LONDON METROPOLITAN UNIVERSITY

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Choose a Module

60% Individual Coursework

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Project File Links:

YouTube Link:	Keep Unlisted YouTube URL of your Project Here
Google Drive Link:	Keep Google Drive URL of your Project Here with Anyone in Organization can View Option Enabled

I confirm that I understand my coursework needs to be submitted online via MySecondTeacher under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a marks of zero will be awarded.

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Introduction

Python is a object-oriented, high level programming language with dynamic semantic. Often programmers falls in love with python because of the increased productivity it provides. Python simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintainence. Debugging python programming is easy a bug or bad input will never cause a segmentation fault. (anonymous, n.d.)

This coursework that contains 60% overall. This coursework have to be done in IDLE. In this coursework basically what we have to do if create a laptop shop that buys laptops from manufacture and sells it to different customers which may be individual or companies. The name of the laptop, price, quantity, specs are first added to a text file name laptop.txt and we have to read the data from the text file and convert into dictionary or 2d array whichever we find to be easier than we have to make various various functions to validate the id the laptop, how much quantity is needed by the buyer and if the quantity is available or not in the shop if not a suitable message is display and after every purchase the quantity must be decreased and be updated in the text file. After the purchase a bill should be generated in both the Idle shell and as a text file but the file name must be unique all the time. Same process goes to buying just vat is added when buying and shipping cost is asked to user whether to add or not after selling. Our laptop shop should be able to ask the same user to buy or sale multiple laptops and at last get the total amount along with vat and shipping cost. And then we have to make report for the coursework which contains algorithm flowchat, pusedocode, data structure Testing etc. Testing is done as it shows the proof that the program is running accordingly as it is asked for, In the data structure part we show what kind of data type we used and where di we implement it with the ss and we can also show the inbuild function of the python we have used. There are some thing we cannot use in the coursework example example and the we can only use tab to design the dictionary or 2d array. We must not use the function name and variable name such as aaa,bbb,cc,zz.12, the program must not be carshed to do this we can use try exception for different exception such as the name variable Is asking for the user to input their name which definitely contains only alphabet but when the user type 1 which is an integer the program must not be crashed, the program must

not contain the Romain nepali word like id_leko, quantity_leko etc. We can also not define function inside another function.

There are certain things program should contains such as it one user must be able to buy and sell one or more than two laptops until the user wish to stop, whenever laptops are bought the quantity should be increased and after the sell the quantity must get deducted from the quantity, the program must also be able to ask the user if the user want the shipping cost added with their total cost or not while selling the laptop, and 13% vat should be compulsorily added when we bought some laptops from the company to the total cost which is gross_amount, bill should be unique after every purchase and sell and a new text file should be created.

At last the program should only be ended when the user wishes to end.

Algorithm

An algorithm is a procedure used for solving a problem. Algorithms acts as an exact list of instructions that conduct specified actions step by step. It takes set of input and produces the desired output. (anonymous, n.d.)

STEP 1: Run the program.

STEP 2: Set the loop true

STEP 3: Display welcome message.

STEP 4: Show the input from 1-4 where user will choose The option. (1- to display all the available laptops, 2 to sale the laptops, 3 to purchase the laptop, 4 to exit).

STEP 5: IF user pressed 1 display the available laptop name, brand, price, quantity, ram and processor go to step 3

STEP 5: IF user pressed 2 Ask for the id user want to sell.

STEP 5.1: Set while loop Check If the id given by the user is <= 0 or > length of dictionary until the user give valid id.

STEP 5.2: If id is not valid display a suitable message dear user id is not valid and go to step 5.

STEP 5.3: if id is valid loop ends ask for quantity to be sold

STEP 5.4: set while loop to check If quantity is not correct display a suitable message dear user the quantity you are looking for is not available in the shop and go to step 5.3 until the user provide valid quantity.

STEP 5.5: If both id and quantity are valid loop ends ask the user if he/she wants to buy more laptops or not. Set loop true Show option Y or N.

STEP 5.6: If the user press y returns True then go to Step 4.

STEP 5.7: If the user press n return false loop end then ask the user for their info name, phone number and email for bill generation.

STEP 5.8: After the data being collected ask the user if he/she wants product to be shipped or not

STEP 5.9: If the user press Y generate the bill In both the idle shell and new text file with shipping cost being added.

STEP 5.10: If the user press N then generate the bill in both idle shell and new text file but without adding the shipping cost.

STEP 5.11: After the bill generation again go to step 2 and display the option

STEP 6: If the user chooses the option 3

STEP 6.1: Ask user for the id to purchase the laptop

STEP 6.2: set while loop if the user id is <=0 and > length of dictionary if yes go to step 6.3

STEP 6.3: Display suitable message Dear user please provide a valid id from (1-5) and again go to step 6.1

STEP 6.4: After the valid id being given by the user loop ends go to step 6.5

STEP 6.5: Ask the user to give quantity of the laptop to be purchased.

STEP 6.6: After getting the quantity from the user go to step 6.7

STEP 6.7: set while true Ask the user if he/she wants to buy more laptops or not with option(y/n)

STEP 6.8: If user press y go to step else go to step 6.1

STEP 6.9: If user press n loop ends go to step 6.10

STEP 6.10: Generate the bill in both the shell and new text file with 13% VAT added

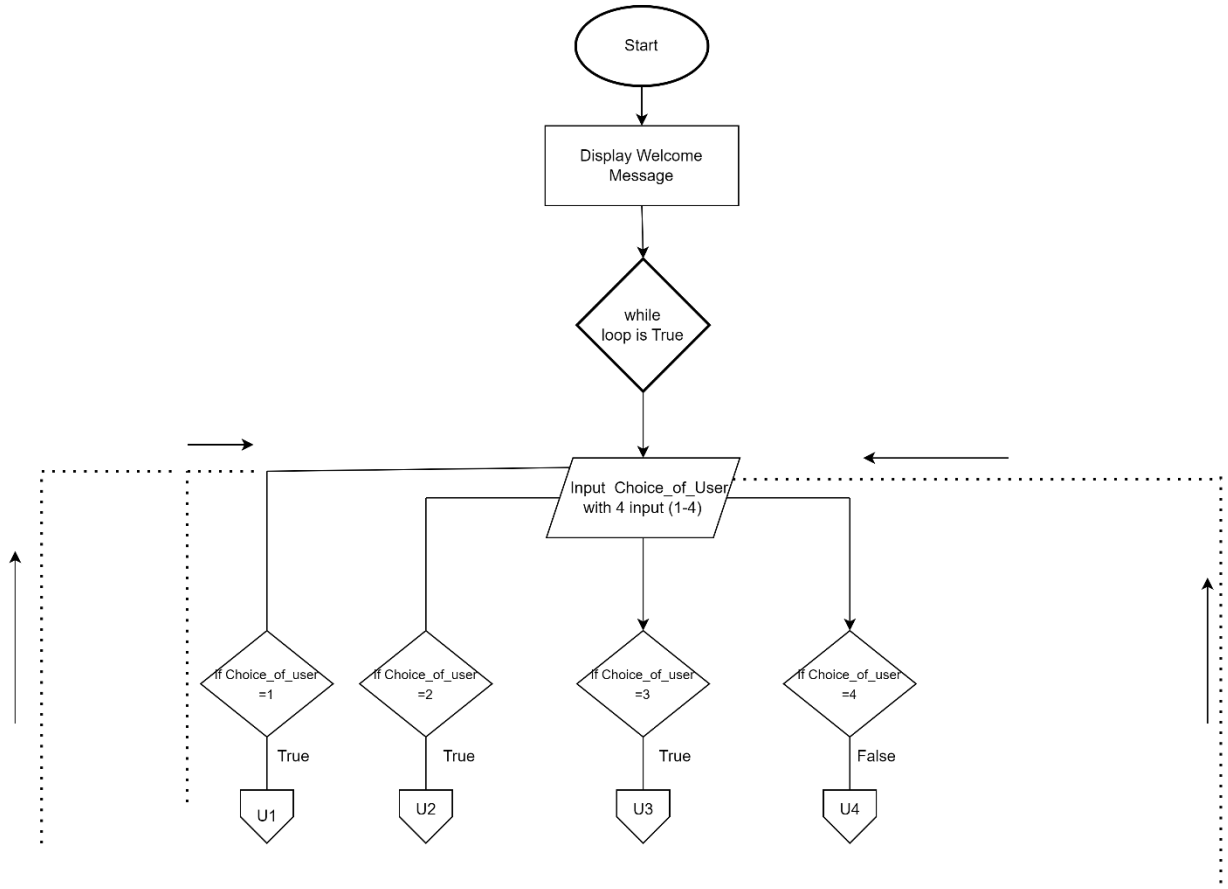
STEP 6.11 After the generation of the bill go to step 2

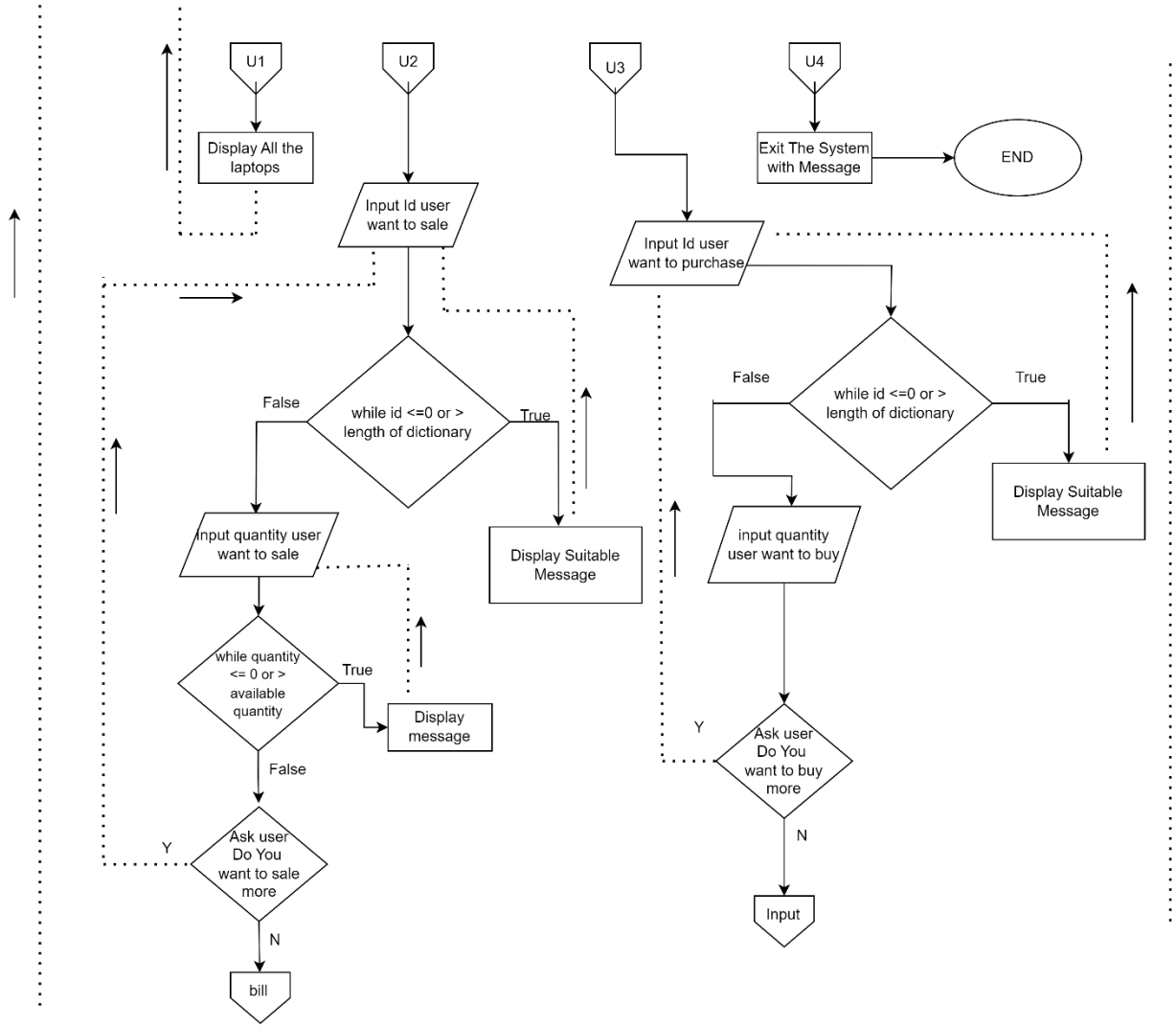
STEP 7: If the user press 4 Loop become false loop end a suitable message is displayed thanking the user

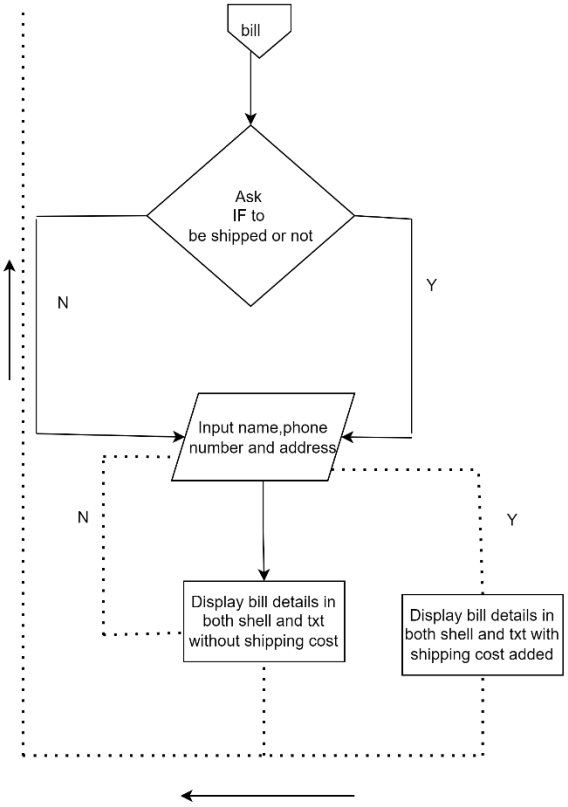
STEP 7.1: END

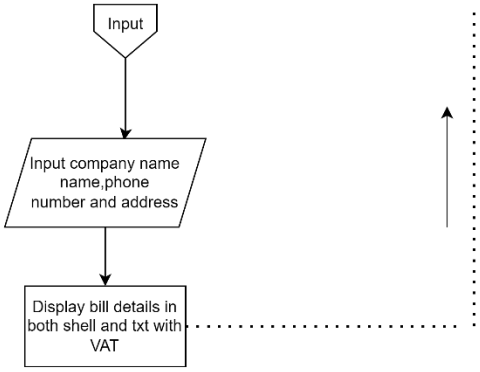
Flowchart

A flowchart is a picture of the separate steps of process in sequential order. A flow chart is the graphical representation of a process. Each step in the process is represented by a different symbol and contains a short description of the process step. (anonymous, n.d.)




