



# Hacker's ATM

Advanced Programming  
Database Management System



H@CK3R\_C3115\_453

HACKERS NEVER ALT+F4!

## Team Details

### Team Members:-

- |   |                      |
|---|----------------------|
| 1) Enaganti Karun Kumar                 | ->~ CH.EN.U4CYS20016 |
| 2) Narayana Datta Sai Manikanta         | ->~ CH.EN.U4CYS20049 |
| 3) Gowtham Pushkar Bhatraju             | ->~ CH.EN.U4CYS20022 |
| 4) Pulakandam Venkata Siva Naga Hemanth | ->~ CH.EN.U4CYS20060 |

### Project Details :-

- |                         |  |
|-------------------------|--|
| 1) Topic of our Topic   | :- ATM Machine   |
| 2) Title of our Project | :- Hackers ATM   |
| 3) Team Number          | :- 16  |
| 4) Subjects             | :- Advanced Programming , DBMS   |
| 5) Project Demo         | :- <a href="https://youtu.be/nhDfxp-j14w">https://youtu.be/nhDfxp-j14w</a>                             |
| 6) Project Repo         | :- <a href="https://github.com/Dattasai20028062/APDBMS">https://github.com/Dattasai20028062/APDBMS</a> |
| 7) Professor's          | :- Dr Vigneshwaran Muralidaran<br>Dr Ragupathy   |

A Group assignment Submitted to Amrita School of Engineering in partial fulfilment of the Requirements for the Degree of Bachelor of Technology in Computer Science and Engineering (CYS)

Sir, we kindly request to check our project demo video in the YouTube link given above as we could not include everything in these screen shots , but we tried our best to explain all these things in this documentation. And sir please visit our repository with above GitHub link to check our project code and more about our code.

In this project we used python programming language and for database we used MySQL. We included python with MySQL driver that enables python programs to access MySQL Database.

## Motivation For Selecting this topic :-

Our team thought to take a realistic topic so that we can implement in a better and understandable way. Thought we have wide number of topics with similar to our point of view, we chosen this ATM topic because Nowadays all are using online transaction and online payments for everything , but the idea and online banking are somewhat similar. In fact, the online banking is updated version of ATM. Because ATM to help people in managing bank activities without vising bank and in a safe , secured manner. With all this in mind we chosen to make project of ATM with works similar to real world ATM. Our Project may not as good as true ATM , but we tried our level best to make as realistic and as good as possible. We named this project as hackers bank because we are cyber security enthusiastic and we want to name our project that is something related to our Project

## Approach to our topic :-

Our group had make sure to make our code as understandable as possible. We had implemented this code with simple code logic and simple syntax. This code may look some complex because of its number of lines and length but on simple analysis this can be easily understandable and easy to execute. In this code we followed program-oriented programming , but in real life we should use object-oriented programming.

We made this code as user friendly as possible , even we don't need change any syntax or execute any Queries for connecting to database. If you have python and MySQL running in computer that's enough to run this code and before executing this code u need to install python module name mysql.connector , this can simply installed with command " pip install mysql.connector ". We prefer to install another package also that is " pip install mysql.connector.python ". After doing this we can simply run our python code(link for GitHub is above)

## ) ~ : Code Flow : - )

Here we are going to explain about every single step of our code with corresponding output screenshots in order. This makes logic of our code very clear.

So, here are the steps in our code : --

### 1) Connecting to MySQL : -

After Running our code, you will be asked to enter host name , user name and password of MySQL to connect. After entering your credentials, it will check whether you have required database or not. If you have a database this will modified to run accordingly. Even if you don't have the database this will create a database for you and this will set to it accordingly .

```

File Edit Selection View Go Run Terminal Help
ATM.py - Untitled (Workspace) - Visual Studio Code

ATM.py
AP+DBMS > ATM.py > ...
1  """
2  AP+DBMS Project Done by Team - 16
3  Team Members :
4  1) Enaganti Karun Kumar           ->~ CH.EN.U4CYS20016
5  2) Narayana Datta Sai Manikanta    ->~ CH.EN.U4CYS20049
6  3) Gowtham Pushkar Bhatraju        ->~ CH.EN.U4CYS20022
7  4) Pulakandam Venkata Siva Naga Hemanth ->~ CH.EN.U4CYS20060
8  """

PROBLEMS OUTPUT TERMINAL SQL CONSOLE DEBUG CONSOLE

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS D:\Amrita 3rd Sem\Assignments\AP\AP+DBMS> python -u "d:\Amrita 3rd Sem\Assignments\AP\AP+DBMS\ATM.py"
Enter the Host Name : localhost
Enter the User Name : root
Enter the password : THISISMySQL3306
Enter port Number(Default-3306) : 3306
Database Selected
  
