Bank Management System

The Bank Account Management System is application for maintaining person’s account in bank. This command line based application cover the basic functionality of a Bank Management System. The system provides user to create and manage an account, deposit/withdraw the cash from account, also to view reports of all transaction as well all available accounts present.

Program:

import mysql.connector;

import datetime;

mydb=mysql.connector.connect(host="localhost",user="root",passwd="",database="banksystem");

mycursor = mydb.cursor();

class Bank:

rois=0;

roic=0;

mycursor.execute("Select \* from intrest order by date desc limit 1");

for i in mycursor:

rois=i[1];

roic=i[2];

def \_\_init\_\_(self):

self.acno=0;

self.acnm='';

self.actype=0;

self.balance=0;

self.mbno=0;

self.adrs=0;

@classmethod

def setROIS(cls):

cls.rois=float(input("Enter Rate of Interest for Saving Accounts = "));

str="update intrest set rois='%f' where id=1";

args=(cls.rois);

try:

mycursor.execute(str % args);

mydb.commit();

except:

mydb.rollback();

print("\nError : intrest is not update");

@classmethod

def setROIC(cls):

cls.roic=float(input("Enter Rate of Interest for Current Accounts = "));

str="update intrest set roic='%f' where id=1";

args=(cls.roic);

try:

mycursor.execute(str % args);

mydb.commit();

except:

mydb.rollback();

print("\nError : intrest is not update");

def createAccount(self):

print("\n------ Enter Details for Create a New Account ------");

self.acno=int(input("\nEnter Account No = "));

self.acnm=input("Enter Account Holder Name = ");

print("\n------- Type of Account --------");

print("1. Saving Account\n2. Current Account");

self.actype=int(input("Enter type of Account = "));

while self.balance==0:

self.balance=float(input("Enter Account Balance = "));

if self.balance < 1000:

print("\nError : Account Blance Is not Sufficient");

print("It Must be greater than 1000 INR\n");

self.balance=0;

self.mbno=int(input("Enter Mobile no = "));

self.adrs=input("Enter address = ");

str="Insert into accounts values('%d','%s','%d','%f','%d','%s')";

args=(self.acno,self.acnm,self.actype,self.balance,self.mbno,self.adrs);

str1="Insert into transactionlog(id,trans,mtrans) values ('%d','%d','%f')";

args1=(self.acno,1,self.balance);

try:

mycursor.execute(str % args);

mycursor.execute(str1 % args1);

mydb.commit();

print("\n\*\*\*\*\*\*\*\* Account Created \*\*\*\*\*\*\*\*\n");

except:

mydb.rollback();

print("\nError : Account creation Failed.");

def display(self):

print("--------- Account Details ---------");

print("Account No = ",self.acno);

print("Account Holder Name = ",self.acnm);

if self.actype==1 :

print("Account type = Saving");

elif self.actype==2 :

print("Account type = Current");

print("Account Balance = ",self.balance);

print("Mobile no = ",self.mbno);

print("Address = ",self.adrs);

def newAccount():

n=Bank();

n.createAccount();

n.display();

def setInterest():

n=Bank();

print("\n---- Current Rate of Interest ----");

print("Savings Account = ",n.rois);

print("Current Account = ",n.roic);

print("\n1. Saving Account\n2. Current Account");

i=int(input("Enter type of Account = "));

if i==1:

n.setROIS();

elif i==2:

n.setROIC();

else:

print("Error : Invalid Choice");

def deposite():

acno=int(input("\nEnter Account number = "));

x=0;

mycursor.execute("select \* from accounts where acno='%d'"%(acno));

for i in mycursor:

print(i);

x=i[3];

amt=float(input("\nEnter amount for deposite = "));

x=x+amt;

try:

mycursor.execute("update accounts set balance='%f' where acno='%d'"%(x,acno));

str1="Insert into transactionlog(id,trans,mtrans) values ('%d','%d','%f')";

