COMPUTER SCIENCE PROJECT:

ATM INVESTIGATORY

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1. Title of the Project

- **ATM MANAGEMENT SYSTEM**

2. About the Program

- This project on ‘Atm Manaagement System’ is made using both Python and MySQL. It works similar to an atm.
- It contains limited functions which include changing the pin, checking balance, withdrawing money of the customer and even displaying details of the customer, search the account number of the customer to the service maintainer.

3. Source Code

```
importmysql.connector as sqltor
User_name=input("Enter MySQL user name:")
Password=input("Enter MySQL password:")
Database=input("Enter Database name:")
myConnection=" "
cid=" "
sid=" "
PIN=" "
account_no=" "


#Establishing MySQL Connection
defConnectioncheck():
globalUser_name
```

```
global Password
global Database



globalmyConnection
myConnection=sqltor.connect(host="localhost",user=User_name,password=Password,database=Database,auth_plugin="mysql_native_password")
ifmyConnection:
print("Connection established Successfully!")
MainScreen()
else:
print("Error establishing Connection")
print("Check username and password!")

#Existing Account Holder
defExisting_acc():
globalcid
count=3
```

```
while count>0:
ifmyConnection:


cursor=myConnection.cursor()
cid=input("Please enter your Customer ID:")
sql="SELECT * FROM CUSTOMER WHERE CID = %s"
values=(cid,)
data=cursor.execute(sql,values)
data=cursor.fetchall()
if data:
print("1-Change PIN")
print("2-Check Balance")
print("3-Withdraw Money")
print("4-Help")
print("5-Exit")
        choice1=int(input("Enter your choice:"))
if choice1==1:
Change_PIN()
break
```

```
if choice1==2:


Balance()
break
if choice1==3:
withdrawAmount()
break
if choice1==4:
helpMe()
break
if choice1==5:
print("THANK YOU")
break
else:
print("Wrong Customer ID ")
count=count-1
print("You have",count,"attempts left")
if count==0:
print("Sorry , Your card has been blocked")
```

```
#Service Maintainer
def Server():
globalsid
ifmyConnection:
cursor=myConnection.cursor()
sid=input("Please Enter your Service ID:")
sql="SELECT * FROM SERVER WHERE SID = %s"
values=(sid,)
data=cursor.execute(sql,values)
data=cursor.fetchall()
if data:
print("1-Display all Customers")
print("2-Display all Accounts")
print("3-Search a Customer")
print("4-Search an Account")
print("5-Exit")
```

```
choice=int(input("Enter your choice:"))
if choice==1:
displayAllCustomer()
if choice==2:
displayAllAccount()
if choice==3:
searchCustomer()
if choice==4:
searchAccount()
if choice==5:
print("THANK YOU")
else:
print("Wrong Service ID.Access Denied!!!!")

#Entering a New Customer
defnewCustomer():
globalcid

ifmyConnection:
```

```
cursor=myConnection.cursor()
createTable ="""CREATE TABLE IF NOT EXISTS
CUSTOMER(CID VARCHAR(10) PRIMARY KEY
,CNAME VARCHAR(30) NOT NULL,ADDRESS
VARCHAR(30)NOT NULL ,PHONE VARCHAR(12) NOT
NULL)
"""
cursor.execute(createTable)
print("\nPlease Fill All The Information Carefully !")
cid=input("Please Enter Customer ID : ")
cname=input("Please Enter Customer Name : ")
address=input("Please Enter Customer Address : ")
phone=input("Please Enter Customer Contact No. : ")
sql='INSERT INTO
CUSTOMER(cid,cname,address,phone) values(%s,%s,
%s,%s)'
values=(cid,cname,address,phone)
cursor.execute(sql,values)

cursor.execute("COMMIT")
```

```
cursor.close()
print("\nNew Customer Added Successfully !")

#Creating a new Account
defnewAccount():
globalcid
ifmyConnection:
cursor=myConnection.cursor()
cid=input("Please Enter Customer ID : ")
sql="SELECT * FROM CUSTOMER WHERE CID = %s"
values=(cid,)
data=cursor.execute(sql,values)
data = cursor.fetchall()
if data:
```

```
createTable ="""CREATE TABLE IF NOT EXISTS
ACCOUNT(CID VARCHAR(10),ACCOUNT_NO INT
PRIMARY KEY

,ACCOUNT_TYPE VARCHAR(20) NOT NULL ,AMOUNT
INT NOT NULL , PIN INT NOT NULL)

"""

cursor.execute(createTable)

account_no=int(input("PLEASE ENTER THE ACCOUNT
NUMBER [0-9]: "))

account_type=input("PLEASE ENTER THE ACCOUNT
TYPE [ S-SAVING / C - CURRENT : ")

amount=int(input("PLEASE ENTER THE AMOUNT TO
DEPOSIT : "))

ATM_pin=int(input("PLEASE ENTER THE ATM PIN
[ FOUR DIGITIS ONLY ] : "))

sql='INSERT INTO ACCOUNT
(cid,account_no,account_type,amount ,pin)
VALUES(%s,%s,%s,%s,%s)'
```

```
values1=(cid,account_no,account_type,amount,ATM_pin)

cursor.execute(sql,values1)

cursor.execute("COMMIT")

print("\nNew Account Opened Successfully !")

else:

print("Sorry ! Customer NOT Found , Please Try Again ! ")


