VTC Academy

BASIC PROGRAMMING LANGUAGE
IT1003
***
FINAL ASSIGNMENT

1. Scope Knowledges:

- Build Console Application
- Learn how to organize a program with multiple functions
- Learn how to combine the knowledge learned about loops, arrays, functions, structs, ...
- Learn how to store and manipulate files
- Learn how to debug a program
- Get excited about building more complete programs

2. Type of Assessment: Presentation/ Submission

3. Materials/ Softwares/ Tools:

- gcc Compiler
- Visual Studio Code

4. Final Assignment:

Topic Description	Mark (100 mark)	Evaluation criteria
Topic 1: Building a program to create ATM cards	10	Account number and pin in the correct format
	10	Save to file

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Topic 2: Build a program to simulate the operation of an ATM machine	20	UI and menu
	15	Check account balance function
	15	Withdrawal function
	15	Transfers function
	15	Change PIN function

4.1. Topic 1: Building a program to create ATM cards

Description:

- Enter the following account information:
  - Account name
  - Account number: A sequence of 14 digits
  - Pin code: A sequence of 6 numbers
  - Account balance: Greater than or equal to 50.000 VND
- Store information to file (account-number.dat)

Evaluation criteria:

- Account number and pin in the correct format
- Save to file

Suggestions:

- Save account information as text file

Sample Product:

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- UI Sample

```
====================================
 VTC Academy Bank
====================================
 Create ATM Cards
------------------------------------
 Input Account Name: Nguyen Van A
 Input Account No:   12345678901234
 Input Pin Code:     123456
 Input balance:      10000000
------------------------------------
 Create ATM complete!
 Do you want to create ATM Card? (Y/N): _
```

4.2. Topic 2: Build a program to simulate the operation of an ATM machine

Description:

- Build a program to simulate the operation of an ATM machine
- The program includes the following main functions:
  - Check the card's account
  - Enter the pin code
  - Confirm
  - Make transactions
  - Print transaction information at ATMs

Evaluation criteria:

- UI and menu
- Check account balance function
- Withdrawal function
- Transfers function

3

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- Change PIN function

Suggestions:

- Read card information from the account-number.dat file in the following ways:
  - Use the atm cards created in the above topic
  - Use text file with format:
    ```
    Nguyen Van A
    12345678901234
    123456
    10000000
    ```

Sample Product:

- ***UI Sample for checking account balance function:***

```
===================================
 VTC Academy Bank
===================================
 ATM Machine
-----------------------------------
 Account No: 1245678901234
 Pin Code:   ******
-----------------------------------
 Account Name: Nguyen Van A
-----------------------------------
 1. Checking account balance
 2. Withdrawal
 3. Transfers
 4. Change PIN
 5. End of transaction
-----------------------------------
 Your choice: 1
```

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```
    Balance in the account: 10.000.000 VND
    Press any key to continue...
```

- ***UI Sample for Withdrawal function***

```
==================================
           VTC Academy Bank
==================================

            ATM Machine
----------------------------------

1. Checking account balance
2. Withdrawal
3. Transfers
4. Change PIN
5. End of transaction
----------------------------------

Your choice: 2
==================================
           VTC Academy Bank
==================================

ATM Machine – Withdraw
----------------------------------

1.    100.000 VND
2.    200.000 VND
3.    500.000 VND
4. 1.000.000 VND
5. 2.000.000 VND
6. Other number
----------------------------------

Your choice: 3
----------------------------------
```

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```
Do you want print ? (Y/N): Y
.....
==================================
          VTC Academy Bank
==================================
      BIEN LAI RUT TIEN TAI ATM
----------------------------------
Ngay: 20/12/2021        Gio: 10:10
So the:            1234xxxxxx1234
So giao dich:          0987654321
So tien:             500.000 VND
Noi dung:     Rut tien mat tai ATM
----------------------------------
So du:             9.500.000 VND
Le phi:                1.000 VND
VAT:                     100 VND
----------------------------------
     Cam on quy khach da su dung
        dich vu cua chung toi!
----------------------------------
```

- ***UI Sample for Tranfers function***

```
==================================
          VTC Academy Bank
==================================
             ATM Machine
----------------------------------
1. Checking account balance
2. Withdrawal
3. Transfers
```

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```
 4. Change PIN
 5. End of transaction
-------------------------------------
 Your choice: 3
-------------------------------------
 Tranfer to Account: 12345678901235
 Money to tranfers: 100000
-------------------------------------
 Transfer complete!
-------------------------------------
```

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