U1
Display All the laptops
U2
Input Id user want to sale
while id <=0 or > length of dictionary
False
True
Display Suitable Message
input quantity user want to sale
while quantity <= 0 or > available quantity
True
Display message
False
Ask user Do You want to sale more
Y
N
bill
U3
Input Id user want to purchase
while id <=0 or > length of dictionary
False
True
Display Suitable Message
input quantity user want to buy
Ask user Do You want to buy more
Y
N
Input
U4
Exit The System with Message
END


bill
Ask
IF to
be shipped or not
N
Y
Input name,phone
number and address
N
Y
Display bill details in
both shell and txt
without shipping cost
Display bill details in
both shell and txt with
shipping cost added


Input
Input company name
name,phone
number and address
Display bill details in
both shell and txt with
VAT

Data Structure

A data structure is a specialized format for organizing, processing, retrieving and storing data. The study of data structure allows us to understand the organization of data and management of the data flow in order to increase the efficiency of any process or program. (anonymous, n.d.)

Integer: This data type includes numeric values such as 1,-1,0 without a decimal at the end

```
int(Available_Laptops[valid_id_for_sale][3]) - int(wanted_amount_of_laptop)
```

The valid id and wanted amount uses integer data type and the result will also be a integer datatype.

Float: This datatype uses a decimal point at the end of the value for example 4.5

```
total = wanted_amount_of_laptop * float(Laptopprice)
```

Here the price of the laptop uses float datatype which means it can have a decimal point after the value like Rs 2000.1.

Boolean: This datatype uses values True and False helpful in conditional statement.

```
loop=True
while loop == True:
```

Here loop use Boolean value which means the program will keep running the the Boolean value of loop is false.

String: This datatype uses word, alphabet and this type of datatype is always kept inside a double inverted comma.

```
name = input("Please enter the name of the customer: ")
```

Here name variable uses the the datatype as string because name is made from alphabet .

List: List is inbuilt python function where can add various items properties. A list can consist of both heterogenous and homogenous elements. Some of the methods applicable on a List are index(), append(), extend(), insert(), pop() etc.

```
Creating_List_For_Multiple_Laptops=[]
```

```
Creating_List_For_Multiple_Laptops.append([Laptopname_of_product,LaptopBrand, Laptopquantity, Laptopprice,total])
```

Example of list where I have implemented in the code

Inbuilt method : I have used in build method like isalpha() an isspace() these are used to check if the some input given by the user only contains alphabet or not, and the other method is used to read the alphabet with space.

```
while True:
        try: # This is to check is the name is in alphabet or not
                name = input("Please enter the name of the customer
                if not all(c.isalpha() or c.isspace() for c in name
                        raise ValueError #(raise and ValueError are
                break #loop ends
        except ValueError:
                operations.for_alpha()
```

Psuedocode

Psuedocode is the informal way of programming description that does need any strict programming language syntax. It is used for creating an outline or a rough draft of a program.

FOR READ.PY

DEFINE function Reading_File()

CREATE A DICTIONARY Available_Laptops = {}

ASSIGN laptop_id to 1

OPEN file laptop.txt and read it

USE for loop to read each line assigned in the variable line from file

REPLACE line “\n’(new line) with empty string “”

UPDATE the dictionary with key,value pair where key is laptop id and laptop specs are value which is split by “,”

INCREASE the value of laptop id by 1 until it gets all the value so that each value can have a unique key

END FOR LOOP

RETURN laptop dictionary

DEFINE function Laptop_Display()

OPEN the file laptop.txt and read it

READ all the lines from laptop.txt and store in the variable myList converting into string as realines() method does

CREATE list name nestedList which contains each elements from list newList as nested list

CREATE a list name newList = [ ]

USE for loop which iterate over a range of value according to the length from the list nestList

ADD list of value to list newList as a new sublist which is split by comma

END FOR LOOP

ASSIGN a value to 1

USE for loop to iterate over item in list and take value of each item in list one at a time

PRINT a multiple the" "space with subtracting length of the index with space, do this for each index

INCREASE the value of a so that the next laptop id will be unique until it gets all the item

END FOR LOOP

FOR MAIN.PY

IMPORT operations

IMPORT read

IMPORT write

PRINT Welcome message

SET loop True

USE while condition

TRY

    PRINT options to sale, buy, show, and exit from system (1-4)

    ASK user for the input (1-4)

EXCEPT

    CALL Except_Message() function from operations

    CONTINUE

IF Choice_Of_User equals to 1

    PRINT we have following laptops available

    PRINT specs of laptops

    CALL Laptop_Display() function from read

ELIF Choice_Of_User equals to 2

    PRINT specs of laptops

CALL Laptop_Display() function from read

USE while loop

CALL the function Id_For_Sale() from operations and store in variable checkingId

PRINT checkingId

CALL the function Quantity_For_Sale with the parameter checkingId to get valid id from operations and store in variable checkingId

PRINT QuantityCheck

CALL the Writing_Updated_Value_For_Sale with the parameter checkingId and Quantity to get valid id and quantity from operations and store in variable Updated

PRINT Updated

IF call function Hello from operations

Continue

ELSE

loopSale = Fasle

END IF

END while loop

CALL the function Bill_Printing from write function with the parameter checkingid and quantitycheck to get validid and quantity and store in a variable Bill

PRINT Bill

ELIF Choice_Of_User equals to 3

PRINT specs

CALL Laptop_Display() function from read and store in variable Buy

PRINT Buy

USE while loop

CALL Id_For_Purchase from operations and store in variable checkingId

PRINT checkingId

CALL the function Quantiy_For_Purchase with the parameter checkingId to get valid id from operations and store in variable checkingId

PRINT QuantityCheck

CALL the Writing_Updated_Value_For_Purchase with the parameter checkingId and Quantity to get valid id and quantity from operations and store in variable Updated

PRINT Updated

IF call function Hello1 from operations

Continue

ELSE

loopPurchase = Fasle

END IF

END while loop

CALL the function Bill_Printing from write function with the parameter checkingid and quantitycheck to get validid and quantity and store in a variable Bill

PRINT Bill

ELIF Choice_Of_User equals to 4

Loop = False

END while loop

```
        PRINT thank you message
ELSE
        PRINT No match
END IF
```

FOR OPERATIONS.PY

```
IMPORT read

                                FOR SALE


DEFINE function Expect_Message()
        PRINT (“\n”) for new line
        PRINT (“Dear User, Please Enter a valid Input.(Only Integers Are Allowed(1-4)”)
        PRINT(“\n”) for new line
DEFINE function Design
        print("|-------------------------------------------------------------------------------|”)
        print("|S.N  Laptop Name        Company Name    Price     Quantity    RAM
        Graphics   |")
        print("|-------------------------------------------------------------------------------|")
DEFINE function for_Yes_No():
    print("\n")
    print("\t\tDear User, Only y and n are allowed")
    print("\n")


DEFINE function for_alpha():
    print("\n")
    print("\t\tInvalid Input. Only Alphabet Allowed")
    print("\n")
```

DEFINE function Id_For_Sale()

CALL Reading_File() function from read for the laptop dictionary name Available_Laptops

TRY

ASK input from the user to provide which id user wants to sale and store in variable given_id

USE while to check condition until the user give the correct input(given_id<= 0 or given_id> length of dictionary Available_Laptops)

(IF condition if true)

PRINT Dear User, Your input does not match from the laptop Id

PRINT(“\n”) for new line

RETURN given_id

EXCEPT

CALL Expect_Message() function

DEFINE function Quantity_For_Sale(given_id) passing given_id to get valid id

CALL Reading_File() function from read for the laptop dictionary name Available_Laptops

TRY

ASK input from the user to give valid quantity for sale and store in variable wanted_amount_of_laptop

STORE Laptop dictionary name

USE while to check condition until the user give the correct input (wanted_amount_of_laptop <= 0 or wanted_amount_of_laptop > length of dictionary Available_Laptops)

(IF condition if true)

PRINT Dear User, Your input does not match from the laptop quantity

PRINT(“\n”) for new line

RETURN wanted_amount_of_laptop

Except

CALL function Except_Message()

DEFINE function Hello()

USE while loop

ASK input from the user and store it in variable Ask

TRY

IF

Ask.lower()= “Y”

Return True

ELIF

Ask.lower()=”n”

Return False

WHILE LOOP END

ELSE

PRINT raise ValueError

END IF

Except ValueError

CALL function for_Yes_No()

FOR PURCHASE

DEFINE function Quantity_For_Sale(given_id) passing given_id to get valid id

CALL Reading_File() function from read for the laptop dictionary name Available_Laptops

TRY

ASK input from the user to give valid quantity for sale and store in variable wanted_amount_of_laptop

RETURN wanted_amount_of_laptop

Except

CALL function Except_Message()

DEFINE function Hello1()

USE while loop

ASK input from the user and store it in variable Ask

TRY

IF

Ask.lower()= “Y”

Return True

ELIF

Ask.lower()=”n”

Return False

```
        WHILE LOOP END
        ELSE
            PRINT raise ValueError
        END IF
Except ValueError
        CALL function for_Yes_No()
```

FOR WRITE.PY

For Sale

```
IMPORT read

IMPORT operation

From

DEFINE Invoice_Generate():


    print("|-------------------------------------------------------------------------|")

    print("|Dear User For Bill Generation you will have to enter your details first! |")

    print("|-------------------------------------------------------------------------|")

    print("\n")


DEFINE Laptop_Shop():

    print("\n")

    print("\t \t \t \t \t Nakarmi Laptop Shop Bill")

    print("\n")

    print("\t \t\t\t New Road, Kathmandu | Phone No: 9863526287")

    print("\n")


    print("Laptop details are : ")

    print("\n")
```

DEFINE Bill_Laptop_Specs():

print("\n")

print("Purchase Details are:")

print("|----------|")

print("|Laptop Name Brand Qauntity Price Total|")

print("|----------|")

DEFINE Thanks():

print("\t\tThank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!")

print("\t\t Bill has been printed in the txt file also!!")

CREATE a list name Creating_Lisiting_For_Multiple_Laptops = [ ]

DEFINE function Writing_Updated_Value_For_Sale(given_id, wanted_amount_of_laptop) with parameter so we can get the value of id and quantity

CALL Reading_File() function from read for the laptop dictionary name Available_Laptops

Subtract the given quantity(from the user) from the available quantity

Available_Laptops[given_id][3] = int(Available_Laptops[given_id][3]) - int(wanted_amount_of_laptop)

OPEN file name laptop.txt as write

USE For loop to iterate over Available_Laptops(dictionary name)values using variable values

Write in file using file.write in the beginning

file.write(convert the list index into str and give all the index which we added in the list for printing)

file.write(“\n”) for new line

DECLARE Laptopname=Available_Laptops[valid_id_for_sale][0]

DECLARE LaptopBrand = Available_Laptops[valid_id_for_sale][1]

DECLARE Laptopquantity=wanted_amount_of_laptop

DECLARE Laptopprice = Available_Laptops[valid_id_for_sale][2].replace("$","")

DECALRE total = wanted_amount_of_laptop * float(Laptopprice)

APPEND list
Creating_List_For_Multiple_Laptops.append([Laptopname,LaptopBrand Laptopquantity, Laptopprice,total])

DEFINE function Bill_Printing(valid_id_for_sale,wanted_amount_of_laptop):

CALL Available_Laptops = read.Reading_File()

CALL Invoice_Generate() Function

SET while True

TRY

ASK input name = input("Please enter the name of the customer: ")

IF not check the condition for if there are only alphabet and also spaces allowed

Raise ValueError

Break

END LOOP

EXCEPT ValueError

CALL function for_alpha() from operations

SET while True

TRY

ASK input phone_number = Iint(input("Please enter the phone number of the customer: "))

Break

LOOP END

EXCEPT

CALL function for_alpha() from operations

SET while True

TRY

ASK input address = input("Please enter your address: ")

IF not check the condition for if there are only alphabet and also spaces allowed

Raise ValueError

Break

END LOOP

EXCEPT ValueError

```
                CALL function for_alpha() from operations
SET while True
        TRY
                ASK to add shipping_cost = input("Dear user do you want your
                laptop tp be      shipped?(Y/N)").upper()

                IF shipping_cost=="Y"
                        shipping_cost = 250
                        break
END LOOP
                ELIF shipping_cost=="N":
                        shipping_cost = 0
                        break
END LOOP
                ELSE
                        Raise ValueError
                END IF
        EXCEPT ValueError
                Call function for_yes_no() from operations

INITIALIZE total_price = 0
CALL function Laptop_Shop()
PRINT(Name of the customer,+convert name into String)
```

