Session 2020-21

Central Board Of Secondary Education

Computer Science Project On

Banking Management

Prepared By:

Amogh Krishna

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Certified that the Project Report Entitled

Banking Management

Is bonafied work carried out by ***Amogh Krishna And Kushal Sena*** in Fulfillment prescribed by the **CENTRAL BOARD OF SECONDARY EDUCATION** for **CBSE+2 COMPUTER SCIENCE** during the academic year 2020-2021. The project report has been approved as it satisfies the academic requirements in respect of Project prescribed for CBSE+2.

.....	.....
Mrs. Gayatri	**G Anantha Rao**
Respected Teacher	**Respected Principal**

Externals Signature: 1)……

2)……

Acknowledgement

We would like to thank Mrs. Gayatri for her able guidance and the support exhibited by her in the completion of the project.

It gives us great pleasure in presenting this project. We extend our gratitude to our worthy colleagues for conveying their valuable suggestions to improve the quality of this Project and its value. This project has contributed invariably in improving and increasing our knowledge about this language which will hopefully prove to be profitable for us in future.

Students Name

Amogh Krishna
Kushal Sena

-ABSTRACT

The Bank Management System is an application for maintaining a person's account in a bank. In this project I tried to show the working of a banking account system and cover the basic functionality of a Bank Management System. To develop a project for solving financial applications of a customer in banking environment in order to nurture the needs of an end banking user by providing various ways to perform banking tasks.

-About Python

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.

-About MySQL

MySQL is a relational database management system based on **SQL** – **S**tructured **Q**uery **L**anguage. The application is used for a wide range of purposes, including data warehousing, e-commerce, and logging applications.

The most common use for MySQL however, is for the purpose of a web database. It can be used to store anything from a single record of information to an entire inventory of available products for an online store. In association with a scripting language such as **PHP** or **Perl** (both offered on our hosting accounts) it is possible to create websites which will interact in real-time with a MySQL database to rapidly display categorized and searchable information to a website user.

-About Banking

Banks act as payment agents by conducting checking or current accounts for customers, paying check drawn by customers on the bank, and collecting checks deposited to customers' current accounts. Banks also enable customer payments via other payment methods such as Automated Clearing House (ACH), Wire transfers or telegraphic transfer, EFTPOS, and automated teller machine (ATM).

Banks borrow money by accepting funds deposited on current accounts, by accepting term deposits, and by issuing debt securities such as banknotes and bonds. Banks lend money by making advances to customers on current accounts, by making installment loans, and by investing in marketable debt securities and other forms of money lending.

Banks provide almost all payment services, and a bank account is considered indispensable by most businesses, individuals and governments. Non-banks that provide payment services such as remittance companies are not normally considered an adequate substitute for having a bank account.

Banks borrow most funds from households and non-financial businesses, and lend most funds to households and non-financial businesses, but non-bank lenders provide a significant and in many cases adequate substitute for bank loans, and money market funds, cash management trusts and other non-bank financial institutions in many cases provide an adequate substitute to banks for lending savings too.

Therefore, this program is a simple example of commercial programs used by Banks and their Managements.

PROGRAM SOURCE CODE

```
# Project Name      : Banking System
# Created by        : Amogh Krishna
#                     Kushal Sena



import mysql.connector
from datetime import date


def clear():
  for _ in range(65):
     print()


def account_status(acno):
  conn = mysql.connector.connect(

      host='localhost', database='bankproject', user='root', password='amogh')
  cursor = conn.cursor()
  sql ="select status,balance from customer where acno ='"+acno+"'"
  result = cursor.execute(sql)
  result = cursor.fetchone()
  conn.close()
  return result


def deposit_amount():
```

```
    conn = mysql.connector.connect(
        host='localhost', database='bankproject', user='root', password='amogh')
    cursor = conn.cursor()
    clear()
    acno = input('Enter account No :')
    amount = input('Enter amount :')
    today = date.today()
    result = account_status(acno)
    if result [0]== 'active':


      sql1 ="update customer set balance = balance+"+amount + ' where acno = '+acno+' and
status="active";'
      sql2 = 'insert into transaction(amount,type,acno,dot) values(' + amount
+',"deposit",'+acno+',"'+str(today)+'");'
      cursor.execute(sql2)
      cursor.execute(sql1)
      #print(sql1)
      #print(sql2)
      print('\n\nAmount deposited')



    else:
      print('\n\nClosed or Suspended Account....')



    wait= input('\n\n\n Press any key to continue....')
    conn.close()




def withdraw_amount():
    conn = mysql.connector.connect(
        host='localhost', database='bankproject', user='root', password='amogh')
    cursor = conn.cursor()
```

```
    clear()
    acno = input('Enter account No :')
    amount = input('Enter amount :')
    today = date.today()
    result = account_status(acno)
    if result[0] == 'active' and int(result[1])>=int(amount):
      sql1 = "update customer set balance = balance-" + \
          amount + ' where acno = '+acno+' and status="active";'
      sql2 = 'insert into transaction(amount,type,acno,dot) values(' + \
          amount + ',"withdraw",'+acno+',"'+str(today)+'");'



      cursor.execute(sql2)
      cursor.execute(sql1)
      #print(sql1)
      #print(sql2)
      print('\n\nAmount Withdrawn')



    else:
      print('\n\nClosed or Suspended Account.Or Insufficient amount')

    wait = input('\n\n\n Press any key to continue....')
    conn.close()



def transaction_menu():
    while True:
      clear()
      print(' Trasaction Menu')
      print("\n1.  Deposit Amount")
      print('\n2.  WithDraw Amount')
      print('\n3.  Back to Main Menu')
      print('\n\n')
```

```
    choice = int(input('Enter your choice ...: '))
    if choice == 1:
      deposit_amount()
    if choice == 2:
      withdraw_amount()
    if choice == 3:
      break


def find_account():
  conn = mysql.connector.connect(
    host='localhost', database='bankproject', user='root', password='amogh')
  cursor = conn.cursor()
  while True:
    clear()
    print(' Find account')
    print("\n1.  Account No")
    print('\n2.  Aadhar Card')
    print('\n3.  Phone No')
    print('\n4.  Email')
    print('\n5.  Names')
    print('\n6.  Back to Main Menu')
    print('\n\n')
    choice = int(input('Enter your choice ...: '))
    field_name=''

    if choice == 1:
      field_name ='acno'

    if choice == 2:
      field_name ='aadhar_no'

    if choice == 3:
      field_name = 'phone'
```

```
if choice == 4:
  field_name = 'email'

if choice == 5:
  field_name = 'name'

if choice == 6:
  break

msg ='Enter '+field_name+': '
value = input(msg)
if field_name=='acno':
  sql = 'select * from customer where '+field_name + ' = '+value+';'
else:
  sql = 'select * from customer where '+field_name +' like "%'+value+'%";'
#print(sql)
cursor.execute(sql)
records = cursor.fetchall()
n = len(records)
clear()
print('Search Result for ', field_name, ' ',value)
print('-'*80)
for record in records:
 print('Account No :',record[0])
 print('Account Name :',record[1])
 print('Address :',record[2])
 print('Phone NO :',record[3])
 print('Email ID :',record[4])
 print('Aadhar No :',record[5])
 print('Account Type :',record[6])
 print('Account Status :',record[7])
 print('Current Balance :',record[8])
 print("-"*80)
```

```
      if(n <= 0):
        print(field_name, ' ', value, ' does not exist')
      wait = input('\n\n\n Press any key to continue....')

    conn.close()
    wait=input('\n\n\n Press any key to continue....')


def daily_report():
  clear()


  conn = mysql.connector.connect(
     host='localhost', database='bankproject', user='root', password='amogh')
  today = date.today()
  cursor = conn.cursor()
  sql = 'select tid,dot,amount,type,acno from transaction t where dot="'+ str(today)+'";'
  cursor.execute(sql)
  records = cursor.fetchall()
  clear()
  print('Daily Report :',today)
  print('-'*60)
  for record in records:
     print('Account Number :',record[4])
     print('Date :',record[1])
     print('Amount :',record[2])
     print('Transaction type :',record[3])
     print('-'*60)


  conn.close()
  wait = input('\n\n\n Press any key to continue....')
```

```
def account_details():
    clear()
    acno = input('Enter account no :')
    conn = mysql.connector.connect(
        host='localhost', database='bankproject', user='root', password='amogh')
    cursor = conn.cursor()
    sql ='select * from customer where acno ='+acno+';'
    sql1 = 'select tid,dot,amount,type from transaction t where t.acno='+acno+';'
    cursor.execute(sql)
    result = cursor.fetchone()
    clear()
    print('Account Details')
    print('-'*60)
    print('Account No :',result[0])

    print('Account Name :',result[1])
    print('Address :',result[2])
    print('Phone NO :',result[3])
    print('Email ID :',result[4])
    print('Aadhar No :',result[5])
    print('Account Type :',result[6])
    print('Account Status :',result[7])
    print('Current Balance :',result[8])
    print('-'*60)
    cursor.execute(sql1)
    results = cursor.fetchall()
    for result in results:


        print('Date :',result[1])
        print('Amount :',result[2])
        print('Transaction type :',result[3])
        print('-'*60)
```

```
    conn.close()
    wait=input('\n\n\nPress any key to continue.....')


def report_menu():
    while True:
      clear()
      print(' Report Menu')
      print("\n1.  Daily Report")
      print('\n2.  Account Details')
      print('\n3.  Back to Main Menu')
      print('\n\n')
      choice = int(input('Enter your choice ...: '))
      if choice == 1:
        daily_report()
      if choice == 2:
        account_details()
      if choice == 3:
        break


def add_account():
    conn = mysql.connector.connect(
        host='localhost', database='bankproject', user='root', password='amogh')
    cursor = conn.cursor()


    name = input('Enter Name :')
    addr = input('Enter address :')
    phone = input('Enter Phone no :')
    email = input('Enter Email :')
    aadhar = input('Enter Aadhar no :')
    actype = input('Account Type (saving/current ) :')
```

```
    balance = input('Enter opening balance :')
    sql = 'insert into
customer(name,address,phone,email,aadhar_no,acc_type,balance,status) values ( "' + name
+'","'+ addr+'","'+phone+'","'+email+'","'+aadhar+'","'+actype+'",'+balance+',"active" );'
    #print(sql)
    cursor.execute(sql)
    conn.close()
    print('\n\nNew account created successfully')
    wait= input('\n\n\n Press any key to continue....')



def modify_account():
    conn = mysql.connector.connect(
        host='localhost', database='bankproject', user='root', password='amogh')
    cursor = conn.cursor()
    clear()
    acno = input('Enter Account No :')
    print('Modify screen ')
    print('\n 1.  User Name')
    print('\n 2.  User Address')
    print('\n 3.  User Phone No')
    print('\n 4.  User Email ID')
    choice = int(input('What do you want to change ? '))
    new_data  = input('Enter New value :')
    field_name=''
    if choice == 1:
      field_name ='name'
    if choice == 2:
      field_name = 'address'
    if choice == 3:
      field_name = 'phone'
    if choice == 4:
      field_name = 'email'
```

```
    sql ='update customer set ' + field_name + '="'+ new_data +'" where acno='+acno+';'
    cursor.execute(sql)
    print('\n\nUser Information modified..')
    wait = input('\n\n\n Press any key to continue....')


def close_account():
    conn = mysql.connector.connect(
        host='localhost', database='bankproject', user='root', password='amogh')
    cursor = conn.cursor()
    clear()
    acno = input('Enter Account No :')
    sql ='update customer set status="close" where acno ='+acno+';'
    cursor.execute(sql)
    print('\n\nAccount closed')
    wait = input('\n\n\n Press any key to continue....')



def activate_account():
    conn = mysql.connector.connect(
        host='localhost', database='bankproject', user='root', password='amogh')
    cursor = conn.cursor()
    clear()
    acno = input('Enter Account No :')
    sql = 'update customer set status="active" where acno ='+acno+';'
    cursor.execute(sql)
    print('\n\nAccount Activated')
    wait = input('\n\n\n Press any key to continue....')


def main_menu():
    while True:
      clear()
```

