



## CSCI 2170

### OLA 2 Due beginning of class, Tuesday, Feb 7<sup>th</sup>

This assignment requires that you rewrite OLA1 to define and use a class called “CardClass”. The 2 data members of this class are:

- the deck of cards implemented in terms of an array of CardStruct of size 52,
- the count of how many cards are remaining in the deck.

The class should include at least the following member functions:

- **Default constructor** which creates the deck of cards by assigning appropriate suit, value, and points for each card. A deck of cards contains four suits: Hearts, Diamonds, Spades, and Clubs. The cards are listed in order of their rankings: Ace, King, Queen, Jack, 10, 9, 8, 7, 6, 5, 4, 3, 2
- **ShuffleCard** which randomize the order of the 52 cards in the deck
- **DealCard** which deals out, or returns, one card to the program where the function is called. The card dealt out should be from the top of the deck. It should also decrement the number of cards remaining in deck by 1.
- **GetSize** which returns the number of cards currently in the deck
- **IsEmpty** which returns whether or not the deck is empty, e.g., no cards remaining

After you have defined the “CardClass”, write a client program that :

- (i) creates an object of CardClass;
- (ii) deals cards to 4 players (Each player is a 1-D array of CardStruct type, same as in OLA 1)
- (iii) sort each player’s cards
- (iv) displays the cards for each of the 4 players.

**Make sure to include detailed description (description, pre-condition, post-condition) of each method in the class in the header file.**

To turn in part A, create a script file including:

```
frank% script log
frank% pr -n CardClass.h
frank% pr -n CardClass.cpp
frank% pr -n ola2.cc
frank% aCC CardClass.cpp ola2.cc -o run
frank% run
frank% exit
frank% lph log
```

Notes:

- Assign face value 14 to Ace of a suit
- Put the definition of “CardStruct” in CardClass.h, instead of ola2.cc
- This is the first part of a larger program. If this part does not work properly, it can affect the next two OLA assignments.