ATM Services Protocol Implementation in Python

By
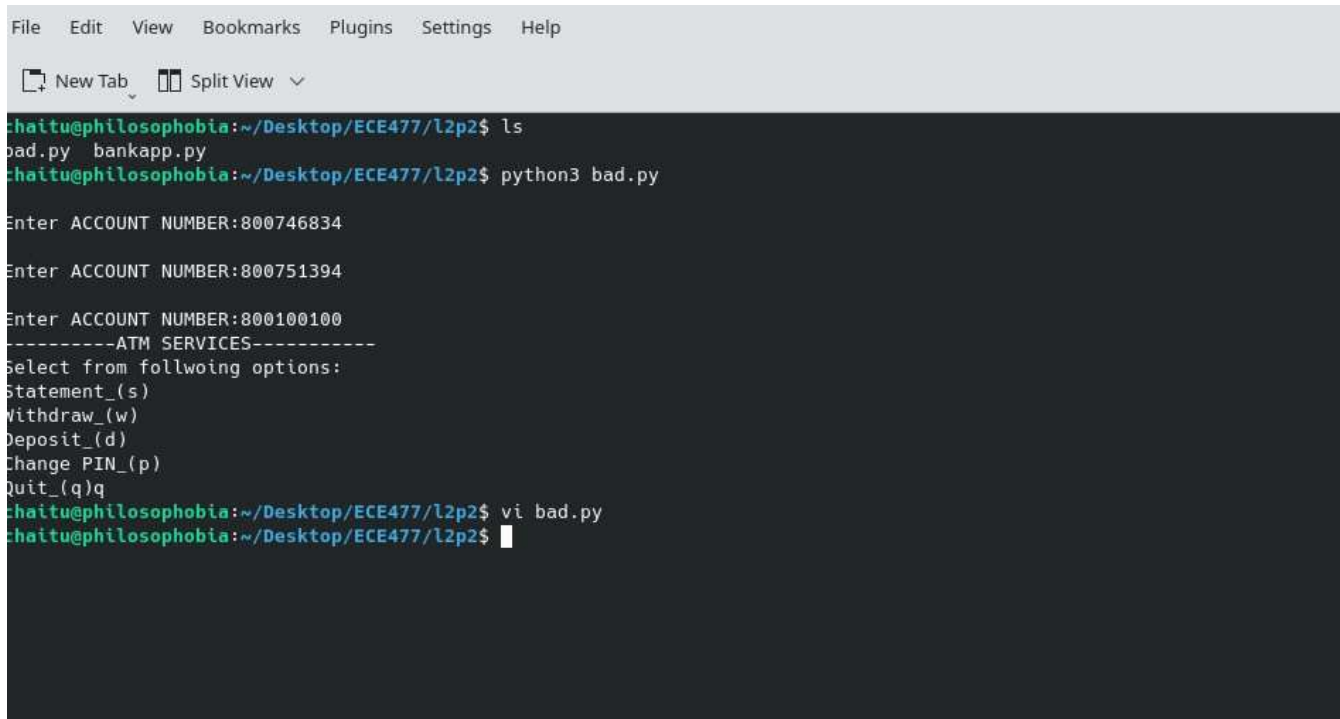
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Fall Semester

September 29 2022.

1. I wrote code on ATM services and my protocol consists of account number and lot of services regarding the ATM it consists of different of options like statement, deposit, withdrawal,balance, change PIN and quit. Here I attached my result of my protocol.

2. My code is related to Python Programming since Python is a case sensitive language I faced a lot of indentation errors while running the code so I have cleared all the error at last.

3. I use following commands

```
        Statement_(s)
        Withdraw_(w)
        Deposit_(d)
        Change PIN_(p)
        Quit_(q)q
when I use Statement command it shows following stuff
Processing...
Please Wait...

YOUR STATEMENT:
YOU HAVE ₹ 30000 IN YOUR ACCOUNT.
```

when I use the withdraw command

```
Processing...
Please Wait...

ENTER AMOUNT YOU WOULD LIKE TO WITHDRAW :3000

Proces  sing...
Collect your Cash...

YOUR NEW BALANCE IS:$ 27000
```

when I use Deposit Command and Change PIN command we get the following stuff like this

```
Processing...
Please wait...

ENTER AMOUNT YOU WANT TO DEPOSIT:500

Processing...

Your Amount Has Been Deposited...
YOUR NEW BALANCE IS:₹ 27500
```

```
Quit_(q)p

Processing...

ENTER A NEW PIN: 2580
CONFIRM NEW PIN:2580
Select from follwoing options:
Statement_(s)
Withdraw_(w)
Deposit_(d)
Change PIN_(p)
Quit_(q)
```

4) I didn't use the socket programming so I don't have any screen shots of wire shark in the assignment sir clearly mention he don't care about what language I use, but it should be meaning fully commented so I run my protocol successfully.