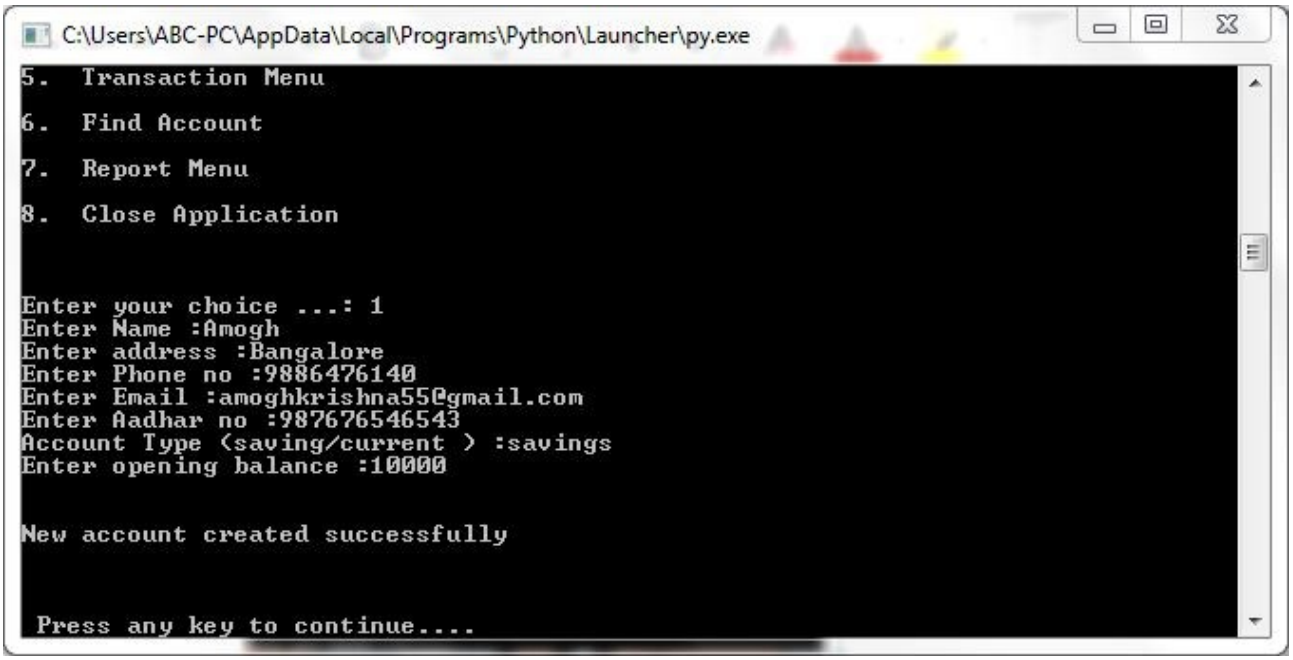
```
print('                    CREATED BY: AMOGH AND KUSHAL ')
print('\n\n')
print(' Main Menu')
print("\n1.  Add Account")
print('\n2.  Modify Account')
print('\n3.  Close Account')
print('\n4.  Activate Account')
print('\n5.  Transaction Menu')
print('\n6.  Find Account')
print('\n7.  Report Menu')
print('\n8.  Close Application')
print('\n\n')
choice = int(input('Enter your choice ...: '))

if choice == 1:
  add_account()

if choice == 2:
  modify_account()

if choice == 3:
  close_account()

if choice == 4:
  activate_account()

if choice ==5 :
  transaction_menu()

if choice ==6 :
  find_account()

if choice == 7:
  report_menu()
```

```
      if choice ==8:
        break

if __name__ == "__main__":
    main_menu()


# Source Code ends.. :D
```

