

## Project #2

Write a program that allows the user to play the card game *flip*. Flip is played by one player with a standard deck of 52 cards. The game has the following steps:

1. The cards are shuffled three times.
2. The player keeps taking cards until the player decides to stop and end the game.
3. To take a card, the player turns over the top card on the deck and
  - (a) receives 10 points for an ace,
  - (b) receives 5 points for a king, queen or jack,
  - (c) receives 0 points for an 8, 9 or 10,
  - (d) loses half their points for a 7,
  - (e) loses all their points for a 2, 3, 4, 5 or 6, and
  - (f) receives 1 point extra, in addition to the above, for a heart.
4. The goal is to end the game with the most points.

### Part a

Fully implement a **card** class that stores a single card. A card includes a value and a suit (club, diamond, heart or spade). You should include constructors, set, and get functions, and an overloaded print operator.

Fully implement a **deck** class that stores the cards in a deck in order. A deck of cards should be implemented using a linked list of **nodes**, each of which contains a single card. The **deck** object should contain a pointer to the first card in the deck. You should include a constructor that creates a deck with all the cards in order (2-A, clubs to spades) and an overloaded operator that prints the cards in the deck.

Exceptions should be thrown for all error conditions and all exceptions should be caught.

Include a **main** function that initializes a deck and prints all the cards in the deck.