else:

print("\nSomthing Went Wrong ,Please Try Again !")


#Search a Customer

defsearchCustomer():

globalcid

ifmyConnection:

cursor=myConnection.cursor()
```

```
cid=input("Please Enter Customer ID : ")
sql="SELECT * FROM CUSTOMER WHERE CID = %s"
values=(cid,)
data=cursor.execute(sql,values)
data = cursor.fetchall()
if data:
print("\n*****CUSTOMER DETAILS*****")
print(data)
else:
print("Sorry ! Customer NOT Found , Please Try Again ! ")
else:
print("\nSomthing Went Wrong ,Please Try Again !")

#Changing PIN
defChange_PIN():
global PIN
count=3
ifmyConnection:
```

```
while count>0:
cursor=myConnection.cursor()
        pin1=int(input("Enter the current PIN:"))
sql="SELECT * FROM ACCOUNT WHERE PIN = %s"
values=(pin1,)
data=cursor.execute(sql,values)
data=cursor.fetchall()
if data:
            pin2=int(input("Enter a new PIN:"))
account_no=int(input("Enter account number:"))
sql="UPDATE ACCOUNT SET PIN = %s WHERE
ACCOUNT_NO = %s"
values=(pin2,account_no)
cursor.execute(sql,values)
cursor.execute("COMMIT")
print("PIN set successful!!!")
```

```
break
else:
print("Wrong PIN.Please enter a valid PIN")
count=count-1
print("You have",count,"attempts left")
if count==0:
print("Your card has been blocked. Visit Branch to reactivate it!!!")

#Checking Balance
def Balance():
globalaccount_no
ifmyConnection:
cursor=myConnection.cursor()
account_no=int(input("Enter the Account Number:"))
sql="SELECT * FROM ACCOUNT WHERE ACCOUNT_NO = %s"
```

```
values=(account_no,)
data=cursor.execute(sql,values)
data=cursor.fetchall()
if data:
sql="SELECT AMOUNT FROM ACCOUNT WHERE
ACCOUNT_NO = %s"
values=(account_no,)
data=cursor.execute(sql,values)
data=cursor.fetchall()
print(data)
else:
print("Account not found")

#Withdrawing Amount
defwithdrawAmount():
count =3
ifmyConnection:
```

```
cursor=myConnection.cursor()
account_no=int(input("PLEASE ENTER THE ACCOUNT NUMBER [0-9]: "))
sql="SELECT * FROM ACCOUNT WHERE ACCOUNT_NO = %s"
values=(account_no,)
data=cursor.execute(sql,values)
data = cursor.fetchall()
if data:
while True:
        ATM_PIN=int(input("PLEASE ENTER THE ATM PIN - ONLY 3 ATTEMPTS ARE ALLOWED : "))
sql='SELECT * FROM ACCOUNT WHERE PIN = %s'
values=(ATM_PIN,)
cursor.execute(sql,values)
data = cursor.fetchall()
if data:
```

```
amount=int(input("PLEASE ENTER AMOUNT TO
WITHDRAW : "))

sql='UPDATE ACCOUNT SET AMOUNT = AMOUNT - %s
WHERE PIN = %s'

values=(amount,ATM_PIN)

cursor.execute(sql ,values)

cursor.execute("COMMIT")

print("******* TRANSACTION SUCCESSFULLY
COMPLETED ! *******")

print("***** PLEASE TAKE MONEY AND REMOVE YOUR
CARD ! *****")

break

else:

print("Wrong Pin ! Please enter a Valid PIN")

count=count-1

print("You are left with only ",count ,"Attempts")

if count == 0:
```

```
print("Your Card has been Blocked , Please Visit the Branch to activate it")

break

else:

print("Sorry ! Account Infromation NOT Found , Please Try Again ! ")


#Displaying all Customers

defdisplayAllCustomer():

ifmyConnection:

cursor=myConnection.cursor()

cursor.execute("SELECT * FROM CUSTOMER")

data = cursor.fetchall()

if data:

print("\n*****DETAILS OF ALL CUSTOMER*****")

print(data)

else:
```

```
print("Sorry ! No Record Found , Please Try Again ! ")

#Display All Accounts
defdisplayAllAccount():
ifmyConnection:
cursor=myConnection.cursor()
cursor.execute("SELECT * FROM ACCOUNT")
data = cursor.fetchall()
if data:
print("\n*****DETAILS OF ALL CUSTOMER*****")
print(data)
else:
print("Sorry ! No Account Information , Please Try Again ! ")

# Search an Account
defsearchAccount():
```

```
globalcid
ifmyConnection:
cursor=myConnection.cursor()
cid=input("PLEASE ENTER CUSTOMER ID : ")
account_no=int(input("PLEASE ENTER THE ACCOUNT NUMBER [0-9]: "))
sql="SELECT * FROM ACCOUNT WHERE CID = %s AND ACCOUNT_NO = %s"
values=(cid,account_no)
data=cursor.execute(sql,values)
data = cursor.fetchall()
if data:
print("\n*****CUSTOMER ACCOUNT DETAILS*****")
print(data)
else:
print("Sorry ! Account Infromation NOT Found , Please Try Again ! ")
#Help
```

```
defhelpMe():
print("Please, Visit The Offcial Website Of Bank To Download The Mannual !!!")

#ATM Main Screen
defMainScreen():
print("WELCOME!!!!")
print("1-New Customer")
print("2-Existing Customer")
print("3-Service Maintainer")
   choice1=int(input("Enter your choice:"))
if choice1==1:
print("1-Create Customer ID")
print("2-Open New Account")
print("3-Help")
print("4-Exit")
      choice2=int(input("Enter your choice:"))
```