PRINT(Contact Number of the customer,+convert phone_number into String)

PRINT(Date and time of purchase of the customer,+convert date and time into String)

CALL function Bill_Laptop_Specs()

USE For loop to iterate in list for i in Creating_List_For_Multiple_Laptops:

Total_price += int(i[4])

grand_total = total_price+shipping_cost

today_date_and_time = datetime.now()

PRINT convert the list index into string and multiple the" "space with subtracting length of the index with space, do this for each index

END FOR LOOP

IF shipping_cost == Y

print("Your Shipping cost is:", shipping_cost)

print("Grand Total: $"+str(grand_total))

CALL function thanks()

ELSE

print("Grand Total: $"+str(grand_total))

print("\n")

CALL function thanks()

END IF

OPEN file type write with open(str(name) + ".txt","w") as file:

grand_total = total+shipping_cost

today_date_and_time = datetime.now()

WRITE in file with the help of file.write in the beginning.

file.write(shop name)

file.write("\n") for new line

file.write("address and contact of shop")

file.write("\n") for new line

file.write("details of laptop")

file.write("\n") for new line

file.write("name of customer, +convert name into string")

file.write("\n") for new line

file.write("contact number, + convert contact into string")

file.write("\n") for new line

file.write("address, + convert address into string")

file.write("\n") for new line

file.write("date and time, + convert date and time into string")

file.write("\n") for new line

file.write("purchase detail")

file.write("\n") for new line

file.write("design of the heading of the table for laptop specs")

file.write(“\n”) for new line

USE for loop to iterate over the list

File.write(“convert the list index into string and multiple the” ”space with subtracting length of the index with space, do this for each index”)

END FOR LOOP

IF shipping_cost = Y

file.write(print total, + convert the total_price into string)

file.write(“\n”) for new line

file.write(print shipping cost,+convert shipping into string)

file.write(“\n”) for new line

file.write(print grand total, + convert grandtotal into string)

file.write(print thank)

ELSE print grand total only

file.write(print grand total, + convert grandtotal into string)

file.write(print thank you message)

END IF

FOR PURCHASE

CREATE a list name Creating_Lisiting_For_Multiple_Laptops = [ ]

DEFINE function Bill_Printing_For_Purchasee(given_id,wanted_amount_of_laptop):

CALL Reading_File() function from read for the laptop dictionary name Available_Laptops

ADD the given quantity(from the user) from the available quantity

Available_Laptops[given_id][3] = int(Available_Laptops[given_id][3]) + int(wanted_amount_of_laptop)

OPEN file name laptop.txt as write

USE For loop to iterate over Available_Laptops(dictionary name)values using variable values

Write in file using file.write in the beginning

file.write(convert the list index into str and give all the index which we added in the list for printing)

file.write("\n") for new line

DECLARE Laptopname=Available_Laptops[valid_id_for_sale][0]

DECLARE LaptopBrand = Available_Laptops[valid_id_for_sale][1]

DECLARE Laptopquantity=wanted_amount_of_laptop

DECLARE Laptopprice = Available_Laptops[valid_id_for_sale][2].replace("$","")

DECALRE total = wanted_amount_of_laptop * float(Laptopprice)

APPEND list
Creating_List_For_Multiple_Laptops.append([Laptopname,LaptopBrand Laptopquantity, Laptopprice,total])

DEFINE function Bill_Printing(valid_id_for_sale,wanted_amount_of_laptop):

CALL Available_Laptops = read.Reading_File()

CALL Invoice_Generate() Function

SET while True

TRY

ASK input Mname = input("Please enter the company: ")

IF not check the condition for if there are only alphabet and also spaces allowed

Raise ValueError

Break

END LOOP

EXCEPT ValueError

CALL function for_alpha() from operations

SET while True

TRY

ASK input name = input("Please enter the name of the customer: ")

IF not check the condition for if there are only alphabet and also spaces allowed

Raise ValueError

Break

END LOOP

EXCEPT ValueError

CALL function for_alpha() from operations

SET while True

TRY

ASK input phone_number = Iint(input("Please enter the phone number of the customer: "))

Break

LOOP END

EXCEPT

CALL function for_alpha() from operations

SET while True

TRY

ASK input address = input("Please enter your address: ")

IF not check the condition for if there are only alphabet and also spaces allowed

Raise ValueError

Break

END LOOP

EXCEPT ValueError

CALL function for_alpha() from operations

INITIALIZE net_amount = 0

CALL function Laptop_Shop()

PRINT(Name of the company,+convertMname into String)

PRINT(Name of the customer,+convert name into String)

PRINT(Contact Number of the customer,+convert phone_number into String)

PRINT(Date and time of purchase of the customer,+convert date and time into String)

CALL function Bill_Laptop_Specs()

USE For loop to iterate in list for i in Creating_List_For_Multiple_Laptops:

net_amount += int(i[4])

vat=(13/100)*net_amount

gross_amount = net_amount + vat

today_date_and_time = datetime.now()

PRINT convert the list index into string and multiple the” ”space with subtracting length of the index with space, do this for each index

END FOR LOOP

print("\t\t\t\t\t\t\t Total : $"+str(net_amount))

print("Your Vat is :", vat)

print("Grand Total : $"+str(gross_amount))

print("\n")

CALL function Thanks()

OPEN file type write with open(str(name) + ".txt","w") as file:

grand_total = total+shipping_cost

today_date_and_time = datetime.now()

WRITE in file with the help of file.write in the beginning.

file.write(shop name)

file.write("\n") for new line

file.write("address and contact of shop")

file.write("\n") for new line

file.write("details of laptop")

file.write("\n") for new line

file.write("company name, +convert Mname into string")

file.write("\n") for new line

file.write("name of customer, +convert name into string")

file.write("\n") for new line

file.write("contact number, + convert contact into string")

file.write("\n") for new line

file.write("address, + convert address into string")

file.write("\n") for new line

file.write("date and time, + convert date and time into string")

file.write("\n") for new line

file.write("purchase detail")

file.write("\n") for new line

file.write("design of the heading of the table for laptop specs")

file.write(“\n”) for new line

USE for loop to iterate over the list

File.write(“convert the list index into string and multiple the” ”space with subtracting length of the index with space, do this for each index”)

END FOR LOOP

file.write("net amount, + convert(net_amount) into string)

file.write("\n") for new line

file.write("Your Vat is, + convert (vat) into string)

file.write("\n") for new line

file.write("Grand Total $",+ convert (gross_amount) into string)

file.write("\n") for new line

file.write("\t\t display thank you message ")

Program

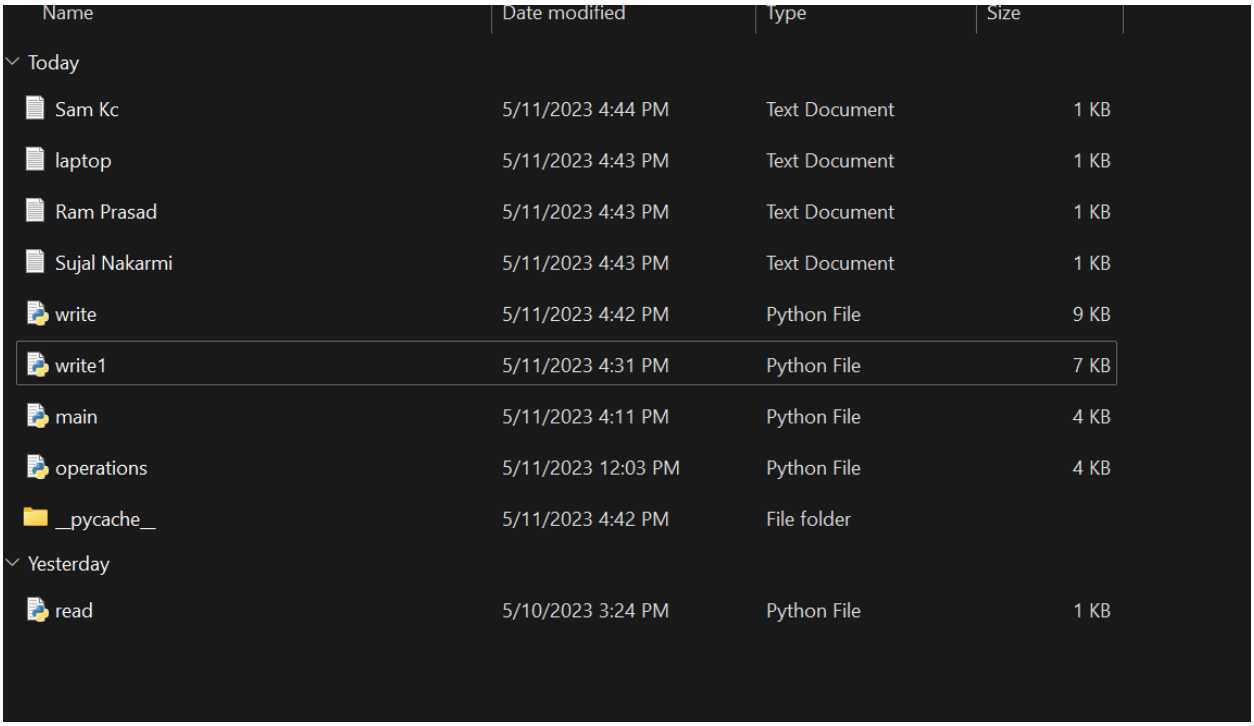
This program is all about a laptop shop who buys laptops from manufacturers and sells it various customers individual or company. In this program at first welcome message is displayed and option are displayed from 1 to 4, 1 to display the available laptops, 2 to sell the laptops after choosing 2 it will ask the Id and quantity and checks If its valid and available or not after that buying 1 laptop it will ask the user to sell more or not if yes again asks for id and quantity if not again asks to add shipping cost or not if the user wants the total will be added shipping cost and grand total will be printed, if not bill will be generated without shipping cost in both the shell and text file, If 3 is chosed then it goes in the purchasing section first it will ask for the id and checks if its valid or not then ask if the user want to buy more laptops or not if yes asks for id and quantity and then goes to bill printing with 13% vat added. Bill will be printed out in both shell and as text file. If 4 option is choosen the program will end.

Bill printed with shipping cost added in text file as well as shell

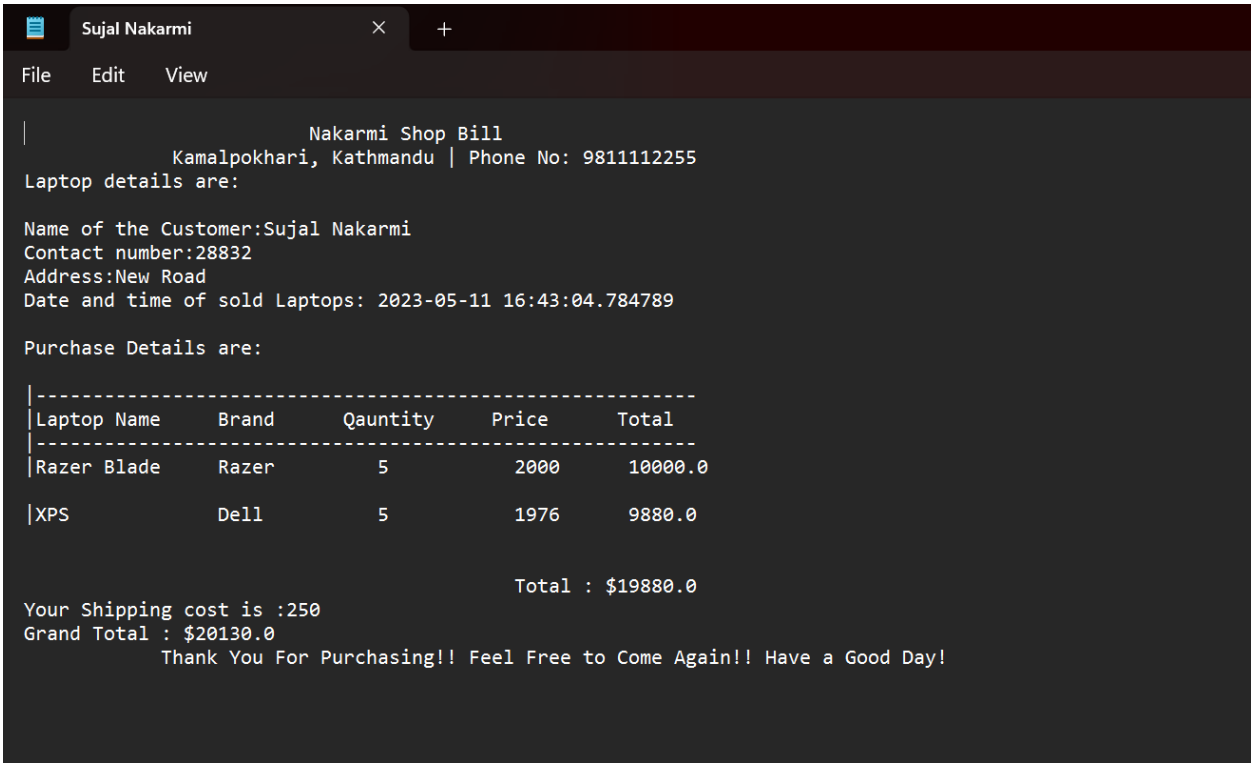
```
------------------------------------------------------------------------
                      Welcome to Nakarmi Shop
------------------------------------------------------------------------


Dear User, Please Selected One Option To continue


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 1


We have following Laptops available:

|-------------------------------------------------------------------------------------------|
|S.N  Laptop Name         Company Name    Price     Quantity    RAM           Graphics    |
|-------------------------------------------------------------------------------------------|
| 1  | Razer Blade     |  Razer         |  $2000  |  15      |  i7 7th Gen   | GTX 3060  |
| 2  | XPS             |  Dell          |  $1976  |  10      |  i5 9th Gen   | GTX 3070  |
| 3  | Alienware       |  Alienware     |  $1978  |  29      |  i5 9th Gen   | GTX 3070  |
| 4  | Swift 7         |  Acer          |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5  | Macbook Pro 16  |  Apple         |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 2
```

```
|-------------------------------------------------------------------------------------|
|S.N  Laptop Name         Company Name    Price     Quantity    RAM          Graphics   |
|-------------------------------------------------------------------------------------|
| 1   | Razer Blade     |  Razer         |  $2000  |  15      |  i7 7th Gen   | GTX 3060  |
| 2   | XPS             |  Dell          |  $1976  |  10      |  i5 9th Gen   | GTX 3070  |
| 3   | Alienware       |  Alienware     |  $1978  |  29      |  i5 9th Gen   | GTX 3070  |
| 4   | Swift 7         |  Acer          |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5   | Macbook Pro 16  |  Apple         |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |


Please provide the ID number of the laptop you want available from our shop: 1


Dear User,Please provide the number of quantity of the laptop:5



Do You want to sale more laptop?(Y/N)y
Please provide the ID number of the laptop you want available from our shop: 2


Dear User,Please provide the number of quantity of the laptop:5



Do You want to sale more laptop?(Y/N)n
|-------------------------------------------------------------------------|
|Dear User For Bill Generation you will have to enter your details first! |
|-------------------------------------------------------------------------|


Please enter the name of the customer: Sujal Nakarmi
Please enter the phone number of the customer: 28832
Please enter your address: New Road
Dear user, Do you want your laptop to be shipped? (Press Y for shipping Press N for not shipping)Y

                                    Nakarmi Laptop Shop Bill

                                New Road, Kathmandu | Phone No: 9863526287
```

```
                                New Road, Kathmandu | Phone No: 9863526287


Laptop details are :


Name of the Customer : Sujal Nakarmi
Contact number : 28832
Address : New Road
Date and time of purcahse : 2023-05-11 16:42:55.452805


Purchase Details are:
|-------------------------------------------------------------------|
|Laptop Name          Brand        Qauntity       Price         Total|
|-------------------------------------------------------------------|
| Razer Blade        Razer           5             2000        10000.0
| XPS                Dell            5             1976        9880.0
                                                        Total : $19880.0


                        Your Shipping cost is : 250
                                  Grand Total : $20130.0


                Thank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!
                 Bill has been printed in the txt file also!!
```