args1=(acno,1,amt);

mycursor.execute(str1 % args1);

mydb.commit();

print("\*\*\* Account Updated Successfully. \*\*\*");

except:

mydb.rollback();

def withdraw():

acno=int(input("\nEnter Account number = "));

x=0;

mycursor.execute("select \* from accounts where acno='%d'"%(acno));

for i in mycursor:

print(i);

x=i[3];

amt=float(input("Enter amount for withdraw = "));

x=x-amt;

if x>100:

try:

mycursor.execute("update accounts set balance='%f' where acno='%d'"%(x,acno));

str1="Insert into transactionlog(id,trans,mtrans) values ('%d','%d','%f')";

args1=(acno,0,amt);

mycursor.execute(str1 % args1);

mydb.commit();

print("\*\*\* Account Updated Successfully. \*\*\*");

except:

mydb.rollback();

else:

print("Error : Account Balance is insufficient\nMoney Withdraw Denied.");

def balanceInq():

acno=int(input("\nEnter Account number = "));

mycursor.execute("select \* from accounts where acno='%d'"%(acno));

for i in mycursor:

print("Account Name = ",i[1]);

print("Current Balance = ",i[3]);

def displayAccounts():

mycursor.execute("Select \* from accounts");

print("\n Acno\t\tAcName\t\tActype\t\tBalance\t\t Mobileno\t\tAddress");

print("-"\*100);

for row in mycursor:

print(" ",row[0],"\t",row[1],end="");

if row[2]==1 :

print("\t\tSaving",end="");

elif row[2]==2 :

print("\t\tCurrent",end="");

print("\t\t",row[3],"\t",row[4],"\t\t",row[5],end="");

print();

def closeAccount():

acno=int(input("\nEnter Account number = "));

mycursor.execute("select \* from accounts where acno='%d'"%(acno));

for i in mycursor:

print(i);

ch=input("Do you want to delete account(y/n) = ");

if ch=='y' or ch=='Y':

try:

mycursor.execute("delete from accounts where acno='%d'"%(acno));

mydb.commit();

print("\*\*\*\* Account Deleted \*\*\*\*");

except:

mydb.rollback();

def updateAccount():

acno=int(input("\nEnter Account number = "));

mycursor.execute("select \* from accounts where acno='%d'"%(acno));

name=mbno=adrs=0;

for i in mycursor:

name=i[1];

mbno=i[4];

adrs=i[5];

printModify();

ch=getChoice();

while ch!=4:

if ch==1:

print("Name = ",name);

nnm=input("Enter name for Update = ");

try:

mycursor.execute("update accounts set acnm='%s' where acno='%d'"%(nnm,acno));

mydb.commit();

print("\*\*\* Name Updated Successfully. \*\*\*");

except:

mydb.rollback();

elif ch==2:

print("Address = ",adrs);

nadrs=input("Enter New Address = ");

try:

mycursor.execute("update accounts set adrs='%s' where acno='%d'"%(nadrs,acno));

mydb.commit();

print("\*\*\* Address Updated Successfully. \*\*\*");

except:

mydb.rollback();

elif ch==3:

print("Mobile no = ",mbno);

nmbno=int(input("Enter new mobile no = "));

try:

mycursor.execute("update accounts set mbno='%d' where acno='%d'"%(nmbno,acno));

mydb.commit();

print("\*\*\* Mobile no Updated Successfully. \*\*\*");

except:

mydb.rollback();

else :

break;

printModify();

ch=getChoice();

def viewTransaction():

print("\n----------Transaction History-----------");

print("\t1. All time");

print("\t2. All Credit Records");

print("\t3. All Debit Records");

print("\t4. User's Transaction ");

print("\t0. Exit");

print("----------------------------------------");

ch=getChoice();

if ch==1:

print("\nID\tTransaction\t Amount\t\tDate Time");

print("-"\*65);