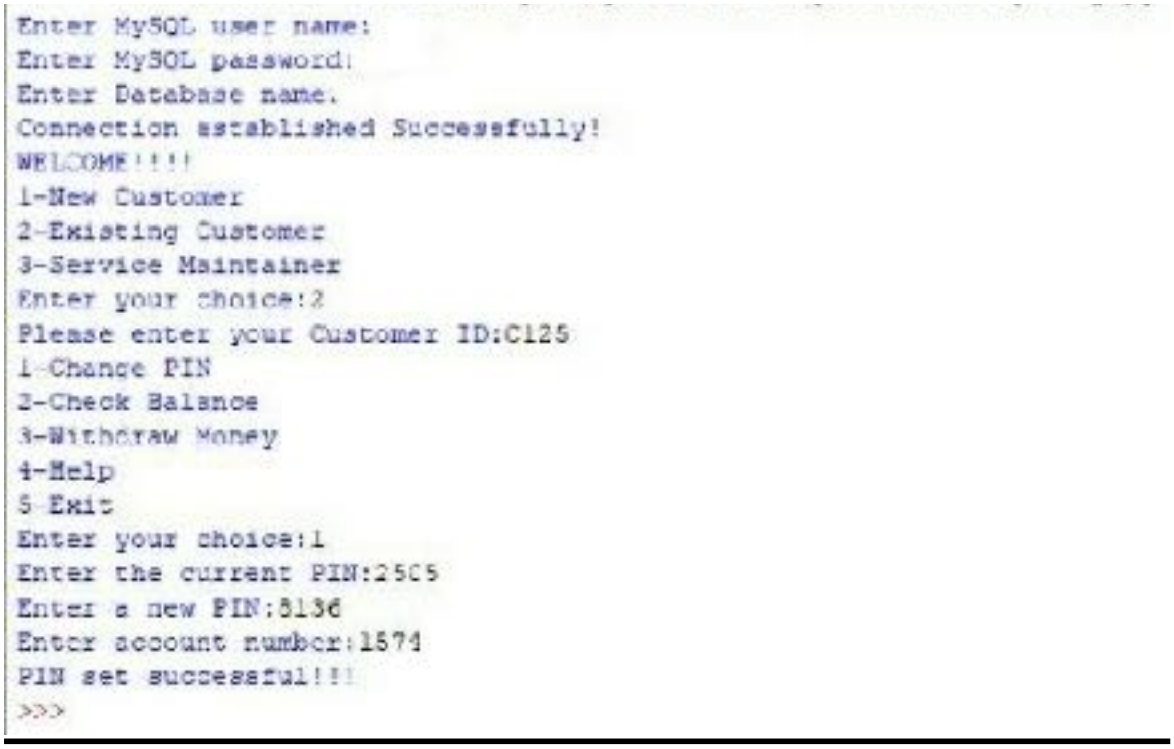
```
if choice2==1:
newCustomer()
if choice2==2:
newAccount()
if choice2==3:
helpMe()
if choice2==4:
print("THANK YOU")
myConnection.close()
if choice1==2:
Existing_acc()
if choice1==3:
Server()
Connectioncheck()
```

