



# Hacker's ATM

HACKER'S ATM

Advanced Programming  
Database Management System



H@CK3R\_C3115\_453

HACKERS NEVER ALT+F4!

## Team Details

### Team Member:-

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### 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 Repo        :<https://github.com/hemanthgithub642/APDBMS.git>
- 6) Professor's                                        :- Dr Vigneshwaran Muralidaran  
Dr Ragupathy

In this project we used C++ programming language and for database we used MySQL. We included c++ with MySQL driver that enables 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 c++ and MySQL running in computer that's enough to run this code and before executing this code u need to install c++ 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.c++ ". After doing this we can simply run our c++ 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 .

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.

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.

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

```

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<<<=====>>>
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
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<<<=====>>>
1. LOGIN      2.SIGNUP      3.Exit
Enter Your Choice :1
Please Enter secret Account Number :7635
Logging in.... [██████████]HACKERS BANK WELCOME 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
  
```

Let's see one by one from deposit to logout ,

### i. Deposit :-

On choosing option 1 our code will how much money you are willing to deposit then after it will add up to your balance

```

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. .088b. 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<<<<=====>>>>
1.LOGIN 2.SIGNUP 3.Exit
Enter Your Choice :1
Please Enter secret Account Number :7635
Logging in.... [HACKED BANK SYSTEMS YOU.....]
Please Enter your 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
7.Log Out

Enter Your Choice: 1
Enter the amount u want to deposit:500
Here You Go ...!Old Balance : 500
Updated Balance : 1000.0
Money Deposited Successfully to your Account

```

### ii. Withdraw :-

On choosing option 2 code works similar to Deposit but code again to enter pin in point of view of security , ..

```

PROBLEMS OUTPUT TERMINAL SQL CONSOLE DEBUG CONSOLE

db db .d8b. .088b. 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: 2
MONEY IS FOR EVERY ONE .. HERE YOU CAN WITHDRAW YOUR AMOUNT
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
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
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<<=====>>>>
HACKERS BANK USED YOUR IDENTICAL DATA
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 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]Hacker's Bank Withdrawal Vaid.....
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

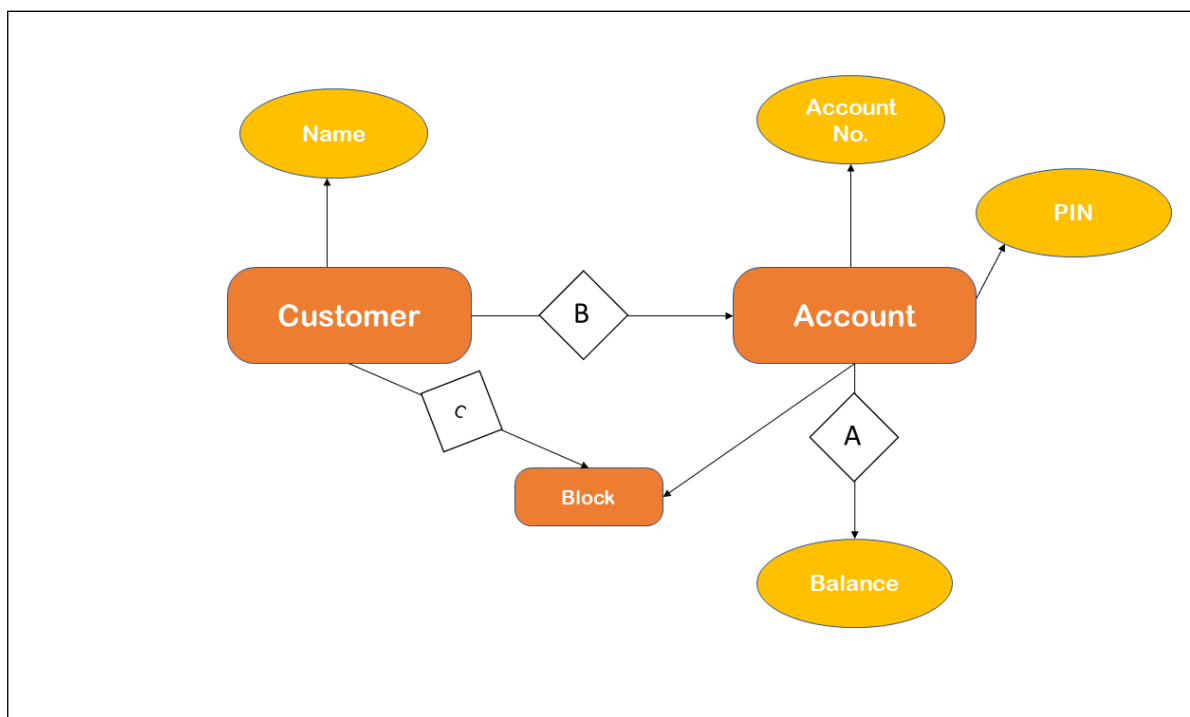
Only a true hacker can login ... !
Hacker Never Quits...!
<<<<=====>>>>Never Give Up<<<<=====>>>>
1.LOGIN      2.SIGNUP      3.Exit
Enter Your Choice :1
Please Enter secret Account Number :7635
Logging in.... [REDACTED]Your Account is Temporary Blocked Contact Admin for futhur Queries

```

## ) ~ : Difficulties Faced : - )

1. First difficulty we faced is using the connector to connect the database with c++ , as we are not sure how the exactly use it
2. Even after connecting we got some errors of SQL with in c++.
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 : - )

