BANKING MANAGEMENT SYSTEM

21CSS101J – PROGRAMMING FOR PROBLEM SOLVING

Mini Project Report

Submitted by

VISHWAJITH V [Reg. No.: RA2211003010081]
B.Tech. CSE -CORE

SREYA SUSAN ROY [Reg. No.: RA2211003010089]
B.Tech. CSE - CORE

SCHOOL OF COMPUTING
COLLEGE OF ENGINEERING AND TECHNOLOGY
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
(Under Section 3 of UGC Act, 1956)
S.R.M. NAGAR, KATTANKULATHUR – 603 203
KANCHEEPURAM DISTRICT

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PROBLEM STATEMENT

The Banking Management System helps to avail bank services in the most intuitive way making the banking life of customers easy.

The system provides functions to create accounts, withdraw and deposit money, view your account details, search an account, and delete your account. A user can choose his choice from a user-friendly menu to navigate through different functions.

PROCEDURE

1. **Creating accounts**

This function helps in adding a new account or accounts with its

respective details. All the data is saved in "accdata.dat".

All the account details for the new account are entered such as:

Account no, Name, Amount, PIN and are added to the file as a new account.

The user is then asked if he wants to add another account, if the answer is no - the user is exited from the loop by giving an appropriate message.

2. **Depositing money**

This function allows users to deposit money on their accounts.

- On calling the function the user is asked to enter his **Account no and PIN** to confirm his identity and is returned “account not found” or “Incorrect PIN” if details didn’t match.
- On confirming identity, the user is asked to enter the amount to deposit and the amount is added to his account balance.

3. **Withdrawing money**

This function allows users to withdraw money from their accounts.

- On calling the function the user is asked to enter his **Account no and PIN** to confirm his identity and is returned “account not found” or “Incorrect PIN” if details didn’t match.
- On confirming identity, the user is asked to enter the amount to withdraw and the amount is subtracted from his account balance.

4. **Update PIN**

This function allows users to update PIN for their account.

- On calling the function the user is asked to enter his **Account no and current PIN** to confirm his identity and is returned “account not found” or “Incorrect PIN” if details didn’t match.
- On confirming identity, the user is asked to enter the new PIN and again to confirm the new PIN. If both the PINs match, the PIN is updated in his account.

5. **View balance**

A function is defined in the code to accept the **Account no and PIN** as input and display the balance and other info of the account as output.

6. **Searching accounts**

A function is defined in the code which asks the user to input the **Account no or Name**. If valid input is given you will get the Account no and Name as the output.

7. **Deleting accounts**

A function is defined in the code which accepts the **Account no and PIN** as input. After the user successfully enters a valid input, the user is inquired whether to delete all the details of the account or not. If the user agrees the entire data of the account will be permanently erased.

8. **Exit**

This option allows users to exit from the program after use.

