**GROUP CHALLENGE**

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**Requirement 2**

**Data Structures**

The system uses serializable classes to represent signals sent to many of its processes. The actions of these processes are determined by the data type of the signal that they receive, and the processes use the data that the signal contains. This approach should allow for easy expansion of both the Controller and Player’s capabilities. It should also be possible to refactor the nested switch statement in PlayerManager – which handles the user’s input – to use pre-conditions, which are less complex and eliminate code repetition.

**Communication Structures**

The Player windows do not receive real-time updates on the actions of other users; the most notable consequence of this is that a Player may attempt to reveal a matching pair that has already been claimed by another Player.

**User Interactions**

If an enrolled user closes the Player window without pressing ‘Withdraw from game’, they will not be delisted from the Controller. The flow of the gameplay is also inconsistent; the user must first press a button to select their next pair of targets following an unsuccessful match, but can immediately select the next pair after a successful match.

**Surface-Level Issues**

* Pressing ‘Withdraw from game’ before enrolling as a player will instantly withdraw you from the game upon enrolling.
* Clicking on a target to reveal it, then clicking on it again, will be regarded as selecting a pair.
* If an incorrect pair is selected, clicking another target – including either target of the selected pair – will instantly reveal that tile after pressing ‘Select next pair’. This effect does not stack; if multiple targets are clicked on, pressing ‘Select next pair’ will only reveal the last one clicked.