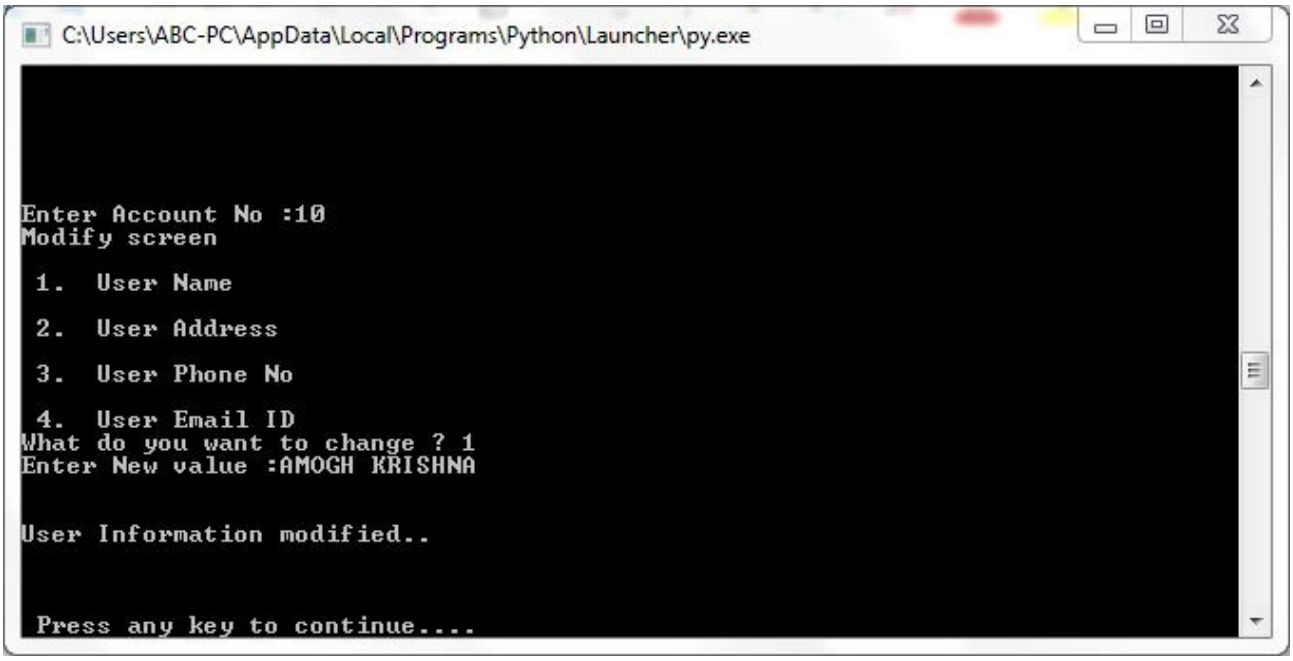
Output →

MAIN MENU

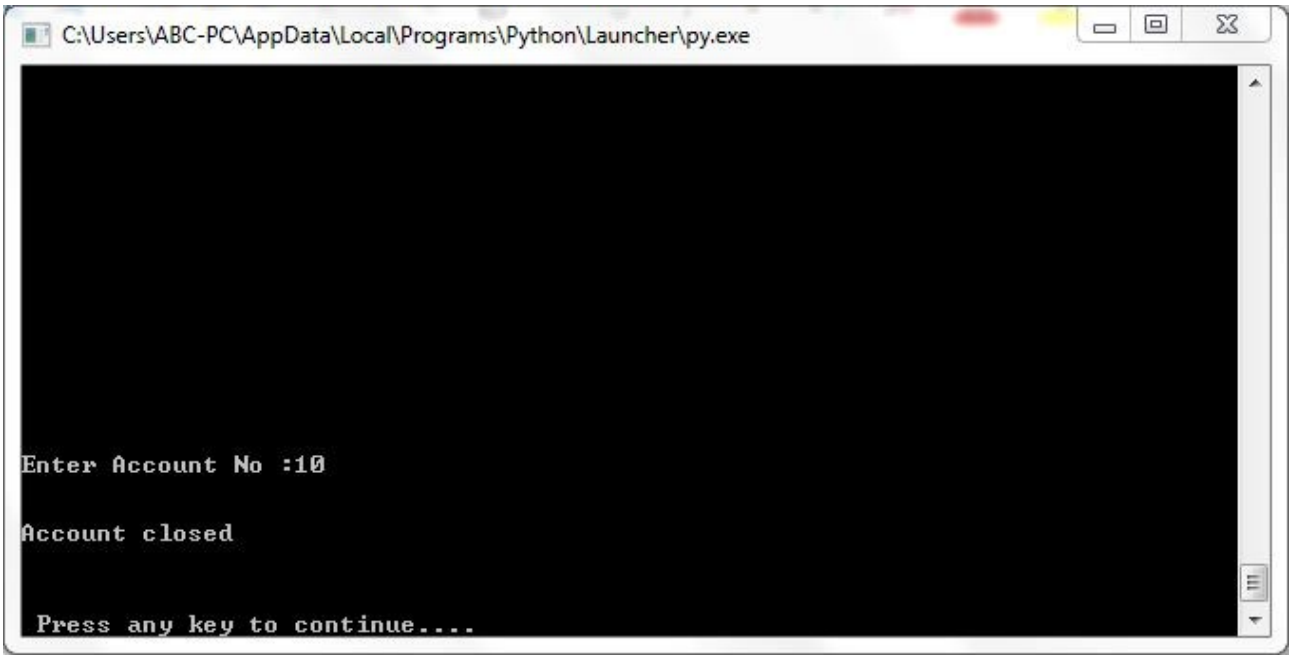
ADD ACCOUNT



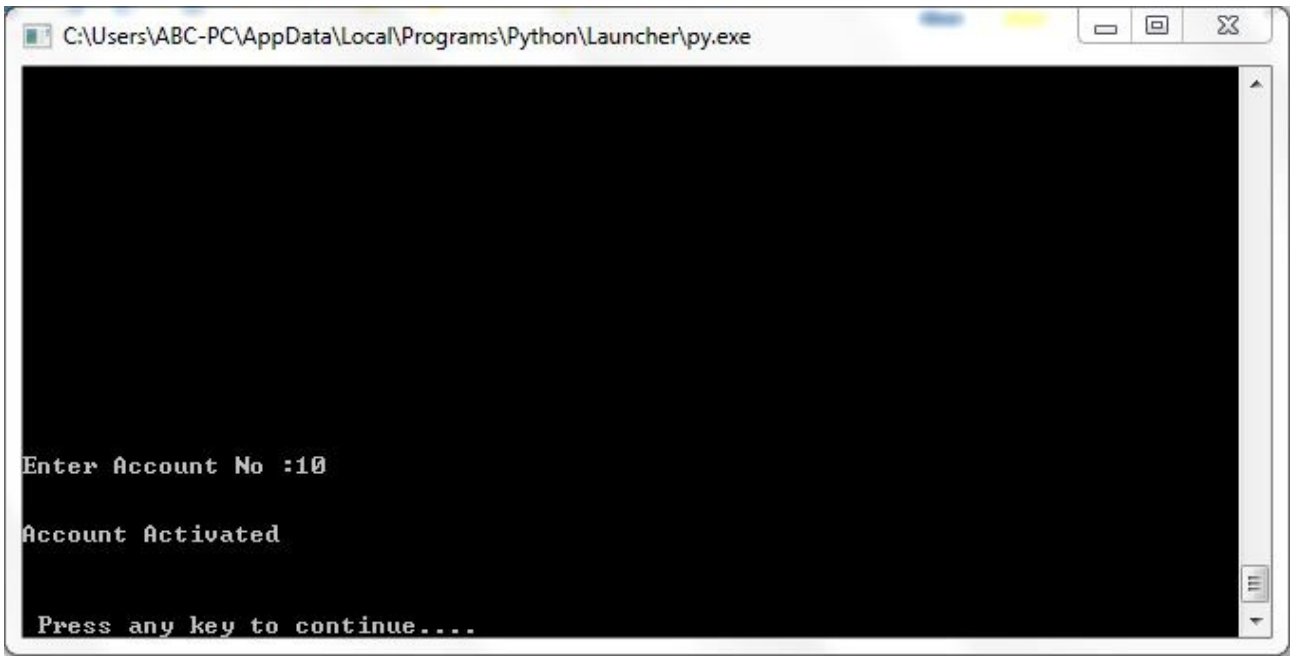
MODIFY ACCOUNT



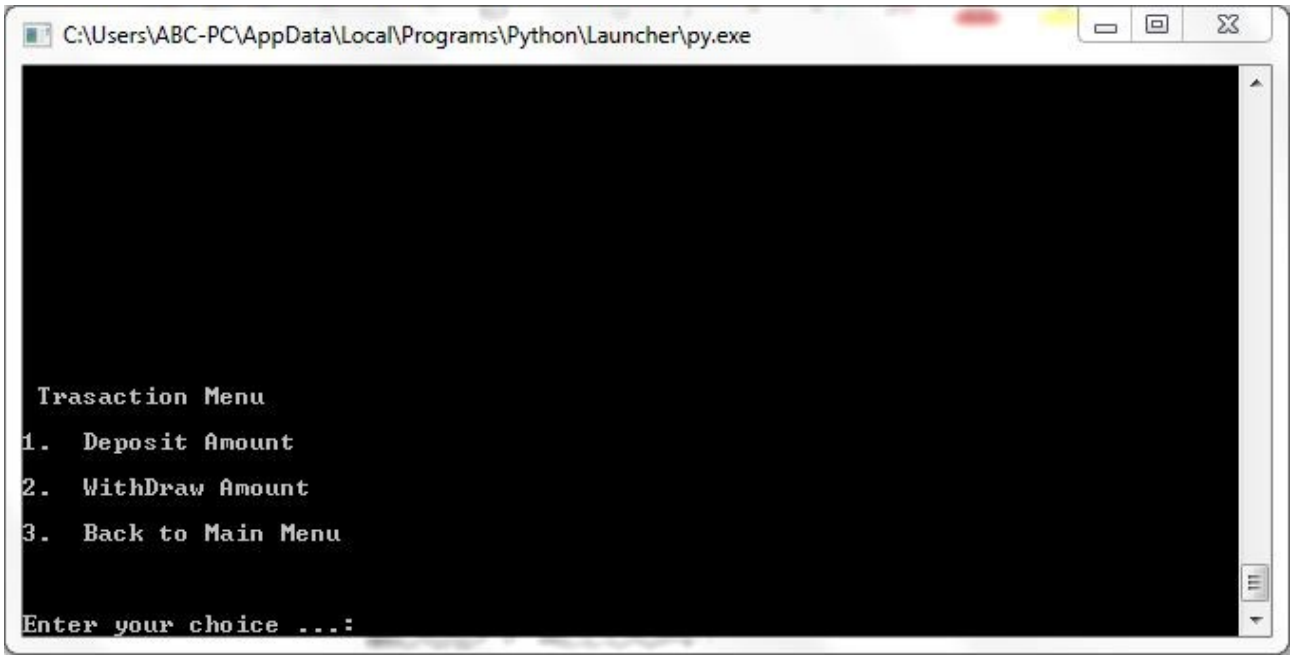
CLOSE ACCOUNT



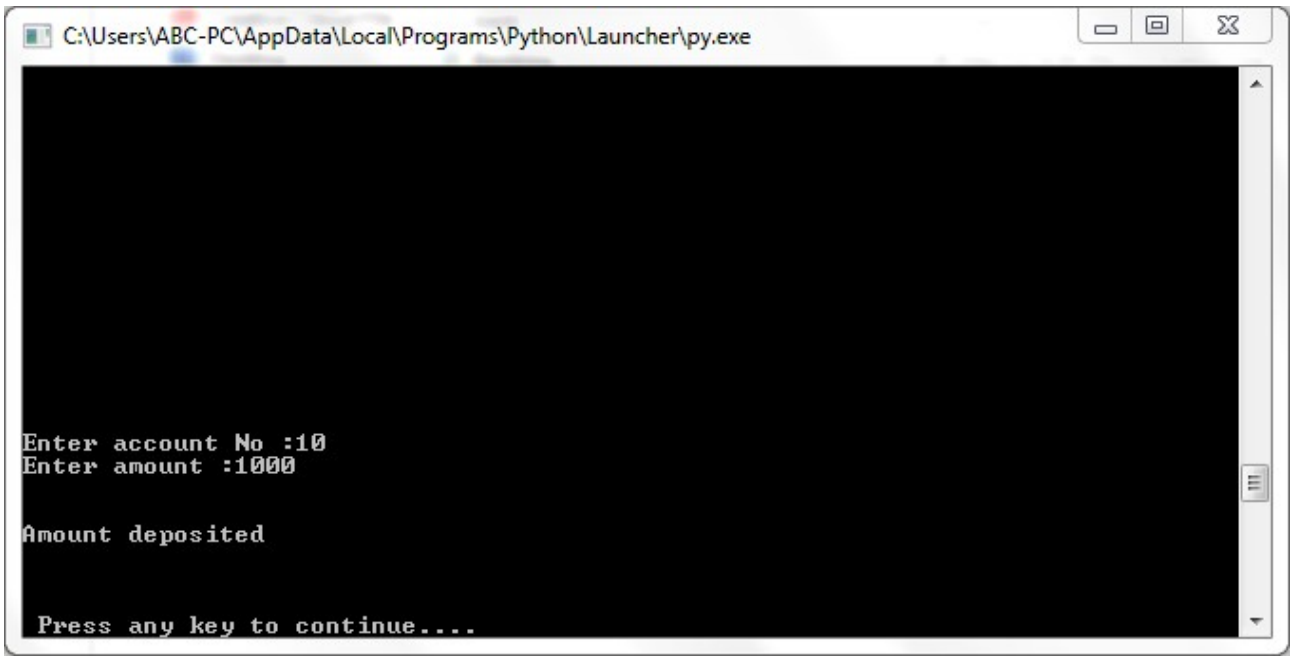
ACTIVATE ACCOUNT



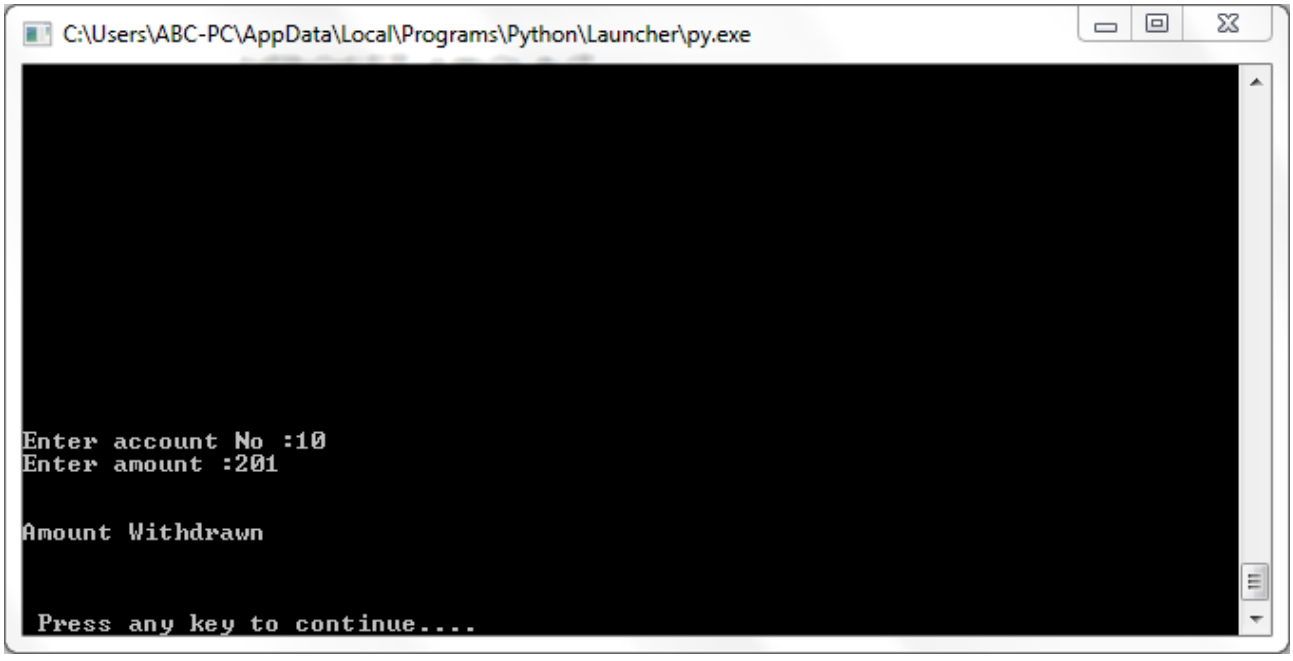
TRANSACTION MENU



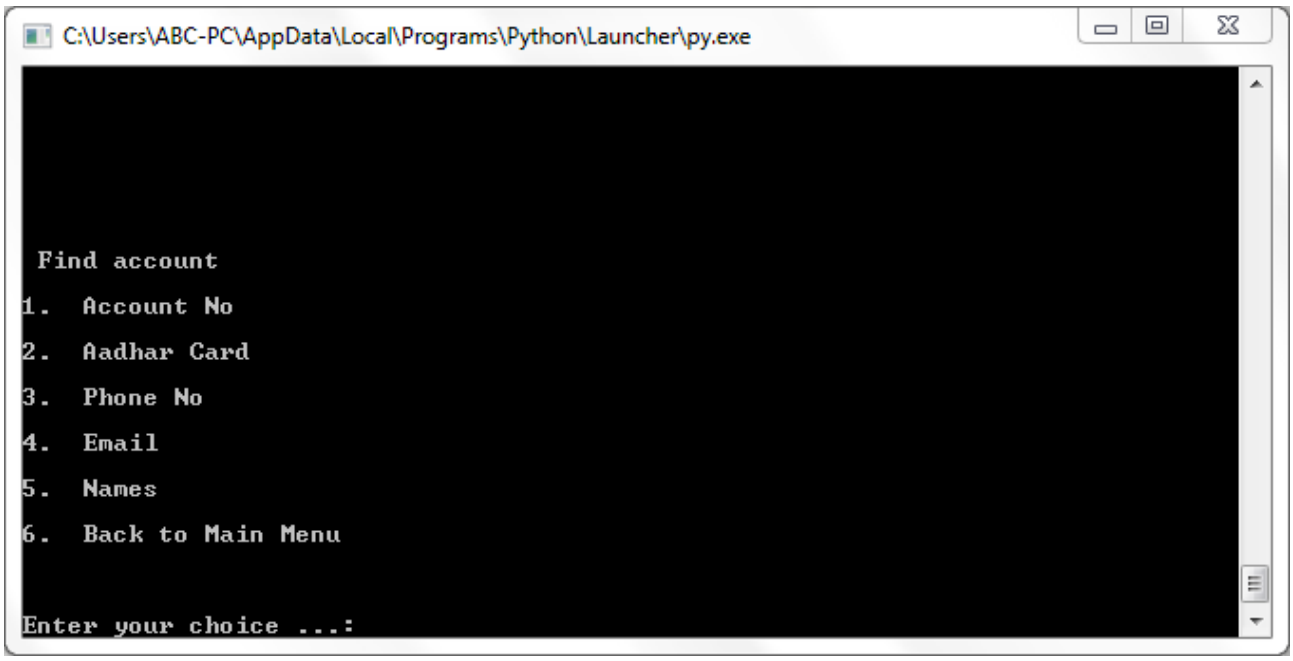
DEPOSIT AMOUNT

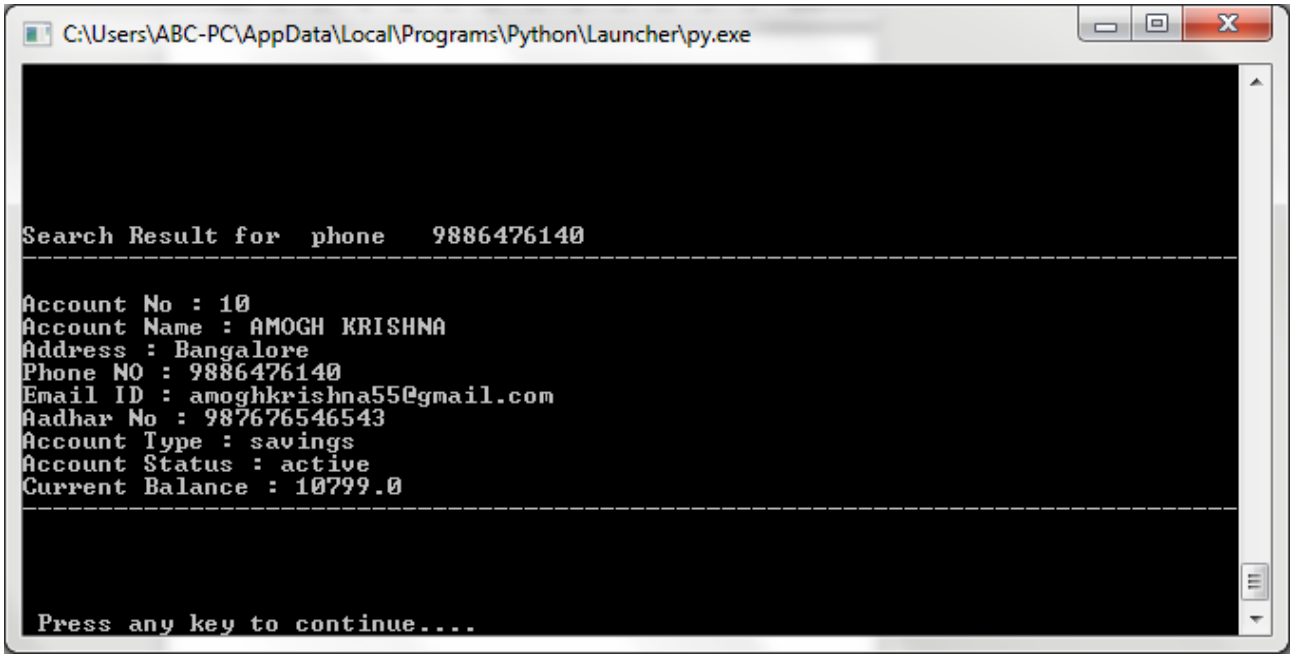


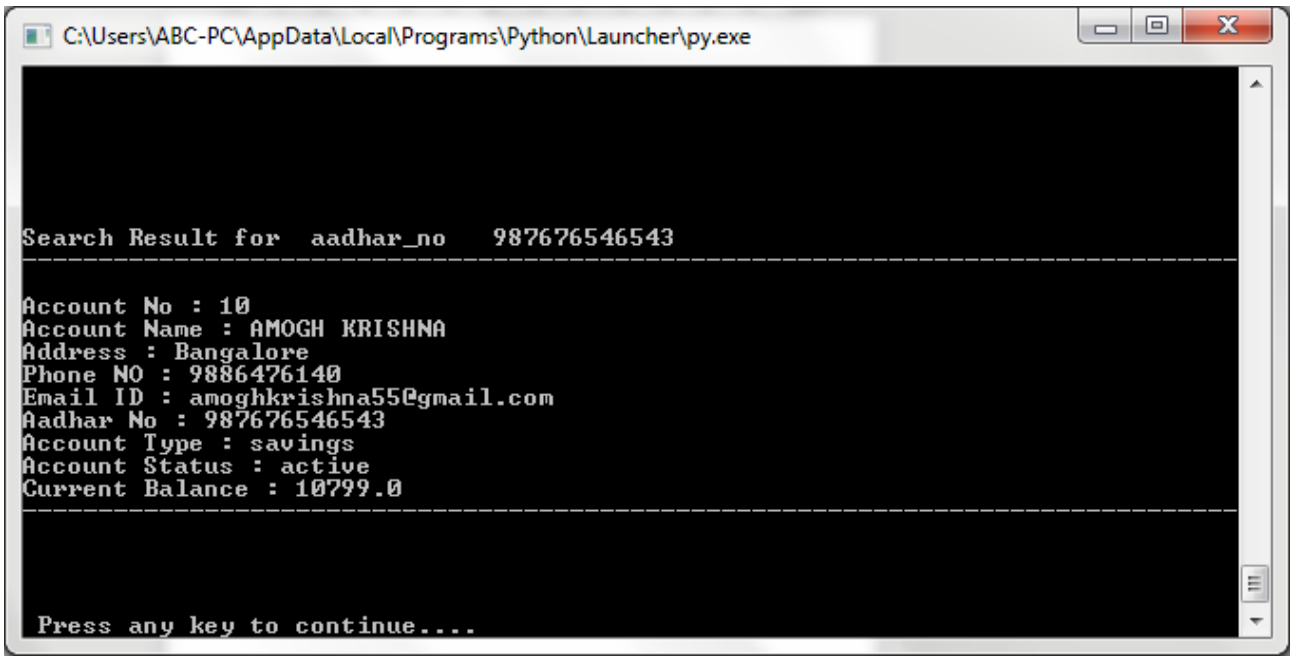
WITHDRAW AMOUNT

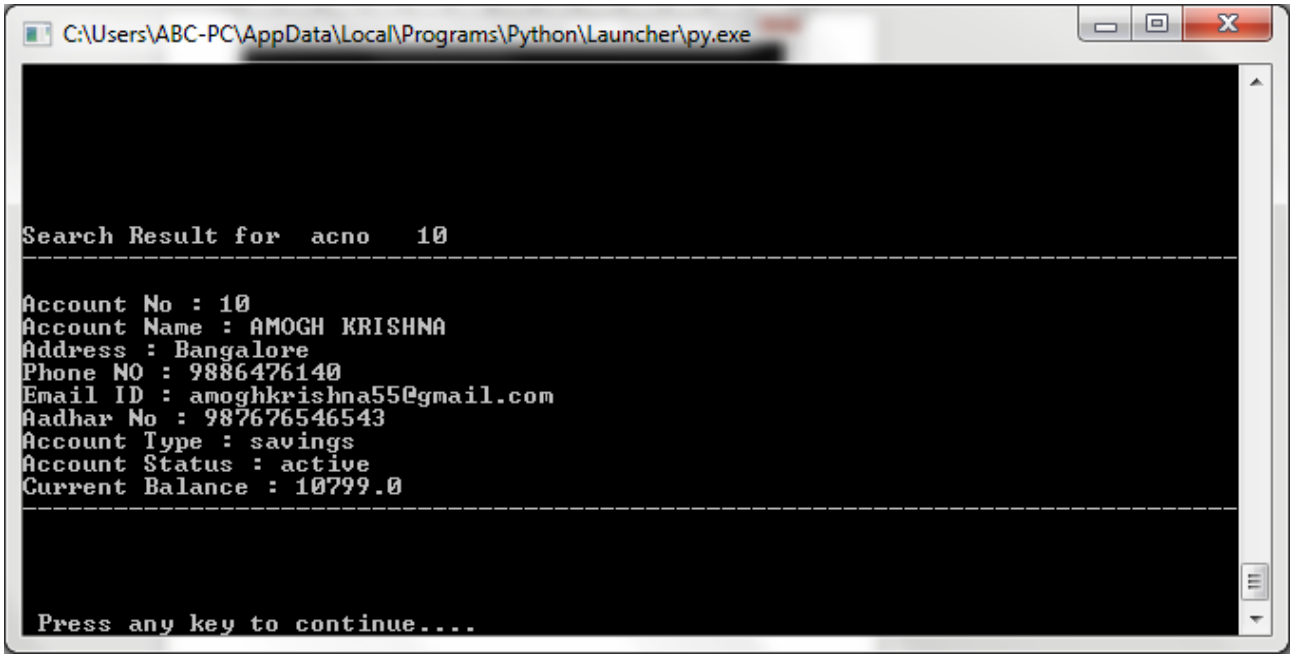


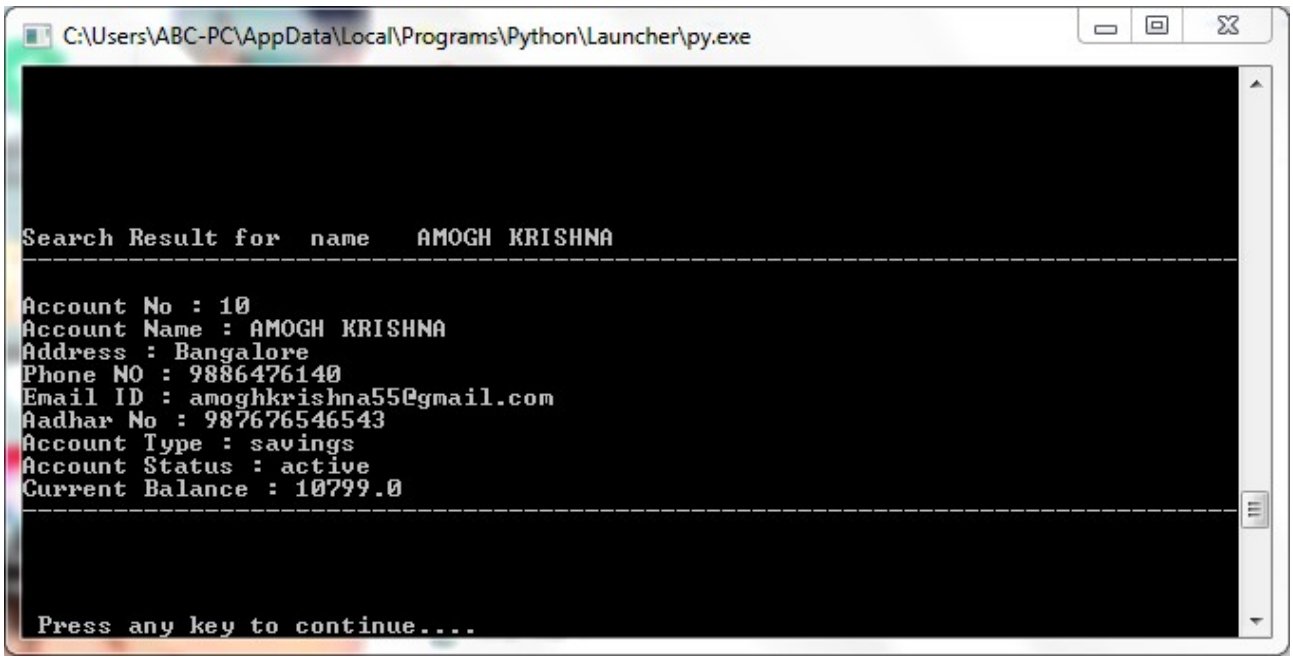
FIND ACCOUNT

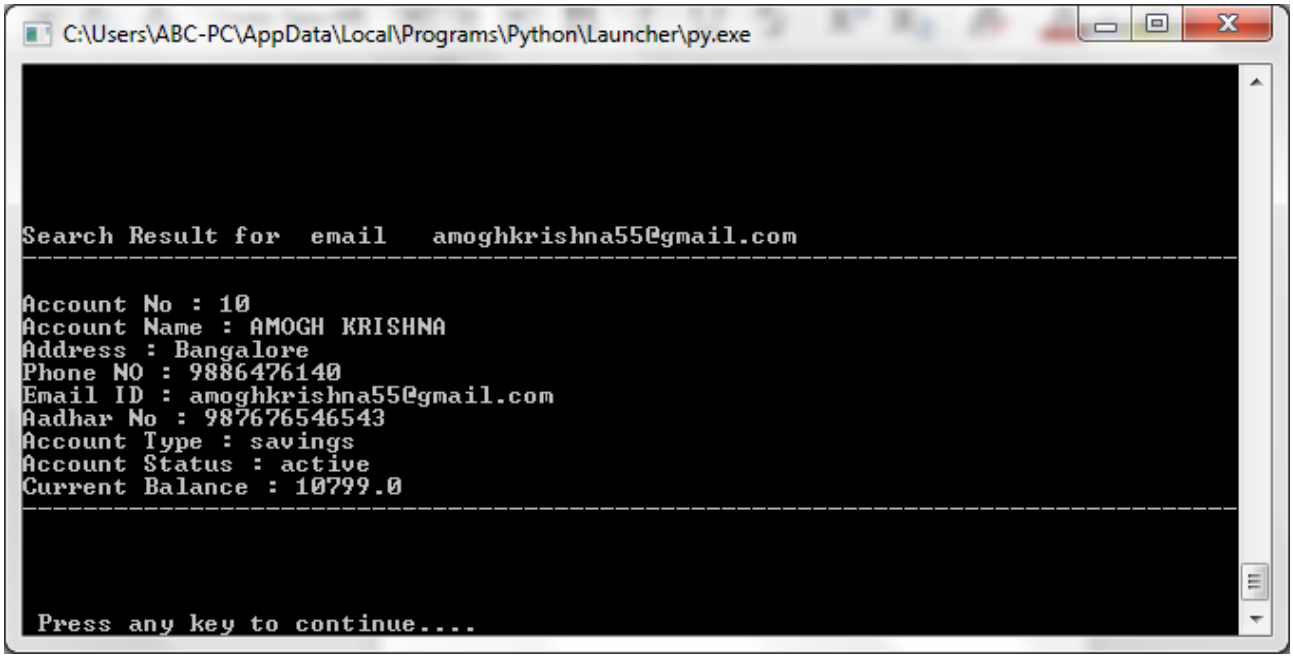




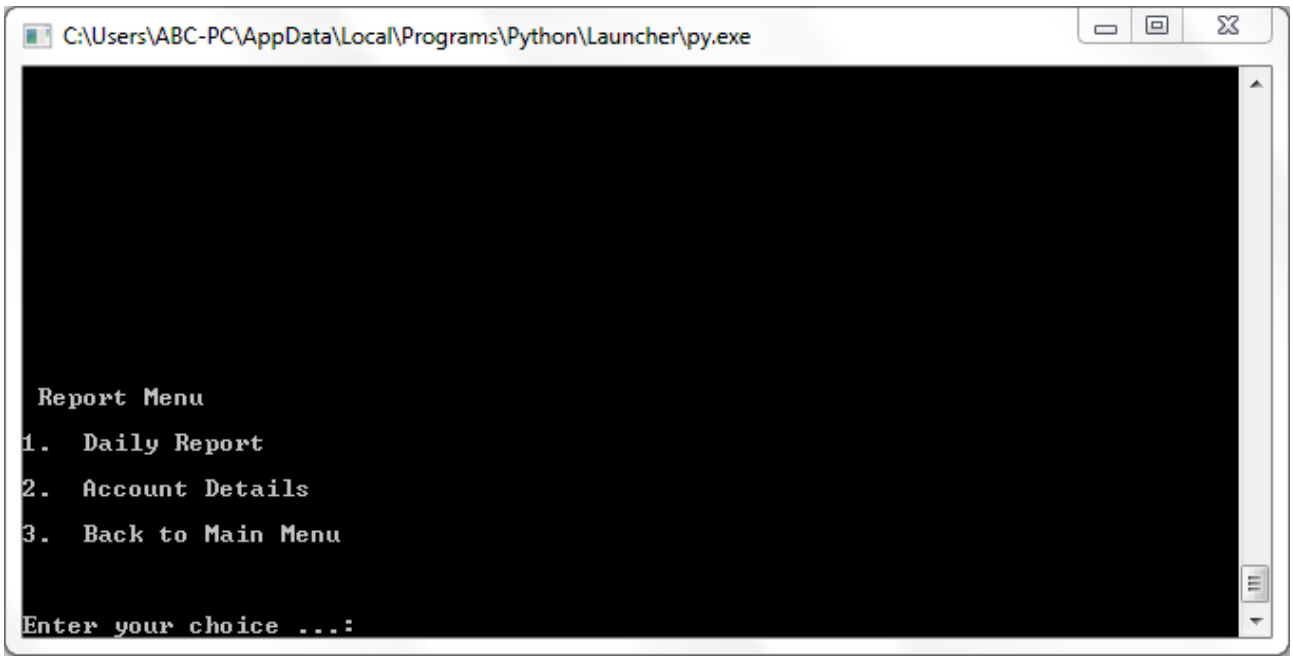

