CS151 Lab Assignment 13

Your Standard Deck of Cards

Although the only card needed by Lemmy Kilmister is the Ace of Spades, you need 52 cards in order to play most standard card games. For this lab, you will use components of the standard template library to make a deck of cards. This lab consists of several parts.

[](http://farm4.static.flickr.com/3146/2306575265_bd93f3ff92_z.jpg?zz=1)

# 1. Create a Card Class

Cards form the basis of a deck, so you will need either a class to model the cards. At a bare minimum, you will need attributes for the suit (e.g. spades), value(e.g. ace), and points (e.g. 13). You should define constructors, accessors, and mutators for this class. An overloaded insertion operator << is also a nice thing to have.

# 2. Create a Deck of Cards

Select one of the container classes (e.g. vector, deque, or stack) from the standard template library to model your deck. Since these are template classes, you can make your container class hold the cards, e.g. vector<card> deck1.

# 3. Initialize Your Deck

Add all the possible cards into your deck. You can do this by exhaustion or by using nested loops to set the suit, value, and points for the cards.

**Hint:** The ASCII character values for the various card suits are 3, 4, 5, and 6.

# 4. Shuffle Your Deck

Use the random shuffle function from the algorithms library to randomize your deck.

# 5. Create Two Hands of Cards

Use a different container class to make two hands of cards, e.g. List. One hand should be for the player while the other hand should be for the computer.

# 6. Print out the Hands

Declare an iterator for the set and use it to print out the cards in each hand.

# 7. Bonus

Have the two hands play a simple game such as war or crazy eights.