Notes

This is a Banking application project created using the REPL.it platform within the C++ language. An initial account is created upon running the code. Then calls upon the respective functions, to begin manipulating the total amount provided to you.

The Logic: After first running the code, an account must be created before entering the banking application menu. Once an account has been created, it will present the menu option, for the following options to manipulate your initial total balance of 100coins:

- Withdraw amount
- Deposit amount
- Check amount
- Account info
- Quit session

I have uploaded the code here for you to learn and explore further on your own. If you have any questions message me on my website below.

Anthony's Website: https://anthonyconstant.co.uk/

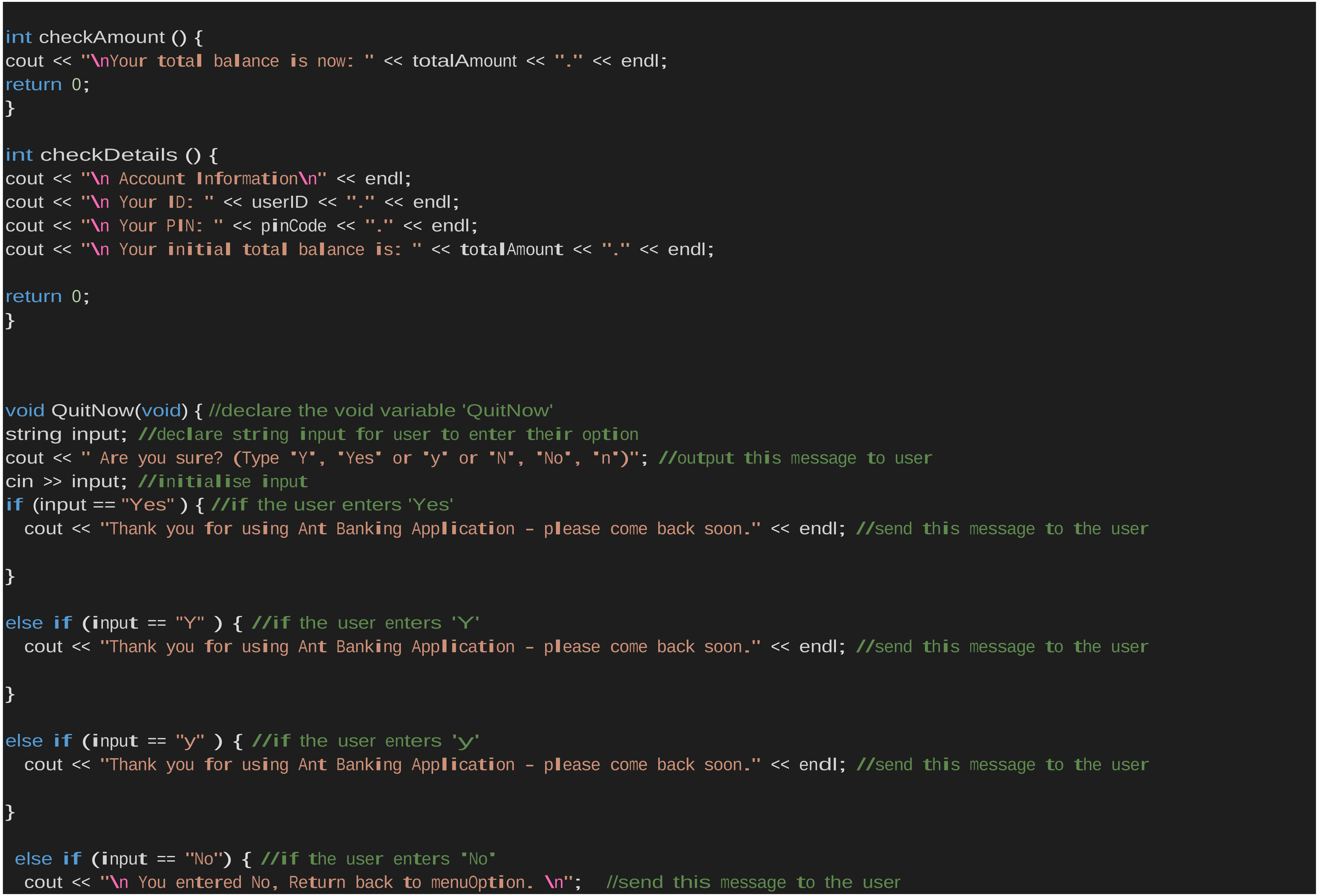
REPL.IT
Share Link: https://replit.com/@Ant94x/Banking-Application-Project

