Fall 2018

CECS 282 – Final Project: Blackjack Slot Machine
Due on December 12th, 2018 @ 11:59 pm

A. Design a program in C++ that simulates a Blackjack Slot Machine. When the program runs, it should do the following:
a. Ask the user to enter the account number.
b. Ask the user to enter the amount of money he/she wants to bet.
c. The program will randomly select and show the user two cards.
d. The program will randomly select another two cards and show one card (dealer's cards).
e. The program will show the value of user's cards and ask if the user wants to **hit** or **stand** or **split**.
NOTE: The value of the two cards is determined by the sum of the value of each card. Face cards have value of 10. Ace would have value of 1 or 11. For example:
Ace and Ace have value of 12.
Ace and Queen have value of 21.
Queen and Jack have value of 20.
King and two have value of 12.
f. If the user decides to **stand**, decide how the program will select a card for the dealer.
g. If the user decides to **hit** and the total value is less than 21, the program will select a card for the user. If the total value of the user's cards is more than 21 during this process, the user will lose; otherwise, decide how the program will select a card for the dealer.
h. If the user decides to **split**, the dealer will draw two cards for the user. The user now has two hands. Also, an additional bet of equal value to the original bet is placed on the second hand. Proceed the game as in step f and/or g.
i. The winner is determined by the total value of the cards.
-If the value of the user's cards is more than the dealer's cards but less than 21, the user wins.
-If the value of the user's cards and the dealer's cards are the same, the game is a tie.
-Otherwise, the dealer wins.
j.
- If the user wins, the money inputted will be doubled.
-If the user ties, the money inputted will be split in half.
-If the user loses, the user win 0 dollars.

k. The program will ask whether the user wants to play again. If so, these steps are repeated. If not, the program displays the total amount of betting money and the total amount won.
l. Be sure to update the player's account accordingly.

B. Write a report to describe your algorithm. The report should include:
1. Front page (name of project, school, and group members).
2. Introduction – describe the purpose of the program.
3. Program Analysis and algorithm design.
   - Describe any variables involved in the program
   - Describe any functions used in the program
   - Describe algorithm for main function.
4. Program Code – Complete program listing
5. Sample run – show "every" possible outcomes of this program.
6. Provide UML diagram that shows relationship between classes you use in the project

NOTE: This program should use at least three classes Card, Player, and Account.