**CSC 478 Fall 2018 – Team #4: Poker Game**

**Back End Design**

**Version 0.1**

**10/18/2018**

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# Classes

See Spec Document... Need to figure out what the format should be for turn-in.

## Playing Card

### Constructors

| **Constructor** | **Requirement** | **Purpose** |
| --- | --- | --- |
|  | REQ040101 | Prevent invalid cards from being created |

### Properties

| **Property** | **Requirement** | **Purpose** |
| --- | --- | --- |
| Suit | REQ040301 | Keep track of card suit |
| Rank | REQ040302 | Keep track of card rank |

## Deck

### Constructors

| **Constructor** | **Requirement** | **Purpose** |
| --- | --- | --- |
|  | REQ040101 | Only allow proper decks to be created |

### Properties

| **Property** | **Requirement** | **Purpose** |
| --- | --- | --- |
| Cards | REQ040100 | Keep track of cards in deck |

### Functions

| **Function** | **Requirement** | **Purpose** |
| --- | --- | --- |
| Shuffle | REQ040200 | Randomly shuffle the deck |

## Player

### Constructors

| **Constructor** | **Requirement** | **Purpose** |
| --- | --- | --- |
|  | REQ020000 | Create a human player object |
|  | REQ030000 | Create a computer player object |

### Properties

| **Property** | **Requirement** | **Purpose** |
| --- | --- | --- |
| PlayerId | REQ020600 | Uniquely identify a human player |
|  | REQ030100 | Uniquely identify a computer player |
| Name | REQ020601 | Track human player name |
|  | REQ030101 | Track computer player name |
| Dollars | REQ020602 | Track human player amount of money |
|  | REQ030102 | Track computer player amount of money |
| Debt | REQ020603 | Track human player amount of debt |
|  | REQ030103 | Track computer player amount of debt |
| Wins | REQ020604 | Track human player number of wins |
|  | REQ030104 | Track computer player number of wins |
| Losses | REQ020605 | Track human player number of losses |
|  | REQ030105 | Track computer player number of losses |
| IsComputer | REQ020000 | Track if player object represents human or computer |
| SkillLevel | REQ030106 | Set skill level of computer player |

### Functions

| **Function** | **Requirement** | **Purpose** |
| --- | --- | --- |

## Poker Game

### Constructors

| **Constructor** | **Requirement** | **Purpose** |
| --- | --- | --- |
|  |  | Create a poker table |
|  | REQ050000 | Create a poker Game |

### Properties

| **Property** | **Requirement** | **Purpose** |
| --- | --- | --- |
| PokerGameId | REQ050100 | Uniquely identify game |
| Ante | REQ050500 | Track ante amount (allowed to be zero) |
| LowStake | REQ050600 | Track low stake (positive non-zero, smaller than high stake) |
| HighStake | REQ050700 | Track high stake (positive non-zero, larger than low stake) |
| NumberOfPlayers | REQ050800 | Set number of players allowed at the table |

### Functions

| **Function** | **Requirement** | **Purpose** |
| --- | --- | --- |

## Player Hand

### Constructors

| **Constructor** | **Requirement** | **Purpose** |
| --- | --- | --- |
|  | REQ040600 | Create an empty player hand for a player |

### Properties

| **Property** | **Requirement** | **Purpose** |
| --- | --- | --- |
| CardsInHand | REQ040600 | Track the cards in a player hand |

### Functions

| **Function** | **Requirement** | **Purpose** |
| --- | --- | --- |
| ClearHand |  | Start each game with empty hands for players |
| AddToHand |  | Allow dealer to add a card to a player's hand |
| FaceUpCards |  | Allow players and dealer to see face up cards at any time |
| Cards |  | Allow dealer to check all cards in hand during scoring |

### Constants

| **Name** | **Requirement** | **Purpose** |
| --- | --- | --- |
| HandSize | REQ040601 | Fixed number of cards per hand |

# Game Flow

# User Interface