**Assignment 5: Card Game**

**Planning Part 1**

Game Setup-

Number of cards dealt: 2 each (one faced up and one faced down)

Min players: 2

Max players: 7

Moves: hit (add one card) or stay (get no cards) or out (too many points)

Times cards are dealt: 1

Winner: the winner is the one with the points total closest to 21. The dealer (i.e. the computer) is always winner if they have the same number as the user.

**Computer Strategy**

Translate the Chart   
The best way to do this is to translate the basic strategy chart into plain English that explains how to play a hand with three or more cards. Let's look at an example:

If your first two cards are and a 5 and a 3 you have a total of eight. The chart tells you to hit. You draw another 3, which gives you a total of eleven. The chart tells you to double on 11 but you can only double on your first two cards. Therefore you must hit.

When we translate the strategy chart into plain English, we use the word "otherwise" when dealing with situations that are different because of multiple cards. If we were to write out the example above it would be:*If you have 11 - double, otherwise hit.*

I have written out how to handle multi card decisions for hard hands, soft hands and split pairs. I have placed this information into three "How to Play" pages that you can link to below. Here is how to play basic strategy when there are more than two cards involved written out in plain English.

How to Play Hard Hands: -A hard hand is two starting cards that do not contain an ace.

8 or less away from 21

If you have eight or less, always hit.   
If you have Nine: Double if the dealer has 3 thru 6 - otherwise hit.   
If you have Ten : Double if the dealer has 2 thru 9 - otherwise hit.  
If you have Eleven: Double if the dealer has 2 thru 10, Hit if dealer has Ace.   
If you have Twelve: Hit if the dealer has 2 or 3, Stand if the dealer has 4 thru 6, otherwise hit.   
If you have 13- 16: Stand if the dealer has2 thru 6, otherwise hit.   
If you have 17 - 21: Always Stand.

How to Play Soft Hands: - A soft hand is when one of your starting hands contains an ace.

If you have Ace 2 or Ace 3: Double if the dealer has 5 or 6 - otherwise hit.   
If you have Ace 4 or Ace 5: Double if the dealer has 4 thru 6 - otherwise hit.   
If you have Ace 6: Double if the dealer has 3 thru 6 - otherwise hit.  
If you have Ace 7: Stand if the dealer has 2, 7 or 8. Double 3 -thru 6 - otherwise hit.   
If you have Ace 8 or Ace 9: Always Stand.

Overall Idea:

If the computers total<=17, the computer would hit

If the computer total>17, the computer would stay