Name	Date modified	Type	Size
Today			
Sam Kc	5/11/2023 4:44 PM	Text Document	1 KB
laptop	5/11/2023 4:43 PM	Text Document	1 KB
Ram Prasad	5/11/2023 4:43 PM	Text Document	1 KB
Sujal Nakarmi	5/11/2023 4:43 PM	Text Document	1 KB
write	5/11/2023 4:42 PM	Python File	9 KB
write1	5/11/2023 4:31 PM	Python File	7 KB
main	5/11/2023 4:11 PM	Python File	4 KB
operations	5/11/2023 12:03 PM	Python File	4 KB
__pycache__	5/11/2023 4:42 PM	File folder	
Yesterday			
read	5/10/2023 3:24 PM	Python File	1 KB



Sujal Nakarmi

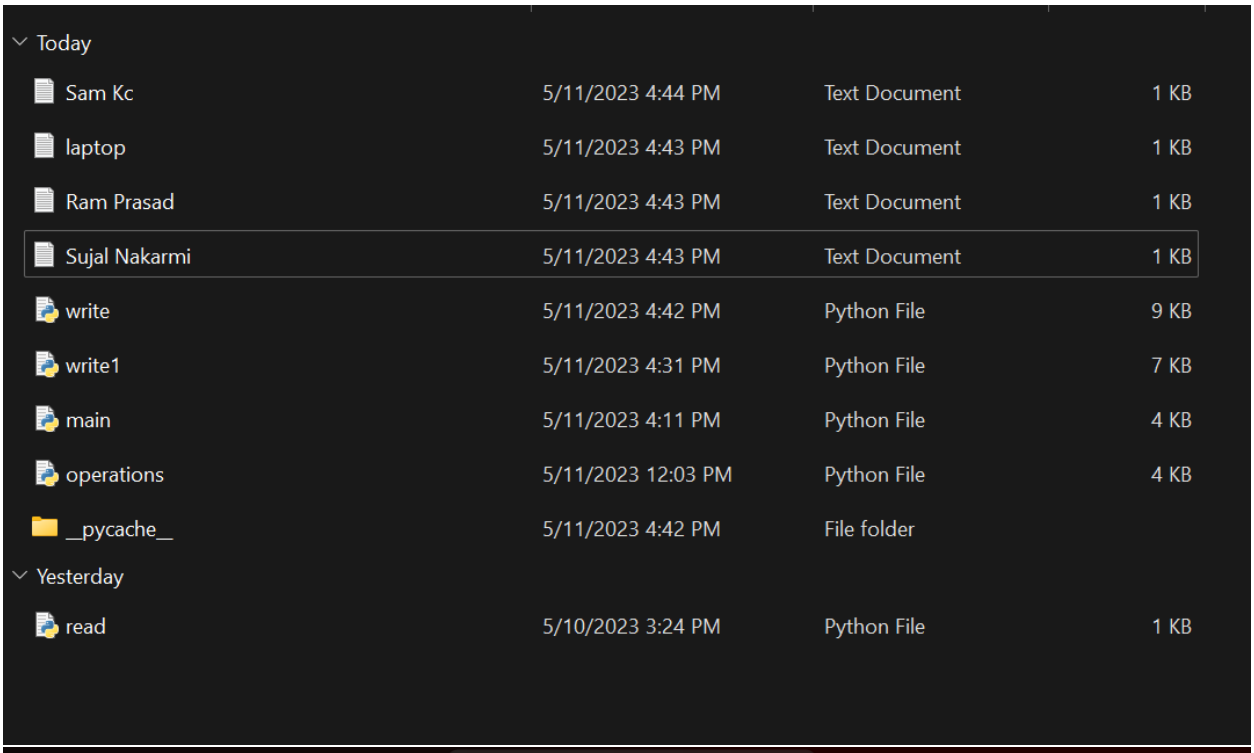
File Edit View

```
                        Nakarmi Shop Bill
            Kamalpokhari, Kathmandu | Phone No: 9811112255
Laptop details are:

Name of the Customer:Sujal Nakarmi
Contact number:28832
Address:New Road
Date and time of sold Laptops: 2023-05-11 16:43:04.784789

Purchase Details are:

|-------------------------------------------------------
|Laptop Name     Brand      Qauntity     Price      Total
|-------------------------------------------------------
|Razer Blade     Razer         5          2000      10000.0

|XPS            Dell          5          1976      9880.0


                                        Total : $19880.0
Your Shipping cost is :250
Grand Total : $20130.0
           Thank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!
```

Bill printed with not adding shipping cost

```
Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 2


|-------------------------------------------------------------------------------------|
|S.N  Laptop Name         Company Name    Price     Quantity    RAM           Graphics   |
|-------------------------------------------------------------------------------------|
| 1  | Razer Blade     |  Razer         |  $2000  |  10      |  i7 7th Gen   | GTX 3060  |
| 2  | XPS             |  Dell          |  $1976  |  5       |  i5 9th Gen   | GTX 3070  |
| 3  | Alienware       |  Alienware     |  $1978  |  29      |  i5 9th Gen   | GTX 3070  |
| 4  | Swift 7         |  Acer          |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5  | Macbook Pro 16  |  Apple         |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |


Please provide the ID number of the laptop you want available from our shop: 1


Dear User,Please provide the number of quantity of the laptop:5



Do You want to sale more laptop?(Y/N)y
Please provide the ID number of the laptop you want available from our shop: 3


Dear User,Please provide the number of quantity of the laptop:5
```

```
Do You want to sale more laptop?(Y/N)n
|-------------------------------------------------------------------------|
|Dear User For Bill Generation you will have to enter your details first! |
|-------------------------------------------------------------------------|


Please enter the name of the customer: Ram Prasad
Please enter the phone number of the customer: 872832
Please enter your address:  BHotebahal
Dear user, Do you want your laptop to be shipped? (Press Y for shipping Press N for not shipping)N


                                    Nakarmi Laptop Shop Bill


                               New Road, Kathmandu | Phone No: 9863526287


Laptop details are :


Name of the Customer : Ram Prasad
Contact number : 872832
Address :  BHotebahal
Date and time of purcahse : 2023-05-11 16:43:19.271499


Purchase Details are:
|-----------------------------------------------------------------|
|Laptop Name          Brand        Qauntity       Price         Total|
|-----------------------------------------------------------------|
| Razer Blade        Razer           5             2000        10000.0
| XPS                Dell            5             1976        9880.0
| Razer Blade        Razer           5             2000        10000.0
| Alienware          Alienware       5             1978        9890.0
                                                        Total : $39770.0



                    Grand Total : $39770.0
               Thank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!
                Bill has been printed in the txt file also!!
```



Today			
Sam Kc	5/11/2023 4:44 PM	Text Document	1 KB
laptop	5/11/2023 4:43 PM	Text Document	1 KB
Ram Prasad	5/11/2023 4:43 PM	Text Document	1 KB
Sujal Nakarmi	5/11/2023 4:43 PM	Text Document	1 KB
write	5/11/2023 4:42 PM	Python File	9 KB
write1	5/11/2023 4:31 PM	Python File	7 KB
main	5/11/2023 4:11 PM	Python File	4 KB
operations	5/11/2023 12:03 PM	Python File	4 KB
__pycache__	5/11/2023 4:42 PM	File folder	
Yesterday			
read	5/10/2023 3:24 PM	Python File	1 KB

Sujal Nakarmi | Ram Prasad

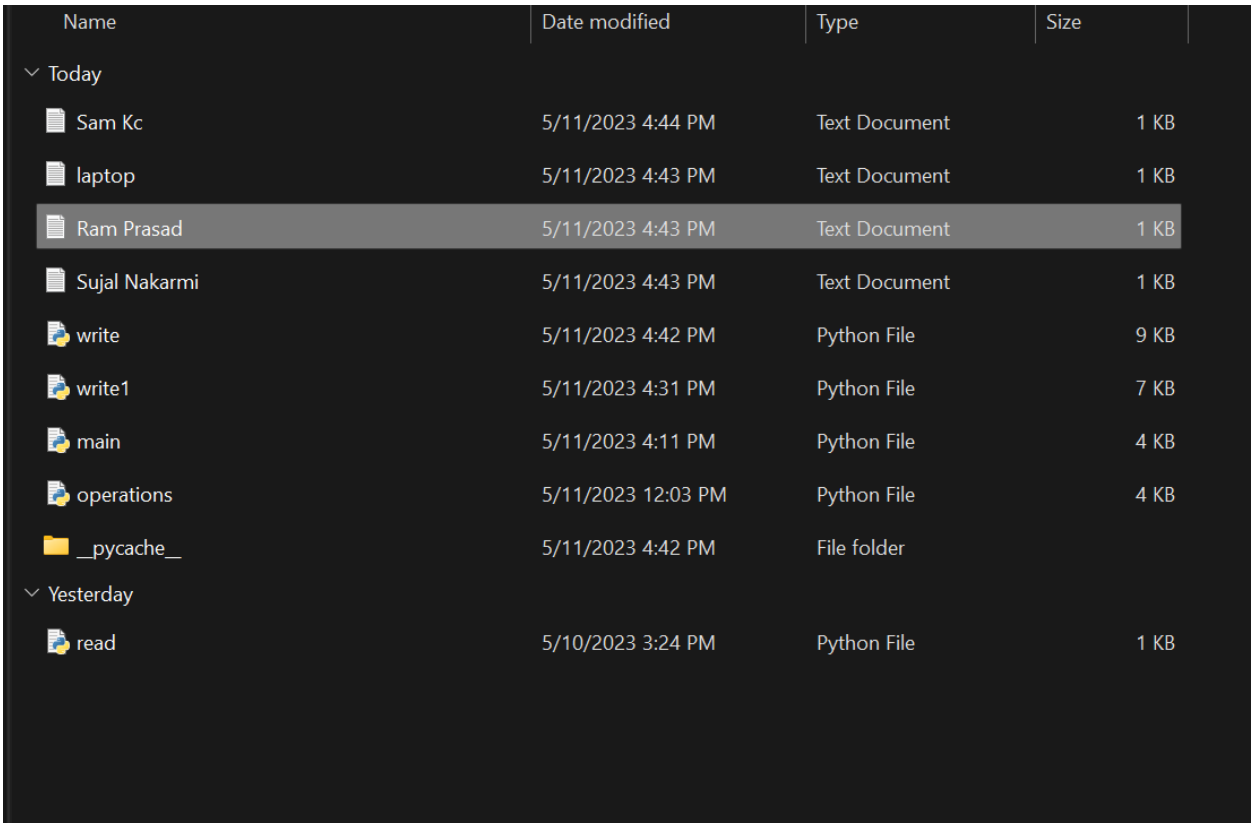
File Edit View

```
                    Nakarmi Shop Bill
          Kamalpokhari, Kathmandu | Phone No: 9811112255
Laptop details are:

Name of the Customer:Ram Prasad
Contact number:872832
Address: BHotebahal
Date and time of sold Laptops: 2023-05-11 16:43:44.087132

Purchase Details are:

|-----------------------------------------------------------
|Laptop Name     Brand      Qauntity     Price      Total
|-----------------------------------------------------------
|Razer Blade     Razer         5           2000      10000.0

|XPS            Dell          5           1976      9880.0

|Razer Blade     Razer         5           2000      10000.0

|Alienware       Alienware     5           1978      9890.0


Grand Total: $39770.0
          Thank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!
```

