso sistema de comunicação.</b>
<b>Code Structure</b> <ul style="list-style-type: none"> <li>• Correct implementation of suitable function to encapsulate functionalities</li> </ul>	<b>+ 0.5 Values</b>	<b>Concluded/Correct ( 95 %)\</b>
<b>Report</b>	<b>+ 0.5 Values</b>	<b>Concluded/Correct ( 60 %)</b>  <b>Em desenvolvimento.</b>

Discussion	+ 0.5 Values	Concluded/Correct ( 100 %)
	Alunos eloquentes	