mycursor.execute("Select \* from transactionlog");

for row in mycursor:

if row[1]==1:

tr='Credit'

else:

tr='Debit '

print(row[0],"\t",tr,"\t",row[2]," \t ",row[3]);

elif ch==2:

print("\nID\tTransaction\t Amount\t\tDate Time");

print("-"\*65);

mycursor.execute("Select \* from transactionlog where trans=1");

for row in mycursor:

tr='Credit'

print(row[0],"\t",tr,"\t",row[2]," \t ",row[3]);

elif ch==3:

print("\nID\tTransaction\t Amount\t\tDate Time");

print("-"\*65);

mycursor.execute("Select \* from transactionlog where trans=0");

for row in mycursor:

tr='Debit '

print(row[0],"\t",tr,"\t",row[2]," \t ",row[3]);

elif ch==4:

acno=int(input("\nEnter Account Number = "));

print("\nID\tTransaction\t Amount\t\tDate Time");

print("-"\*65);

mycursor.execute("select \* from transactionlog where id='%d'"%(acno));

for row in mycursor:

if row[1]==1:

tr='Credit'

else:

tr='Debit '

print(row[0],"\t",tr,"\t",row[2]," \t ",row[3]);

def calcIntrest():

acno=int(input("\nEnter Account number = "));

n=float(input("Enter Time period(in years) = "));

mycursor.execute("select \* from accounts where acno='%d'"%(acno));

actype=roi=balance=0;

for i in mycursor:

print("\nAccount Holder name = "+i[1]);

actype=i[2];

balance=i[3];

if actype==1:

print("Account Type = Saving");

print("Rate of Intrest = ",Bank.rois);

roi=(balance\*Bank.rois\*n)/100.0;

else:

print("Account Type = Current");

print("Rate of Intrest = ",Bank.roic);

roi=(balance\*Bank.roic\*n)/100.0;

print("Account Balance = ",balance);

print("Total Intrest Amount = ",roi);

print("Total Amount = ",roi+balance);

def about():

print("\t\t-----------------------------------");

print("\t\t\*\*\*\*\*\* BANK MANAGEMENT SYSTEM \*\*\*\*\*\*");

print("\t\t-----------------------------------\n\n");

def getDivision():

print("\n----------------------------------------");

print("\t\tLOGIN AS");

print("----------------------------------------");

print("\t1. BANK ADMIN");

print("\t2. BANK MANAGER");

print("\t3. EXIT");

print("----------------------------------------");

d=int(input("\tEnter Your Choice = "));

return d;

def printMenu():

print("\n----------------------------------------");

print("\t\tMAIN MENU");

print("----------------------------------------");

print("\t1. NEW ACCOUNT");

print("\t2. DEPOSIT AMOUNT");

print("\t3. WITHDRAW AMOUNT");

print("\t4. BALANCE ENQUIRY");

print("\t5. ALL ACCOUNT HOLDER LIST");

print("\t6. CLOSE AN ACCOUNT");

print("\t7. MODIFY AN ACCOUNT");

print("\t8. TRANSACTION HISTORY")

print("\t9. CALCULATE INTREST");

print("\t10. EXIT")

print("----------------------------------------");

def printMenuAdmin():

print("\n----------------------------------------");

print("\t\tMAIN MENU");

print("----------------------------------------");

print("\t1. VIEW ACCOUNT DETAILS");

print("\t2. SET RATE OF INTREST");

print("\t3. EXIT");

print("----------------------------------------");

def printModify():

print("""\n----------------------------------------

1. UPDATE NAME

2. UPDATE ADDRESS

3. UPDATE MOBILE NO

4. EXIT

----------------------------------------""");

def getChoice():

ch=int(input("\tEnter Your Choice = "));

return ch;

about();

d=0;

d=getDivision();

while d:

if d==1:

print("\n\t\tLog in");

print("----------------------------------------");

unm=input("\tEnter User Name = ");

