

To: Overlord Founder of our Precious Startup
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Title: Designing a Player Interface

We were asked to build an interface for the player of a game with the following set of rules:

- (i) the player declares a number between 1 and 10;
- (ii) the administrator selects a card from a pile of cards each with a number between 1 and 10 and places it face down on the table;
- (iii) the player can either pick the card on the table or keep their number;
- (iv) the administrator reveals the card;
- (v) the player wins if their choice is the one with the bigger number.

From the above, we describe an interface for the player that provides the necessary player functions needed to accomplish steps (i) and (iii). The other steps are the responsibility of the administrator, which may use the outputs from the player to compute other game state values.

The interface is as follows:

Player

- declareNumber() → returns player's selected number to caller
 - Returns the selected number from the player (between 1 and 10) that the player has specified via the UI or stdin. This allows the player to accomplish steps (i).
- switchNumber() → returns boolean
 - Returns true if the player specifies that they wish to choose the administrator's number rather than their own (via the UI or stdin) during step (iii). Otherwise, returns false.