```

As I already have database saved in MySQL , this just selects it lets see what happens if we delete the database and again run this code . This code will create a database and automatically generate required tables in your MySQL.

```

ATM.py > ...
if(D==0):
    print("You dont have the required database in your connection")
    try:
        C.execute("create database apdbms2;")
        C.execute("use apdbms2")
        C.execute("create table apdbms_Cust(Name varchar(20),ACCOUNT_NO int, PRIMARY KEY(ACCOUNT_NO));")
        C.execute("create table apdbms_Bal(ACCOUNT_NO int , Balance int , foreign key(ACCOUNT_NO) references apdbms_Cust(ACCOUNT_NO) on delete cascade);")
        C.execute("create table apdbms_Acc(ACCOUNT_NO int ,PIN varchar(10), foreign key(ACCOUNT_NO) references apdbms_Cust(ACCOUNT_NO) on delete cascade);")
        C.execute("create table apdbms_wid(Date timestamp default current_timestamp ,ACCOUNT_NO int ,Amount int, foreign key(ACCOUNT_NO) references apdbms_Cust(A")
        C.execute("create table apdbms_dep(Date timestamp default current_timestamp ,ACCOUNT_NO int ,Amount int, foreign key(ACCOUNT_NO) references apdbms_Cust(A")
        C.execute("create table apdbms_tra(Date timestamp default current_timestamp ,ACCOUNT_NO int ,To_ACCOUNT int ,Amount int, foreign key(ACCOUNT_NO) referenc")
        C.execute("create table apdbms_blo(ACCOUNT_NO int, foreign key(ACCOUNT_NO) references apdbms_Cust(ACCOUNT_NO) on delete cascade);")
        con.commit()
    except Exception as e:
        print(e)

PowerShell
Microsoft Corporation. All rights reserved.

the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

Amrita 3rd Sem\Assignments\AP\AP+DBMS> python -u "d:\Amrita 3rd Sem\Assignments\AP\AP+DBMS\ATM.py"
Host Name : localhost
User Name : root
Password : THISISMySQL3306
Port Number(Default-3306) : 3306
You have the required database in your connection
Now connected to database ... you can start executing

```

Once you have connected to database , terminal will display the tittle text and ask for login details. If due to any reason this fails you can still run our code as we include our SQL Queries at end of our code (commented)

## 2) Login , Signup , Exit : -

Now we have to choose Login , signup , or exit ( closes the program)

First lets signup and after login.

```

AP+DBMS > ATM.py > ...
1. LOGIN      2. SIGNUP      3. Exit
Enter Your Choice : 2
HACK3R5 B4NK W3LC0M35 Y0U .... !
Please Enter Your Name : ApDBMS
Your Account Number is 7635
Thank You For Choosing Our Bank....Login Again to choose the PIN

db db .d8b. .o88b. db dD d88888b d8888b. Cb .d8888. .d8b. d888888b .88b d88.
88 88 d8' `8b d8P Y8 88 ,8P' 88' 88 `8D 88' YP d8' `8b `~88~' 88'YbdP' 88
8800088 8800088 8P 88,8P 8800000 8800bY' ' 8b0. 8800088 88 88 88 88
88~88 88~88 8b 88'8b 88~88 88'8b `Y8b. 88~88 88 88 88 88
88 88 88 88 Y8b d8 88 88. 88 88. db 8D 88 88 88 88 88 88
YP YP YP YP Y88P' YP YD Y88888P 88 YD `8888Y' YP YP YP YP YP YP

Only a true hacker can login ... !
Hacker Never Quits...!
<<<<=====>>>>Never Give Up<<<<=====>>>>
1. LOGIN      2. SIGNUP      3. Exit
Enter Your Choice : 2
HACK3R5 B4NK W3LC0M35 Y0U .... !
Please Enter Your Name : ApDBMS
Your Account Number is 7635
Thank You For Choosing Our Bank....Login Again to choose the PIN