For purchase process

```
Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 3


|-------------------------------------------------------------------------------------------|
|S.N  Laptop Name         Company Name    Price     Quantity    RAM           Graphics    |
|-------------------------------------------------------------------------------------------|
| 1  | Razer Blade     |  Razer         |  $2000  |  5       |  i7 7th Gen   | GTX 3060  |
| 2  | XPS             |  Dell          |  $1976  |  5       |  i5 9th Gen   | GTX 3070  |
| 3  | Alienware       |  Alienware     |  $1978  |  24      |  i5 9th Gen   | GTX 3070  |
| 4  | Swift 7         |  Acer          |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5  | Macbook Pro 16  |  Apple         |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |


Please provide the ID number of the laptop you want available from our shop: 1


Please provide the number of quantity of the laptop you want to buy: 5



Do You want to buy more laptop?(Y/N)y
Please provide the ID number of the laptop you want available from our shop: 2


Please provide the number of quantity of the laptop you want to buy: 5



Do You want to buy more laptop?(Y/N)n
|-----------------------------------------------------------------------|
|Dear User For Bill Generation you will have to enter your details first! |
|-----------------------------------------------------------------------|


Please enter the name of company Apple
Please enter the name of the customer: Sam Kc
Please enter the phone number of the customer: 7364734
Please enter your address: Baneshowr
```

```
Please enter the name of company Apple
Please enter the name of the customer: Sam Kc
Please enter the phone number of the customer: 7364734
Please enter your address: Baneshowr


                                        Nakarmi Laptop Shop Bill


                                  New Road, Kathmandu | Phone No: 9863526287


Laptop details are :


Company Name : Apple
Name of the Customer:Sam Kc
Contact number:7364734
Adress:Baneshowr
Date and time of purcahse: 2023-05-11 16:44:36.758593


Purchase Details are:


Purchase Details are:
|-------------------------------------------------------------------------|
|Laptop Name          Brand        Qauntity       Price         Total|
|-------------------------------------------------------------------------|
| Razer Blade        Razer           5             2000        10000.0
| XPS                Dell            5             1976        9880.0
                                                        Total : $19880
Your Vat is : 2584.4
Grand Total : $22464.4


               Thank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!
                Bill has been printed in the txt file also!!
```



Name	Date modified	Type	Size
Today			
Sam Kc	5/11/2023 4:44 PM	Text Document	1 KB
laptop	5/11/2023 4:43 PM	Text Document	1 KB
Ram Prasad	5/11/2023 4:43 PM	Text Document	1 KB
Sujal Nakarmi	5/11/2023 4:43 PM	Text Document	1 KB
write	5/11/2023 4:42 PM	Python File	9 KB
write1	5/11/2023 4:31 PM	Python File	7 KB
main	5/11/2023 4:11 PM	Python File	4 KB
operations	5/11/2023 12:03 PM	Python File	4 KB
__pycache__	5/11/2023 4:42 PM	File folder	
Yesterday			
read	5/10/2023 3:24 PM	Python File	1 KB

Sujal Nakarmi | Ram Prasad | Sam Kc

File Edit View

```
                        Nakarmi Shop Bill
            Kamalpokhari, Kathmandu | Phone No: 9811112255
Laptop details are:

Name of the Company : Apple
Name of the Customer :Sam Kc
Contact number :7364734
Address :Baneshowr
Date and time of sold Laptops : 2023-05-11 16:44:37.197044

Purchase Details are:

|-------------------------------------------------------
|Laptop Name     Brand      Qauntity     Price      Total
|-------------------------------------------------------
|Razer Blade     Razer         5          2000      10000.0

|XPS            Dell          5          1976      9880.0

                                        Total : $19880
Your Vat is:2584.4
Grand Total: $22464.4
           Thank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!
```

Exit the program will pressing 4

```
                Thank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!
                 Bill has been printed in the txt file also!!
Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 4


Thank you for using the system, have a good day Admin!


>
```

Testing

Test 1 : Try Except Use

Test No	1
Objective	To show the use of try except
Action	➢ Press variable a where we need to press 4 option (1-4)
Expected Result	The message should be displayed while typing A..
Actual Result	The message is displayed while typing A.
Conclusion	Test Is successful.

```
try:

 print("Press 1 to show the details of laptop.")
 print("Press 2 to sale the laptop to customer.")
 print("Press 3 to purchase from Manufacturer.")
 print("Press 4 to Exit from the system.")

 Choice_Of_User = int(input("Enter the option to continue: "))

 print("\n")
except:
    operations.Exception_Hanndling()

    continue
```

Message Displayed

```
Dear User, Please Selected One Option To continue


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: a


Dear User, Please Enter a valid input. (Only Integers Are Allowed)


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue:
```

Test No	2
Objective	To show the use of try except
Action	➢ Press variable a where we need to press 5 option (1-5) while giving Id
Expected Result	The message should be displayed while typing A..
Actual Result	The message is displayed while typing A.
Conclusion	Test Is successful.

```
def Checking_Id():
    Available_Laptops = read.Reading_File()
    while True:
        try:
            given_id = int(input("Please provide the ID number of the laptop you want available from our shop: "))

            if given_id <= 0 or given_id > len( Available_Laptops):
                    print("\n")
                    print("Dear User, Your input does not match from the laptop Id that we have, Please Provide Valid Id from (1-5)")
                    print("\n")
            else:
                return given_id
        except:
            Exception_Hanndling()

    return given_id
```

Message Displayed

```
|-------------------------------------------------------------------------------------------|
|S.N  Laptop Name          Company Name     Price      Quantity     RAM           Graphics   |
|-------------------------------------------------------------------------------------------|
| 1   | Razer Blade      |  Razer          |  $2000   |  1        |  i7 7th Gen    | GTX 3060  |
| 2   | XPS              |  Dell           |  $1976   |  19       |  i5 9th Gen    | GTX 3070  |
| 3   | Alienware        |  Alienware      |  $1978   |  37       |  i5 9th Gen    | GTX 3070  |
| 4   | Swift 7          |  Acer           |  $900    |   12      |  i5 9th Gen    | GTX 3070  |
| 5   | Macbook Pro 16   |  Apple          |  $3500   |   10      |  i5 9th Gen    | GTX 3070  |

Please provide the ID number of the laptop you want available from our shop: a

Dear User, Please Enter a valid input. (Only Integers Are Allowed)

Please provide the ID number of the laptop you want available from our shop:
```

Test No	3
Objective	To show the use of try except
Action	➢ Press 1 where we need to press y or n to sale more
Expected Result	The message should be displayed while typing 1.
Actual Result	The message is displayed while typing 1.
Conclusion	Test Is successful.

```
def Hello():
    while True:
        try:
            Ask = input("Do You want to sale more laptop?(Y/N)")
            if Ask.lower()=="y":
                return True
            elif Ask.lower()=="n":
                return False
            else:
                raise ValueError
        except ValueError:
            for_Yes_No()
```

Message displayed

```
Do You want to sale more laptop?(Y/N)1

                Dear User, Only y and n are allowed

Do You want to sale more laptop?(Y/N)
```

Test No	4
Objective	To show the use of try except
Action	➢ Press 1 where we need to give alphabet only
Expected Result	The message should be displayed
Actual Result	The message is displayed
Conclusion	Test Is successful.

```
while True:
        try: # This is to check is the name is in alphabet or not
                name = input("Please enter the name of the customer: ")
                if not all(c.isalpha() or c.isspace() for c in name):
                        raise ValueError #(raise and ValueError are inbuilt function raise is used to rai
                break #loop ends
        except ValueError:
                operations.for_alpha()
```

Message displayed

```
Do You want to sale more laptop?(Y/N)n
|-------------------------------------------------------------------------|
|Dear User For Bill Generation you will have to enter your details first! |
|-------------------------------------------------------------------------|

Please enter the name of the customer: 1

                Invalid Input. Only Alphabet Allowed

Please enter the name of the customer:
```

Test No	5
Objective	To show the use of try except
Action	➢ Press variable a where we need press y or n in the shipping cost
Expected Result	The message should be displayed
Actual Result	The message is displayed
Conclusion	Test Is successful.

```
while True:
   try:

        shipping_cost = input("Dear user, Do you want your laptop to be shipped? (Press Y for shipping Press N for not shipping)").upper()


        if shipping_cost=="Y":
            shipping_cost = 250
            break
        elif shipping_cost=="N":
            shipping_cost = 0
            break
        else:
            raise ValueError
   except ValueError:

        operations.for_Yes_No()
```

Message Displayed

```
Dear user, Do you want your laptop to be shipped? (Press Y for shipping Press N for not shipping)1

                Dear User, Only y and n are allowed

Dear user, Do you want your laptop to be shipped? (Press Y for shipping Press N for not shipping)
```

Test No	6
Objective	To show the use of try except
Action	➢ Press variable a where we need to give integer
Expected Result	The message should be displayed
Actual Result	The message is displayed while typing A.
Conclusion	Test Is successful.

```
while True:
        try: #This is to check if the user have given integer value for phone or not
                phone_number = int(input("Please enter the phone number of the customer: "))
                break#loop ends

        except:
                operations.Exception_Hanndling()
```

Display Message

```
Please enter the phone number of the customer: a

Dear User, Please Enter a valid input. (Only Integers Are Allowed)

Please enter the phone number of the customer:
```

Test No	7
Objective	To show the use of try except
Action	➢ Give int value where we need to give alphabet
Expected Result	The message should be displayed
Actual Result	The message is displayed
Conclusion	Test Is successful.

```
while True:
        try: # This is to check is the address is in alphabet or not
                address = input("Please enter your address: ")
                if not all(c.isalpha() or c.isspace() for c in address):
                        raise ValueError
                break #loop ends
        except ValueError:
                operations.for_alpha()
```

Display Message

```
Please enter your address: 1

                Invalid Input. Only Alphabet Allowed

Please enter your address:
```

TEST 2: Selection purchase and sale of laptops giving negative value and non existing value

Test No	8
Objective	Selection Purchase and Sale of laptop Providing negative value.
Action	➢ Type -1
Expected Result	.it should print "Dear User, Your input does not match from the laptop Id that we have, Please Provide Valid Id from (1-5)"
Actual Result	It prints "Dear User, Your input does not match from the laptop Id that we have, Please Provide Valid Id from (1-5)"
Conclusion	Test Is successful.

```
Dear User, Please Selected One Option To continue


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 2


|-------------------------------------------------------------------------------------|
|S.N  Laptop Name          Company Name     Price     Quantity    RAM           Graphics   |
|-------------------------------------------------------------------------------------|
| 1  | Razer Blade      |  Razer          |  $2000  |  35      |  i7 7th Gen   | GTX 3060  |
| 2  | XPS              |  Dell           |  $1976  |  30      |  i5 9th Gen   | GTX 3070  |
| 3  | Alienware        |  Alienware      |  $1978  |  39      |  i5 9th Gen   | GTX 3070  |
| 4  | Swift 7          |  Acer           |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5  | Macbook Pro 16   |  Apple          |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |


Please provide the ID number of the laptop you want available from our shop: -1


Dear User, Your input does not match from the laptop Id that we have, Please Provide Valid Id from (1-5)


Please provide the ID number of the laptop you want available from our shop:
```

This is For Sale

```
Dear User, Please Selected One Option To continue


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 3


|-------------------------------------------------------------------------------------|
|S.N  Laptop Name          Company Name     Price     Quantity    RAM           Graphics   |
|-------------------------------------------------------------------------------------|
| 1  | Razer Blade      |  Razer          |  $2000  |  35      |  i7 7th Gen   | GTX 3060  |
| 2  | XPS              |  Dell           |  $1976  |  30      |  i5 9th Gen   | GTX 3070  |
| 3  | Alienware        |  Alienware      |  $1978  |  39      |  i5 9th Gen   | GTX 3070  |
| 4  | Swift 7          |  Acer           |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5  | Macbook Pro 16   |  Apple          |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |


Please provide the ID number of the laptop you want available from our shop: -1


Dear User, Your input does not match from the laptop Id that we have, Please Provide Valid Id from (1-5)


Please provide the ID number of the laptop you want available from our shop:
```

This is for Purchase

Test No	9
Objective	Selection Purchase and Sale of laptop Providing non existing value
Action	➢ Type 7
Expected Result	It should print Dear User, Please Enter a valid input. (Only Integers Are Allowed From 1-4)
Actual Result	It prints Dear User, Please Enter a valid input. (Only Integers Are Allowed From 1-4)
Conclusion	Test Is successful.

```
Dear User, Please Selected One Option To continue


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 2


|-------------------------------------------------------------------------------------------|
|S.N  Laptop Name         Company Name    Price     Quantity    RAM           Graphics     |
|-------------------------------------------------------------------------------------------|
| 1   | Razer Blade     |  Razer         |  $2000  |  35      |  i7 7th Gen   | GTX 3060   |
| 2   | XPS             |  Dell          |  $1976  |  30      |  i5 9th Gen   | GTX 3070   |
| 3   | Alienware       |  Alienware     |  $1978  |  39      |  i5 9th Gen   | GTX 3070   |
| 4   | Swift 7         |  Acer          |  $900   |   12     |  i5 9th Gen   | GTX 3070   |
| 5   | Macbook Pro 16  |  Apple         |  $3500  |   10     |  i5 9th Gen   | GTX 3070   |

Please provide the ID number of the laptop you want available from our shop: 7


Dear User, Your input does not match from the laptop Id that we have, Please Provide Valid Id from (1-5)


Please provide the ID number of the laptop you want available from our shop:
```

```
Dear User, Please Selected One Option To continue


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 3


|-------------------------------------------------------------------------------------|
|S.N  Laptop Name         Company Name    Price     Quantity    RAM           Graphics   |
|-------------------------------------------------------------------------------------|
| 1  | Razer Blade     |  Razer         |  $2000  |  35      |  i7 7th Gen   | GTX 3060  |
| 2  | XPS             |  Dell          |  $1976  |  30      |  i5 9th Gen   | GTX 3070  |
| 3  | Alienware       |  Alienware     |  $1978  |  39      |  i5 9th Gen   | GTX 3070  |
| 4  | Swift 7         |  Acer          |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5  | Macbook Pro 16  |  Apple         |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |


Please provide the ID number of the laptop you want available from our shop: 7


Dear User, Your input does not match from the laptop Id that we have, Please Provide Valid Id from (1-5)


Please provide the ID number of the laptop you want available from our shop:
```

