

Bank Management System Implemented using Linked List

Outlines:

All functionalities of linked list are available in this Assignment. That includes:

- 1) Insert at beg, end, after, specific.
- 2) Delete Node (Accounts closing and deleting fr list)
- 3) Display List
- 4) Find a Node
- 5) Number of Nodes
- 6) Sort List (Alphabetically) Ascending and descending.
- 7) Reversing List.
- 8) Get Node Data and manipulate it (All possible operation of Data(Account) of Node implemented).

Apart from this

- 1) Read and Write of list in file.
- 2) Both, Automatically and manual updating of file.
- 3) A Single Variable for all iterators & single array for Menu Inputs.

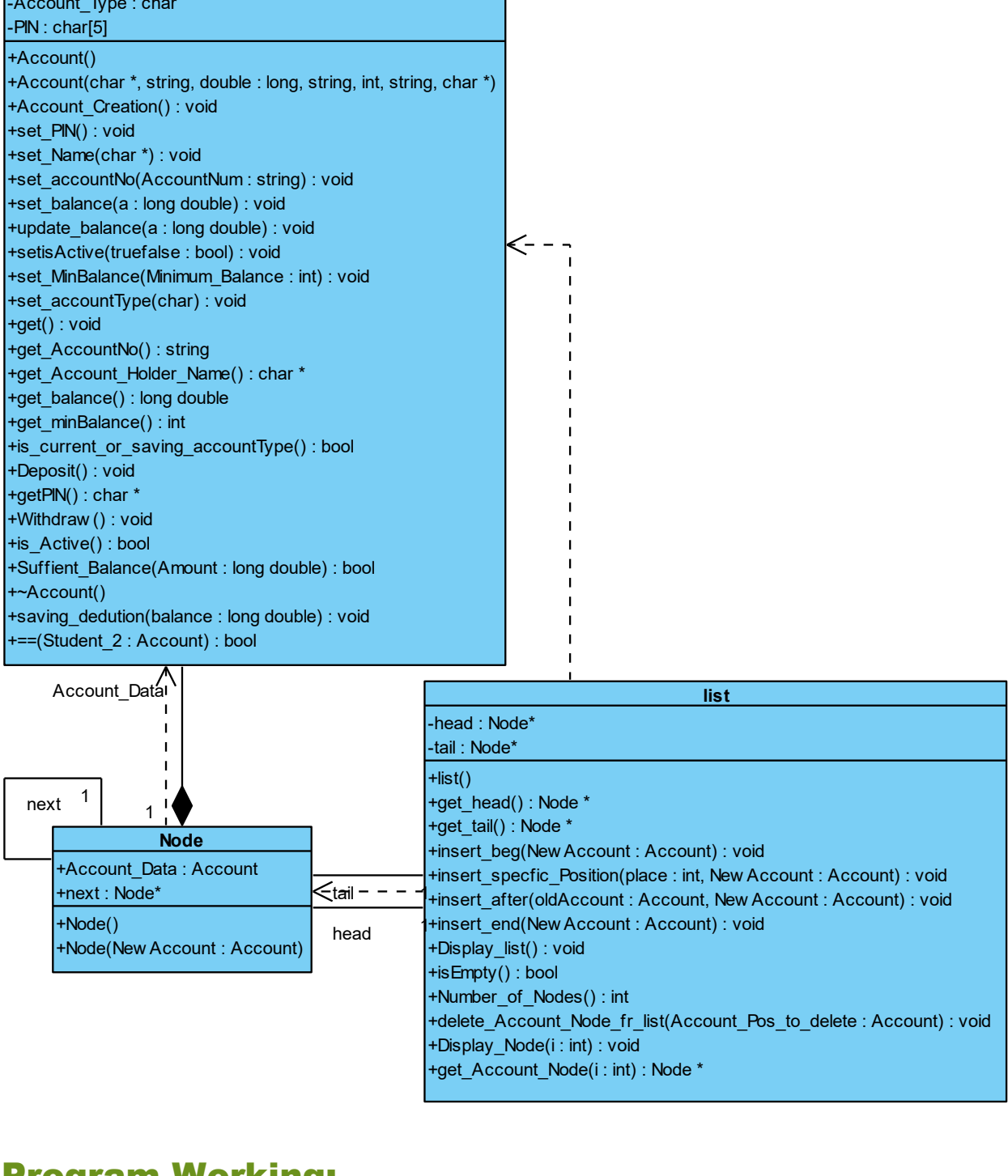
The System is can be used by bank manager or the account holder. For management area, the files can be imported and exported. List can be exported in two ways, one is difficult to understand by human(for backup with confidential info) and the other is easy to read & understand(such as Bank statement). Furthermore the list can be sorted alphabetically Ascending and descending. And list can also be reversed alphabetically.

The user can perform all bank operations such as deposit, withdraw, and Transfer.

The input to entire system is well validated.

The system has advanced PIN feature, the PIN is entered with help of _getch(), its disadvantage is that it accepts all character even backspace. So in order to overcome this, the pin system has been designed to distinguishes between numbers, alphabets (blocks them), and backspace and so The backspace works perfectly fine, and the user can retype the pin.

