



جامعة العلوم والتكنولوجيا  
University of Science and Technology

**C/C++ Programming Lab NANENG 312**

**Dr. Yasser El-Awady**

**Eng. Abdelrhman Ali Arafa / Eng. Abdullah sabry**

## Project Phase #2



### **Name ID**

Mahmoud Mohamed Mabrouk 202201297

Ahmed Sultan 202201086

Amna Mahmoud 202201575

Marwan Mohamed 202201652

❖ methodology

**Understanding:**

- The system is a simulation of an ATM supporting multiple banks.
- It operates in two main modes: **ADMIN** and **CUSTOMER**.

#### **ADMIN Mode Features:**

- Can **add/delete** accounts (maximum 100 accounts).
- Protected by a password.
- Exits the program after 3 incorrect password attempts.

#### **CUSTOMER Mode Features:**

- Access via **user ID and password** (3 incorrect attempts = program terminates).
- Has two account types:
  - **Checking Account:**
    - Deposit
    - Withdraw
    - Transfer to another customer
    - Change password

#### **How to use for customer:**

- First, the message you see is "Default customer loaded 1-Admin 2-Customer 0-Exit"
- Second, if you choose 2(customer) the next message will be "user ID" asking you for your ID, after that the message is "Enter your PIN:" to enter your password.
- Third, if you enter the password correctly the next message is "1-Deposit(C) 2-Withdraw(C) 3-Deposit(S) 4-Balances 5-Change PIN 6-Transfer(S) 0-Logout" to make any transaction you want.
- Fourth, if you choose 1(deposit) the message you will see is "Amt" to enter the amount you want to deposit it

- Fifth, if you choose 2(withdraw), the message you will see is “Amt” to enter the amount you want to withdraw it but you must have that amount of money in your balance
- sixth, if you choose 4(withdraw) the message you will see is “Checking Balance ..... Savings Balance .....” to see the balance of your account
- seventh, if you choose 5(change PIN), the message you will see is “Enter old PIN:”, and if you enter your old password correctly. The next message is “Enter new PIN:” and write the new password to change it, and the final message is “PIN changed.”
- Eighth, if you choose 0(logout), the message you will see is “Default customer loaded 1-Admin 2-Customer 0-Exit”, and write 0(exit) to end the program

#### How to use for admin:

- First, the message you see is “Default customer loaded 1-Admin 2-Customer 0-Exit”
- Second, if you choose 1(admin), the next message will be “password” asking you for the admin password
- Third, if you enter the password correctly, the next message is “1-Add 2-Delete 3-View All 0-Exit” to make any edits to accounts.
- Fourth, if you choose 1(add), the message you will see is “New User ID:” to enter the ID of the new account. And the next message is “PIN” to make a password for this new account.
- Fifth, if you choose 2(delete), the message you will see is “Delete User ID:” to enter the ID of the account you want to delete.
- sixth, if you choose 3(View All), the message you will see is a list of all users with their IDs and balances.

#### Result for customer:

- Invalid password

```
1-Admin 2-Customer 0-Exit
Choice: 2
User ID: user1111
Enter your PIN: 2
Incorrect PIN.
Enter your PIN: 2
Incorrect PIN.
Enter your PIN: 2
Incorrect PIN.
Too many failed attempts.
1-Admin 2-Customer 0-Exit
Choice: █
```

- Deposit

```
1-Admin 2-Customer 0-Exit
Choice: 2
User ID: user1111
Enter your PIN: 1111
1-Deposit(C) 2-Withdraw(C) 3-Deposit(S) 4-Balances 5-Change PIN 6-Transfer(S) 0-Logout
Choice: 3
Amt: 1000
```

- Withdraw

```
1-Deposit(C) 2-Withdraw(C) 3-Deposit(S) 4-Balances 5-Change PIN 6-Transfer(S) 0-Logout
Choice: 2
Amt: 1000
```

- Balance

```
1-Deposit(C) 2-Withdraw(C) 3-Deposit(S) 4-Balances 5-Change PIN 6-Transfer(S) 0-Logout
Choice: 4
Checking Balance 1000
Savings Balance 500
```

- Logout

```
1-Deposit(C) 2-Withdraw(C) 3-Deposit(S) 4-Balances 5-Change PIN 6-Transfer(S) 0-Logout
Choice: 0
1-Admin 2-Customer 0-Exit
Choice: 
```

### Result for admin:

- Invalid password

```
1-Admin 2-Customer 0-Exit
Choice: 1
Password: ndvn
Wrong.
Password: vndkjvn
Wrong.
Password: dfndk
Wrong.
1-Admin 2-Customer 0-Exit
Choice: 
```

- Add

```
1-Add 2-Delete 3-View All 0-Exit
Choice: 1
New User ID: 2222
PIN: 4444
Account added.
```

- Delete

```
1-Add 2-Delete 3-View All 0-Exit
Choice: 2
Delete User ID: 2222
Deleted.1-Add 2-Delete 3-View All 0-Exit
Deleted.1-Add 2-Delete 3-View All 0-Exit
Choice: 2
Delete User ID: 4
Not found.1-Add 2-Delete 3-View All 0-Exit
```

- View all

```
Choice: 3
User: user1111
Checking Balance 1000
Savings Balance 500
1-Add 2-Delete 3-View All 0-Exit
Choice: █
```

## ❖ UML