C:\Users\ABC-PC\AppData\Local\Programs\Python\Launcher\py.exe
Search Result for aadhar_no 987676546543
Account No : 10
Account Name : AMOGH KRISHNA
Address : Bangalore
Phone NO : 9886476140
Email ID : amoghkrishna55@gmail.com
Aadhar No : 987676546543
Account Type : savings
Account Status : active
Current Balance : 10799.0
Press any key to continue....


C:\Users\ABC-PC\AppData\Local\Programs\Python\Launcher\py.exe
Search Result for acno 10
Account No : 10
Account Name : AMOGH KRISHNA
Address : Bangalore
Phone NO : 9886476140
Email ID : amoghkrishna55@gmail.com
Aadhar No : 987676546543
Account Type : savings
Account Status : active
Current Balance : 10799.0
Press any key to continue....

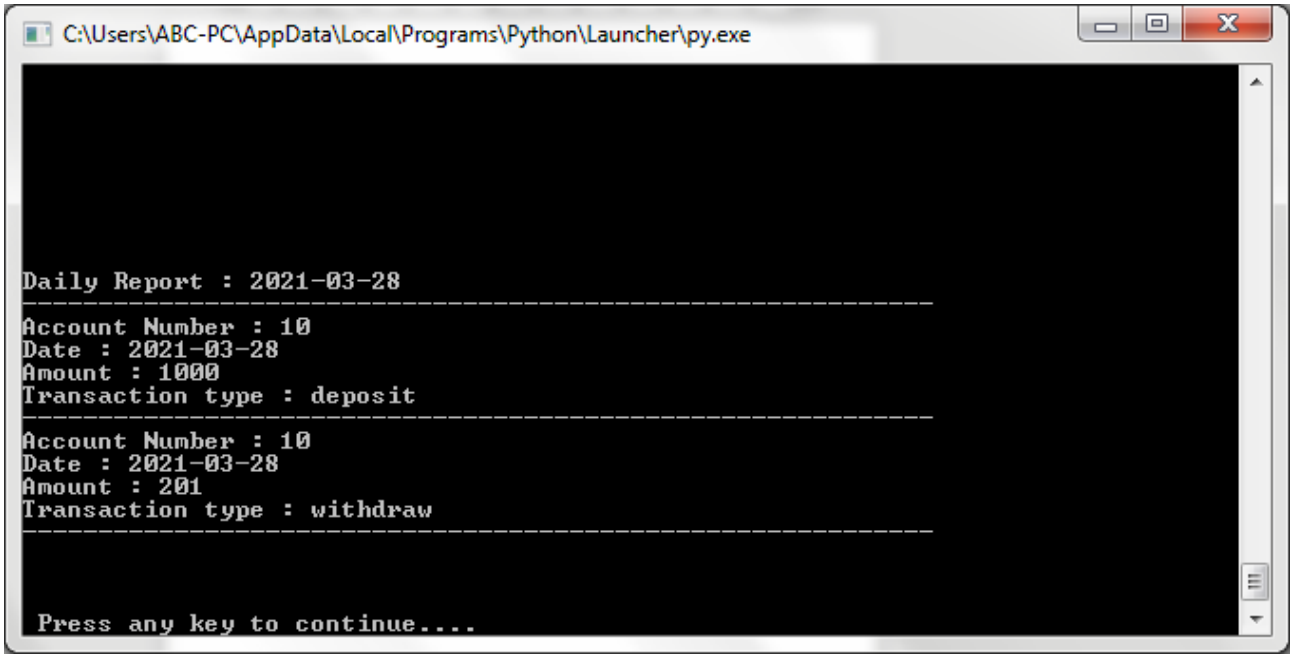

C:\Users\ABC-PC\AppData\Local\Programs\Python\Launcher\py.exe
Search Result for name   AMOGH KRISHNA
Account No : 10
Account Name : AMOGH KRISHNA
Address : Bangalore
Phone NO : 9886476140
Email ID : amoghkrishna55@gmail.com
Aadhar No : 987676546543
Account Type : savings
Account Status : active
Current Balance : 10799.0
Press any key to continue....


C:\Users\ABC-PC\AppData\Local\Programs\Python\Launcher\py.exe
Search Result for email   amoghkrishna55@gmail.com
Account No : 10
Account Name : AMOGH KRISHNA
Address : Bangalore
Phone NO : 9886476140
Email ID : amoghkrishna55@gmail.com
Aadhar No : 987676546543
Account Type : savings
Account Status : active
Current Balance : 10799.0
Press any key to continue....