```

Here it giving us the Account Number which we need to use for login again to set the pin and start the account. Lets start

```

File Edit Selection View Go Run Terminal Help
ATM.py - Untitled (Workspace) - Visual Studio Code

PROBLEMS OUTPUT TERMINAL SQL CONSOLE DEBUG CONSOLE

db db .d8b. .o88b. db dD d88888b d8888b. Cb .d8888. .d8b. d888888b .88b d88.
88 88 d8' `8b d8P Y8 88 ,8P' 88' 88 `8D `D 88' YP d8' `8b `~88~' 88'YbdP`88
88ooo88 88ooo88 8P 88,8P 88ooooo 88oobY' `8bo. 88ooo88 88 88 88 88
88~88 88~88 8b 88`8b 88~88 88`8b `Y8b. 88~88 88 88 88 88
88 88 88 88 Y8b d8 88 `88. 88. 88 `88. db 8D 88 88 88 88 88
YP YP YP YP `Y88P' YP YD Y88888P 88 YD `8888Y' YP YP YP YP YP YP

Only a true hacker can login ... !
Hacker Never Quits...!
<<<=====>>>Never Give Up<<<=====>>>
1. LOGIN 2.SIGNUP 3.Exit
Enter Your Choice :1
Please Enter secret Account Number :7635
Logging in... [ ]You Almost Done ,... Just create a pin below to go ahead
Enter Your New PIN : 1234
Please deposit some money to your account : 500

```

Here when I logged in for the first time it asking to set a pin for account after creating a pin its asking to deposit some minimum balance once we have deposited (entered) we are good to go now. After this it will again ask you to login just login to manage the services provided by our code.

### Salient Features of our code :-

Once you logged throw our code it will display all services that our code will provide . lets see ..

```

88 88 d8' `8b d8P Y8 88 ,8P' 88' 88 `8D `D 88' YP d8' `8b `~88~' 88'YbdP`88
88ooo88 88ooo88 8P 88,8P 88ooooo 88oobY' `8bo. 88ooo88 88 88 88 88
88~88 88~88 8b 88`8b 88~88 88`8b `Y8b. 88~88 88 88 88 88
88 88 88 88 Y8b d8 88 `88. 88. 88 `88. db 8D 88 88 88 88 88
YP YP YP YP `Y88P' YP YD Y88888P 88 YD `8888Y' YP YP YP YP YP YP

Only a true hacker can login ... !
Hacker Never Quits...!
<<<=====>>>Never Give Up<<<=====>>>
1. LOGIN 2.SIGNUP 3.Exit
Enter Your Choice :1
Please Enter secret Account Number :7635
Logging in... [ ]HACKER'S BANK W31C0M35 YOU.....!
Please Enter you MASTER PIN : 1234
U HACKED IT.....!
You successfully logged in .. ! .. Here you go ... : >
1.Depositng money
2.Withdrawing money
3.Transferring money
4.Checking balance
5.Changing PIN
6.View Statement

```

```
PROBLEMS OUTPUT TERMINAL SQL CONSOLE DEBUG CONSOLE
db db .d8b. .o88b. db dD d88888b d8888b. Cb .d8888. .d8b. d888888b .88b d88.
88 88 d8' `8b d8P Y8 88 ,8P' 88' 88 `8D `D 88' YP d8' `8b `~88~' 88'YbdP`88
8800088 8800088 8P      88,8P 8800000 8800bY' ' `8bo. 8800088 88 88 88 88
88~88 88~88 88 8b 88'8b 88~88 88'8b 88~88 88 88 88 88
88 88 88 88 Y8b d8 88 `88. 88. 88 `88. db 8D 88 88 88 88 88 88
YP YP YP YP `Y88P' YP YD Y88888P 88 YD `8888Y' YP YP YP YP YP YP

Only a true hacker can login ... !
Hacker Never Quits...!
<<<=====>>>Never Give Up<<<=====>>>
U HACKED IT.....!
You successfully logged in .. ! .. Here you go ... : >
1.Depositng money
2.withdrawing money
3.Transferring money
4.Checking balance
5.Changing PIN
6.View Statement
7.Log Out

Enter Your Choice: 2
M0N3Y IS FOR EVERY ONE .. HERE Y0U C4N WITHDRAW YOUR 4M0UNT
Enter Amount to Withdraw: 500
WE HOPE YOUR PRIVACY .... Please Enter Your PIN AGAIN : 1234
1000
500.0
Money Withdrawal Successful
```