C++ COPY & PASTED LOCAL SOURCE CODE

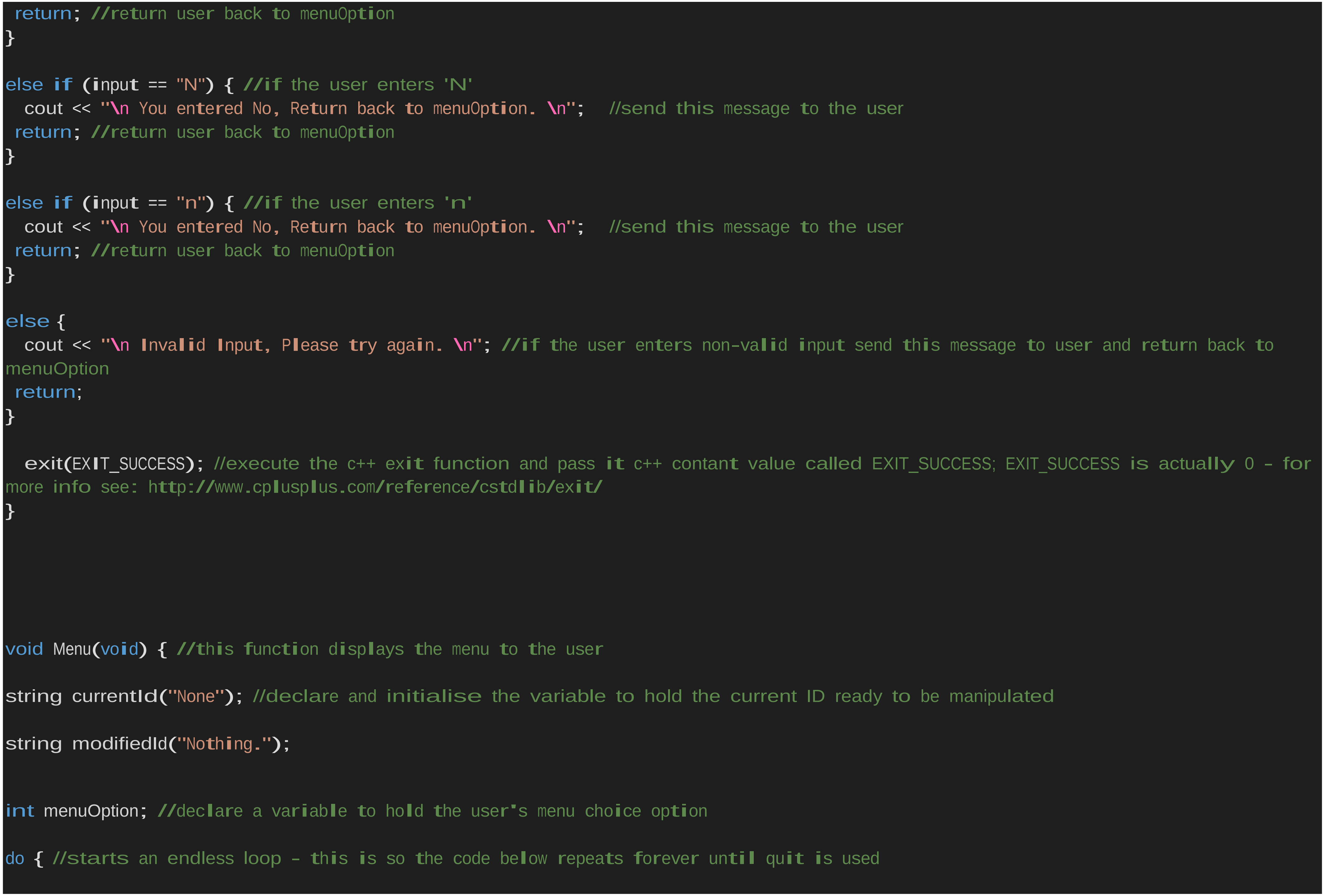
```
#include <iostream>

//*********************************************************************************************************
//AC BANKING APPLICATION
//********************************************************************************************************

#include <iostream> //std::cout
 //defines the standard devices cin, cout, clog, cerr; for more info see http://www.cplusplus.com/reference/iostream/

#include <string> //defines string types and conventions including begin & end iterator; for more info see
http://www.cplusplus.com/reference/string/


#include <algorithm> //std::shuffle
//defines a collection of ranged functions; for more info see http://www.cplusplus.com/reference/algorithm/

#include <random> //std::default_random_engine
//defines random number generation facilities; for more info see http://www.cplusplus.com/reference/random/

using namespace std; //tell the compiler that by default to use the “std” – this means  that we  don’t need  to keep  saying “std::cout” we
can just use: “cout”


//FEATURES and REQUIREMENTS

//STORE ID AND PIN IN GLOBAL VARIABLES
//WITHDRAW AMOUNT
//DEPOSIT  AMOUNT
//CHECK AMOUNT
//CHECK ACCOUNT INFO
//CLOSE  SESSION
//ADD WITHDRAW LIMIT
```