pswd=input("\tEnter Password = ");

mycursor.execute("Select \* from admin");

for row in mycursor:

if unm==row[1] and pswd==row[2]:

printMenuAdmin();

ch=getChoice();

while ch!='3':

if ch==1:

displayAccounts();

elif ch==2:

setInterest();

elif ch==3:

print("\n------Thank you. Have a nice Day!-------\n");

d=getDivision();

break;

else :

print("\n\*\*\*\* Error : Invalid Choice \*\*\*\*\n\t");

printMenuAdmin();

ch=getChoice();

else:

print("\nError : Invalid UserName or Password\n");

d=getDivision();

elif d==2:

print("\n\t\tLog in");

print("----------------------------------------");

unm=input("\tEnter User Name = ");

pswd=input("\tEnter Password = ");

if unm=="manager" and pswd=="manager":

printMenu();

ch=getChoice();

while ch!= '10' :

if ch==1 :

newAccount();

elif ch==2 :

deposite();

elif ch==3 :

withdraw();

elif ch==4 :

balanceInq();

elif ch==5 :

displayAccounts();

elif ch==6 :

closeAccount();

elif ch==7 :

updateAccount();

elif ch==8 :

viewTransaction();

elif ch==9:

calcIntrest();

elif ch==10 :

print("\n------Thank you. Have a nice Day!-------\n");

d=getDivision();

break;

else :

print("\n\*\*\*\* Error : Invalid Choice \*\*\*\*\n\t");

printMenu();

ch=getChoice();

else:

print("\nError : Invalid UserName or Password\n");

d=getDivision();

elif d==3:

print("\n------Thank you. Have a nice Day!-------\n");

d=0;

break;

else :

print("Error : Enter Valid Choice");

d=getDivision();

mycursor.close();

mydb.close();

Output:

==================== RESTART: C:\Users\HP\Desktop\main.py ====================

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\*\*\*\*\*\* BANK MANAGEMENT SYSTEM \*\*\*\*\*\*

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----------------------------------------

LOGIN AS

----------------------------------------

1. BANK ADMIN

2. BANK MANAGER

3. EXIT

----------------------------------------

Enter Your Choice = 1

Log in

----------------------------------------

Enter User Name = admin

Enter Password = admin

----------------------------------------

MAIN MENU

----------------------------------------

1. VIEW ACCOUNT DETAILS

2. SET RATE OF INTREST

3. EXIT

----------------------------------------

Enter Your Choice = 1

Acno AcName Actype Balance Mobileno Address

------------------------------------------------------------------------------------------------------------------------