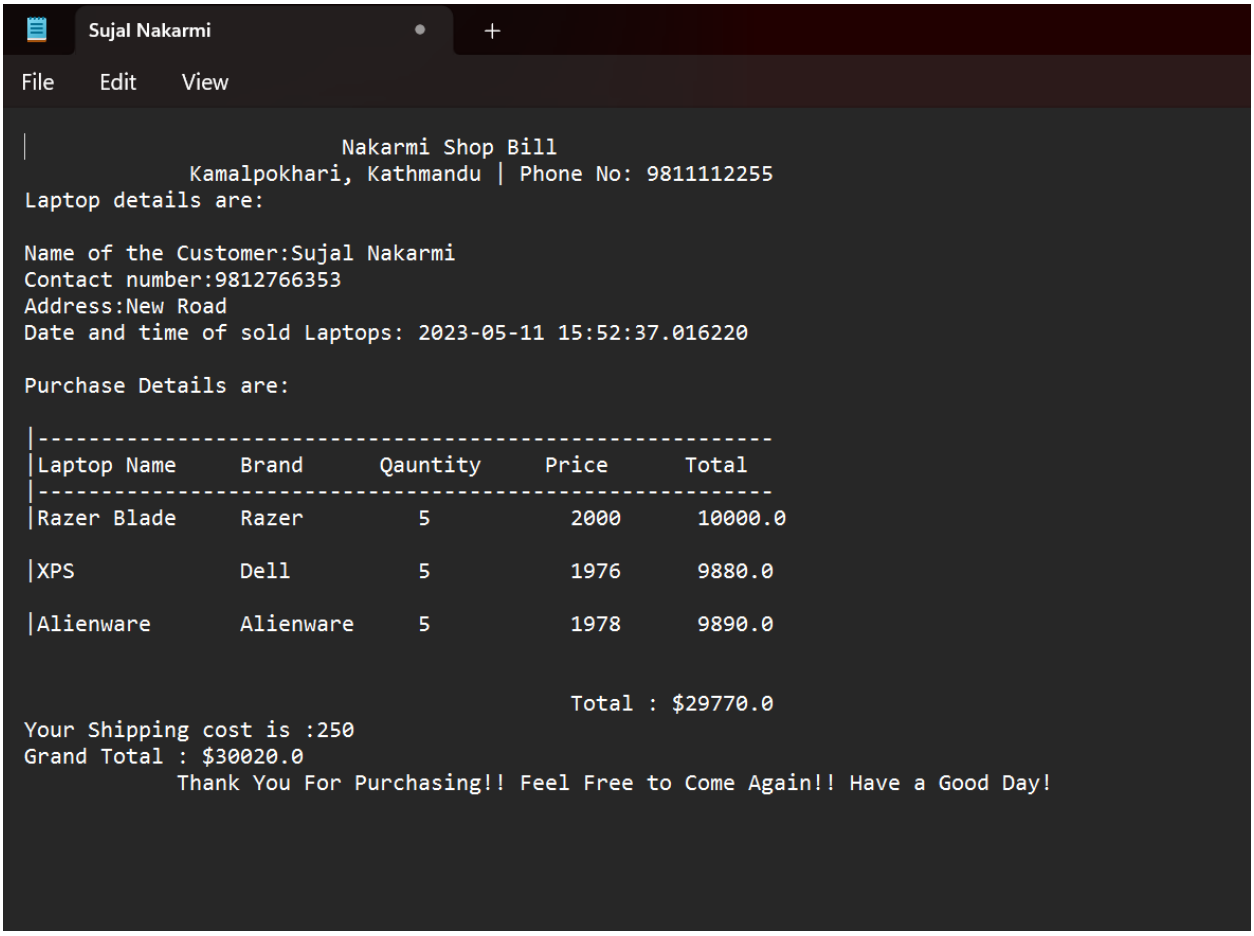
Test 3: File generation of sales process of laptop(s) (Selling multiple laptop(s))

Test No	10
Objective	To show sales process buying multiple laptops
Action	➢ Give the id 1 ➢ Give the number of quantity 5 ➢ Press Y to continue to sale more ➢ Give the id 2 ➢ Give the number of quantity 5 ➢ Press Y to continue to sale more ➢ Give the id 3 ➢ Give the number of quantity 5 ➢ Press N ➢ Fill the details for bill generation ➢ Press Y to add shipping_cost
Expected Result	A suitable message should be displayed.
Actual Result	A suitable message is displayed.
Conclusion	Test Is successful.

```
------------------------------------------------------------------------
                        Welcome to Nakarmi Shop
------------------------------------------------------------------------


Dear User, Please Selected One Option To continue


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 2


|-------------------------------------------------------------------------------------------|
|S.N  Laptop Name         Company Name    Price     Quantity    RAM           Graphics     |
|-------------------------------------------------------------------------------------------|
| 1  | Razer Blade     |  Razer         |  $2000  |   20     |  i7 7th Gen   | GTX 3060  |
| 2  | XPS             |  Dell          |  $1976  |   15     |  i5 9th Gen   | GTX 3070  |
| 3  | Alienware       |  Alienware     |  $1978  |   24     |  i5 9th Gen   | GTX 3070  |
| 4  | Swift 7         |  Acer          |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5  | Macbook Pro 16  |  Apple         |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |


Please provide the ID number of the laptop you want available from our shop: 1


Dear User,Please provide the number of quantity of the laptop:5




Do You want to sale more laptop?(Y/N)y
Please provide the ID number of the laptop you want available from our shop: 2


Dear User,Please provide the number of quantity of the laptop:5
```

```
Do You want to sale more laptop?(Y/N)y
Please provide the ID number of the laptop you want available from our shop: 3


Dear User,Please provide the number of quantity of the laptop:5




Do You want to sale more laptop?(Y/N)n
|-------------------------------------------------------------------------|
|Dear User For Bill Generation you will have to enter your details first! |
|-------------------------------------------------------------------------|


Please enter the name of the customer: Sujal Nakarmi
Please enter the phone number of the customer: 9812766353
Please enter your address: New Road
Dear user, Do you want your laptop to be shipped? (Press Y for shipping Press N for not shipping)Y

                                    Nakarmi Laptop Shop Bill


                               New Road, Kathmandu | Phone No: 9863526287


Laptop details are :


Name of the Customer : Sujal Nakarmi
Contact number : 9812766353
Address : New Road
Date and time of purcahse : 2023-05-11 15:52:21.002913
```

```
Purchase Details are:
|-------------------------------------------------------------------|
|Laptop Name          Brand        Qauntity       Price         Total|
|-------------------------------------------------------------------|
| Razer Blade        Razer           5             2000        10000.0
| XPS                Dell            5             1976        9880.0
| Alienware          Alienware       5             1978        9890.0
                                                        Total : $29770.0


                      Your Shipping cost is : 250
                                Grand Total : $30020.0


               Thank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!
                Bill has been printed in the txt file also!!


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue:
```



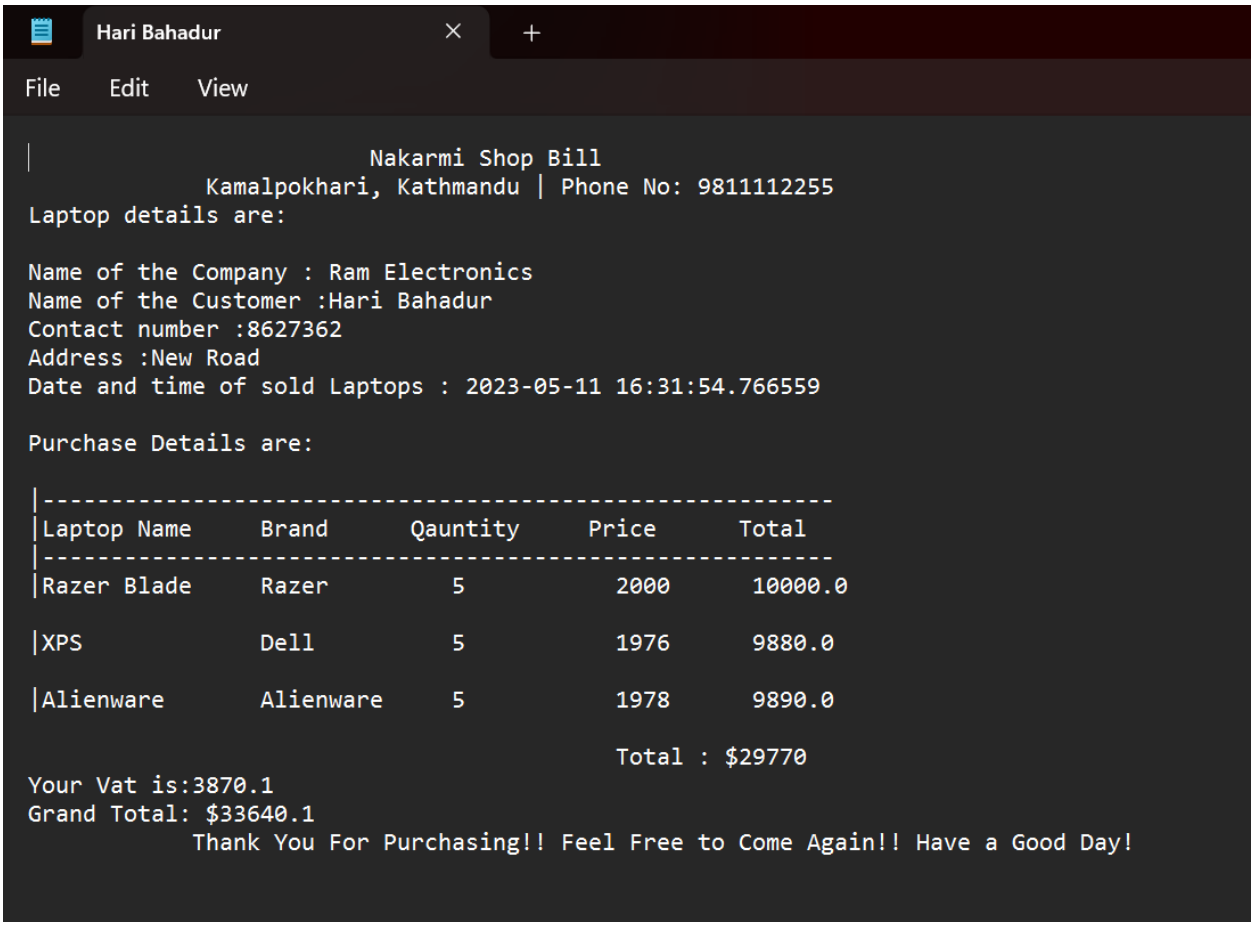
Test 4: File generation of sales process of laptop(s) (Purchasing multiple laptop(s))

Test No	11
Objective	To show purchase process buying multiple laptops
Action	➢ Give the id 1 ➢ Give the number of quantity 5 ➢ Press Y to continue to purchase more ➢ Give the id 2 ➢ Give the number of quantity 5 ➢ Press Y to continue to purchase more ➢ Give the id 3 ➢ Give the number of quantity 5 ➢ Press N ➢ Fill the details for bill generation
Expected Result	A suitable message should be displayed.
Actual Result	A suitable message is displayed.
Conclusion	Test Is successful.

```
------------------------------------------------------------------------
                      Welcome to Nakarmi Shop
------------------------------------------------------------------------


Dear User, Please Selected One Option To continue


Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 3


|-------------------------------------------------------------------------------------|
|S.N  Laptop Name         Company Name    Price     Quantity    RAM           Graphics   |
|-------------------------------------------------------------------------------------|
| 1  | Razer Blade     |  Razer         |  $2000  |   20     |  i7 7th Gen   | GTX 3060  |
| 2  | XPS             |  Dell          |  $1976  |   15     |  i5 9th Gen   | GTX 3070  |
| 3  | Alienware       |  Alienware     |  $1978  |   24     |  i5 9th Gen   | GTX 3070  |
| 4  | Swift 7         |  Acer          |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5  | Macbook Pro 16  |  Apple         |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |


Please provide the ID number of the laptop you want available from our shop: 1


Please provide the number of quantity of the laptop you want to buy: 5




Do You want to buy more laptop?(Y/N)y
Please provide the ID number of the laptop you want available from our shop: 2


Please provide the number of quantity of the laptop you want to buy: 5
```

```
Do You want to buy more laptop?(Y/N)y
Please provide the ID number of the laptop you want available from our shop: 3


Please provide the number of quantity of the laptop you want to buy: 5




Do You want to buy more laptop?(Y/N)n
|-------------------------------------------------------------------------|
|Dear User For Bill Generation you will have to enter your details first! |
|-------------------------------------------------------------------------|


Please enter the name of company Ram Electronics
Please enter the name of the customer: Hari Bahadur
Please enter the phone number of the customer: 8627362
Please enter your address: New Road

                                        Nakarmi Laptop Shop Bill


                                  New Road, Kathmandu | Phone No: 9863526287
```

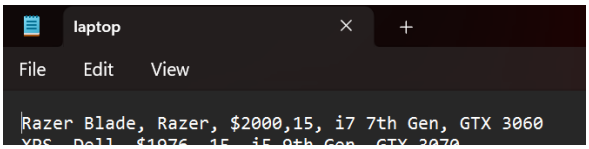
```
                                    Nakarmi Laptop Shop Bill


                                New Road, Kathmandu | Phone No: 9863526287


Laptop details are :


Company Name : Ram Electronics
Name of the Customer:Hari Bahadur
Contact number:8627362
Adress:New Road
Date and time of purcahse: 2023-05-11 16:31:54.264666


Purchase Details are:


Purchase Details are:
|-------------------------------------------------------------------------|
|Laptop Name          Brand        Qauntity       Price         Total|
|-------------------------------------------------------------------------|
| Razer Blade        Razer           5             2000        10000.0
| XPS                Dell            5             1976        9880.0
| Alienware          Alienware       5             1978        9890.0
                                                          Total : $29770
Your Vat is : 3870.1
Grand Total : $33640.1


               Thank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!
                Bill has been printed in the txt file also!!
Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer
```


Hari Bahadur
File Edit View
Nakarmi Shop Bill
Kamalpokhari, Kathmandu | Phone No: 9811112255
Laptop details are:
Name of the Company : Ram Electronics
Name of the Customer :Hari Bahadur
Contact number :8627362
Address :New Road
Date and time of sold Laptops : 2023-05-11 16:31:54.766559
Purchase Details are:
|Laptop Name |Brand |Qauntity |Price |Total
|Razer Blade |Razer |5 |2000 |10000.0
|XPS |Dell |5 |1976 |9880.0
|Alienware |Alienware |5 |1978 |9890.0
Total : $29770
Your Vat is:3870.1
Grand Total: $33640.1
Thank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!