OUTPUT

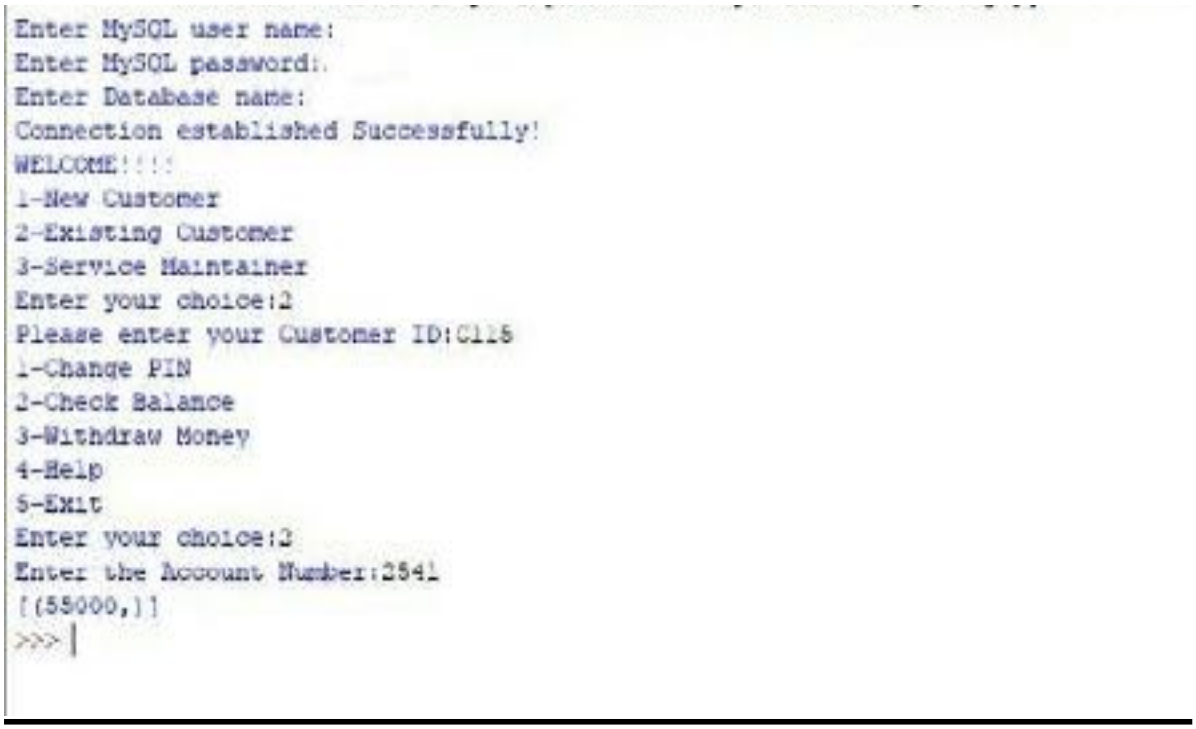
->Adding new customer:

