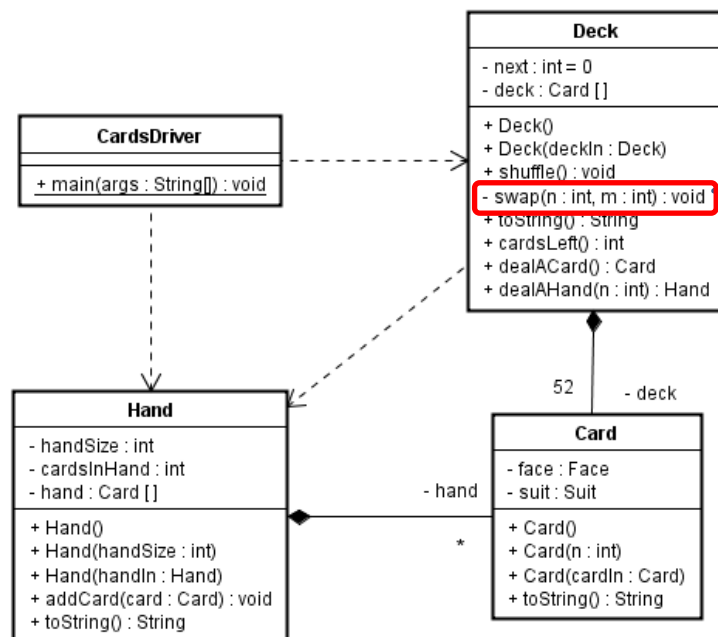




Hand of Cards

The Project

Extend the **Deck-of-Cards** project you have developed previously with the **Card** and **Deck** classes by adding a **Hand** class that implements the following **UML** diagram:



Optional
Method

Note that in addition to implementing the **Hand** class, you will need to modify the **Deck's dealAHand** method to return a **Hand** object instead of a **String** object.

The **driver** should be modified so that it has a **Deck**. It should prompt the user for the size of a **Hand** in the game being played and for the number of players.

It should then **shuffle** the **Deck** and **deal** and display the **Hands** for all players unless there are not enough **Cards** in the **Deck** (for example, we cannot deal 10 **Hands** of 7 **Cards** from a **Deck** of 52 **Cards**). The **driver** should display an error message if the user attempts to deal in an impossible situation such as this.

CSCI 1260 - Project 1B - Card-Deck-Hand

Hints and other specifications

1. The **Hand** class should allow for a **Hand** of any size from 1 to 52 **cards**.
2. The **Hand** class should have a **copy constructor** that does a **deep copy**.
3. The default **hand size** is **5 cards**, but a different size may be specified via the **parameterized constructor**.
4. The **addCard** method in **Hand** can be used to add one **Card** at a time to the **hand** array until it is full. It should increment the **cardsInHand** counter each time a **Card** is added to the **Hand** as long as there is room for the **Card** to fit into the **Hand**.

Upon completion

Submit your assignment in the same fashion as Project 1B (zipped project folder to D2L). There is no design document to include in this project other than a **complete UML diagram**.

Sample Output

The following figure shows sample output from one possible run of the program. User input is in blue and program output is in black. **Do NOT mix JOptionPane input/output with console output. Choose one or the other.**

```
How many cards are in one hand? 10
How many players are playing? 7
There are not enough cards in the deck to deal 7 hands of 10 cards. Try again.

How many cards are in one hand? 7
How many players are playing? 2

Player 1:
    TEN of CLUBS
    EIGHT of HEARTS
    NINE of CLUBS
    JACK of SPADES
    SIX of DIAMONDS
    THREE of HEARTS
    DEUCE of CLUBS

Player 2:
    THREE of SPADES
    KING of HEARTS
    FIVE of HEARTS
    SIX of CLUBS
    FIVE of DIAMONDS
    JACK of HEARTS
    THREE of CLUBS
```