### iii. Transfer money :-

On Choosing Option 3 we can transfer your balance to another user internally ..

```

File Edit Selection View Go Run Terminal Help
ATM.py - Untitled (Workspace) - Visual Studio Code

PROBLEMS OUTPUT TERMINAL SQL CONSOLE DEBUG CONSOLE

db db .d8b. .o88b. db dD d88888b d8888b. Cb .d8888. .d8b. d888888b .88b d88.
88 88 d8' `8b d8P Y8 88 ,8P' 88' 88 `8D `D 88' YP d8' `8b `~88~' 88'YbdP`88
8800088 8800088 8P 88,8P 8800000 8800bY' ' `8bo. 8800088 88 88 88 88
88~88 88~88 8b 88`8b 88~88 88`8b `Y8b. 88~88 88 88 88 88
88 88 88 88 Y8b d8 88 `88. 88. 88 `88. db 8D 88 88 88 88 88 88
YP YP YP YP `Y88P' YP YD Y88888P 88 YD `8888Y' YP YP YP YP YP YP

Only a true hacker can login ... !
Hacker Never Quits...!
<<<<=====>>>>Never Give Up<<=====>>>>
U HACKED IT.....!
You successfully logged in .. ! .. Here you go ... : >
1.Depositng money
2.Withdrawing money
3.Transferring money
4.Checking balance
5.Changing PIN
6.View Statement
7.Log OUT

Enter Your Choice: 3
Enter the Account Number you want to transfer 1790
Enter the Amount to transfer : 20
920.0
Amount transferred Successfully

```

### iv. Checking balance:-

On Choosing option 4 this will display the balance of your account

```

File Edit Selection View Go Run Terminal Help
ATM.py - Untitled (Workspace) - Visual Studio Code

PROBLEMS OUTPUT TERMINAL SQL CONSOLE DEBUG CONSOLE

db db .d8b. .o88b. db dD d88888b d8888b. Cb .d8888. .d8b. d888888b .88b d88.
88 88 d8' `8b d8P Y8 88 ,8P' 88' 88 `8D `D 88' YP d8' `8b `~88~' 88'YbdP`88
8800088 8800088 8P 88,8P 8800000 8800bY' ' `8bo. 8800088 88 88 88 88
88~88 88~88 8b 88`8b 88~88 88`8b `Y8b. 88~88 88 88 88 88
88 88 88 88 Y8b d8 88 `88. 88. 88 `88. db 8D 88 88 88 88 88 88
YP YP YP YP `Y88P' YP YD Y88888P 88 YD `8888Y' YP YP YP YP YP YP

Only a true hacker can login ... !
Hacker Never Quits...!
<<<<=====>>>>Never Give Up<<=====>>>>
U HACKED IT.....!
You successfully logged in .. ! .. Here you go ... : >
1.Depositng money
2.Withdrawing money
3.Transferring money
4.Checking balance
5.Changing PIN
6.View Statement
7.Log OUT

Enter Your Choice: 4
Your Balance is 480

```



## v. Changing PIN :-

This option allows the user to change the pin of your account

```

File Edit Selection View Go Run Terminal Help
ATM.py - Untitled (Workspace) - Visual Studio Code

PROBLEMS OUTPUT TERMINAL SQL CONSOLE DEBUG CONSOLE

db db .d8b. .o88b. db dD d88888b d8888b. Cb .d8888. .d8b. d888888b .88b d88.
88 88 d8' `8b d8P Y8 88 ,8P' 88' 88 `8D `D 88' YP d8' `8b `~88~' 88'YbdP`88
8800088 8800088 8P 88,8P 8800000 8800bY' ' `8bo. 8800088 88 88 88 88
88~88 88~88 8b 88`8b 88~88 88`8b `Y8b. 88~88 88 88 88 88
88 88 88 88 Y8b d8 88 `88. 88. 88 `88. db 8D 88 88 88 88 88
YP YP YP YP `Y88P' YP YD Y88888P 88 YD `8888Y' YP YP YP YP YP YP

Only a true hacker can login ... !
Hacker Never Quits...!
<<<<=====>>>>Never Give Up<<<<=====>>>>
U HACKED IT.....!
You successfully logged in .. ! .. Here you go ... : >
1.Depositng money
2.Withdrawing money
3.Transferring money
4.Checking balance
5.Changing PIN
6.View Statement
7.Log Out

Enter Your Choice: 5
WE HOPE YOUR PRIVACY .... Please Enter Your PIN AGAIN : 1234
Enter your new PIN : 1254
Pin is UPDATED
  
