CSCI 2170 Spring 2011
Open Lab Assignment 2 (soft copy due: Midnight, Sunday, Feb 13th, 2011; hard copy due: beginning of class, Monday, Feb 14th)

Your program will implement the preparation routines used in a card game played among four players. First, the program shuffles a deck of cards, and then it deals the cards to each of the four players one at a time in clockwise rotation. After all cards are dealt to the players, the program organizes the cards in each player's hand by sorting their cards by suit. Then the program will display each player's cards.

Your program should have the following routines/functions:
(1) **FormCards** creates the deck of cards. The deck of cards should be represented as an array of stucts. The size of the array is 52. Each card is described by its suit, value, and points in game. For suit, create an enumeration type called "CardSuitType" that has the four values: DIAMOND, CLUB, HEART, SPADE. For card points in game, all the cards of HEART suit have points: each HEART card of less than 10 face value has 5 points; HERAT of 10, Jack, Queen, and King each has 10 points. In addition, Queen of SPADE has a point of 100, Jack of CLUB has a point of -100. The rest of the cards have 0 point.

(2) **ShuffleCards** shuffles the cards into random order.

(3) **DealCards** deals out shuffled cards to the four players. The cards of the four players are stored in a 2-D array of struct type. The 2D array is of size: 4 rows and 13 columns, where the 4 rows correspond to the 4 players and the 13 columns correspond to the 13 cards each player will receive. That is player one's cards are in row 1 of the 2D array, player two's cards are in row 2 of the array, etc..

(4) **SortCards** cards of one player is sorted by suit.

(5) **PrintCards** prints the cards of one player in sorted order. The card suit, value and points in game for each card are displayed. You are encouraged to add routines to make your output graphical.

Name your program cards.cpp. Follow the program requirements given in OLA1 description. In addition, self-grade your program using the program evaluation sheet provided.

Instructions to submit your program

- **Soft copy:**
  - login the ranger system with www.cs.mtsu.edu/nx,
  - login to PeerSpace through the web browser provided by the ranger system, click on *tools*|*Assignments* to submit your softcopy.
- **Hard copy**:
  - Create a script file by following the steps below:
    First, navigate to the directory where your program source file is located, then follow the steps below:
    $ script log2
    $ pr –n –t –e4 cards.cpp
    $ aCC cards.cpp
    $ a.out
    $ exit
    $ lph cards.cpp ←print the source code
  - Enclose the hardcopy of the program and the program evaluation sheet in a folder (at least 9"x12"), and put C# (the one I give you), your name, section #, instructor name on the folder. (**Note**: You can buy folders from the computer lab.)