//CHANGELOG

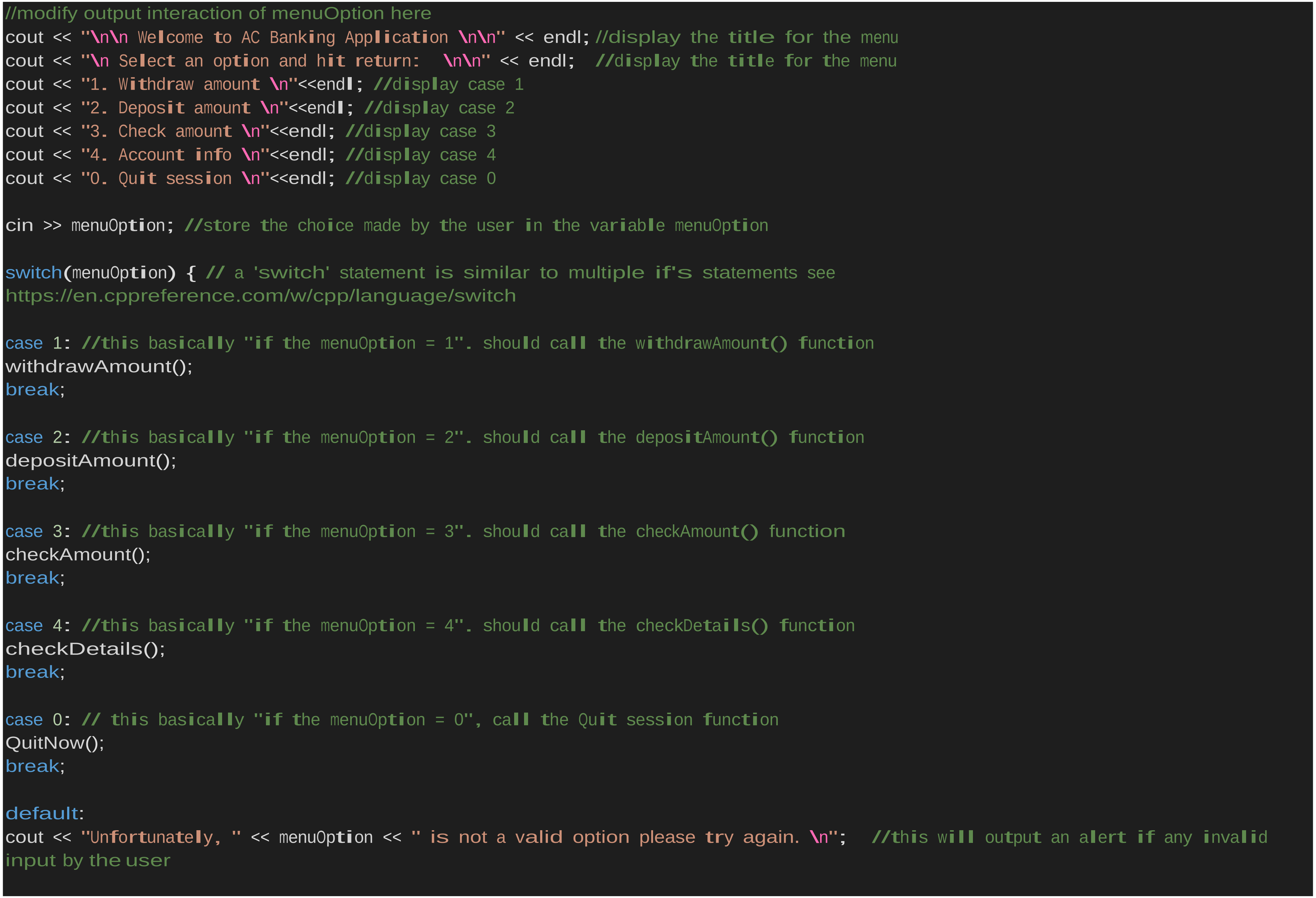
```cpp
// 16.07.20 Template created
//16.07.20 - Created void Menu function to store the menu to be used in main 'Menu();'
// 16.07.20 - Created menuOption variable to store the user's choice
// 16.07.20 - Created main menu to accept user input and execute correct function - used a do while loop to create an endless loop until
user enters 'O' menuOption to quit.
//16.07.20 - Created cout string to output the interaction of menuOption within the do {} while loop
//16.07.20 - Created cin input for menuOption to store the users choice
//16.07.20 - Created switch statement to call the correct function upon the user's choice
//19.04.21 - Fixing bugs in the withdrawAmount function
//19.04.21 - Added debugging info using cout in localString
//19.04.21 - Fixed global totalAmount variable to store global user amount
//20.04.21 all global variables have been declared to store total amount left, ID and PIN; USE FUNCTIONS TO MANIPULATE THE GLOBAL
VARIABLES


//BEGIN TO CREATE THE FUNCTIONS

int totalAmount = 100; //declare global variable to store overall balance
int userID;//declare global variable to store ID
int pinCode;//declare global variable to store pin









// Allow user to withdraw amount
void withdrawAmount (void) {


  //Declare variables
  double withdrawAmount;


  cout << "\n\n Welcome to Withdraw function \n\n" <<endl;
  cout << "\n Enter an amount you would like to withdraw: " <<endl;
  cin >> withdrawAmount;
  cout << endl;
  cout << "You have entered " << withdrawAmount << " for the amount you would like to withdraw" <<endl;

  if (withdrawAmount > totalAmount) {

    cout << "\n Sorry your total balance is too low to withdraw the amount requested." << endl;

   } else {


  totalAmount = totalAmount - withdrawAmount ;

  cout << "\n\nYour total balance is now: " << totalAmount << "." << endl;

    }
}




// Allow user to deposit amount
void depositAmount (void) {

  //Declare variables
  double depositAmount;


  cout << "\n\n Welcome to Deposit function \n\n" <<endl;
  cout << "\n Enter an amount you would like to deposit: " <<endl;
  cin >> depositAmount;
  cout << endl;
  cout << "You have entered " << depositAmount << " for the amount you would like to withdraw" <<endl;

  totalAmount = totalAmount + depositAmount ;

  cout << "\n\nYour total balance is now: " << totalAmount << "." << endl;

}
```



