5. Repeat assignment 2 using Python. (20 marks)

CLIENT SIDE:

#import socket

from socket import socket, AF\_INET, SOCK\_STREAM

if \_\_name\_\_ == "\_\_main\_\_":

cont = 'y'

while(cont == 'y' or cont == 'Y'):

host = "127.0.0.1"

port = 4450

s = socket(AF\_INET, SOCK\_STREAM, 0)

s.connect((host, port))

msg = input("Enter Fruit followed by the no Eg: M 10 :")

s.send(msg.encode())

msg = s.recv(100)

print("Message from server: {}".format(msg.decode()))

cont = input("Do you want to more transactions")

s.close()

SERVER SIDE:  
#import socket

from socket import socket, AF\_INET, SOCK\_STREAM

import sys

import datetime

class Fruit:

qty = 0

def \_\_init\_\_(self, qty, t\_stamp=0, unique\_clients=0):

self.qty = qty

self.t\_stamp = t\_stamp

self.unique\_clients = unique\_clients

def reduceQty(self, qty):

self.qty = self.qty - qty

def parseRequest(msg):

request = msg.split(" ")

try:

return request[0], int(request[1])

except:

print("Plese send proper request")

sys.exit(1)

def printFruits():

print("\tName\tqty\ttimestamp")

print("\tMango\t{}\t{}".format(mango.qty, mango.t\_stamp))

print("\tOrange\t{}\t{}".format(orange.qty, orange.t\_stamp))

print("\tGuava\t{}\t{}".format(guava.qty, guava.t\_stamp))

def doTransaction(reqFruit, qty):

if(reqFruit == "M"):

# Mango

if(qty <= mango.qty):

ret\_message = "transaction successful"

mango.reduceQty(qty)

mango.t\_stamp = datetime.datetime.now()

else:

ret\_message = "transaction error"

elif(reqFruit == "O"):

# Orange

if(qty <= orange.qty):

ret\_message = "transaction successful"

orange.reduceQty(qty)

orange.t\_stamp = datetime.datetime.now()

else:

ret\_message = "transaction error"

elif(reqFruit == "G"):

# Guava

if(qty <= guava.qty):

ret\_message = "transaction successful"

guava.reduceQty(qty)

orange.t\_stamp = datetime.datetime.now()

else:

ret\_message = "transaction error"

else:

ret\_message = "transaction error"

return ret\_message

def addIpToList(addr):

clients.append(addr)

print("Unique clients")

print(clients)

clients = []

mango = Fruit(10)

orange = Fruit(15)

guava = Fruit(20)

if \_\_name\_\_ == "\_\_main\_\_":

host = "127.0.0.1"

port = 4450

s = socket(AF\_INET, SOCK\_STREAM, 0)

s.bind((host, port))

s.listen(5)

printFruits()

print("Listening for connection..")

while(True):

q, addr = s.accept()

# get the transaction request from the client

msg = q.recv(100)

print("MSG from client: '{}'".format(msg.decode()))

# Parse the fruit name and qty

reqFruit, qty = parseRequest(msg.decode())

# Check if qty exist if yes then do transaction

result = doTransaction(reqFruit, qty)

print(result)

if( result == "transaction successful"):

addIpToList(addr)

printFruits()

q.send("Successfully done".encode())

s.close()

OUTPUT: 