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| Computer Programming |
| Course Code: CSC 113 |
| **Assignment 3** |
| Submission Instructions:   * The assignment is to be submitted individually. * Submission deadline is 1 January 2023 |

* For programming questions, include the code and screenshot of output
* Make sure to use this file to submit your solutions.
* **\*Remember to follow best practices, including comments.**

Submission by:

Name: Saad Ahmad Enrollment Number: 01-134222-130

You are required to take on a real-life situation and propose and develop a solution using your knowledge of programming in general and the concepts studied in this course in specific. Maximum of 3 members are allowed.

Submit following details as your first milestone of your project.

1. Project title: Bank Management System
2. Group Members:

|  |  |  |
| --- | --- | --- |
| **Sr. No** | **Full Name** | **Enrollment Number** |
| **1** | Saad Ahmad | 01-134222-130 |
| **2** | Sohaib Ahmed | 01-134222-142 |
| **3** | Muhammad Talha Umer | 01-134222-104 |

1. Project Scope:

|  |  |
| --- | --- |
| **Functional Requirement #** | **Description of Functional Requirement** |
| **1** | Lets the user open an account in the bank |
| **2** | Lets the user perform transactions (online and offline) and all other necessary operations |
| **3** | Lets the manager check and update the details of the employees |
| **4** | Lets the employee enter the attendance |
| **5** | Integration of all the branches of the bank |

1. Programming Deliverables

100 to 200 lines of code containing one or more functions other than the **main()** function.

No need to submit main(). Only submit the functions used in your project.

Code:

int clear()

{

system("CLS");

return 0;

}

struct account {

string name, uname, pword, rpword;

int numberofrecords;

long int accountnum;

int balance;

}uaccount;

int naccount()

{

ifstream in;

in.open("account.dat", ios::binary);

while (in.read((char\*)&uaccount, sizeof(uaccount))) {

}

in.close();

uaccount.numberofrecords++; //increments the number of users created

uaccount.accountnum = 1000000 + uaccount.numberofrecords; //Assigns account number to a user

cout << "Enter your Full Name:" << endl;

getline(cin >> ws, uaccount.name);

cout << "Enter your User Name:" << endl;

cin >> uaccount.uname;

for (;;) {

cout << "Enter your Password:" << endl;

cin >> uaccount.pword;

cout << "Re-enter your Password:" << endl;

cin >> uaccount.rpword;

if (uaccount.rpword == uaccount.pword) { // checks if the passwords match

cout << "Your account has been created successfully" << endl;

break;

}

else {

cout << "Passwords do no match" << endl;

}

}

uaccount.balance = 0; //set the account balance of the user to 0

userdata();

return 0;

}

int userdata() {

ofstream out;

out.open("account.dat", ios::app | ios::binary);

out.write((char\*)&uaccount, sizeof(uaccount)); // writes all the data from the user above

out.close();

/\* ifstream in;

in.open("account.dat", ios::binary);

cout << "Sr.\tAccount Number\tName\t\tUsername\tBalance" << endl;

while (in.read((char\*)&uaccount, sizeof(uaccount))){

cout << uaccount.numberofrecords << "\t" << uaccount.accountnum << "\t\t" << uaccount.name << "\t" << uaccount.uname << "\t" << uaccount.balance << endl;

}

in.close(); \*/

return 0;

}

int userlogin()

{

bool check = false;

string username, pword;

for (int i =0;i != 5;) {

cout << "Enter username: " << endl;

cin >> username;

cout << "Enter password" << endl;

cin >> pword;

ifstream in;

in.open("account.dat", ios::binary);

while (in.read((char\*)&uaccount, sizeof(uaccount))) {

if (username == uaccount.uname) { // checks if the username entered by the user exists in the file

if (pword == uaccount.pword) {

cout << "Login Sucessful";

i = 5;

system("pause");

clear();

in.close();

break;

}

else {

cout << "Invalid Password" << endl;

clear();

}

}

else {

cout << "Invalid username" << endl;

system("pause");

clear();

break;

}

}

}

return 0;

}

int ulogin()

{

int choice;

cout << "Press 1 to create a new account" << endl;

cout << "Press 2 to login to your existing account" << endl;

cin >> choice;

clear();

if (choice == 1)

{

naccount();

}

else if (choice == 2)

{

userlogin();

}

return 0;

}







