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Project: Bank Management System
Technology: Python 3

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1. Introduction

A bank is a financial institution which acts as an intermediary in financial transactions. It also provides financial services such as deposits, pays interest on pre-defined rates, clears checks, makes loans and many other services to its customers. Bank management governs various concerns associated with bank in order to maximize profits.

2. Objective

The goal of the project is to build a simple console-based system which is easy to use and understand. This project is written in python. Talking about the system it consists of all the basic functions which includes creating a new account, view account holder record deposit and withdraw amount, balance inquiry and closing and editing the created account. In this project there is no login system so that the all the features are easily available to the user.

3. Requirement

3.1 Software Requirement

Anaconda Navigator

It is a desktop graphical user interface included in Anaconda distribution that allows to launch applications and manage packages, environment and channels without command line commands. It is available for Windows, macOS and Linux.

Default application in Navigator: JupyterLab, Jupyter Notebook, Spyder, Pycharm etc.

Spyder

Spyder is a powerful scientific environment written in Python, for Python. It offers unique combination of the advanced editing, analysis, debugging, and visualization capabilities of a scientific package.

3.2 Modules

pickle

This module implements binary protocols for serialization and de-serialization of a Python object structure. It is a process python object hierarchy is converted into byte stream and in reverse operation byte stream is converted back to object hierarchy.

os

It is used to use operating system dependent functionality. If we want to manipulate paths os.path module is used. For creating temporary files and directories tempfile module and for high-level file and directory handling see the shutil module.

pathlib

It offers classes representing filesystem paths with semantics appropriate for different operating systems. Path classes are divided between pure paths, which provide purely computational operation and concrete paths, which
Inherits from pure paths.

4. Installation

1)Install Anaconda Navigator
2)Launch Spyder
3)Run the file.

5. Outputs

1) Create a new account:

```
                                BANK MANAGEMENT SYSTEM
                                **********************

      MAIN MENU
      1. NEW ACCOUNT
      2. DEPOSIT AMOUNT
      3. WITHDRAW AMOUNT
      4. BALANCE ENQUIRY
      5. ALL ACCOUNT HOLDER LIST
      6. MODIFY AN ACCOUNT
      7. CLOSE AN ACCOUNT
      8. EXIT
      Select Your Option (1-8)

Enter your choice : 1

Enter the account no : 8759

Enter the account holder name : don

Enter the type of account : savings

Enter The Initial amount :500
```

2) Deposit Amount

```
      MAIN MENU
      1. NEW ACCOUNT
      2. DEPOSIT AMOUNT
      3. WITHDRAW AMOUNT
      4. BALANCE ENQUIRY
      5. ALL ACCOUNT HOLDER LIST
      6. MODIFY AN ACCOUNT
      7. CLOSE AN ACCOUNT
      8. EXIT
      Select Your Option (1-8)

Enter your choice : 2

Enter The account No. : 8759

Enter the amount to deposit : 700
      Your account is updted
```

3)withdraw Amount

```
     MAIN MENU
     1. NEW ACCOUNT
     2. DEPOSIT AMOUNT
     3. WITHDRAW AMOUNT
     4. BALANCE ENQUIRY
     5. ALL ACCOUNT HOLDER LIST
     6. MODIFY AN ACCOUNT
     7. CLOSE AN ACCOUNT
     8. EXIT
     Select Your Option (1-8)

 Enter your choice : 3

 Enter The account No. : 8759

 Enter the amount to withdraw : 400
```

4) Balance Enquiry

```
       MAIN MENU
       1. NEW ACCOUNT
       2. DEPOSIT AMOUNT
       3. WITHDRAW AMOUNT
       4. BALANCE ENQUIRY
       5. ALL ACCOUNT HOLDER LIST
       6. MODIFY AN ACCOUNT
       7. CLOSE AN ACCOUNT
       8. EXIT
       Select Your Option (1-8)

   Enter your choice : 4

   Enter The account No. : 8759
       Your account Balance is =  800
```

5) All Account List

```
      MAIN MENU
      1. NEW ACCOUNT
      2. DEPOSIT AMOUNT
      3. WITHDRAW AMOUNT
      4. BALANCE ENQUIRY
      5. ALL ACCOUNT HOLDER LIST
      6. MODIFY AN ACCOUNT
      7. CLOSE AN ACCOUNT
      8. EXIT
      Select Your Option (1-8)

Enter your choice : 5
12345   ram   save   500
6547   ayushi   savings   400
6437   ayushi   savings    400
6456   ayushi   savings   800
65748   ayushi   savings   698
8759   don   savings   800
```

6) Modify Account

```
      MAIN MENU
      1. NEW ACCOUNT
      2. DEPOSIT AMOUNT
      3. WITHDRAW AMOUNT
      4. BALANCE ENQUIRY
      5. ALL ACCOUNT HOLDER LIST
      6. MODIFY AN ACCOUNT
      7. CLOSE AN ACCOUNT
      8. EXIT
      Select Your Option (1-8)

Enter your choice : 6

Enter The account No. : 8759

Enter the account holder modified name : Raam

Enter the modified account Type : Recurring

      MAIN MENU
      1. NEW ACCOUNT
      2. DEPOSIT AMOUNT
      3. WITHDRAW AMOUNT
      4. BALANCE ENQUIRY
      5. ALL ACCOUNT HOLDER LIST
      6. MODIFY AN ACCOUNT
      7. CLOSE AN ACCOUNT
      8. EXIT
      Select Your Option (1-8)

Enter your choice : 5
12345   ram   save   500
6547   ayushi   savings   400
6437   ayushi   savings    400
6456   ayushi   savings   800
65748   ayushi   savings   698
8759   Raam    Recurring   800
```

7) Close an Account

```
    MAIN MENU
    1. NEW ACCOUNT
    2. DEPOSIT AMOUNT
    3. WITHDRAW AMOUNT
    4. BALANCE ENQUIRY
    5. ALL ACCOUNT HOLDER LIST
    6. MODIFY AN ACCOUNT
    7. CLOSE AN ACCOUNT
    8. EXIT
    Select Your Option (1-8)

Enter your choice : 7

Enter The account No. : 12345

    MAIN MENU
    1. NEW ACCOUNT
    2. DEPOSIT AMOUNT
    3. WITHDRAW AMOUNT
    4. BALANCE ENQUIRY
    5. ALL ACCOUNT HOLDER LIST
    6. MODIFY AN ACCOUNT
    7. CLOSE AN ACCOUNT
    8. EXIT
    Select Your Option (1-8)

Enter your choice : 5
6547   ayushi   savings   400
6437   ayushi   savings    400
6456   ayushi   savings   800
65748   ayushi   savings   698
8759   Raam    Recurring   800
```

8) Exit

```
    MAIN MENU
    1. NEW ACCOUNT
    2. DEPOSIT AMOUNT
    3. WITHDRAW AMOUNT
    4. BALANCE ENQUIRY
    5. ALL ACCOUNT HOLDER LIST
    6. MODIFY AN ACCOUNT
    7. CLOSE AN ACCOUNT
    8. EXIT
    Select Your Option (1-8)

Enter your choice : 8

    Thanks for using bank managemnt system
```

6. Conclusion

This simple console-based Bank Management system provides the simplest management of bank account and transaction.

7. References

1. https://docs.python.org/3/library/os.html
2. https://docs.python.org/3/library/pathlib.html
3. https://docs.python.org/3/library/pickle.html
4. https://www.w3schools.com/python/python_classes.asp