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NETWORK AND COMMUNICATION (CSE1004)
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LAB CAT- 18/02/2020

QUESTION-1

A customer (Client Program) can use his/her credit card for purchasing through online with 2% service charge will be added in addition to the purchased amount. The bank (Server Program) provides 40 days to repay the amount. If the customer paid the amount within the time limit the interest and penalty will not be collected from the customer. If the customer does not pay the repayment amount, the bank will collect 15% interest for the repayment amount from the purchased date to the repayment of the current date and additionally, penalty rupees 500 will also be collected by the bank. Consider a customer who takes n number of days as extra time to repay the purchased amount. Initially the bank will advertise its products with price, so that the customer can buy the required products. Write a TCP client server program to calculate the total amount to be paid by the customer to the bank.

CODE

SERVER/BANK:

```
import socket
port=60002
s=socket.socket()
host=socket.gethostname()
s.bind((host,port))
s.listen(5)
print('Bank is listening...')
while(True):
        conn,addr=s.accept()
        print('Got connection from:',conn,addr)
        name='pen-drive'
        price=500
        p=str(price)
        print('Article :',name)
        print("Price is:",price)
        print('enter date of purchase')
        dop=input()
        dop1=str(dop)
        print('enter month of purchase')
        mop=input()
        mop1=str(mop)
        print('enter year of purchase')
        yop=input()
        yop1=str(yop)

        print('Data of purchase',dop,',',mop,',',yop)
        conn.send(p.encode())
```

```
        conn.send(dop1.encode())
        conn.send(mop1.encode())
        conn.send(yop1.encode())
        tp=conn.recv(1024).decode()
        print('Total price:')
        print(tp)
conn.close()
```

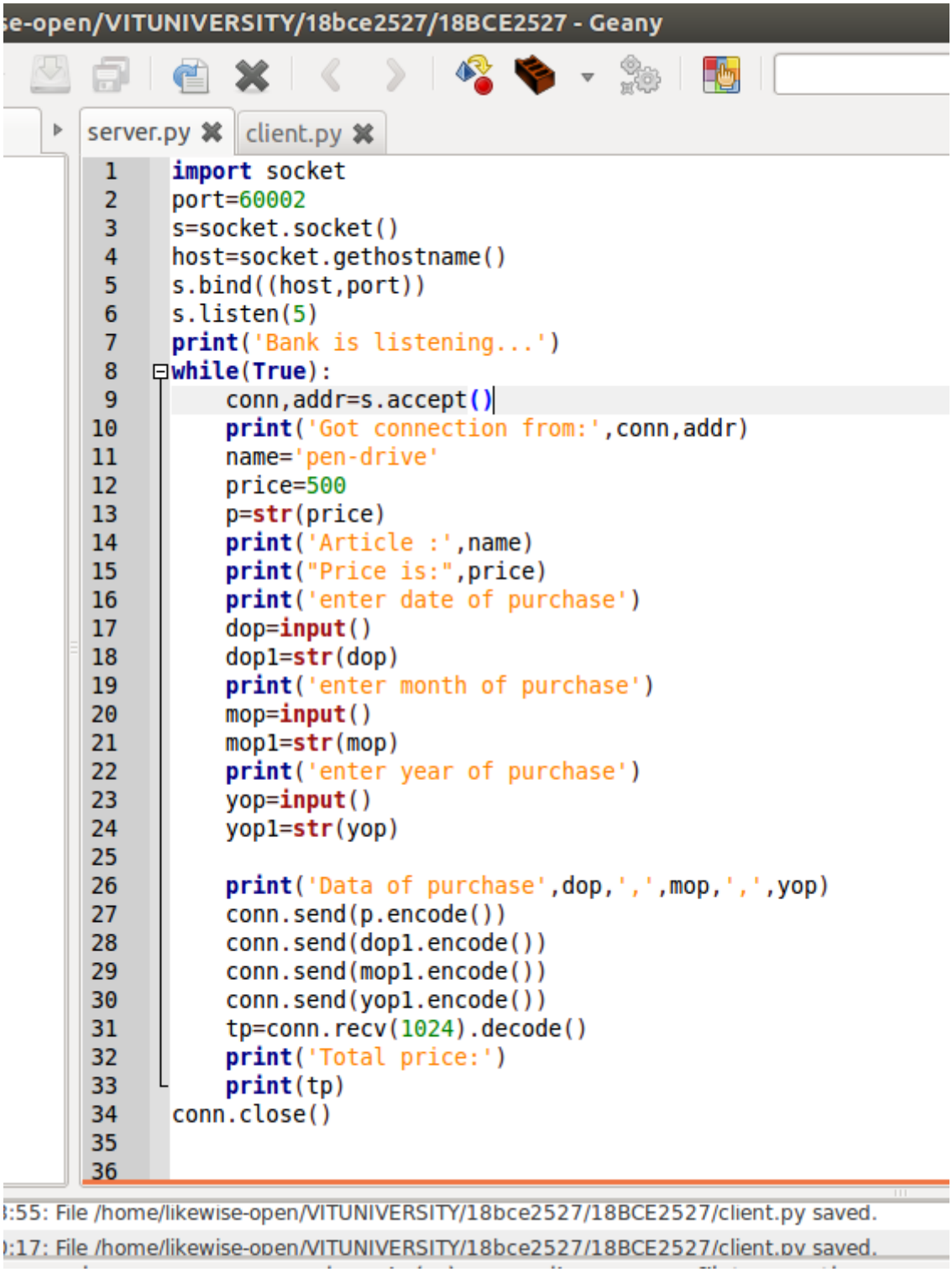
CLIENT/CUSTOMER:

```
import socket
port=60002
s=socket.socket()
host=socket.gethostname()
print('Enter date of payment..')
datepay=int(input())
print('Enter month of payment..')
monthpay=int(input())
print('Enter year of payment..')
yrpay=int(input())
s.connect((host,port))
data=s.recv(3).decode()
print('Original price',data)
dp=s.recv(2).decode()
dp1=int(dp)
mp=s.recv(1).decode()
mp1=int(mp)
yp=s.recv(4).decode()
yp1=int(yp)
pr=int(data)
n=(datepay-dp1)+(monthpay-mp1)*30-40

if(n==0):
        pr=pr+0.02*pr
        pr1=str(pr)
        s.send(pr1.encode())
else:
        print('Days late:',n)
        late=500+0.15*n*pr
        total=late+0.02*pr+pr
        totalS=str(total)
        s.send(totalS.encode())
s.close()
```