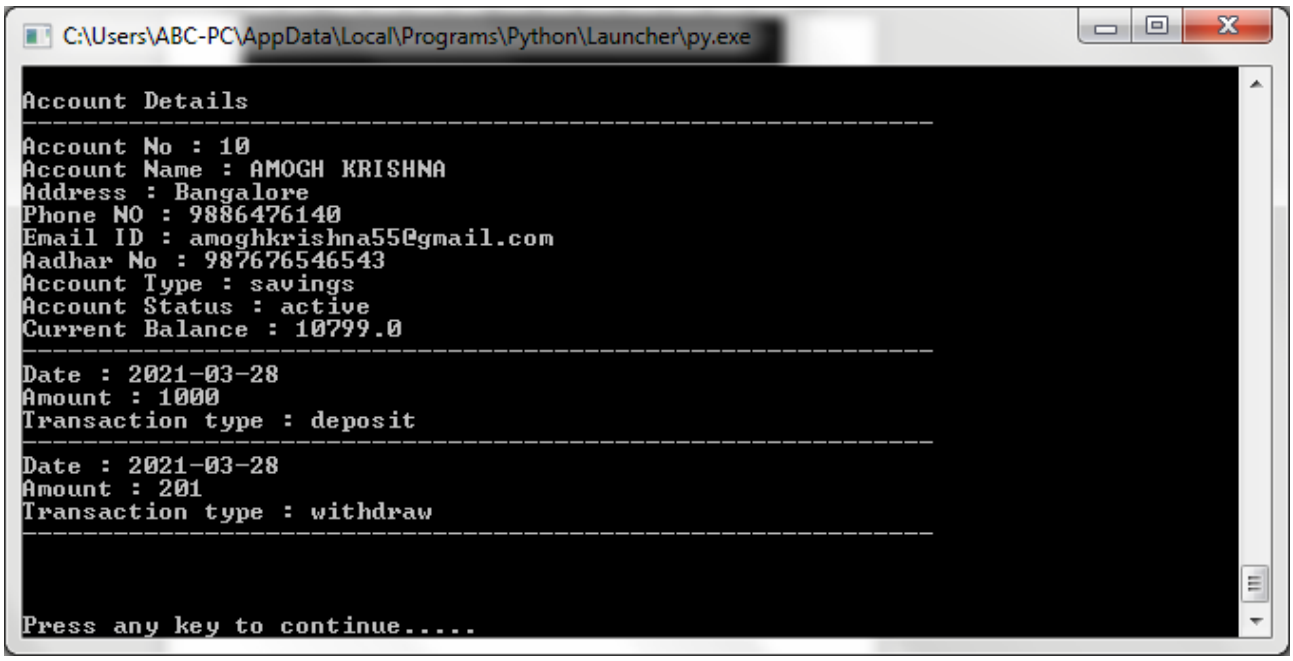
REPORT MENU



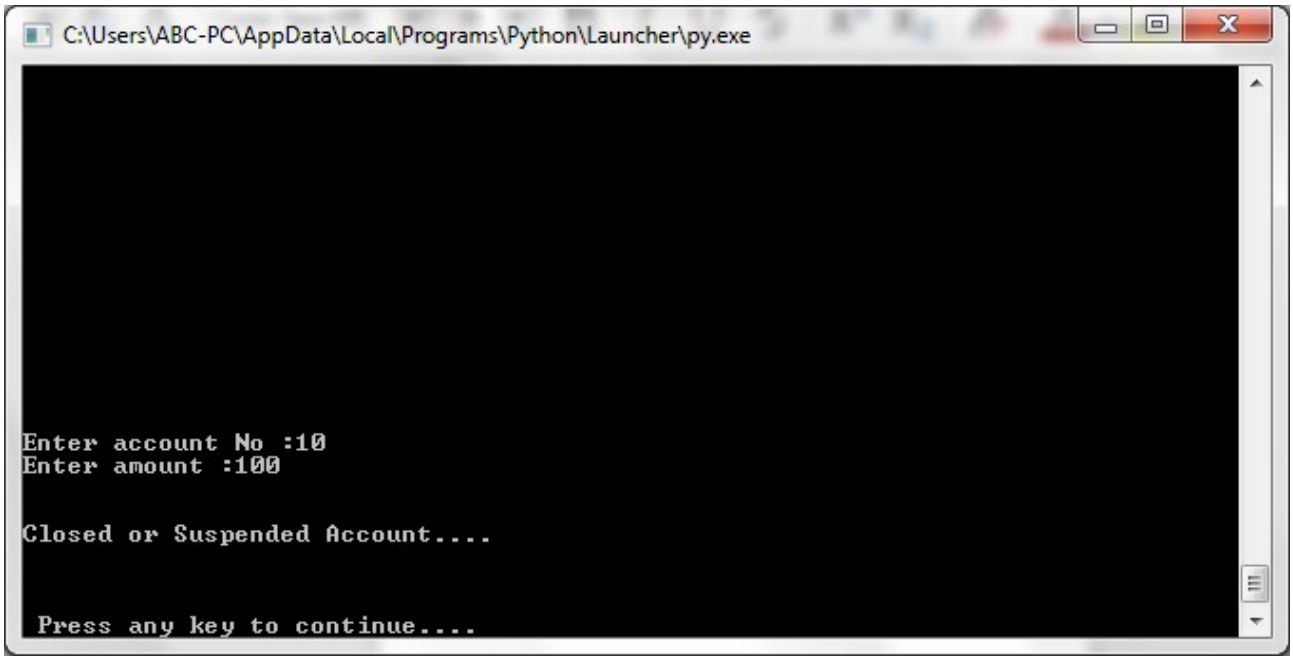
DAILY REPORT

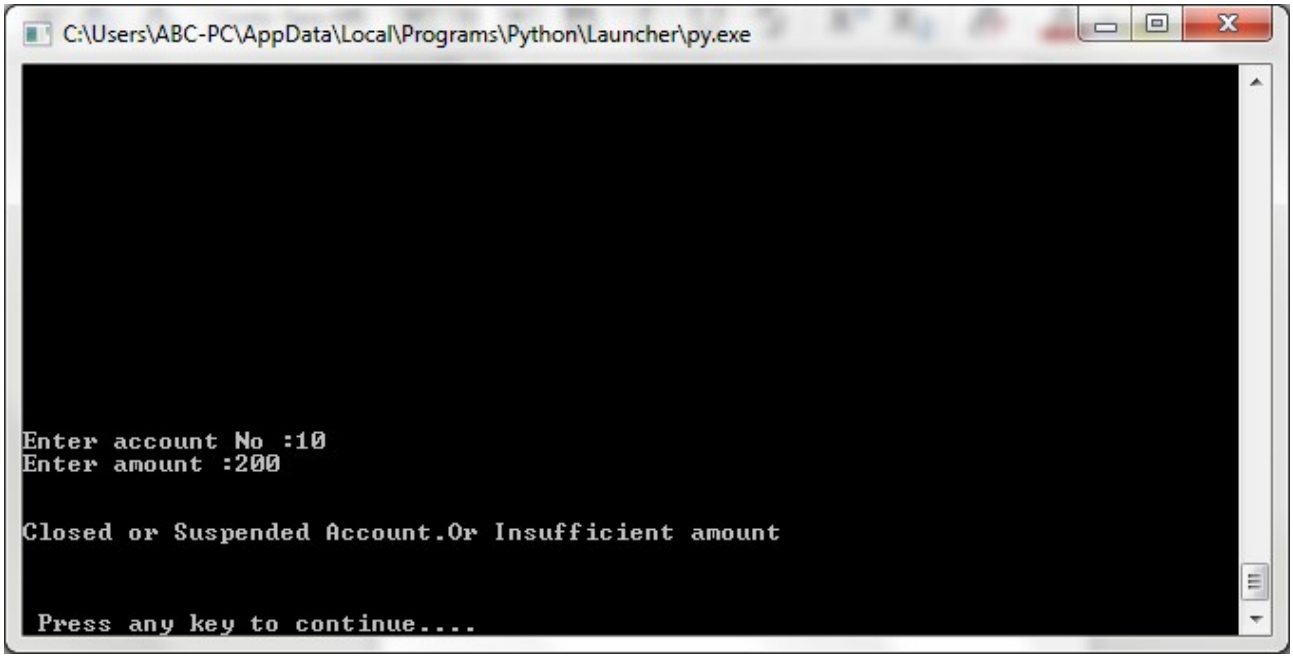


ACCOUNT DETAILS

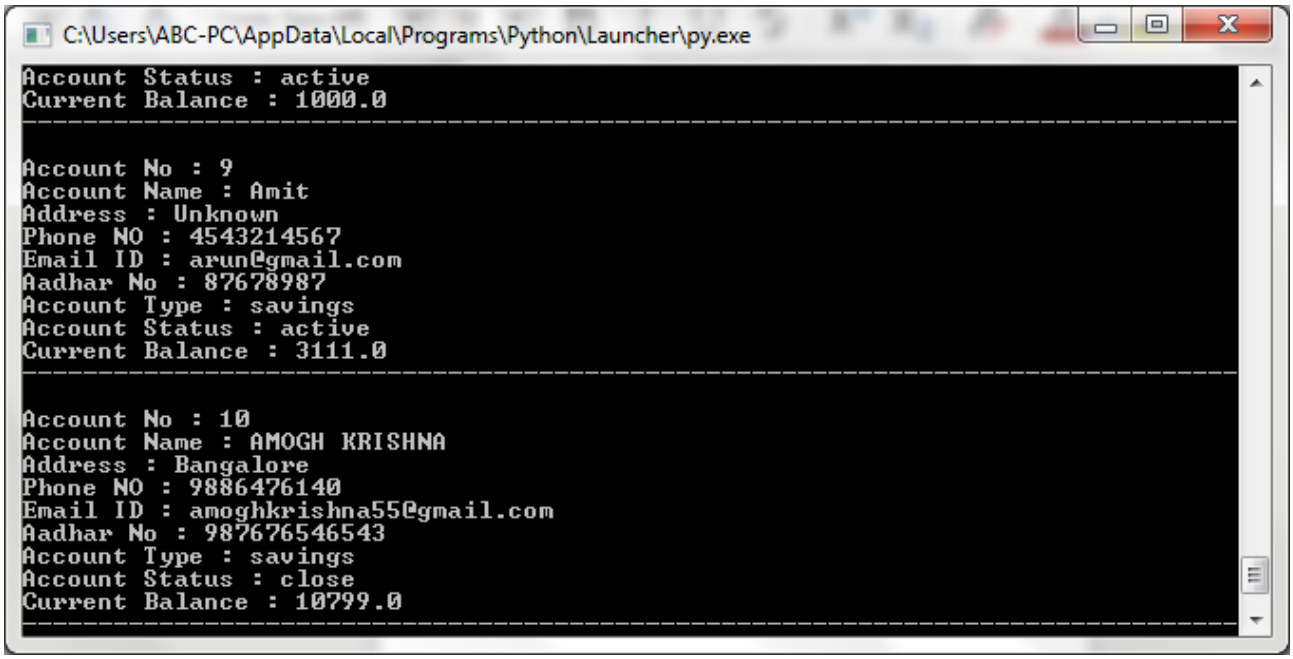


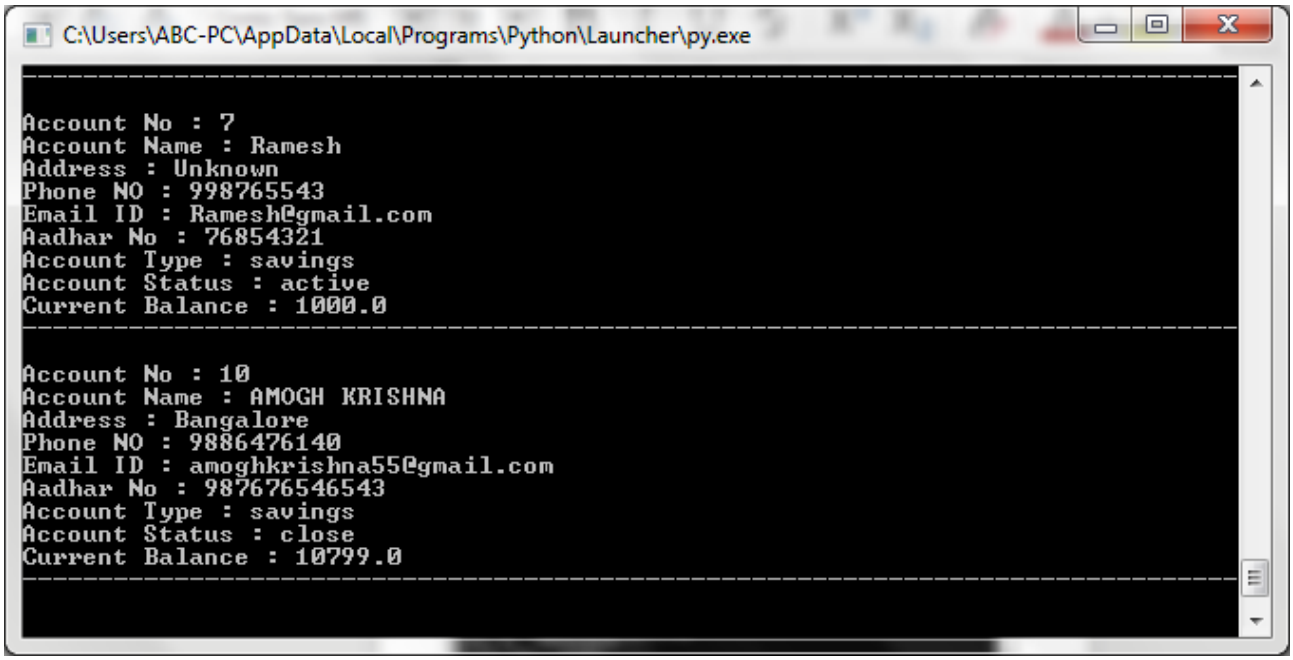
When the users account is closed or suspended and tries to perform transaction-