UML Diagram:



Screen Shots of Program Working:

If no accounts:

```
C:\Users\Wakeel Furqan Ahm... X + v
Welcome to Bank Account Management System
0. Manage Account DataBase      1. Create a Account
```

```
C:\Users\Wakeel Furqan Ahm... X + v
1. Import      2. Export As Readable      3. Export As Backup      4. Manupulate List
```

```
C:\Users\Wakeel Furqan Ahm... X + v
1. Import      2. Export As Readable      3. Export As Backup      4. Manupulate List
Data has been successfully Imported

0. Manage Account DataBase      1. Create Account      2. Manage Accounts
3. Deposit Money                4. Withdraw Money    5. Transfer Funds
6. Exit Program
```

```
C:\Users\Wakeel Furqan Ahm... X + v
1. Import      2. Export As Readable      3. Export As Backup      4. Manupulate List
```

```
C:\Users\Wakeel Furqan Ahm... X + v
1. Sort Alphabetically (asc)    2. Sort Alphabetically (desc)    3.Reverse List
List Before Sorting
1. wqer
2. sdfdsf
3. q
4. f
5. d
6. b
7. b
8. a

Sorted List:
1. a
2. b
3. b
4. d
5. f
6. q
7. sdfdsf
8. wqer

0. Manage Account DataBase      1. Create Account      2. Manage Accounts
3. Deposit Money                4. Withdraw Money    5. Transfer Funds
6. Exit Program
```

```
C:\Users\Wakeel Furqan Ahm... X + v
1. Import      2. Export As Readable      3. Export As Backup      4. Manupulate List
1. Sort Alphabetically (asc)    2. Sort Alphabetically (desc)    3.Reverse List
List Before Sorting
1. a
2. b
3. d
4. sdfdsf
5. wqer
6. q
7. b
8. f

Sorted List:
1. wqer
2. sdfdsf
3. q
4. f
5. d
6. b
7. b
8. a
```

```
C:\Users\Wakeel Furqan Ahm... X + v
1. Sort Alphabetically (asc)    2. Sort Alphabetically (desc)    3.Reverse List
List Before Reversing
1. g
2. e
3. newaccount
4. Testaccount
5. qwerty
Reversed List:
1. qwerty
2. Testaccount
3. newaccount
4. e
5. g

0. Manage Account DataBase      1. Create Account      2. Manage Accounts
3. Deposit Money                4. Withdraw Money    5. Transfer Funds
6. Exit Program
```

```
C:\Users\Wakeel Furqan Ahm... X + v
# of Accounts:0
Account Creation
Note Minimum Balance limit: Current Account: Rs.5000/-    Saving Account: Rs.1000/-
Select Account Type
'C'. Current Account
'S'. Saving Account
AccountNo Assigned:ED06V74015
Enter Account Holder Name:Wakeel
Enter the Amount You Want To Add in account:10000
PIN Assigned:9712
Head:Wakeel      Tail:Wakeel
0. Manage Account DataBase      1. Create Account      2. Manage Accounts
3. Deposit Money                4. Withdraw Money    6. Exit Program
```

Deposit:

```
C:\Users\Wakeel Furqan Ahm... X + v
Select Account To Deposit Money Into
1. Wakeel
0. CancelEnter Amount to Deposit:500
Transaction Successful !!

0. Manage Account DataBase      1. Create Account      2. Manage Accounts
3. Deposit Money                4. Withdraw Money    6. Exit Program
```

Withdraw:

Transfer:

No Transfer available if 1 account exists:

```
C:\Users\Wakeel Furqan Ahm... X + v
Select Account To Deposit Money Into
1. Wakeel
0. CancelEnter Amount to Deposit:500
Transaction Successful !!

0. Manage Account DataBase      1. Create Account      2. Manage Accounts
3. Deposit Money                4. Withdraw Money    6. Exit Program
```

More than 1 account then only transfer function is available:

```
C:\Users\Wakeel Furqan Ahm... X + v
# of Accounts:1
Account Creation
Note Minimum Balance limit: Current Account: Rs.5000/-    Saving Account: Rs.1000/-
Select Account Type
'C'. Current Account
'S'. Saving Account
AccountNo Assigned:B559751864
Enter Account Holder Name:newaccount
Enter the Amount You Want To Add in account:13231
PIN Assigned:8907

0. Manage Account DataBase      1. Create Account      2. Manage Accounts
3. Deposit Money                4. Withdraw Money    5. Transfer Funds
6. Exit Program
```

```
C:\Users\Wakeel Furqan Ahm... X + v
Select Account To Transfer Funds FROM:
1. wakeel
2. newaccount
Enter the 4-digit PIN to perform Transaction:7808
****
Select Account To Transfer Amount TO:Enter Amount To Transfer:2320
Transaction is Successful

0. Manage Account DataBase      1. Create Account      2. Manage Accounts
3. Deposit Money                4. Withdraw Money    5. Transfer Funds
6. Exit Program
```

NOTE THE PIN DISPLAYED is for showing purpose only.