```

## vi. View statement :-

this will display the statement of your deposits , transactions , withdraws .

```

PROBLEMS OUTPUT TERMINAL SQL CONSOLE DEBUG CONSOLE

db db .d8b. .o88b. db dD d88888b d8888b. Cb .d8888. .d8b. d888888b .88b d88.
88 88 d8' `8b d8P Y8 88 ,8P' 88' 88 `8D `D 88' YP d8' `8b `~88~' 88'YbdP`88
8800088 8800088 8P 88,8P 8800000 8800bY' ' `8bo. 8800088 88 88 88 88
88~88 88~88 8b 88`8b 88~88 88`8b `Y8b. 88~88 88 88 88 88
88 88 88 88 Y8b d8 88 `88. 88. 88 `88. db 8D 88 88 88 88 88
YP YP YP YP `Y88P' YP YD Y88888P 88 YD `8888Y' YP YP YP YP YP YP

Only a true hacker can login ... !
Hacker Never Quits...!
<<<<=====>>>>Never Give Up<<<<=====>>>>
<<<<=====>>>>HBUCD<<<<=====>>>>
H@CK3R :ApDBMS Account Number :7635
Withdraw's Table :
+-----+
| Date and Time | Amount |
+-----+
| 2021-12-17 17:23:43 | 500 |
+-----+
Deposits's Table :
+-----+
| Date and Time | Amount |
+-----+
| 2021-12-17 17:19:53 | 500 |
+-----+
Transfer's Table :
+-----+
| Date and Time | Amount | Transfer to |
+-----+
| 2021-12-17 17:27:13 | 20 | 1790 |
+-----+
  
```

### vii. Logout :-

This ends the session and logout from the account and displays the login screen again.

### viii. Blocking the Account : -

This is one of important feature of our code , if the user enters the pin for 3 times then the account is temporarily blocked.

```

PROBLEMS  OUTPUT  TERMINAL  SQL CONSOLE  DEBUG CONSOLE

db .d8b. .o88b. db dD d88888b d8888b. Cb .d8888. .d8b. d888888b .88b d88.
88 d8' `8b d8P Y8 88 ,8P' 88' 88 `8D `D 88' YP d8' `8b `~88~' 88'YbdP`88
8800088 8800088 8P 88,8P 8800000 880obY' ' `8bo. 8800088 88 88 88 88
88~88 88~88 8b 88`8b 88~88 88`8b `Y8b. 88~88 88 88 88 88
88 88 88 Y8b d8 88 `88. 88. 88 `88. db 8D 88 88 88 88 88
YP YP YP `Y88P' YP YD Y88888P 88 YD `8888Y' YP YP YP YP YP YP

Only a true hacker can login ... !
Hacker Never Quits...!
<<<=====>>>Never Give Up<<<=====>>>
1.LOGIN 2.SIGNUP 3.Exit
Enter Your Choice :1
Please Enter secret Account Number :7635
Logging in.... [REDACTED]HACKERS BANK W31C0M39 YOU...!
Please Enter you MASTER PIN : 1235
You Have only 2 Chances left
Please Enter you MASTER PIN : 7586
You Have only 1 Chances left
Please Enter you MASTER PIN : 7895
Maximum Number of attempts Extended ....