->Addind new account:

->Change Pin:



->Check Balance:



->Withdraw Money:

```
Enter MySQL user name:
Enter MySQL password:
Enter Database name:
Connection established Successfully!
WELCOME!!!!
1-New Customer
2-Existing Customer
3-Service Maintainer
Enter your choice:2
Please enter your Customer ID:C125
1-Change PIN
2-Check Balance
3-Withdraw Money
4-Help
5-Exit
Enter your choice:3
PLEASE ENTER THE ACCOUNT NUMBER [0-9]: 1571
PLEASE ENTER THE ATM PIN - ONLY 3 ATTEMPTS ARE ALLOWED : 0196
PLEASE ENTER AMOUNT TO WITHDRAW : 20000
******* TRANSACTION SUCCESSFULLY COMPLETED ! *******
***** PLEASE TAKE MONEY AND REMOVE YOUR CARD ! *****
>>>
```

->Search Customer:

```
Enter MySQL user name:
Enter MySQL password:
Enter Database name:
Connection established Successfully!
WELCOME!!!!
1-New Customer
2-Existing Customer
3-Service Maintainer
Enter your choice:3
Please Enter your Service ID:S016
1-Display all Customers
2-Display all Accounts
3-Search a Customer
4-Search an Account
5-Exit
Enter your choice:3
Please Enter Customer ID : C103

*****CUSTOMER DETAILS*****
[('C103', 'Athul', '9/D Lake road', '3456232146')]
>>>
```

->Search Account:

```
Enter MySQL user name:
Enter MySQL password:
Enter Database name:
Connection established Successfully!
WELCOME!!!!
1-New Customer
2-Existing Customer
3-Service Maintainer
Enter your choice:3
Please Enter your Service ID:S016
1-Display all Customers
2-Display all Accounts
3-Search a Customer
4-Search an Account
5-Exit
Enter your choice:4
PLEASE ENTER CUSTOMER ID : C103
PLEASE ENTER THE ACCOUNT NUMBER [0-9]: 1232

*****CUSTOMER ACCOUNT DETAILS*****
[('C103', 1232, 'S', 50000, 6543)]
>>>
```