Test 5: To show the update in stock of laptop

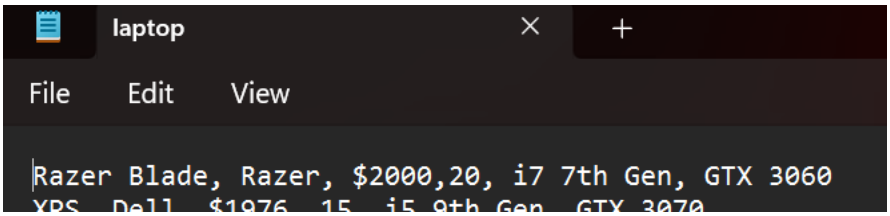
Test No	12
Objective	Show the update stock in laptop
Action	➢ Press 2 to sale ➢ Give Id of laptop 1 ➢ Give quantity of laptop 5
Expected Result	The stock should be updated and the amount of quantity should be decreased from 20 to 15
Actual Result	The stock is updated and the amount of quantity is decreased from 20 to 15
Conclusion	Test Is successful.

```
Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 2


|-------------------------------------------------------------------------------------------|
|S.N  Laptop Name         Company Name    Price     Quantity    RAM           Graphics     |
|-------------------------------------------------------------------------------------------|
| 1   | Razer Blade     |  Razer         |  $2000  |   20     |  i7 7th Gen   | GTX 3060  |
| 2   | XPS             |  Dell          |  $1976  |   15     |  i5 9th Gen   | GTX 3070  |
| 3   | Alienware       |  Alienware     |  $1978  |   24     |  i5 9th Gen   | GTX 3070  |
| 4   | Swift 7         |  Acer          |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5   | Macbook Pro 16  |  Apple         |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |

Please provide the ID number of the laptop you want available from our shop: 1


Dear User,Please provide the number of quantity of the laptop:5



Do You want to buy more laptop?(Y/N)
```



Test No	13
Objective	Show the update stock in laptop
Action	➢ Press 3 to sale ➢ Give Id of laptop 1 ➢ Give quantity of laptop 5
Expected Result	The stock should be updated and the amount of quantity should be increased from 15 to 20
Actual Result	The stock is updated and the amount of quantity is increased from 15 to 20
Conclusion	Test Is successful.

```
Press 1 to show the details of laptop.
Press 2 to sale the laptop to customer.
Press 3 to purchase from Manufacturer.
Press 4 to Exit from the system.
Enter the option to continue: 3


|-------------------------------------------------------------------------------------------|
|S.N  Laptop Name         Company Name    Price     Quantity    RAM           Graphics    |
|-------------------------------------------------------------------------------------------|
| 1  | Razer Blade     |  Razer         |  $2000  |  15      |  i7 7th Gen   | GTX 3060  |
| 2  | XPS             |  Dell          |  $1976  |   15     |  i5 9th Gen   | GTX 3070  |
| 3  | Alienware       |  Alienware     |  $1978  |   24     |  i5 9th Gen   | GTX 3070  |
| 4  | Swift 7         |  Acer          |  $900   |   12     |  i5 9th Gen   | GTX 3070  |
| 5  | Macbook Pro 16  |  Apple         |  $3500  |   10     |  i5 9th Gen   | GTX 3070  |

Please provide the ID number of the laptop you want available from our shop: 1


Please provide the number of quantity of the laptop you want to buy: 5
```


laptop
File
Edit
View
Razer Blade, Razer, $2000,20, i7 7th Gen, GTX 3060
XPS, Dell, $1976, 15, i5 9th Gen, GTX 3070

CONCLUSION

In this coursework basically what we have to do if create a laptop shop that buys laptops from manufacture and sells it to different customers which may be individual or companies. The name of the laptop, price, quantity, specs are first added to a text file name laptop.txt and we have to read the data from the text file and convert into dictionary or 2d array whichever we find to be easier than we have to make various various functions to validate the id the laptop, how much quantity is needed by the buyer and if the quantity is available or not in the shop if not a suitable message is display and after every purchase the quantity must be decreased and be updated in the text file. After the purchase a bill should be generated in both the Idle shell and as a text file but the file name must be unique all the time. Same process goes to buying just vat is added when buying and shipping cost is asked to user whether to add or not after selling.

I have learned many things while doing this coursework I have learned how to define a function how to call a function how to separate modules where to use in bulit function of python, we can name the function of our own, how to create a list represented by [ ]big bracket and add values to it using append, I have learned about for loop which helps us to iterate in the list or values we give, I have learned about how to create a dictionary it is always represented by { curly bracket, in dictionary we find key and value, and print them according to our use, I have learned about the while loop where to set it true to get the process repeated and when to stoo, the loop stops where the loop becomes false or true accordingly.

I have had a lot of problems while doing this coursework as there were a lot of error which I had faced, sometimes there were syntax error the spellings were not correct, sometimes there were logical error where the ques was about something I was doing it incorrectly, I was so confused when to use function, what to return and what to pass as parameter. In a slow pace after doing so much research and asking help from my lecturers, tutors I managed to fix it and I was able to do my coursework. Without there guidance it would have being impossible.

REFERNCES

anonymous, n.d. *https://asq.org/quality-resources/flowchart.* [Online].

anonymous, n.d. *https://www.javatpoint.com/data-structure-introduction.* [Online].

anonymous, n.d. *https://www.python.org/doc/essays/blurb/.* [Online].

anonymous, n.d. *https://www.techtarget.com/whatis/definition/algorithm.* [Online].

APPENDIX

READ.PY

```
def Reading_File():
   """ This function creates a dictionary and
      sets the laptop id to 1 and reads the data from file laptop.txt and for loop is used to iterate over each line from the file
      and Update the dictionary with key,value pair where key is laptop id and laptop specs are value which is split by “,”
      which at last returns laptop dictionary"""



   Available_Laptops = {}
   laptop_id = 1
   with open("laptop.txt","r") as file:
       for line in file:
           line  = line.replace("\n","")
           Available_Laptops.update({laptop_id: line.split(",")})  #(Puts IN the form of List)
           laptop_id += 1


   return Available_Laptops


def Laptop_Display():
   """ This function is used design the data that we get from reading the file laptop.txt in a tabular form by assuming the space we need and
         subtracting it with the len of the word which is defined by items index """



   with open("laptop.txt","r") as file:
```

```
    myList = file.readlines()
    nestedList = [[x] for x in myList]
    newList = []
    for i in range(len(nestedList)):
        newList.append(nestedList[i][0].split(","))



    a = 1
    for item in newList:
        print("|",a," |",item[0]," "*(14-len(item[0])),"|",item[1]," "*(13-len(item[1])),"|",item[2]," "*(6-len(item[2])),"| ",item[3]," "*(6-len(item[3])),"|",item[4]," ","|",item[5].strip()," |")
        a += 1
```

MAIN.PY

```
import read
import operations
import write



print("\n")
print("---------------------------------------------------------------------")
print("\t\t\tWelcome to Nakarmi Shop")
print("---------------------------------------------------------------------")
print("\n")
print("Dear User, Please Selected One Option To continue")
print("\n")

loop=True
```

```
while loop == True:

    try: # Using try except

     print("Press 1 to show the details of laptop.")
     print("Press 2 to sale the laptop to customer.")
     print("Press 3 to purchase from Manufacturer.")
     print("Press 4 to Exit from the system.")

     Choice_Of_User = int(input("Enter the option to continue: "))

     print("\n")
    except:
        operations.Exception_Hanndling() # Calling the function from operation.py

        continue # It is used so that the program doesnt end after the exception



    if Choice_Of_User == 1:
            print("We have following Laptops available:\n ")

            operations.Design()
            read.Laptop_Display()
            print("\n")


    elif Choice_Of_User  == 2:
```

```
        operations.Design()

        read.Laptop_Display()

        print("\n")


        loopSale = True

        while loopSale == True:

            checkingId = operations.Checking_Id()
            print("\n")


            QuantityCheck = operations.Quantity_For_Sale(checkingId) # Passing the id
given by checkingId as parameter
            print("\n")




            Updated                                                              =
write.Writing_Updated_Value_For_Sale(checkingId,QuantityCheck) # getting the id and
quantity given the user as a parameter



            if operations.Hello():
                continue
```

```
            else:
                loopSale = False # Loop Ends



            Bill = write.Bill_Printing(checkingId,QuantityCheck)



elif Choice_Of_User  == 3:

        operations.Design()



        read.Laptop_Display()
        print("\n")


        loopPurchase = True

        while loopPurchase == True:

            checkingId =operations.Checking_Id()
            print("\n")
```

```
            QuantityCheck = operations.Quantity_For_Purchase(checkingId)
            print("\n")

            Updated                                                    =
write.Writing_Updated_Value_For_Purchasee(checkingId,QuantityCheck)



            if operations.Hello1():
                continue
            else:
                loopPurchase = False



            Bill = write.Bill_Printing_For_Purchasee(checkingId,QuantityCheck)




    elif Choice_Of_User  == 4:
            loop = False

            print("Thank you for using the system, have a good day Admin!")
            print("\n")

    else:
```

```
        print("Your option",Choice_Of_User,"does not seem to match as per our requirement. Please look at the provided option. Only From(1-4)")
        print("\n")
```

OERATIONS.PY

```
import read


def Exception_Hanndling():
    # This function is used to print out for exception of the integer value
    print("\n")
    print("Dear User, Please Enter a valid input. (Only Integers Are Allowed)")
    print("\n")


def Design():
     #This function is used for the design of the heading of the table
     print("|-------------------------------------------------------------------------------------------|")
     print("|S.N  Laptop Name        Company Name    Price    Quantity    RAM    Graphics   |")
     print("|-------------------------------------------------------------------------------------------|")

def for_Yes_No():
    #This function is used for the expection for yes or no
    print("\n")
    print("\t\tDear User, Only y and n are allowed")
    print("\n")

def for_alpha():
    #This function is used fot the handling exception for alphabet
```

```
    print("\n")
    print("\t\tInvalid Input. Only Alphabet Allowed")
    print("\n")



def Checking_Id():
    """This function checks if the user given id is correct or not if not it asks until the user have given the correct id and returns the id"""

    Available_Laptops = read.Reading_File()
    while True:
        try:
            given_id = int(input("Please provide the ID number of the laptop you want available from our shop: "))

            if given_id <= 0 or given_id > len( Available_Laptops):
                print("\n")
                print("Dear User, Your input does not match from the laptop Id that we have, Please Provide Valid Id from (1-5)")
                print("\n")
            else:
                return given_id
        except:
            Exception_Hanndling()

    return given_id
```

```
def Quantity_For_Sale(given_id):
    """This function checks if the user given quantity is available or not and it takes given_id as parameter to get the value of it and returns quantity"""
    Available_Laptops = read.Reading_File()


    while True:
        try:
            wanted_amount_of_laptop = int(input("Dear User,Please provide the number of quantity of the laptop:"))
            print("\n")


            Quantity_Available_From_Shop =  Available_Laptops[given_id][3]
            if wanted_amount_of_laptop <= 0 or wanted_amount_of_laptop > int(Quantity_Available_From_Shop):
                print("\n")
                print("Dear User, The quantity you are looking for is not available in out shop ")
                print("\n")
                if int(Quantity_Available_From_Shop) == 0:
                    print("Sorry! We are out of stock.")
                    print("\n")
                    break


            else:
                return wanted_amount_of_laptop
        except:
            Exception_Hanndling()
```

```
    return wanted_amount_of_laptop
```

```
def Hello():
    # This function is used to one user to buy multiple laptops this is inner loop there is also outer loop in main.py
    while True:
        try:
            Ask = input("Do You want to sale more laptop?(Y/N)")
            if Ask.lower()=="y":
                return True
            elif Ask.lower()=="n":
                return False
            else:
                raise ValueError
        except ValueError:
            for_Yes_No()
```

```
def Quantity_For_Purchase(given_id):
```

```
    #This function only take quantity from rhe user and it takes id as a paramter to get the value of it
    Available_Laptops = read.Reading_File()
    while True:
        try:
            wanted_amount_of_laptop = int(input("Please provide the number of quantity of the laptop you want to buy: "))
            print("\n")


            return wanted_amount_of_laptop
        except ValueError:
            Exception_Hanndling()
    return wanted_amount_of_laptop




def Hello1():
    # This function is used to one user to buy multiple laptops this is inner loop there is also outer loop in main.py
    while True:
        try:
            Ask = input("Do You want to buy more laptop?(Y/N)")
            if Ask.lower()=="y":
                return True
            elif Ask.lower()=="n":
                return False
            else:
                raise ValueError
        except ValueError:
```

```
    for_Yes_No()
```