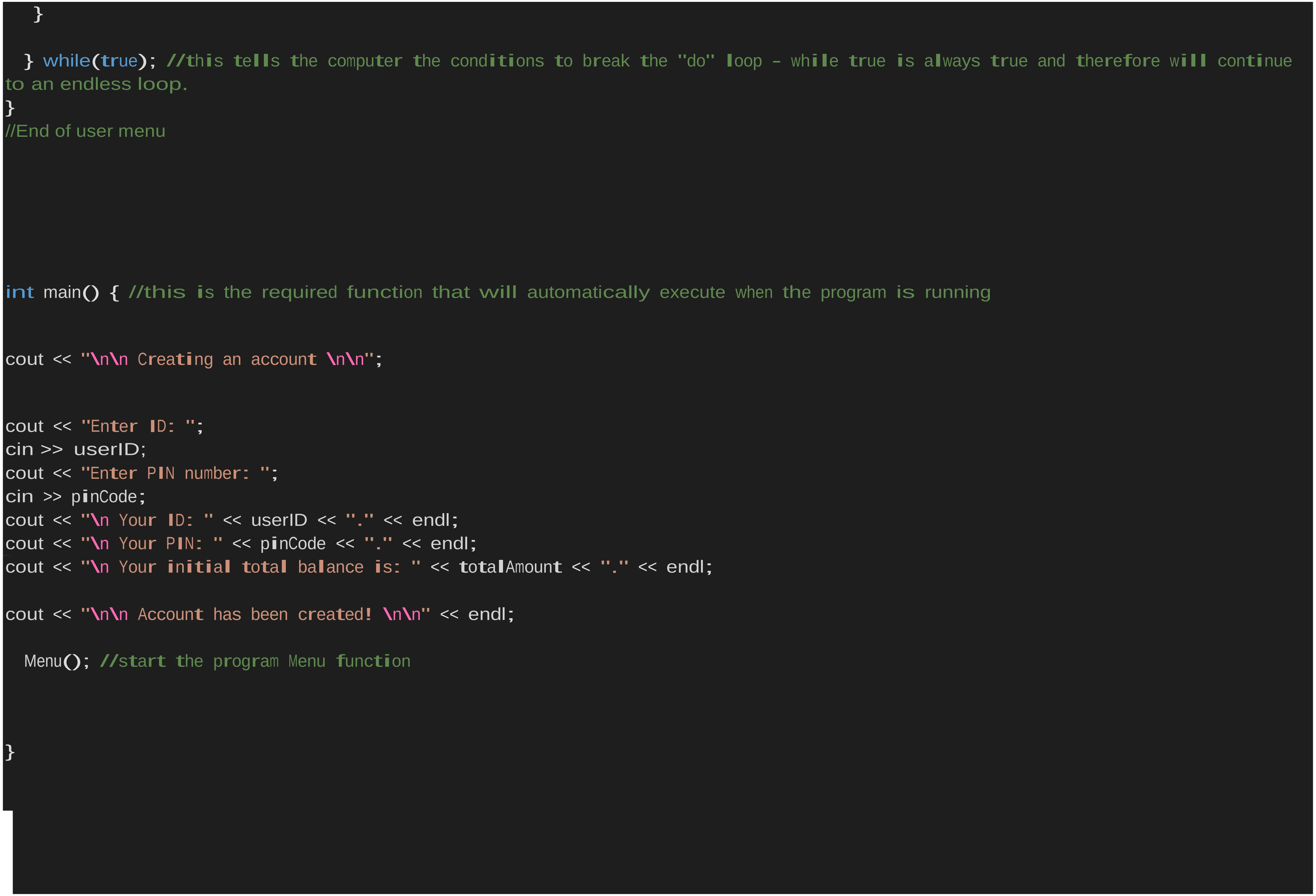
```
int checkAmount () {
cout << "\nYour total balance is now: " << totalAmount << "." << endl;
return 0;
}

int checkDetails () {
cout << "\n Account Information\n" << endl;
cout << "\n Your ID: " << userID << "." << endl;
cout << "\n Your PIN: " << pinCode << "." << endl;
cout << "\n Your initial total balance is: " << totalAmount << "." << endl;

return 0;
}



void QuitNow(void) { //declare the void variable 'QuitNow'
string input; //declare string input for user to enter their option
cout << " Are you sure? (Type "Y", "Yes" or "y" or "N", "No", "n")"; //output this message to user
cin >> input; //initialise input
if (input == "Yes" ) { //if the user enters 'Yes'
  cout << "Thank you for using Ant Banking Application - please come back soon." << endl; //send this message to the user

}

else if (input == "Y" ) { //if the user enters 'Y'
  cout << "Thank you for using Ant Banking Application - please come back soon." << endl; //send this message to the user

}

else if (input == "y" ) { //if the user enters 'y'
  cout << "Thank you for using Ant Banking Application - please come back soon." << endl; //send this message to the user

}

 else if (input == "No") { //if the user enters "No"
  cout << "\n You entered No, Return back to menuOption. \n";   //send this message to the user
```



```
 return; //return user back to menuOption
}

else if (input == "N") { //if the user enters 'N'
  cout << "\n You entered No, Return back to menuOption. \n";   //send this message to the user
 return; //return user back to menuOption
}

else if (input == "n") { //if the user enters 'n'
  cout << "\n You entered No, Return back to menuOption. \n";   //send this message to the user
 return; //return user back to menuOption
}

else {
  cout << "\n Invalid Input, Please try again. \n"; //if the user enters non-valid input send this message to user and return back to
menuOption
 return;
}

  exit(EXIT_SUCCESS); //execute the c++ exit function and pass it c++ contant value called EXIT_SUCCESS; EXIT_SUCCESS is actually 0 - for
more info see: http://www.cplusplus.com/reference/cstdlib/exit/
}




void Menu(void) { //this function displays the menu to the user

string currentId("None"); //declare and initialise the variable to hold the current ID ready to be manipulated

string modifiedId("Nothing.");