1 Diya Sharma Saving 12600.0 9784633221 Rajkot

2 Shyam Patel Current 30700.0 6575689321 Baroda

3 Radhika Mehra Saving 102000.0 8934723453 Ahmedabad

4 Siya Trivedi Saving 19600.0 7456342453 Nadiad

5 Rajesh Shah Current 300000.0 9258964756 Baroda

6 Riddhi Patel Current 396000.0 8596872341 Anand

7 Rishika Jain Saving 459000.0 7847485231 Baroda

8 Rutvik Gandhi Saving 32000.0 6573242211 Ahmedabad

9 Radha Shukla Saving 43000.0 8563453641 Anand

10 Om Patel Current 5567000.0 8905867834 Rajkot

----------------------------------------

MAIN MENU

----------------------------------------

1. VIEW ACCOUNT DETAILS

2. SET RATE OF INTREST

3. EXIT

----------------------------------------

Enter Your Choice = 2

---- Current Rate of Interest ----

Savings Account = 3.2

Current Account = 3.0

1. Saving Account

2. Current Account

Enter type of Account = 1

Enter Rate of Interest for Saving Accounts = 4.7

----------------------------------------

MAIN MENU

----------------------------------------

1. VIEW ACCOUNT DETAILS

2. SET RATE OF INTREST

3. EXIT

----------------------------------------

Enter Your Choice = 3

------Thank you. Have a nice Day!-------

----------------------------------------

LOGIN AS

----------------------------------------

1. BANK ADMIN

2. BANK MANAGER

3. EXIT

----------------------------------------

Enter Your Choice = 2

Log in

----------------------------------------

Enter User Name = manager

Enter Password = manager

----------------------------------------

MAIN MENU

----------------------------------------

1. NEW ACCOUNT

2. DEPOSIT AMOUNT

3. WITHDRAW AMOUNT

4. BALANCE ENQUIRY

5. ALL ACCOUNT HOLDER LIST

6. CLOSE AN ACCOUNT

7. MODIFY AN ACCOUNT

8. TRANSACTION HISTORY

9. CALCULATE INTREST

10. EXIT

----------------------------------------

Enter Your Choice = 8

----------Transaction History-----------

1. All time

2. All Credit Records

3. All Debit Records

4. User's Transaction

0. Exit

----------------------------------------

Enter Your Choice = 1

ID Transaction Amount Date Time

-----------------------------------------------------------------

2 Credit 12000.0 2019-09-12 10:42:47

1 Credit 12000.0 2019-09-12 10:47:39

2 Credit 12000.0 2019-09-16 09:34:36

1 Debit 200.0 2019-09-21 12:03:41

2 Credit 34000.0 2019-09-22 23:24:41

2 Debit 7800.0 2019-09-22 23:27:35

1 Credit 500.0 2019-09-22 23:40:33

3 Credit 2000.0 2019-10-23 22:38:39

3 Credit 100000.0 2019-10-23 22:40:01

4 Credit 23000.0 2019-10-24 00:53:18

5 Credit 340000.0 2019-10-24 00:53:55

6 Credit 450000.0 2019-10-24 00:54:42

7 Credit 457000.0 2019-10-24 00:55:15

8 Credit 29000.0 2019-10-24 00:56:01

9 Credit 32000.0 2019-10-24 00:57:25

10 Credit 5600000.0 2019-10-24 00:59:39

4 Debit 3400.0 2019-10-24 01:01:43

5 Credit 2000.0 2019-10-24 01:01:57

6 Debit 50000.0 2019-10-24 01:02:09

5 Debit 2000.0 2019-10-24 01:02:25

10 Debit 100000.0 2019-10-24 09:03:23

2 Credit 4500.0 2019-10-24 09:03:39

8 Credit 3000.0 2019-10-24 09:03:52

5 Debit 40000.0 2019-10-24 09:04:03

6 Debit 4000.0 2019-10-24 09:04:15

9 Debit 12000.0 2019-10-24 09:04:26

7 Credit 2000.0 2019-10-24 09:04:37

9 Credit 23000.0 2019-10-24 09:04:43

10 Credit 67000.0 2019-10-24 09:06:40

----------------------------------------

MAIN MENU

----------------------------------------

1. NEW ACCOUNT

2. DEPOSIT AMOUNT

3. WITHDRAW AMOUNT

4. BALANCE ENQUIRY

5. ALL ACCOUNT HOLDER LIST

6. CLOSE AN ACCOUNT

7. MODIFY AN ACCOUNT

8. TRANSACTION HISTORY

9. CALCULATE INTREST

10. EXIT

----------------------------------------

Enter Your Choice = 8

----------Transaction History-----------

1. All time

2. All Credit Records

3. All Debit Records

4. User's Transaction

0. Exit

----------------------------------------

Enter Your Choice = 4

Enter Account Number = 2

ID Transaction Amount Date Time

-----------------------------------------------------------------

2 Credit 12000.0 2019-09-12 10:42:47

2 Credit 12000.0 2019-09-16 09:34:36

2 Credit 34000.0 2019-09-22 23:24:41

2 Debit 7800.0 2019-09-22 23:27:35

2 Credit 4500.0 2019-10-24 09:03:39