SNAPSHOTS OF CODE:

SERVER:

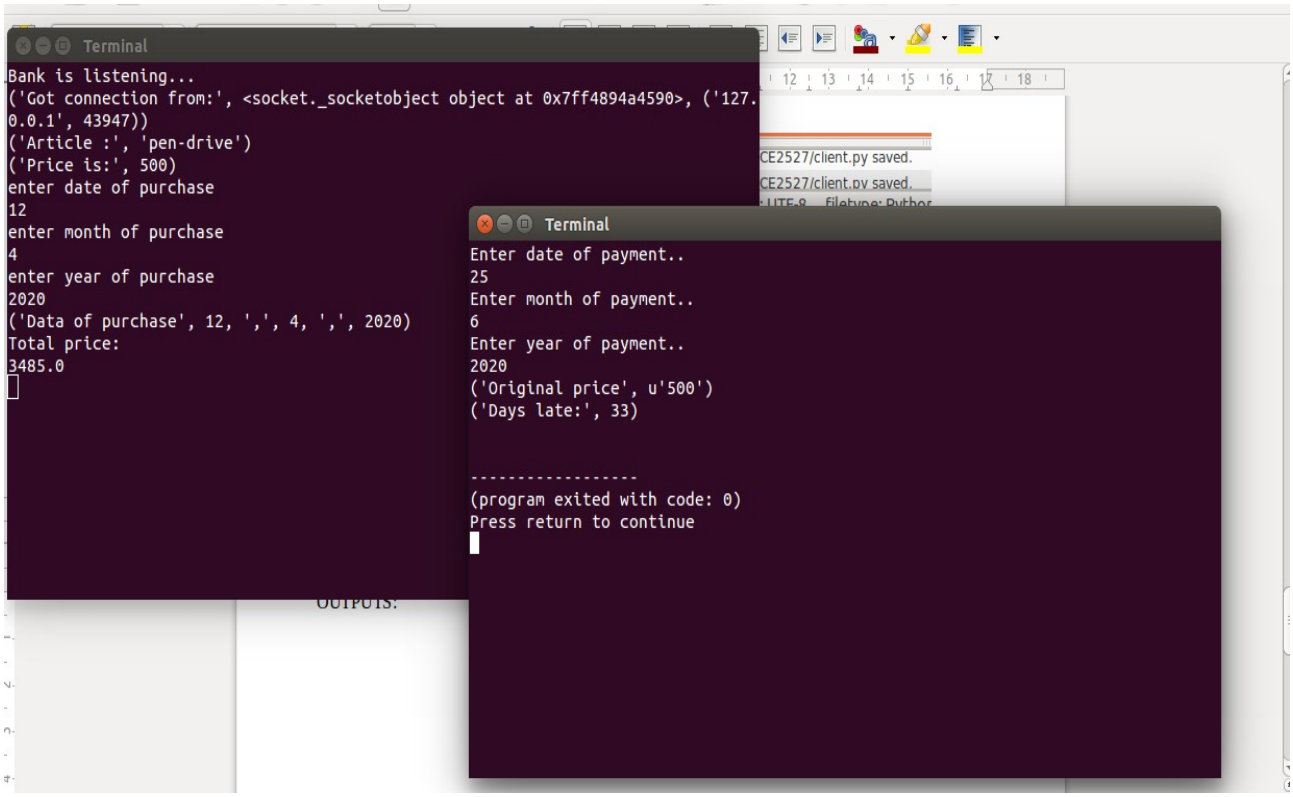


CLIENT:

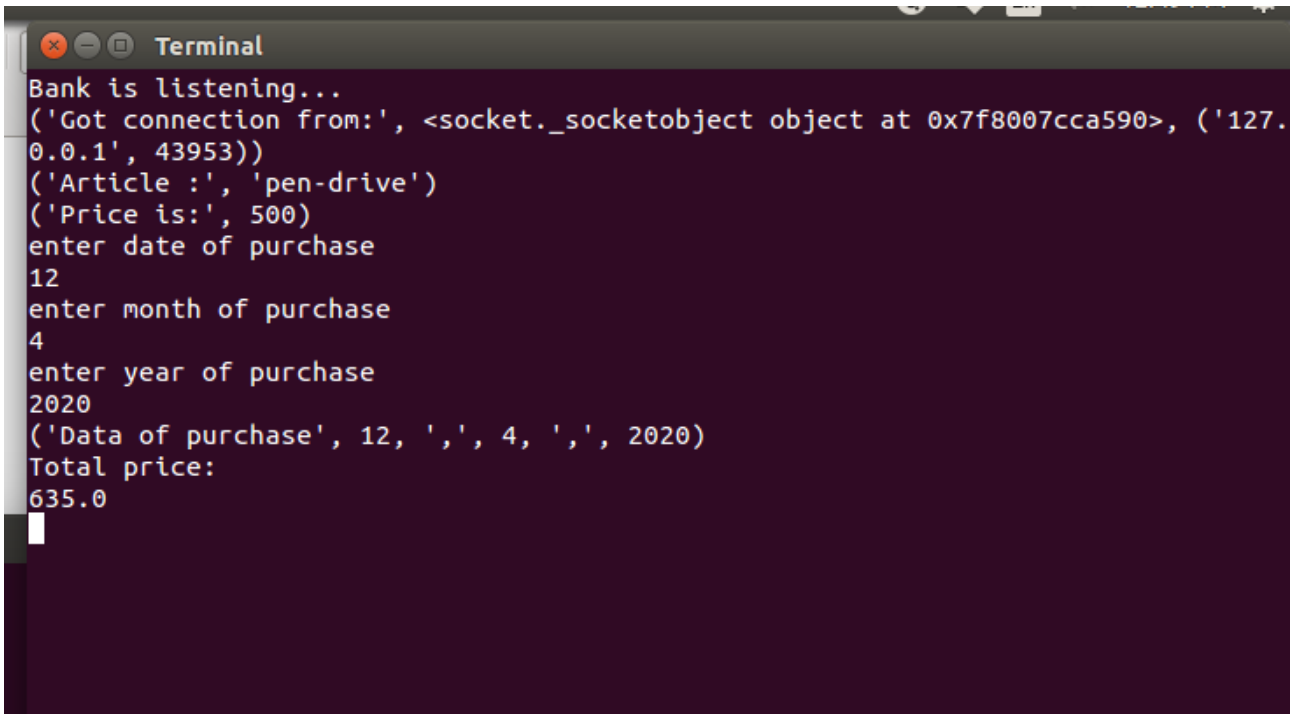

e-open/VITUNIVERSITY/18bce2527/18BCE2527 - Geany
server.py
client.py
import socket
port=60002
s=socket.socket()
host=socket.gethostname()
print('Enter date of payment..')
datepay=int(input())
print('Enter month of payment..')
monthpay=int(input())
print('Enter year of payment..')
yrpay=int(input())
s.connect((host,port))
data=s.recv(3).decode()
print('Original price',data)
dp=s.recv(2).decode()
dp1=int(dp)
mp=s.recv(1).decode()
mp1=int(mp)
yp=s.recv(4).decode()
yp1=int(yp)
pr=int(data)
n=(datepay-dp1)+(monthpay-mp1)*30-40
if(n==0):
pr=pr+0.02*pr
pr1=str(pr)
s.send(pr1.encode())
else:
print('Days late:',n)
late=500+0.15*n*pr
total=late+0.02*pr+pr
totalS=str(total)
s.send(totalS.encode())
s.close()
:55: File /home/likewise-open/VITUNIVERSITY/18bce2527/18BCE2527/client.py saved.
:17: File /home/likewise-open/VITUNIVERSITY/18bce2527/18BCE2527/client.py saved.
l: 21 sel: 0 INS TAB mode: Unix (LF) encoding: UTF-8 filetype: Pythor

OUTPUTS:

1ST OUTPUT:



2ND OUTPUT:




Terminal
Enter date of payment..
17
Enter month of payment..
5
Enter year of payment..
2020
('Original price', u'500')
('Days late:', -5)
(program exited with code: 0)
Press return to continue