Project 1: Blackjack

Jonathan Stanley

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Introduction:

This is a standard blackjack game only all the face cards are already valued at 10.

The objective is for the user to either reach 21 or stay below 21 while staying higher than the dealer.

Summary:

This project displays most of the concepts learned so far mind a few because this is how blackjack is played, a lot of if this, if that.

It took a while to make considering all the rules that accompany blackjack.

This project has 176 lines with 17 variables.

Reference:

1)Textbook

Program:

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\* File: main.cpp

\* Author: Jonathan Stanley

\* Created on March 15, 2018, 12:30 PM

\* Purpose: Blackjack

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//System Libraries Here

#include <iostream>

#include <fstream>

#include <string>

#include <iomanip>

#include <ctime>

#include <cmath>

#include <cstdlib>

using namespace std;

//User Libraries Here

//Global Constants Only, No Global Variables

//Like PI, e, Gravity, or conversions

//Function Prototypes Here

//Program Execution Begins Here

int main(int argc, char\*\* argv) {

//Declare all Variables Here

int comp,player; //Keep the total of the players and computers hand

string pname; //Name of the player

char hit; //If the player wants to take another card or not

char cont; //If the player wants another hand

int pcard1,pcard2,ccard1,ccard2; //Value of the cards pulled for comp and player

int pscore,cscore; //holds the total score of hands

int newcard; //Value of the new card

int newamt=0; //Adds the value for the sum of new cards drawn

int Ace; //User choice if they want they're ace to be a 1 or 11

int firAce; //The first ace

//Shuffle the deck of cards

int random;

srand(static\_cast<unsigned int>(time(0)));

ofstream deckFile;

deckFile.open("Deck.doc");

for(int count=1;count<=52;count++){

random=rand()%10+1;

deckFile<<random<<endl;

}

deckFile.close();

//Open the file to read

ifstream readfile;

readfile.open("Deck.doc");

//Input and start game

cout<<"This is blackjack between you and the computer(the dealer)"<<endl;

cout<<"1=Ace,Jack,Queen,King==10"<<endl;

cout<<"Please enter your name ";

cin>>pname;

cout<<"The computer will now deal you two cards"<<endl;

do{

//Deal the cards to comp and player

readfile>>pcard1;

readfile>>pcard2;

readfile>>ccard1;

readfile>>ccard2;

cout<<"Your cards are "<<pcard1<<setw(4)<<pcard2<<endl;

cout<<"The dealers face up card is "<<ccard2<<endl;

if (ccard1==1||ccard2==1){

int randAce;

randAce=rand()%2+1;

if (randAce==1){

comp+=1;

}

else {

comp+=11;

}

}

//Ask the user if they want their ace to be a 1 or 11

if (pcard1==1||pcard2==1){

cout<<"Would you like this Ace to be a 1 or 11?"<<endl;

cin>>firAce;

if (firAce==1){

player+=1;

}

else if (firAce==11){

player+=11;

}

}

//Ask the user if they want another card

do{

cout<<"Would you like to take another card? (y or n)"<<endl;

cin>>hit;

if (hit=='y'){

readfile>>newcard;

cout<<newcard<<endl;

if (newcard==1){

cout<<"Would you like this Ace to be a 1 or 11?"<<endl;

cin>>Ace;

if (Ace==1){

newamt+=1;

}

else if (Ace==11){

newamt+=11;

}

}

else{

newamt+=newcard;

}

}

}while (hit=='y');

//Sum up player and comp cards

if (player==1||player==11){

if (pcard1==1){

player+=pcard2+newamt;

}

else if (pcard2==1){

player+=pcard1+newamt;

}

}

else {

player=pcard1+pcard2+newamt;

}

if (comp==1||comp==11){

if (ccard1==1){

comp+=ccard2;

}

else if (ccard2==1){

comp+=ccard1;

}

}

else {

comp=ccard1+ccard2;

}

newamt=0;

if (player<21&&comp<21){

if (player>comp){

cout<<"Congratulations you had "<<player<<" over the dealers "

<<comp<<" "<<pname<<" won that hand!"<<endl;

pscore++;

}

else if (comp>player){

cout<<"The dealer won that hand with "<<comp<<" over your "

<<player<<"!"<<endl;

cscore++;

}

}

else if (player==comp){

cout<<"You and the dealer pushed with "<<player<<endl;

}

else if (player>21){

cout<<"You busted at "<<player<<" , the dealer wins!"<<endl;

cscore++;

}

else if (comp>21){

cout<<"The dealer busted at "<<comp<<" , you win!"<<endl;

pscore++;

}

else if (player>21&&comp>21){

cout<<"You and the dealer busted, it's a push"<<endl;

}

//Reset the total of player and the computer

comp=0;

player=0;

//Ask if the user wants another hand

cout<<"Would you like to play another hand? (y or n) ";

cin>>cont;

}while (cont=='y');

//Output total amount of hands won by the user and computer

cout<<"You won "<<pscore<<" hands!"<<endl;

cout<<"The computer won "<<cscore<<endl;

readfile.close();

//Exit

return 0;

}