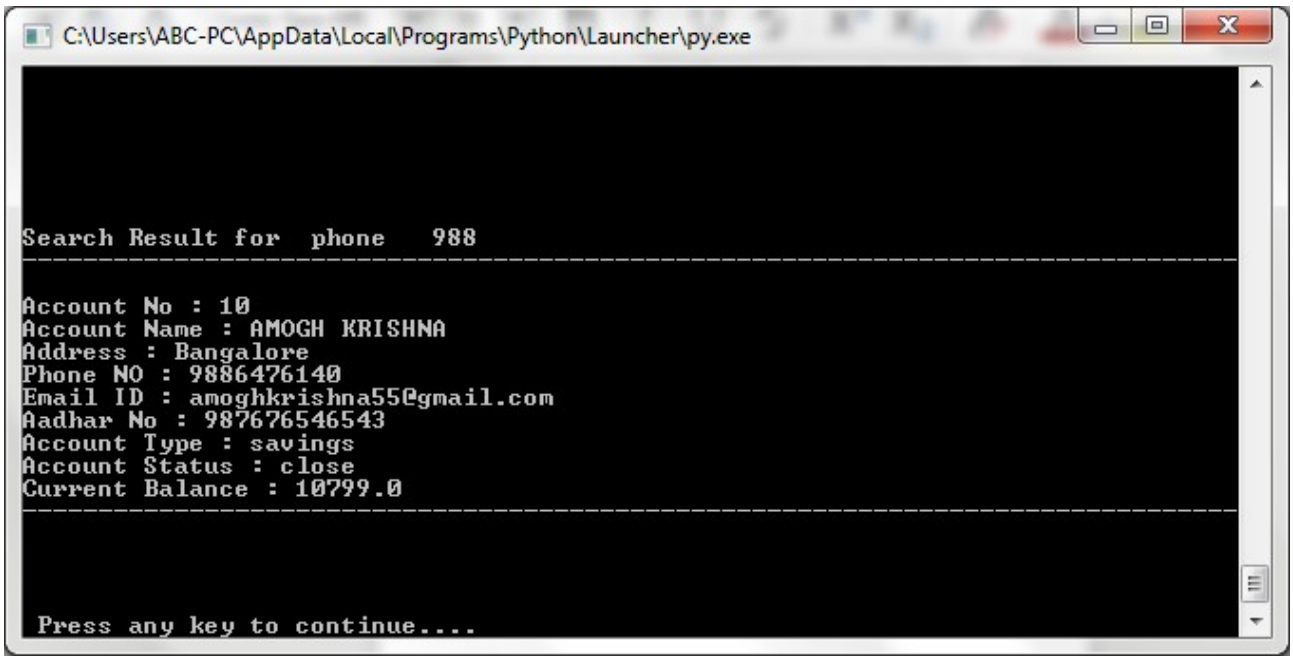




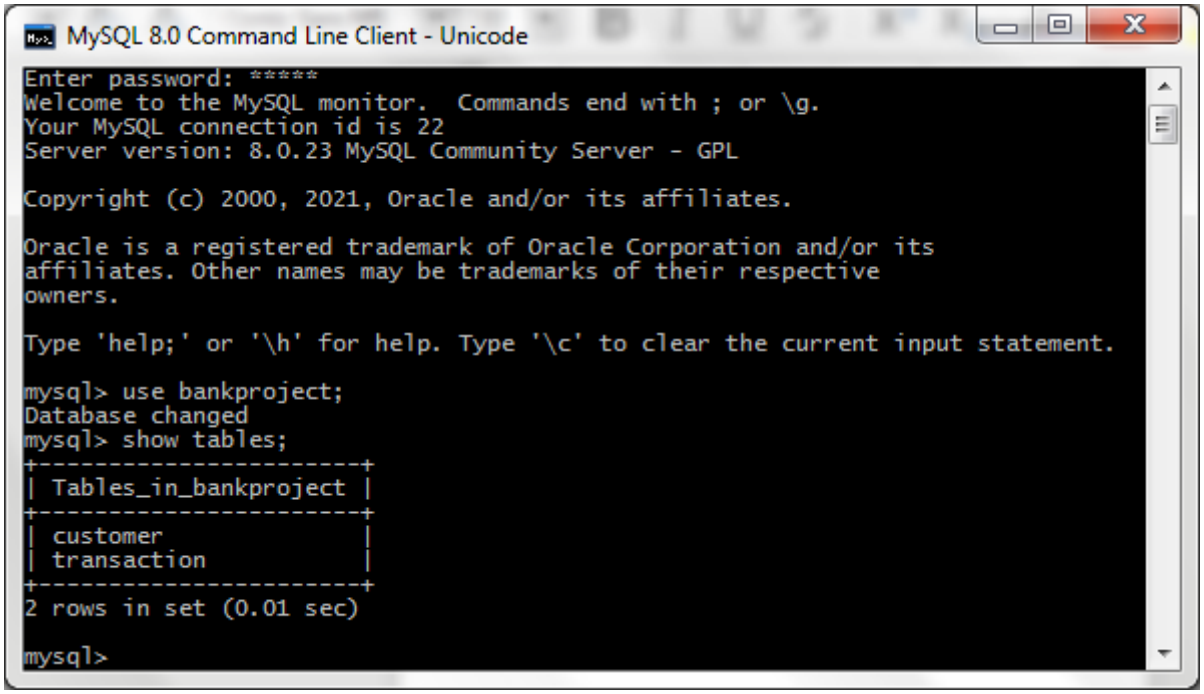
When the account holders full Name, E-mail address, Phone Number is not known-