5)
    Source code of my Protocol.

```python
import string
import os
import sys
users=['800746834','800751394','800100100']
pins=['3096','0599','0000']
amounts=[1000000,200000,30000]
count=0
net=4

while True:
    user=input('\nEnter ACCOUNT NUMBER:')
    user=user.capitalize()
    if user in users:
        if user==users[0]:
            n=0
        elif user==users[1]:
            n=1
        elif user==users[2]:
            n=2
            break
        else:
            print('*********ERROR***********')
            print('INVALID USERNAME')
            while count<=3:
                    pin=str(input('PLEASE ENTER PIN:'))
                    print('\nProcessing.....\n')
                    if pin.isdigit():
                        if user=='Keshav':
                            if pin==pins[0]:
                                break
                        else:
                            count+=1
                            net-=1
                        print("***********ERROR*********")
                        print('INVALID PIN')
                        print('\n.  ..........INFO........')
                        print('PIN CONSISTS OF 4 DIGITS')
                        print(net,"att  empts remaining\n")
                        if user=='Akash':
                            if pin==pins[1]:
                                break
                        else:
```

```python
                    count+=1
                    net-=1
                print("*********ERROR***  *****")
                print('INVALID PIN')
                print('\n........INFO..........')
                print('PIN CONSISTS OF 4 DIGITS')
                print(net,"attempts remaining")
                if user=='Teja':
                    if pin==pins[2]:
                        break
                else:
                    count+=1lab2 report code
                    net-=1lab2 report code
                print("********ERROR**********")
                print('\n........INFO........')
                print('INVALID PIN')
                print('\n.......INFO.......')
                print('PIN CONSISTS OF 4   DIGITS')
                print(net,"attempts re  maining")
            else:
                count= count+1
                if count==4:
                    print("Contact Bank For Assistance")
                    sys.exit("Maximum Attempts Exceeded")

            print('*******LOGIN SUCCESFUL******')lab2 report code
            print("*****WELCOME TO ATK BANK*****\n")
            print("Account User:",str.upper(users[n]),"\n")
lab2 report code
print('----------ATM SERVICES-----------')
while True:lab2 report code
    response=input('Select from follwoing options:\nStatement_(s)\nWithdraw_(w)\nDeposit_(d)\
nChange PIN_(p)\nQuit_(q)').lower()
    valid_responses=['s','w','d','p','q']
    response=response.lower()lab2p1.odt
    if response=='s':
        print('\nProcessing...')
        print('PleaseWait...\n')lab2 report code
        print("YOURSTATEMENT:\n"'YOUHAVE₹',amounts[n],'INYOURACCOUNT.\n')
    elif response=='w':
        print('\nProcessing...')
        print('Please Wait...\n')
        cash_out=int(input('ENTER AMOUNT YOU WOULD LIKE TO WITHDRAW :'))
        if cash_out%10!=0:
            print('\nProcessing...')
            print('Please Wait...\ n')lab2 report code
            print('AMOUNT YOU WANT TO WITHDRAW MUST BE A MULTIPLE OF 500')
            print('Ex.:₹500,₹1000,₹2000etc....\n')
        elif cash_out>amounts[n]:
```

```python
                print('\nProcessing...')
                print('Please Wait...\n')
                print('YOU HAVE INSUFFICIENT BALANCE')
                print("Press 's' for your statement\n")
            else:
                amounts[n]=amounts[n]-cash_out
                print('\nProces  sing...')
                print('Collect your Cash...\n')
                print('YOUR NEW BALANCE IS:$', amounts[n])
        elif response=='d':
            print('\nProcessing...')
            print('Please wait...\n')
            cash_in=int(input('ENTER AMOUNT YOU WANT TO DEPOSIT:'))
            if cash_in%10!=0:
                print('\nProcessing...')
                print('Please Wait...')
                print('A  MOUNT YOU WANT TO DEPOSIT MUST BE A MULTIPLE OF 500')
                print('Ex.:₹500,₹1000,₹1500,₹2000 etc...')
            else:
                amounts[n]=amounts[n]+cash_in
                print('\nProcessing...')
                print('\nYour Amount Has Been Deposited...')
                print('YOUR NEW BALANCE IS:₹',amounts[n],'\n')
        elif response=='p':
            print("\nProcessing...")
            new_pin=input('\nENTER A NEW PIN: ')
            if new_pin.isdigit() and new_pin!=pins[n] and len(new_pin)==4:
                new_ppin=input('CONFIRM NEW PIN:')
            elif new_ppin!=new_pin:
                print('\nPIN MISMATCH\n')
            else:
                pins[n]=new_pin
                print('\nNEW PIN SAVED\n')
#else:lab2p1.odt
    #print('\nNEW PIN MUST CONSIST OF 4 DIGITS \
nAND MUST BE DIFFERENT TO PREVIOUS PIN\n')
        elif response=='q':
            os._exit(0)
        else:
            print('\nRESPONSE NOT VALID').
```