int menuOption; //declare a variable to hold the user's menu choice option

do { //starts an endless loop - this is so the code below repeats forever until quit is used
```



```
//modify output interaction of menuOption here
cout << "\n\n Welcome to AC Banking Application \n\n" << endl; //display the title for the menu
cout << "\n Select an option and hit return:  \n\n" << endl;  //display the title for the menu
cout << "1. Withdraw amount \n"<<endl; //display case 1
cout << "2. Deposit amount \n"<<endl; //display case 2
cout << "3. Check amount \n"<<endl; //display case 3
cout << "4. Account info \n"<<endl; //display case 4
cout << "0. Quit session \n"<<endl; //display case 0

cin >> menuOption; //store the choice made by the user in the variable menuOption

switch(menuOption) { // a 'switch' statement is similar to multiple if's statements see
https://en.cppreference.com/w/cpp/language/switch

case 1: //this basically "if the menuOption = 1". should call the withdrawAmount() function
withdrawAmount();
break;

case 2: //this basically "if the menuOption = 2". should call the depositAmount() function
depositAmount();
break;

case 3: //this basically "if the menuOption = 3". should call the checkAmount() function
checkAmount();
break;

case 4: //this basically "if the menuOption = 4". should call the checkDetails() function
checkDetails();
break;

case 0: // this basically "if the menuOption = 0", call the Quit session function
QuitNow();
break;

default:
cout << "Unfortunately, " << menuOption << " is not a valid option please try again. \n";   //this will output an alert if any invalid
input by the user
```



```
   }

  } while(true); //this tells the computer the conditions to break the "do" loop - while true is always true and therefore will continue
to an endless loop.
}
//End of user menu






int main() { //this is the required function that will automatically execute when the program is running


cout << "\n\n Creating an account \n\n";


cout << "Enter ID: ";
cin >> userID;
cout << "Enter PIN number: ";
cin >> pinCode;
cout << "\n Your ID: " << userID << "." << endl;
cout << "\n Your PIN: " << pinCode << "." << endl;
cout << "\n Your initial total balance is: " << totalAmount << "." << endl;

cout << "\n\n Account has been created! \n\n" << endl;

  Menu(); //start the program Menu function



}
```

[redacted]