SOURCE CODE

```
import pickle
def data():
  data=[]
  with open("accdata.dat","rb") as f:
    while True:
      try:
        data.append(pickle.load(f))
      except EOFError:
        break
  return data


                                        # file "accdata.dat"
import pickle
f=open("accdata.dat","wb")
f.close()

                                        #create
def create():
  rec=data()
  print("************Create Account************")
  while True:
    query="n"
    accno=input("Enter account no: ")
    for i in rec:
      if i["accno"]==accno:
        print("Account already exists,\n Please try again")
        query="y"
        break
    if query!="y":
      name=input("Enter the customer name: ")
      pin=input("Enter the pin: ")
      amt=float(input("Enter the amount: "))
      rec.append({"accno":accno,"name":name,"amt":amt,"pin":pin})
      print("************Account Created***********")
      print("""
If you need to add another account
enter 'y' for yes and 'n' for no!""")
      query=input("Enter here: ")
      print()
      if query[0].lower()=="n":
        break
  with open("accdata.dat","wb") as nf:
    for i in rec:
      pickle.dump(i,nf)
  print("===Thank you for creating account(s)===")
```

```
                                        #deposit
def deposit():
  print("*************Deposit Cash*************")
  accno=input("Enter the account no: ")
  pin=input("Enter the pin: ")
  rec=data()
  for i in rec:
    if i["accno"]==accno:
      if i["pin"]==pin:
        amt=abs(float(input("Enter amount: ")))
        i["amt"]+=amt
        print("\n Transaction Successful,\n Amount
deposited:",amt,"/-")
      else:
        print("\nIncorrect pin, Please try again")
      break
  else:
    print("\nAccount not found, Please try again")
  with open("accdata.dat","wb") as nf:
    for i in rec:
      pickle.dump(i,nf)
  print("=======================================")


                                        #withdraw
def withdraw():
  print("*************Withdraw Cash*************")
  accno=(input("Enter the account no: "))
  pin=input("Enter the pin: ")
  rec=data()
  for i in rec:
    if i["accno"]==accno:
      if i["pin"]==pin:
        amt=abs(float(input("Enter amount: ")))
        if i["amt"]-amt>=0:
          i["amt"]-=amt
          print("\n Transaction Successful,")
          print(" Amount withdrawed:",amt,"/-")
        else:
          print("\n Transaction Unsuccessful,\n Not enough balance")
      else:
        print("\nIncorrect pin, Please try again")
      break
  else:
    print("\nAccount not found, Please try again")
  with open("accdata.dat","wb") as nf:
    for i in rec:
      pickle.dump(i,nf)
  print("=======================================")
```

```
                                        # View
def view():
  print("*************View Balance*************")
  rec=data()
  accno=input('Enter the account no: ')
  pin=input('Enter the pin: ')
  for i in rec:
    if i["accno"]==accno:
      if i["pin"]==pin:
        print("\n*************Account Info*************")
        print(" Account No.\t: ",i['accno'],"\n Name\t\t:
",i["name"])
        print("\n Balance\t: ",i["amt"])
      else:
        print("\nIncorrect pin, Please try again")
      break
  else:
    print("\nAccount not found, Please try again")
  print("=======================================")


                                        #update pin
import re
def updatepin():
  print("**************Update Pin**************")
  accno=input("Enter the account no: ")
  pin=input("Enter the pin: ")
  rec=data()
  for i in rec:
    if i["accno"]==accno:
      if i["pin"]==pin:
        print("\nPin should contain 4 digits")
        npin=input("Enter new pin: ")
        conpin=input("Confirm new pin: ")
        if npin==conpin and re.match("^[0-9]{4}$",npin):
          i["pin"]=npin
          print("\n Successfully Updated pin")
        else:
          print("\nPins didn't match Or Invalid characters used,")
          print("Please try again")
      else:
        print("\nIncorrect pin, Please try again")
      break
  else:
    print("\nAccount not found, Please try again")
  with open("accdata.dat","wb") as nf:
    for i in rec:
      pickle.dump(i,nf)
  print("=======================================")
```

```
                                        #Search
def search():
  rec=data()
  print("************Search Account************")
  print(" 1:Account no \n 2:Account name")
  hm=input("Enter your choice: ")
  if hm=="1":
    accno=input("\nEnter account no: ")
    print("\n************Search Result*************")
    for i in rec:
      if i["accno"]==accno:
        print(" Account No.\t: ",i['accno'],"\n Name\t\t:
",i["name"])
        break
    else:
      print("Account not found")
  elif hm=="2":
    name=input("\nEnter account name: ")
    print("\n************Search Result*************")
    for i in rec:
      if i["name"].lower()==name.lower():
        print(" Account No.\t: ",i['accno'],"\n Name\t\t:
",i["name"])
        break
    else:
      print("Account not found")
  else:
    print("\n Invalid choice, Please try again")
  print("=======================================")


                                        #delete
def delete():
  print("************Delete Account************")
  rec=data()
  accno=input('Enter the account no: ')
  pin=input('Enter the pin: ')
  q="nd"
  for i in rec:
    if i["accno"]==accno:
      if i["pin"]==pin:
        print("\nEnter 'D' to delete account permanently")
        q=input(" Else enter any other letters: ")
        if q.lower()!="d":
          print("\nCancelled Delete request")
          break
        rec.remove(i)
        print("\nAccount Deleted, Sorry to see you go..")
      else:
        print("\nIncorrect pin, Please try again")
        Break
```

```
  else:
    if q.lower()!="d":
      print("\nAccount not found, Please try again")
  with open("accdata.dat","wb") as nf:
    for i in rec:
      pickle.dump(i,nf)
  print("=====================================")



                                        #menu
def menu():
  while True:
    print("\n*************************************")
    print("**Welcome to Banking Management tool**")
    print(" 1: Create account \n 2: Deposit cash \n 3: Withdraw cash
")
    print(" 4: View balance \n 5: Update pin \n 6: Search account ")
    print(" 7: Delete account \n 8: Exit")
    c=input("Enter the choice: ")
    print()
    if c=="1":
      create()
    elif c=="2":
      deposit()
    elif c=='3':
      withdraw()
    elif c=='4':
      view()
    elif c=='5':
      updatepin()
    elif c=='6':
      search()
    elif c=='7':
      delete()
    elif c=='8':
      print("Thank you, See you again soon..")
      print("=====================================")
      break
    else:
      print("Invalid response, Please try again")

#================================================

menu()
```