->Add Customers:

```
Enter MySQL user name:
Enter MySQL password:
Enter Database name:
Connection established Successfully!
WELCOME!!!!
1-New Customer
2-Existing Customer
3-Service Maintainer
Enter your choice:3
Please Enter your Service ID:S016
1-Display all Customers
2-Display all Accounts
3-Search a Customer
4-Search an Account
5-Exit
Enter your choice:1

*****DETAILS OF ALL CUSTOMER*****
[('C102', 'Arjun', '16/c P.K.Nagar', '7543214560'), ('C103', 'Achul', '9/D Lake road', '3456232146'), ('C106', 'Rahim', 'B.G.Street', '2436578650'), ('C109', 'Melvin',
'Ranji street', '6541214568'), ('C112', 'Rayse', 'Dabba Mumbai', '4534564321'), ('C114', 'Preethi', 'Leela Road 25', '3213456543'), ('C116', 'Rama', 'St.Jones kolkata'
, '2564767890'), ('C118', 'Balu', 'Baghi 26/8', '1245689054'), ('C120', 'Regveth', 'K.T.Road', '2356756432'), ('C122', 'Manish', 'R.N.Nagar Delhi', '9887643526'), ('C1
24', 'Sushanth', 'P.S.Nagar Delhi', '9475876620'), ('C126', 'Sushanth', 'P.S.Nagar Delhi', '9456754321'), ('C127', 'Raees', 'T.T Rajput 23/9', '4321427660')]
>>>
```

->All Accounts:

```
Enter MySQL user name:
Enter MySQL password:
Enter Database name:
Connection established Successfully
WELCOME!!!!
1-New Customer
2-Existing Customer
3-Service Maintainer
Enter your choice:3
Please Enter Your Service ID:8018
1-Display all Customers
2-Display all Accounts
3-Search a Customer
4-Search an Account
5-Exit
Enter your choice:2
*****DETAILS OF ALL CUSTOMER*****
[('C126', 1574, 'Savings', 70000, 8186), ('C115', 2541, 'Current', 5600), 150%), ('C105', 2563, 'Current', 20000, 1163), ('C116', 2559, 'Savings', 50120, 1974), ('C102
', 2552, 'Savings', 30010, 6937), ('C122', 2635, 'Savings', 45000, 1949), ('C118', 3641, 'Savings', 65070, 1840), ('C129', 4053, 'Current', 17500, 3858), ('C127', 6497
, 'Savings', 57500, 1086), ('C123', 8417, 'Current', 18010, 6547)]
>>>
```