```

After this when you login also this will say that account is temporarily blocked . Let's see

```

Edit Selection View Go Run Terminal Help ATM.py - Untitled (Workspace) - Visual S

PROBLEMS  OUTPUT  TERMINAL  SQL CONSOLE  DEBUG CONSOLE

db db .d8b. .o88b. db dD d88888b d8888b. Cb .d8888. .d8b. d888888b .88b d88.
88 88 d8' `8b d8P Y8 88 ,8P' 88' 88 `8D `D 88' YP d8' `8b `~88~' 88'YbdP`88
8800088 8800088 8P 88,8P 8800000 880obY' ' `8bo. 8800088 88 88 88 88
88~88 88~88 8b 88`8b 88~88 88`8b `Y8b. 88~88 88 88 88 88
88 88 88 88 Y8b d8 88 `88. 88. 88 `88. db 8D 88 88 88 88 88
YP YP YP YP `Y88P' YP YD Y88888P 88 YD `8888Y' YP YP YP YP YP YP

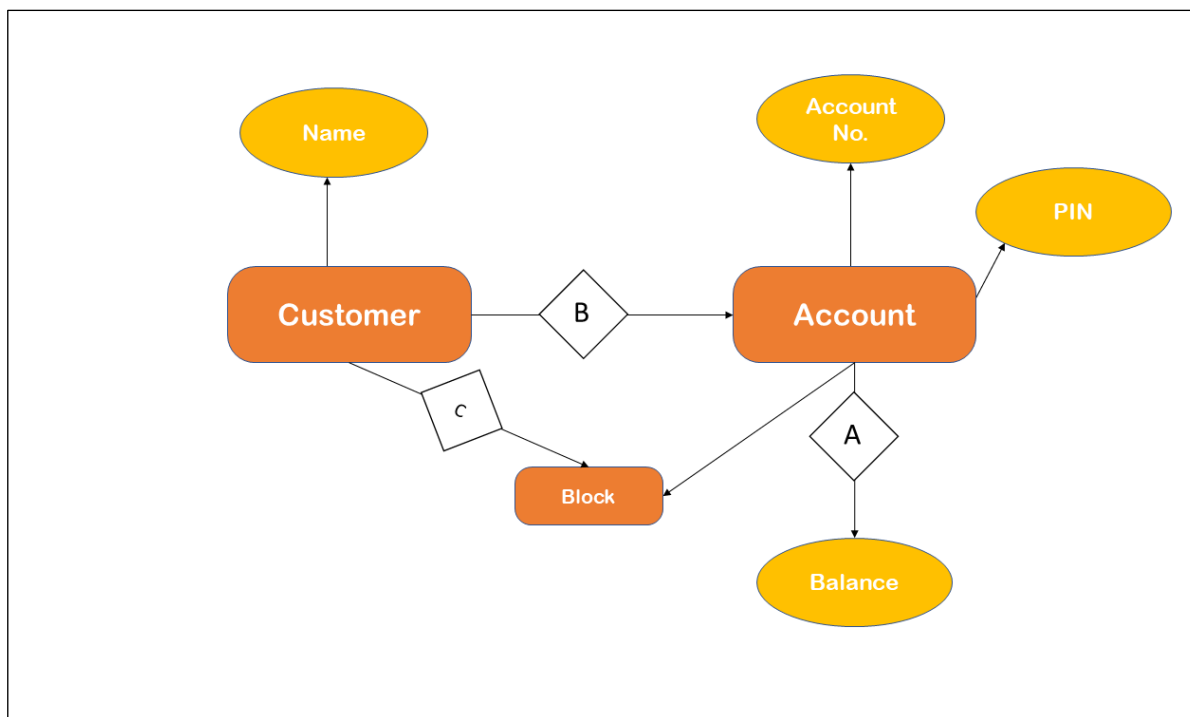
Only a true hacker can login ... !
Hacker Never Quits...!
<<<=====>>>Never Give Up<<<=====>>>
1.LOGIN 2.SIGNUP 3.Exit
Enter Your Choice :1
Please Enter secret Account Number :7635
Logging in.... [REDACTED]Your Account is Temporary Blocked Contact Admin for futhur Queries

```

## ) ~ : Difficulties Faced : - )

1. First difficulty we faced is using the connector to connect the database with python , as we are not sure how the exactly use it
2. Even after connecting we got some errors of SQL with in python.
3. We thought to make a database design with one table actually we had done but after we understand that might not be a good database because some many rows are null indicates wastage of memory. To avoid this we created different table for different purposes
4. First we are not concrete about logic of blocking option but later we solved with simple for loop and constraints.

## ) ~ : ER Diagram : - )



A--> Account can deposit , withdraw , transfer balance

B-->Customer can Create Account

C->Customer can block Account

## ) ~ : Database Design : - )