RESULT

```
************************************
**Welcome to Banking Management tool**
 1: Create account
 2: Deposit cash
 3: Withdraw cash
 4: View balance
 5: Update pin
 6: Search account
 7: Delete account
 8: Exit
Enter the choice:
```

OUTPUT OF CREATE ACCOUNT:

```
************************************
**Welcome to Banking Management tool**
 1: Create account
 2: Deposit cash
 3: Withdraw cash 4: View balance
 5: Update pin
 6: Search account
 7: Delete account
 8: Exit
Enter the choice: 1

************Create Account************
Enter account no: 1000
Enter the customer name: Han Solo
Enter the pin: 1122
Enter the amount: 1000
************Account Created***********

If you need to add another account
enter 'y' for yes and 'n' for no!
Enter here: y

Enter account no: 2000
Enter the customer name: Joi
Enter the pin: 2002
Enter the amount: 10000
************Account Created***********
```

```
If you need to add another account
enter 'y' for yes and 'n' for no!
Enter here: y



Enter account no: 3000
Enter the customer name: Sarah Conner
Enter the pin: 5683
Enter the amount: 2600
**********Account Created**********

If you need to add another account
enter 'y' for yes and 'n' for no!
Enter here: y

Enter account no: 4000
Enter the customer name: David Aames
Enter the pin: 3030
Enter the amount: 4500
**********Account Created**********

If you need to add another account
enter 'y' for yes and 'n' for no!
Enter here: n

===Thank you for creating account(s)===
```

OUTPUT OF DEPOSIT CASH:

```
**********Deposit Cash**********
Enter the account no: 4000
Enter the pin: 3030
Enter amount: 300

 Transaction Successful,
 Amount deposited: 300.0 /-
====================================
```

OUTPUT OF WITHDRAW CASH:

```
**********Withdraw Cash**********
Enter the account no: 2000
Enter the pin: 2002
Enter amount: 100

 Transaction Successful,
 Amount withdrawed: 100.0 /-
====================================
```

OUTPUT OF VIEW BALANCE:

```
*************View Balance*************
Enter the account no: 4000
Enter the pin: 3030

*************Account Info*************
 Account No.     :  4000
 Name            :  David Aames
 Balance         :  4800.0
====================================
```

OUTPUT OF UPDATE PIN:

```
**************Update Pin**************
Enter the account no: 3000
Enter the pin: 5683

Pin should contain 4 digits
Enter new pin: 5600
Confirm new pin: 5600

 Successfully Updated pin
====================================
```

OUTPUT OF SEARCH ACCOUNT:

```
************Search Account************
 1:Account no
 2:Account name
Enter your choice: 2

Enter account name: joi

************Search Result*************
 Account No.     :  2000
 Name            :  Joi
====================================
```

OUTPUT OF DELETE ACCOUNT:

```
************Delete Account************
Enter the account no: 3000
Enter the pin: 5600

Enter 'D' to delete account permanently
 Else enter any other letters: d

Account Deleted, Sorry to see you go..
======================================
```

OUTPUT OF EXIT:

```
************************************
**Welcome to Banking Management tool**
 1: Create account
 2: Deposit cash
 3: Withdraw cash
 4: View balance
 5: Update pin
 6: Search account
 7: Delete account
 8: Exit
Enter the choice: 8

Thank you, See you again soon...
======================================
```

CONCLUSION

In this project we have successfully accomplished the task using python programming language in banking management system.