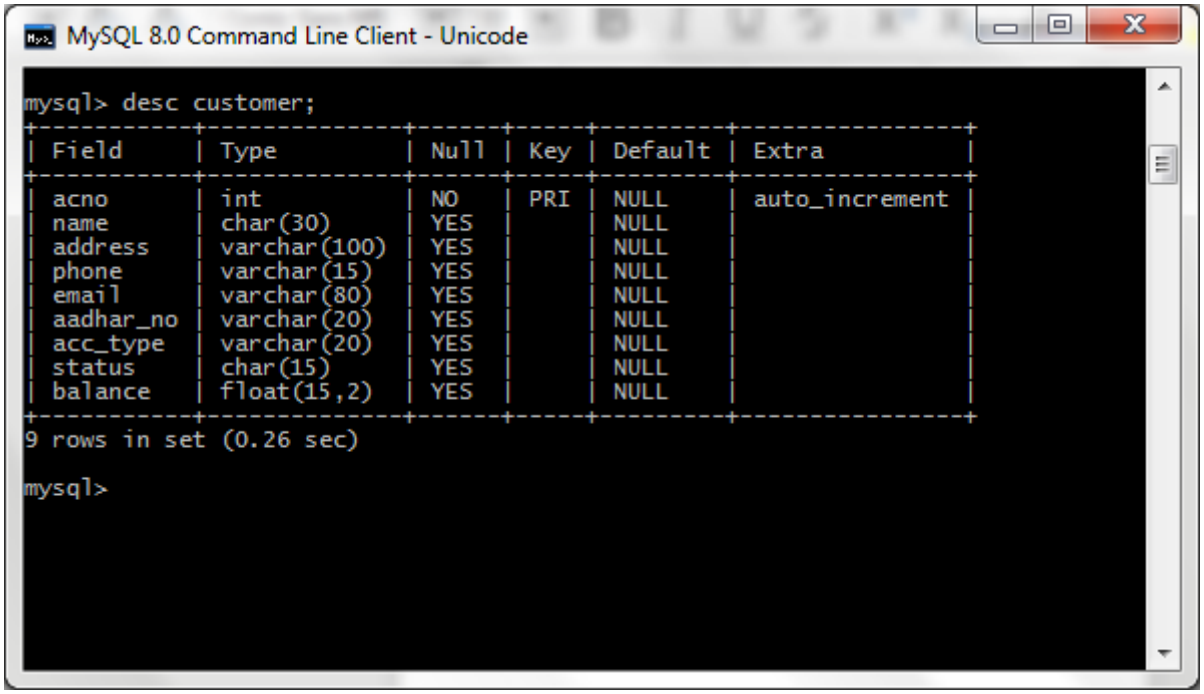


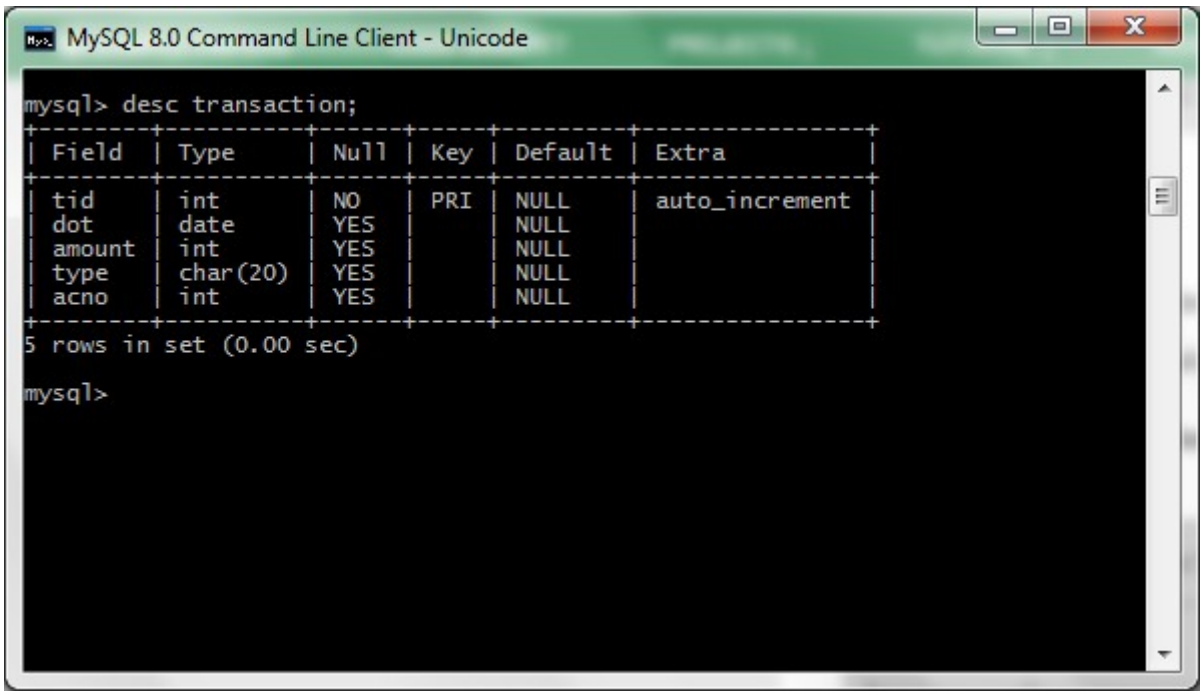


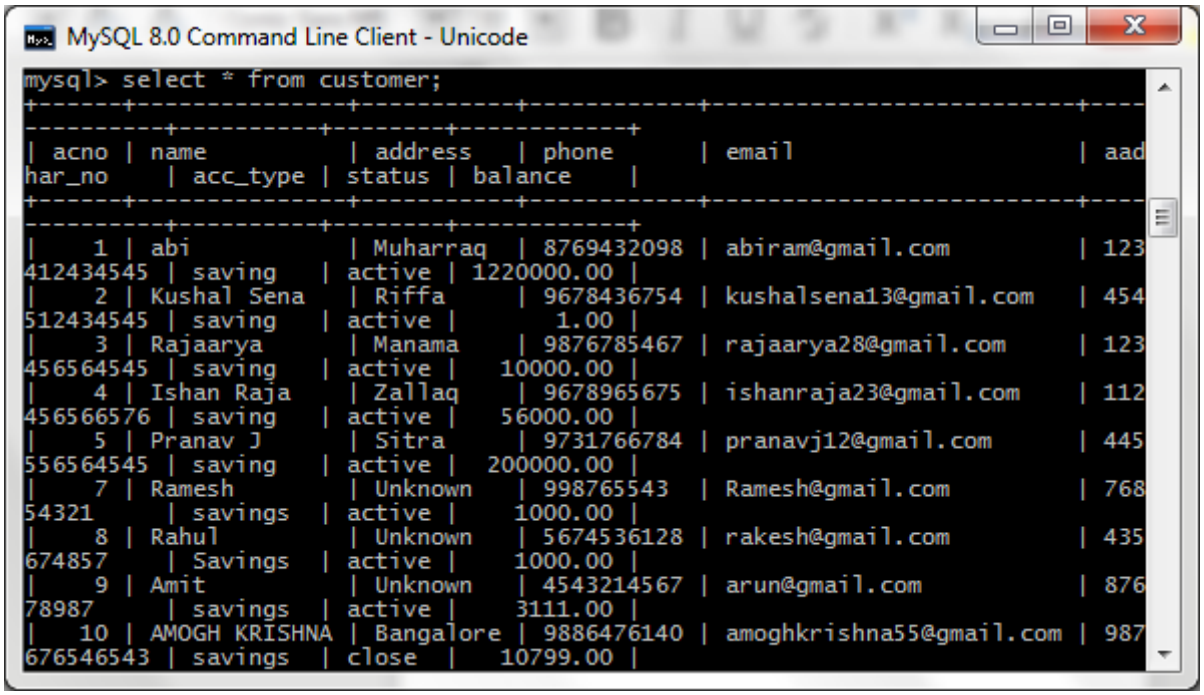

C:\Users\ABC-PC\AppData\Local\Programs\Python\Launcher\py.exe
Search Result for phone   988
Account No : 10
Account Name : AMOGH KRISHNA
Address : Bangalore
Phone NO : 9886476140
Email ID : amoghkrishna55@gmail.com
Aadhar No : 987676546543
Account Type : savings
Account Status : close
Current Balance : 10799.0
Press any key to continue....

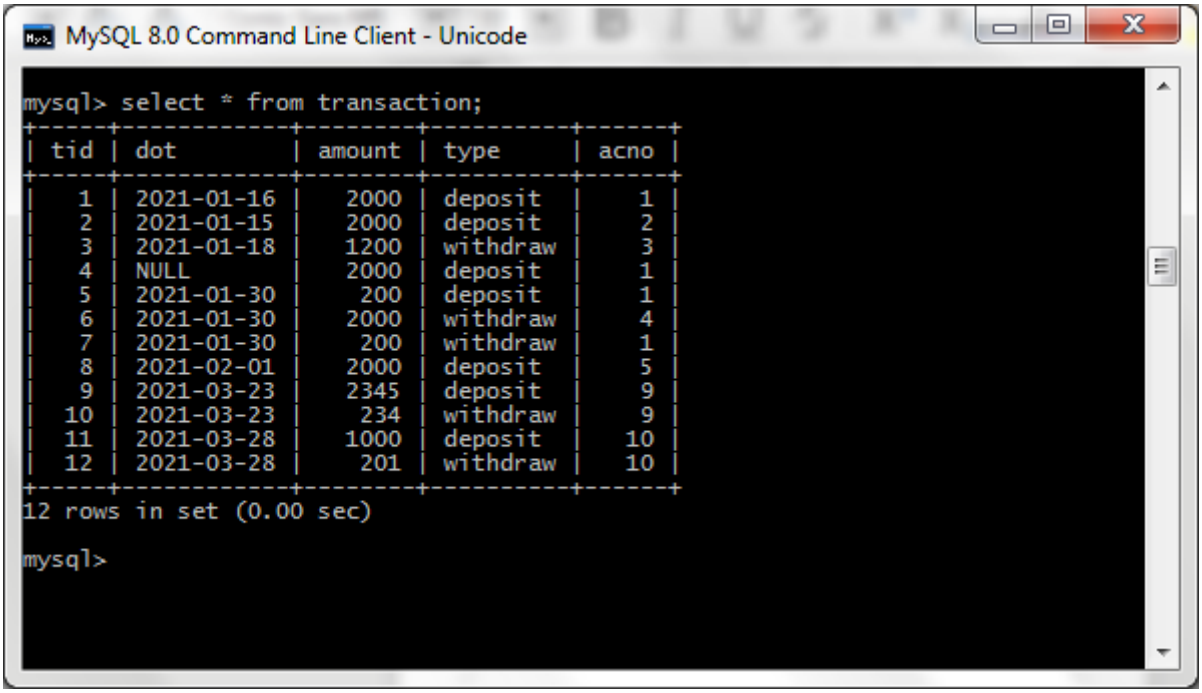
-STRUCTURE OF SQL TABLE






MySQL 8.0 Command Line Client - Unicode
mysql> desc transaction;
+--------+----------+------+-----+---------+----------------+
| Field | Type | Null | Key | Default | Extra |
+--------+----------+------+-----+---------+----------------+
tid	int	NO	PRI	NULL	auto_increment
dot	date	YES		NULL	
amount	int	YES		NULL	
type	char(20)	YES		NULL	
acno	int	YES		NULL	
+--------+----------+------+-----+---------+----------------+
5 rows in set (0.00 sec)
mysql>


MySQL 8.0 Command Line Client - Unicode
mysql> select * from customer;
acno	name	address	phone	email	aadhar_no	acc_type	status	balance
1	abi	Muharraq	8769432098	abiram@gmail.com	123412434545	saving	active	1220000.00
2	Kushal Sena	Riffa	9678436754	kushalsena13@gmail.com	454512434545	saving	active	1.00
3	Rajaarya	Manama	9876785467	rajaarya28@gmail.com	123456564545	saving	active	10000.00
4	Ishan Raja	Zallaq	9678965675	ishanraja23@gmail.com	112456566576	saving	active	56000.00
5	Pranav J	Sitra	9731766784	pranavj12@gmail.com	445556564545	saving	active	200000.00
7	Ramesh	Unknown	998765543	Ramesh@gmail.com	76854321	savings	active	1000.00
8	Rahul	Unknown	5674536128	rakesh@gmail.com	435674857	Savings	active	1000.00
9	Amit	Unknown	4543214567	arun@gmail.com	87678987	savings	active	3111.00
10	AMOGH KRISHNA	Bangalore	9886476140	amoghkrishna55@gmail.com	987676546543	savings	close	10799.00


MySQL 8.0 Command Line Client - Unicode
mysql> select * from transaction;
+-----+------------+--------+----------+------+
| tid | dot | amount | type | acno |
+-----+------------+--------+----------+------+
1	2021-01-16	2000	deposit	1
2	2021-01-15	2000	deposit	2
3	2021-01-18	1200	withdraw	3
4	NULL	2000	deposit	1
5	2021-01-30	200	deposit	1
6	2021-01-30	2000	withdraw	4
7	2021-01-30	200	withdraw	1
8	2021-02-01	2000	deposit	5
9	2021-03-23	2345	deposit	9
10	2021-03-23	234	withdraw	9
11	2021-03-28	1000	deposit	10
12	2021-03-28	201	withdraw	10
+-----+------------+--------+----------+------+
12 rows in set (0.00 sec)
mysql>

-Hardware

>Lenovo IdeaPad S540

>Lenovo 300 Wireless Compact
>Mouse (GX30K79401)

-Software

>Python 3.7.9

>MySQL server 8.0

>MySQL workbench

>LibreOffice Writer

>Adobe Acrobat Reader

>Snipping Tool

-Minimum Requirement

>Processors: Intel Atom® processor or Intel® Core™ i3 processor.

>Disk space: 1 GB.

>Operating systems: Windows* 7 or later, macOS, and Linux.

>**Python*** versions: 2.7.X, 3.6.X.

>**MySQL*** versions: 8.0.X and below.

-Scope of the project

This program was created to make bank management simpler and to avoid any human made errors while entering data.

While creating this program we made sure that it was user friendly so that it is accessible to each and everyone. This program provides various options from creating an account to depositing and withdrawing cash from that account.

We can also monitor the date when the amount was credited or debited from that account. All the entered data is stored in a secure database in MySQL

so non of the stored data is being tampered with.

-Conclusion

This project is developed to nurture the needs of a user in a banking sector by embedding all the tasks of transactions taking place in a bank. Future version of this project will still be much enhanced than the current version. Writing and depositing checks are perhaps the most fundamental ways to move money in and out of a checking account, but advancements in technology have added ATM and debit card transactions. All banks have rules about how long it takes to access your deposits, how many debit card transactions you're allowed in a day, and how much cash you can withdraw from an ATM. Access to the balance in your checking account can also be limited by businesses that place holds on your funds. Banks are providing internet banking services also so that the customers can be attracted. By asking the bank employs we came to know that maximum numbers of internet bank account holders are youth and business man. Online banking is an innovative tool that is fast becoming a necessity. It is a successful strategic weapon for banks to remain profitable in a volatile and competitive marketplace of today. If proper training should be given to customer by the bank employs to open an account will be beneficial secondly the website should be made friendlier from where the first time customers can directly make and access their accounts.

BIBLIOGRAPHY

We would like to show our deep gratitude towards the people who have helped us and the sources that we have used in the completion of our project.

This project is the outcome of our persistent efforts and the invariable support and guidance of our senior computer lecturer **Mrs. Gayatri**, the support of our worthy colleagues and a valuable reference provided by the websites such as ***www.icbse.nic.in*** and other sites supported by ***www.google.co.in*** .