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Data Structures

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We decided to make the game Blackjack.

**Behaviors**

* A card is a simple object that has the parameters suit and rank, which is determined when it is constructed.
* A pile of cards is basically a list of cards, allowing the collection, interaction and organization of the cards.
* A deck of cards would be another “pile” object that is used for dealing out the cards, having the other “piles”, the hands of the players, play around it.
* A player’s hand would be another instance of piles that are used specifically for specific players, and would often change its contained objects as the game plays out.
* The player objects have names, scores, wins and their specific hand pile that they were assigned.
* The game is initialized by constructing players and initializing the main deck to contain all the needed cards, while the rules are the rules from the game Blackjack. Another feature is the ability to rematch.

**On the game itself**

* We have a maximum number of players capped at 4, and we can add artificial players if desired. We cannot run out of cards with the rules in place.
* The users would participate through the computer’s console, taking turns.
* Betting is not a feature for our game; if it were to be made, it would probably be a simple fix. Each player would have their “balance” in the player object, while the house may keep track of all the money that has been bet. The winner would simply add the amount that has been bet to their personal balance.
* If all the players were located in a separate environment, we would need to implement socket programming and have a server-client structure for the game so that the players can connect to each other and have a game running.