

Game

Constructs the game to default specifications.

Parameters

None.

Response Element

A game element is constructed with two players. The first player is named via user input. The second player is the computer by default. A deck of cards is shuffled. The cards are then dealt to the players in alternating orders until each player has a hand of 7. A final card is drawn and set as the “pile” card off which the game is played.

Errors

If the deck of cards is not greater than or equal to 14, this function will attempt to draw cards that do not exist.

checkHand

Checks to see if the player can play any of the cards in their hand. If they cannot, the next card in the deck is drawn.

Parameters

`player_number`

Integer corresponding the position of the player in the array of players.

Type: Integer

Length Constraints: Assigned 0 or 1 by default

Required: Yes

`game_over`

True or false value indicating if the game is over or not (true the game is over, false the game is not over).

Type: Boolean

Required: Yes

Response Element

Cards are drawn until the player has a card in hand that is playable.

Before drawing a card from the deck, the number of cards remaining in the deck is checked. If there are no cards left in the deck, the game ends.

The player with the least cards in their hand wins. If the number of cards in each players hand is equal, the game is a tie.

`game_over`

True or false value indicating if the game is over or not (true the game ends, false the game does not end).

Type: Boolean

Required: Yes

Errors

This function assumes the deck has 52 cards. If the deck has fewer than 52 cards, it will attempt to draw cards that have not been created.

playCard

Allows the user to select which card to play.

Parameters

player_number

Integer corresponding the position of the player in the array of players.

Type: Integer

Length Constraints: Assigned 0 or 1 by default

Required: Yes

Response Element

If the selected card is not a valid play, the user is reprompted to choose another card.

If the selected card has a rank of 8, they are prompted to choose a suit. The suit is chosen by entering an integer between 1 and 4.

Errors

This function assumes cards are defined to have ranks and suits between 1 and 4. If there is a suit not defined in that range, this function will accept that card as a valid choice.

playComputer_card

Runs the computer player's turn.

Parameters

player_number

Integer corresponding the position of the player in the array of players.

Type: Integer

Length Constraints: Assigned 0 or 1 by default

Required: Yes

Response Element

The first card that is a valid option is played.

If the card selected has a rank of 8, a suit is randomly chosen by generating a number between 1 and 4.

Errors

This function assumes cards are defined to have ranks and suits between 1 and 4. If there is a suit not defined in that range, this function will accept that card as a valid choice.

turn

Runs through the player turn.

Parameters

`player_number`

Integer corresponding the position of the player in the array of players.

Type: Integer

Length Constraints: Assigned 0 or 1 by default

Required: Yes

Response Element

The `checkHand` function is called to verify that the player has cards they can play. This also verifies that the deck is not empty.

If the deck is not empty and the player has only 1 card left in their hand, the game is over, as they must play that last card.

If the player has more than 1 card and is the user, the `playCard` function is called.

If the player has more than 1 card and is the computer, the `playComputer_card` function is called.

`game_over`

True or false value indicating if the game is over or not (true the game ends, false the game does not end).

Type: Boolean

Required: Yes