# **Abstract:**

The overall goal of the assignment is to create the card game 21 or sometimes known as Black Jack as a computer game. The game will be played by one user and will be played against the dealer, which will be automated by the software. The game will be strictly for entertainment purposes and will be a fully functional game that will be able to play against the computer as many times as one would like. In order to win the game, the user must be closer to 21 than the dealer is without going over.

### **Introduction**:

Card games are and have been extremely popular ways to entertain people for many years. However, one problem with card games is the fact that almost all games require more than one player. A program like this will allow a player to play black jack alone without needing a partner or a group of others to play with. The game will provide entertainment to Black Jack loving people that do not have other people to play with. The game fits into a perfect niche and has the potential to provide many people with hours of entertaining game play.

# **Detailed System Description:**

Deal cards ()

Draw card() int

Choose Ace() boolean

DealerCards() int

FinalCount() int

Compare () int

Winner () boolean

**Requirements:** 

There are many requirements that go into the game. For example each card can only be drawn once, therefore once the card is drawn it can not be drawn again until the next game. Another requirement is judging when the computer takes another card and when the computer dies not take another card. This will be judged based on the common rule that the dealer can not take another card if they're total is over 17. Another difficult requirement that must be added to the program includes how ace's will be counted, as in the game, based on the scenario, aces are either equal to 1 or 11. Other requirements include giving the user the ability to choose whether or not they would like another cars. Calculating the total by giving each card a value is also a value. There are many other requirements such as automatically drawing two cards for both the dealer and the player.

# **Literary Survey:**

There are many other similar products out on the market. The internet is littered with online games with varying topics. Card games are extremely popular and can be found very readily throughout the internet. Many other card games are single player games in which the player plays against a computer player. However, there are also very many games that are played as multiplayer games and people are playing against each other over the internet. Other black jack games available offer both single player games as well as games with multiple players playing in the same game. Many of the less complex black jack games are single player games. The simplest of the black jack games use one value for ace cards. Most of these simple games use the value of 1 for ace if the second second card in the original hand does not have a value of 10. Although there are many similar games available there is always room for more games of similar nature because they are so popular.

#### **User Manual:**

The user will enter the game and the user will be dealt two cards that he can see. The dealer will also be dealt two card which the user will not see. The dealer will then be dealt more cards if necessary. Once the dealer has sufficient cards, the user will be prompted weather they want another card. If the user chooses to get another card he will be dealt another card. He will again have the option to take another card two more times. Once the user elects to not take any more cards, the dealers cards will be shown and the cards will be compared. The system will then show who the winner is and the user will be prompted if they want to play again.

# **Conclusion:**

Overall, the system will provide a simple to play game that a user will be able to interact with. The game will be fun and simple to play and will be quite entertaining for people to play with any free time.

## **References:**

https://codereview.stackexchange.com/questions/46439/first-attempt-at-a-blackjack-game https://www.codecademy.com/en/forum\_questions/4f5d8c9362b76b000302e083