Heaven's Light is Our Guide
Rajshahi University of Engineering & Technology
Department of Computer Science & Engineering

Assignment

Course Code: **CSE 1203**

Problem Statement: We know bKash is a pioneering mobile financial service in Bangladesh that has played a significant role in transforming the country's financial landscape. Launched in 2011, bKash was established as a joint venture between BRAC Bank Limited, one of Bangladesh's leading private banks, and Money in Motion LLC, a US-based technology company. Our goal is to write a similar type of program that would be very close to their functionalities. The name of our application is **myCash**.

Write a C++ program to create myCash application using class and objects to fulfill the following criteria.

i.   The program is capable of storing data for each member permanently in a file. The member data includes mobile-no, name, amount and pin.

ii.   To use the system a user must register first.

iii.   The program should be menu operated

iv.   The program starts with a login menu. If login successful then main menu appears.

v.   Define a class with data members mobile, name, amount and pin.

vi.   Treat mobile number as the key information for each member.

vii.   Create facilities for cash-in, cash-out, send-money and pay- bill.

viii.   The system must check for duplicate member.

ix.   The application should produces appropriate error message when required (table 1)

x.   The system must use OTP (one time passcode) when more security is required like Add Member, Change pin, Send money, Cash-out and Pay bill. The time validity for the OTP is 2 minutes.

xi.   The History stores the details of each transaction like Transaction ID, Customer Mobile, Type of Transaction etc. with Date and Time.

a. The classes look like

```
class Member{

 //Declare data members
 //Write member functions
};

class History{

 //Declare data members
 //Write member functions
}
```

b. The login look like :

*** MyCash Login**

1. Login
2. Register
3. Exit
    Enter Your Option:

```
********** MyCash Menu ********

     1. Update Me
     2. Remove Me
     3. Send Money
     4. Cash-in
     5. Cash-out
     6. Pay Bill
     7. Check Balance
     8. History
     9. Logout
        Enter Your Option (1-9):_
```

c. Few Snapshots:

1. Register a new member

```
Enter your option(1-3):2 <enter>
Enter Mobile No. (11-digit): 01714228567 <enter>
Enter Name: John Borris <enter>
Enter pin (5-digit): *****<enter>
Reconfirm pin: ***** <enter>
myCash OTP: 2319
Enter OTP: 2319 <enter>
Registration is Successful
Press any key go to main menu.....
```

2. Login Form

```
Enter your option(1-3):1 <enter>
Enter Mobile No. (11-digit): 01714228567 <enter>
Enter pin: ***** <enter>
Login is Successful
```

3. Update a Member

```
Enter your option(1-9):1 <enter>
Old Name: John Borris
New Name (enter to ignore):
Old pin: *****
New pin (enter to ignore): ***** <enter>
Confirm New pin: ***** <enter>
```

```
myCash OTP: 2419
Enter OTP: 2419 <enter>
Update is Successful
Press any key go to main menu.....
```

5. Remove a Member

```
Enter your option(1-9):2 <enter>
myCash OTP: 2519
Enter OTP: 2519 <enter>
Remove is Successful
Back to MyCash Login Menu
```

6. Send Money

```
Enter your option(1-9):3 <enter>
Enter Destination no. (11-digit): 01713447831 <enter>
Enter Amount: 2000 <enter>
Sending 2000 to 01713447831
Are you sure(Y/N)? Y <enter>
myCash OTP: 2619
Enter OTP: 2619 <enter>
Send Money is Successful
Press any key go to main menu.....
```

7. Cash-In

```
Enter your option(1-9):4 <enter>
Enter Amount: 4000 <enter>
Cash-in 4000
Are you sure(Y/N)? Y <enter>
Cash-in is Successful
Press any key go to main menu.....
```

8. Cash-Out

```
Enter your option(1-9):5 <enter>
Enter Amount: 2000 <enter>
Cash-out 2000
Are you sure(Y/N)? Y <enter>
myCash OTP: 2719
Enter OTP: 2719 <enter>
Cash-out is Successful
Press any key go to main menu.....
```

9. Pay Bill

```
Enter your option(1-9):6 <enter>
Enter Bill Type (Gas/Electricity/Water/Internet-1/2/3/4): 4 <enter>
Your Internet Bill: 1000
Want to pay(Y/N)? Y <enter>
myCash OTP: 2819
Enter OTP: 2819 <enter>
Bill Payment is Successful
Press any key go to main menu.....
```

10. Check Balance

```
Enter your option(1-9):7 <enter>
Balance: 2375
Press any key go to main menu.....
```

11. History

```
Enter your option(1-9):8 <enter>
Tran ID    Description      Amount   Balance
    101    Cash-in          1000     5200
    105    Send Money       3000     2200
    109    Internet Bill    1000     1200
Press any key go to main menu.....
```

Table: 1

	Message to be Displayed
1	Member already exists
2	Member NOT exists
3	Insufficient Fund
4	Invalid Mobile Number
5	OTP does NOT matched
6	OTP time has expired
7	Pins must be same
8	Invalid login
9	Destination Mobile no. is invalid
10	Invalid Option
11	Enter Y or N

*************** Best of Luck *********************