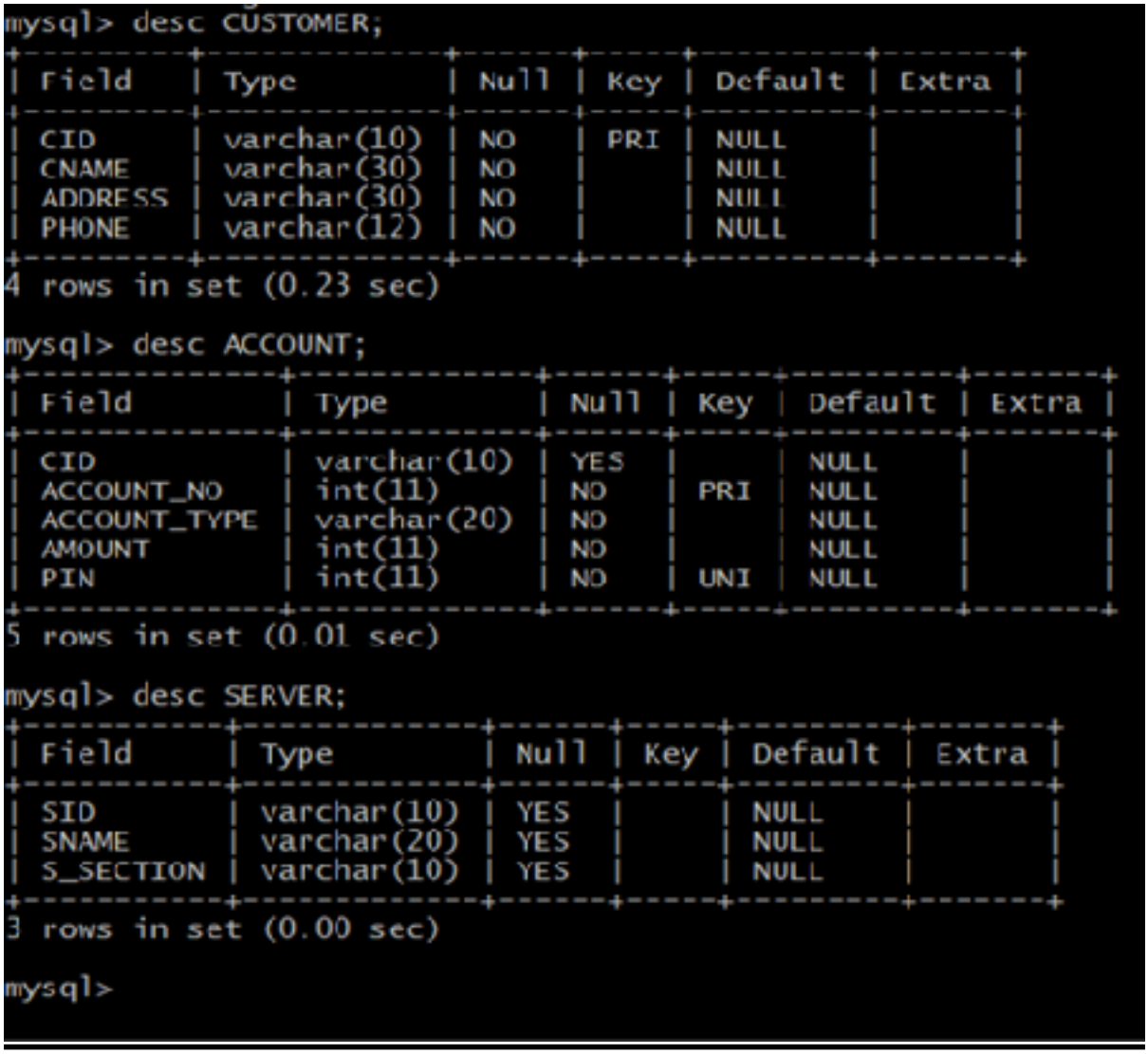
->Help:

```
Enter MySQL user name:
Enter MySQL password:
Enter Database name
Connection established Successfully!
WELCOME!!!!
1-New Customer
2-Existing Customer
3-Service Maintainer
Enter your choice:2
Please enter your Customer ID:C102
1-Change PIN
2-Check Balance
3-Withdraw Money
4-Help
5-Exit
Enter your choice:4
Please, Visit The Official Website Of Bank To Download The Mannual !!!
>>>
```

->Exit:

```
Enter MySQL user name:
Enter MySQL password:
Enter Database name
Connection established Successfully!
WELCOME!!!!
1-New Customer
2-Existing Customer
3-Service Maintainer
Enter your choice:2
Please enter your Customer ID:C102
1-Change PIN
2-Check Balance
3-Withdraw Money
4-Help
5-Exit
Enter your choice:5
THANK YOU
```

-> SQL TABLES:



```
mysql> desc CUSTOMER;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| CID     | varchar(10) | NO   | PRI | NULL    |       |
| CNAME   | varchar(30) | NO   |     | NULL    |       |
| ADDRESS | varchar(30) | NO   |     | NULL    |       |
| PHONE   | varchar(12) | NO   |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.23 sec)

mysql> desc ACCOUNT;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| CID          | varchar(10) | YES  |     | NULL    |       |
| ACCOUNT_NO   | int(11)     | NO   | PRI | NULL    |       |
| ACCOUNT_TYPE | varchar(20) | NO   |     | NULL    |       |
| AMOUNT       | int(11)     | NO   |     | NULL    |       |
| PIN          | int(11)     | NO   | UNI | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
5 rows in set (0.01 sec)

mysql> desc SERVER;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| SID       | varchar(10) | YES  |     | NULL    |       |
| SNAME     | varchar(20) | YES  |     | NULL    |       |
| S_SECTION | varchar(10) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql>
```

5. Modules Used

- **Mysql.connector -** MySQL Connector/Python enables Python programs to access MySQL databases, using an API that is compliant with the Python Database API Specification v2.0 (PEP 249). It is written in pure Python and does not have any dependencies except for the Python Standard Library.

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6. Inferences

- **Sumita Arora-Class XII Textbook**
- **geeksforgeeks**
- **stackoverflow**