**Card Game Documentation.**

**Display:**

The user is prompted with a numbered menu with different options to deal either a single card, a whole hand, or N amount of cards.

The user can also shuffle the undealt cards, or reset the deck.

Welcome to Card Dealer!

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

**Test Run:**

Let’s now walk through the program. Note: comments/explanations are provided in red italics

Welcome to Card Dealer!

Please make your selection

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(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

1 *//Let’s start simple by dealing one one card*

Dealer deals: [3 of Clubs]

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

2 *//Now let’s deal a whole hand of poker*

Dealer deals: [2 of Clubs, 9 of Spades, 6 of Spades, 6 of Diamonds, 10 of Diamonds, ]

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

3 *//Let’s dispense N cards now, (10 in this case).*

How many cards do you want?

10

Dealer deals: [6 of Clubs, Q of Diamonds, 8 of Clubs, 2 of Hearts, 10 of Clubs, 5 of Clubs, Q of Clubs, K of Clubs, 9 of Clubs, A of Clubs, ]

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

4 *//Let’s now display the cards left in the dealer’s hand after the previous deals. Notice there are NO DUPLICATES between the cards already dealt and the cards left.*

Dealer has 36 card(s) left: {4 of Hearts

3 of Diamonds

2 of Spades

6 of Hearts

8 of Hearts

9 of Hearts

A of Spades

J of Hearts

K of Hearts

J of Clubs

7 of Diamonds

4 of Diamonds

5 of Hearts

9 of Diamonds

3 of Spades

A of Hearts

J of Spades

4 of Spades

K of Diamonds

J of Diamonds

8 of Spades

5 of Spades

7 of Clubs

Q of Hearts

7 of Spades

10 of Hearts

10 of Spades

8 of Diamonds

A of Diamonds

Q of Spades

5 of Diamonds

3 of Hearts

2 of Diamonds

K of Spades

4 of Clubs

7 of Hearts

}

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

5 *//LEt’s now shuffle ONLY the cards remaining in the dealer’s hand.*

Deck has been shuffled...

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

4 *//After displaying the remaining cards again, notice they are the same as in the previous display, but in different order.*

Dealer has 36 card(s) left: {3 of Diamonds

7 of Hearts

4 of Clubs

5 of Diamonds

6 of Hearts

9 of Hearts

2 of Spades

K of Hearts

J of Hearts

7 of Diamonds

5 of Hearts

10 of Spades

5 of Spades

A of Spades

3 of Spades

8 of Hearts

K of Diamonds

8 of Diamonds

J of Spades

4 of Spades

8 of Spades

2 of Diamonds

A of Diamonds

9 of Diamonds

10 of Hearts

7 of Clubs

J of Diamonds

Q of Spades

7 of Spades

4 of Hearts

A of Hearts

Q of Hearts

J of Clubs

4 of Diamonds

K of Spades

3 of Hearts

}

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

6 *//Let’s now grab all the cards and put them back in the dealer’s hand (unshuffled).*

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

4 *//When we display the cards again, we have all 52 of them and they are again in the order they come out of a fresh pack.*

Dealer has 52 card(s) left: {2 of Clubs

3 of Clubs

4 of Clubs

5 of Clubs

6 of Clubs

7 of Clubs

8 of Clubs

9 of Clubs

10 of Clubs

J of Clubs

Q of Clubs

K of Clubs

A of Clubs

2 of Hearts

3 of Hearts

4 of Hearts

5 of Hearts

6 of Hearts

7 of Hearts

8 of Hearts

9 of Hearts

10 of Hearts

J of Hearts

Q of Hearts

K of Hearts

A of Hearts

2 of Spades

3 of Spades

4 of Spades

5 of Spades

6 of Spades

7 of Spades

8 of Spades

9 of Spades

10 of Spades

J of Spades

Q of Spades

K of Spades

A of Spades

2 of Diamonds

3 of Diamonds

4 of Diamonds

5 of Diamonds

6 of Diamonds

7 of Diamonds

8 of Diamonds

9 of Diamonds

10 of Diamonds

J of Diamonds

Q of Diamonds

K of Diamonds

A of Diamonds

}

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

5 *//Let’s shuffle the deck once again.*

Deck has been shuffled...

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

3

How many cards do you want?

51 *//Let’s dispense all cards but one. (Notice the order after the last shuffle).*

Dealer deals: [J of Spades, 3 of Clubs, 7 of Diamonds, 5 of Clubs, 7 of Clubs, 9 of Clubs, 5 of Diamonds, K of Spades, J of Clubs, Q of Clubs, 10 of Clubs, K of Clubs, 2 of Hearts, A of Hearts, 4 of Hearts, 8 of Diamonds, Q of Spades, 6 of Clubs, 9 of Diamonds, 6 of Hearts, 8 of Spades, 7 of Spades, Q of Diamonds, K of Diamonds, 3 of Hearts, J of Diamonds, 9 of Hearts, A of Spades, 8 of Clubs, 7 of Hearts, Q of Hearts, 8 of Hearts, 10 of Hearts, K of Hearts, 6 of Spades, 2 of Spades, 4 of Spades, 5 of Spades, 6 of Diamonds, 5 of Hearts, 3 of Spades, 9 of Spades, 2 of Diamonds, 10 of Spades, 4 of Clubs, 2 of Clubs, 4 of Diamonds, A of Diamonds, 3 of Diamonds, 10 of Diamonds, A of Clubs, ]

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

4 *//When checking how many cards are left, we only return one.*

Dealer has 1 card(s) left: {J of Hearts

}

Please make your selection

(1) To deal ONE card.

(2) To deal a hand (five cards).

(3) To deal N amount of cards.

(4) To show All the cards remaining of the deck.

(5) To SHUFFLE the deck.

(6) To RESET the deck.

(0) To Exit.

**The Code:**

This Implementation consists of three classes :

* Dealer
* Card
* main

**Class Dealer:**

**DeckOfCards**: List of type Card, to represent a deck of cards in a dealer’s hand.

**resetDeckOfCards**(): This method restores all the cards back in an UNSHUFFLED deck.

**shuffle**(): This method shuffles the deck of cards, given the cards left on the deck.

**dealOneCard**(): This method returns the top card of the deck.

**dealNCards**(**int** num): This method dispenses N amount of cards from the deck.

**showCardsLeft**(): This method displays the remaining cards in the dealer’s hand.

This method is particularly useful to keep track of the cards left versus the cards already dealt, as well as to test the shuffle() method.

**swap**(**int** loc1, **int** loc2): This method moves a certain card into a random position in the deck

**Class Card:**

**face**: A String representing the card’s face (2-A)

**suit**: A String representing the card’s suit (Clubs, Hearts, Spades, Diamonds)

**toString**(): Returns a String concatenating the face and suit.

**Class main:**

**main**(): The program’s point of entry.

**printMenu**(): Displays a numbered menu at the beginning of the program and after every selection.

**printNotEnoughMessage**(Dealer dealer): For the card-dealing options in the menu (options 1-3) , if there are not enough cards to meet the user’s request, it displays an error message prompting the user that there are not enough cards left in the deck.