WRITE.PY

```
import read
import operations
from datetime import datetime



def Invoice_Generate():
    #This function is used for the design before asking the details


    print("|-------------------------------------------------------------------------|")
    print("|Dear User For Bill Generation you will have to enter your details first! |")
    print("|-------------------------------------------------------------------------|")
    print("\n")



def Laptop_Shop():
    #This function is used for the design of the laptop shop and address and phone number
    print("\n")
    print("\t \t \t \t \t Nakarmi Laptop Shop Bill")
    print("\n")
    print("\t \t\t\t New Road, Kathmandu | Phone No: 9863526287")
    print("\n")
```

```
    print("Laptop details are : ")
    print("\n")


def Bill_Laptop_Specs():
    #This function is used for the design of the heading of the table while printing bill
    print("\n")
    print("Purchase Details are:")
    print("|-------------------------------------------------------------------|")
    print("|Laptop Name        Brand       Qauntity      Price       Total|")
    print("|-------------------------------------------------------------------|")


def Thanks():
    #This function is used for thank you message
    print("\t\tThank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!")
    print("\t\t Bill has been printed in the txt file also!!")




Creating_List_For_Multiple_Laptops=[]


def Writing_Updated_Value_For_Sale(given_id, wanted_amount_of_laptop):
   """This function is used to update out main text file which is laptop.txt and here also we created list so that all the items get
   added when one user purchase multiple laptops"""
```

```
    Available_Laptops = read.Reading_File()


    # Update the quantity of the specific laptop
    Available_Laptops[given_id][3] = int(Available_Laptops[given_id][3]) - int(wanted_amount_of_laptop)




    # Writing  the updated laptop details to the file laptop.txt it will print the subtracted value in the quantity
    with open("laptop.txt","w") as file:
            for values in Available_Laptops.values():

file.write(str(values[0]+","+str(values[1])+","+str(values[2])+","+str(values[3])+","+str(values[4])+","+str(values[5])))
                file.write("\n")



    Laptopname_of_product=Available_Laptops[given_id][0]
    LaptopBrand = Available_Laptops[given_id][1]
    Laptopquantity = wanted_amount_of_laptop
    Laptopprice = Available_Laptops[given_id][2].replace("$","")
    total = wanted_amount_of_laptop * float(Laptopprice)
```

(adding the intialized variable in the list which we created at the beiginning using append)

Creating_List_For_Multiple_Laptops.append([Laptopname_of_product,LaptopBrand, Laptopquantity, Laptopprice,total])

def Bill_Printing(given_id,wanted_amount_of_laptop):

#This function is used to generate the bill in both shell and txt file after selling and id and quantity are passed as parameter to get value

Available_Laptops = read.Reading_File()

today_date_and_time = datetime.now()

Invoice_Generate()

while True:

try: # This is to check is the name is in alphabet or not

```
            name = input("Please enter the name of the customer: ")
            if not all(c.isalpha() or c.isspace() for c in name):
                raise ValueError #(raise and ValueError are inbuilt function raise is used to raise an exception and valueerror to check datatype
            break #loop ends
        except ValueError:
            operations.for_alpha()



    while True:
        try: #This is to check if the user have given integer value for phone or not
            phone_number = int(input("Please enter the phone number of the customer: "))
            break#loop ends


        except:
            operations.Exception_Hanndling()



    while True:
        try: # This is to check is the address is in alphabet or not
            address = input("Please enter your address: ")
            if not all(c.isalpha() or c.isspace() for c in address):
                raise ValueError
            break #loop ends
        except ValueError:
            operations.for_alpha()


    while True:
```

```
        try:

            shipping_cost = input("Dear user, Do you want your laptop to be shipped? (Press Y for shipping Press N for not shipping)").upper()



            if shipping_cost=="Y":
                shipping_cost = 250
                break
            elif shipping_cost=="N":
                shipping_cost = 0
                break
            else:
                raise ValueError
        except ValueError:

            operations.for_Yes_No()




total_price = 0
Laptop_Shop()

print("Name of the Customer : "+str(name))
```

```
print("Contact number : "+str(phone_number))
print("Address : "+str(address))
print("Date and time of purcahse : "+str(today_date_and_time))



Bill_Laptop_Specs()

for i in Creating_List_For_Multiple_Laptops:

    total_price += i[4]
    grand_total = total_price+shipping_cost
    today_date_and_time = datetime.now()

    print("|",str(i[0])," "*(14-len(str(i[0]))),
          " ",str(i[1])," "*(13-len(str(i[1]))),
          " ",str(i[2])," "*(9-len(str(i[2]))),
          " ",str(i[3])," "*(9-len(str(i[3]))),
          " ",str(i[4])," "*(9-len(str(i[4]))))

if shipping_cost:
      print("\t\t\t\t\t\t\t Total : $"+str(total_price))
      print("\n")
      print("\t\t\tYour Shipping cost is :", shipping_cost)
      print("\t\t\t          Grand Total : $"+str(grand_total))
      print("\n")
      Thanks()

else:
```

```
    print("\t\t\t\t\t\t\t\t Total : $"+str(total_price))
    print("\n")
    print("\n")
    print("\t\t\tGrand Total : $"+str(grand_total))
    Thanks()



with open(str(name) + ".txt","w") as file:

 grand_total = total_price + shipping_cost
 today_date_and_time = datetime.now()



 file.write("\t \t \t \t Nakarmi Shop Bill")
 file.write("\n")

 file.write("\t \t Kamalpokhari, Kathmandu | Phone No: 9811112255")
 file.write("\n")



 file.write("Laptop details are:")
 file.write("\n")
 file.write("\n")

 file.write("Name of the Customer:"+str(name))
```

```
    file.write("\n")

    file.write("Contact number:"+str(phone_number))
    file.write("\n")

    file.write("Address:"+str(address))
    file.write("\n")

    file.write("Date and time of sold Laptops: "+str(today_date_and_time)+"\n")
    file.write("\n")



    file.write("Purchase Details are:")

    file.write("\n")

    file.write("\n")
    file.write("|------------------------------------------------------")
    file.write("\n")
    file.write("|Laptop Name     Brand      Qauntity     Price      Total")
    file.write("\n")
    file.write("|------------------------------------------------------")
    file.write("\n")

    for i in Creating_List_For_Multiple_Laptops:
            file.write("|"+str(i[0])+" "*(14-len(str(i[0])))+
                    " "+str(i[1])+" "*(14-len(str(i[1])))+
```

```
                    " "+str(i[2])+" "*(10-len(str(i[2])))+
                    " "+str(i[3])+" "*(10-len(str(i[3])))+
                    " "+str(i[4])+" "*(10-len(str(i[4])))+ "\n")
            file.write("\n")



    if shipping_cost:
        file.write("\n")
        file.write("\t\t\t\t\t\t\t\t Total : $"+str(total_price))
        file.write("\n")
        file.write("Your Shipping cost is :" +str(shipping_cost))
        file.write("\n")


        file.write("Grand Total : $"+str(grand_total))
        file.write("\n")
        file.write("\t\tThank You For Purchasing!! Feel Free to Come Again!! Have a
Good Day!")


    else:
        file.write("\n")
        file.write("Grand Total: $"+str(grand_total))
        file.write("\n")
        file.write("\t\tThank You For Purchasing!! Feel Free to Come Again!! Have a
Good Day!")



    print("\n")
```

```
Creating_List_For_Multiple_Laptops=[]

def Writing_Updated_Value_For_Purchasee(given_id, wanted_amount_of_laptop):
    """This function is used to update out main text file which is laptop.txt and here also we created list so that all the items get
    added when one user purchase multiple laptops"""



    Available_Laptops = read.Reading_File()

    # Update the quantity of the specific laptop
    Available_Laptops[given_id][3] = int(Available_Laptops[given_id][3]) + int(wanted_amount_of_laptop)



    # Write the updated laptop details to the file
    with open("laptop.txt","w") as file:
        for values in Available_Laptops.values():

file.write(str(values[0]+","+str(values[1])+","+str(values[2])+","+str(values[3])+","+str(values[4])+","+str(values[5])))
            file.write("\n")

    Laptopname_of_product = Available_Laptops[given_id][0]
    LaptopBrand = Available_Laptops[given_id][1]
    Laptopquantity = wanted_amount_of_laptop
```

```
    Laptopprice = Available_Laptops[given_id][2].replace("$","")
    total = wanted_amount_of_laptop * float(Laptopprice)




    Creating_List_For_Multiple_Laptops.append([Laptopname_of_product,LaptopBrand,
Laptopquantity, Laptopprice,total])




def Bill_Printing_For_Purchasee(given_id,wanted_amount_of_laptop):
        #This function is used to generate the bill in both shell and txt file after selling and id
and quantity are passed as parameter to get value

        Available_Laptops = read.Reading_File()
        today_date_and_time = datetime.now()

        Invoice_Generate()

        while True:
            try:

                Mname = input("Please enter the name of company")
                if not all(c.isalpha() or c.isspace() for c in Mname):
```

```
                raise ValueError #(raise and ValueError are inbuilt function raise is used to raise an exception and valueerror to check datatype
                break #loop ends
            except ValueError:
                operations.for_alpha()



    while True:
        try: # This is to check is the name is in alphabet or not
            name = input("Please enter the name of the customer: ")
            if not all(c.isalpha() or c.isspace() for c in name):
                raise ValueError #(raise and ValueError are inbuilt function raise is used to raise an exception and valueerror to check datatype
            break #loop ends
        except ValueError:
            operations.for_alpha()



    while True:
        try: #This is to check if the user have given integer value for phone or not
            phone_number = int(input("Please enter the phone number of the customer: "))
            break#loop ends


        except:
            operations.Exception_Hanndling()



    while True:
```

```
        try: # This is to check is the address is in alphabet or not
            address = input("Please enter your address: ")
            if not all(c.isalpha() or c.isspace() for c in address):
                raise ValueError
            break #loop ends
        except ValueError:
            operations.for_alpha()



net_amount = 0









Laptop_Shop()



print("Company Name :"+str(Mname))
print("Name of the Customer:"+str(name))
print("Contact number:"+str(phone_number))
print("Adress:"+str(address))
print("Date and time of purcahse: "+str(today_date_and_time))



print("\n")
print("Purchase Details are:")
```

```
Bill_Laptop_Specs()



for i in Creating_List_For_Multiple_Laptops:
    net_amount += int(i[4])
    vat=(13/100)*net_amount
    gross_amount = net_amount + vat
    today_date_and_time = datetime.now()

    print("|",str(i[0])," "*(14-len(str(i[0]))),
          " ",str(i[1])," "*(13-len(str(i[1]))),
          " ",str(i[2])," "*(9-len(str(i[2]))),
          " ",str(i[3])," "*(9-len(str(i[3]))),
          " ",str(i[4])," "*(9-len(str(i[4]))))
print("\t\t\t\t\t\t\t Total : $"+str(net_amount))
print("Your Vat is :", vat)
print("Grand Total : $"+str(gross_amount))
print("\n")
Thanks()



with open(str(name) + ".txt","w") as file:

 vat=(13/100)*net_amount
```

```
gross_amount = net_amount + vat
today_date_and_time = datetime.now()



file.write("\t \t \t \t Nakarmi Shop Bill")
file.write("\n")

file.write("\t \t Kamalpokhari, Kathmandu | Phone No: 9811112255")
file.write("\n")



file.write("Laptop details are:")
file.write("\n")
file.write("\n")

file.write("Name of the Company :"+str(Mname))
file.write("\n")

file.write("Name of the Customer :"+str(name))
file.write("\n")

file.write("Contact number :"+str(phone_number))
file.write("\n")

file.write("Address :"+str(address))
file.write("\n")

file.write("Date and time of sold Laptops : "+str(today_date_and_time)+"\n")
```

```
file.write("\n")



file.write("Purchase Details are:")

file.write("\n")

file.write("\n")
file.write("|------------------------------------------------------")
file.write("\n")
file.write("|Laptop Name     Brand      Qauntity     Price      Total")
file.write("\n")
file.write("|------------------------------------------------------")
file.write("\n")

for i in Creating_List_For_Multiple_Laptops:
        file.write("|"+str(i[0])+" "*(14-len(str(i[0])))+
                " "+str(i[1])+" "*(14-len(str(i[1])))+
                " "+str(i[2])+" "*(10-len(str(i[2])))+
                " "+str(i[3])+" "*(10-len(str(i[3])))+
                " "+str(i[4])+" "*(10-len(str(i[4])))+ "\n")
        file.write("\n")

file.write("\t\t\t\t\t\t\t\t Total : $"+str(net_amount))
file.write("\n")
file.write("Your Vat is:" +str(vat))
file.write("\n")
```

```
file.write("Grand Total: $"+str(gross_amount))

file.write("\n")

file.write("\t\tThank You For Purchasing!! Feel Free to Come Again!! Have a Good Day!")
```