Choose a Module

60% Individual Coursework

2023 Spring

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Project File Links:

Google Drive Link	https://drive.google.com/file/d/1Zz3tdpKW3as5A1vJPGR77K3smM3S1_S1/view?usp=share_link

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1 INTRODUCTION

The laptop shop program is a software application that will help the shop manage their inventory, process orders, and generate receipts for their customers. The program must be able to read a text file containing information about the available laptops, such as the name of the laptop, manufacturer, price, stock, processor, and graphics card. The program should be able to update the stock information in the text file whenever a laptop is sold or purchased.

The program should have a user-friendly interface that allows the user to easily add or remove laptops from their inventory. The interface should also provide the user with an overview of the current stock levels and any pending orders that need to be fulfilled. This will help the shop manage their inventory more effectively and prevent stockouts.The program should also be able to generate notes or receipts with the details of each transaction, such as the laptop name, price, customer details, and date of purchase. This will help the shop keep track of their sales and inventory, and provide customers with proof of purchase.

The objective of this project is to develop a program that meets the requirements of the laptop shop and is easy to use. The program should be implemented using appropriate programming concepts and techniques, such as object-oriented programming, file handling, and user interface design. The program should also be designed in a modular and scalable way, so that it can be easily modified or extended in the future if needed.

In conclusion, the laptop shop program is an important project that will help the shop manage their inventory and process orders more efficiently. The program should be easy to use and provide the shop with an overview of their current stock levels and pending orders. The program should also be able to generate notes or receipts for customers, and be tested with sample data to ensure that it meets the requirements of the shop

1.1 GOALS

- To develop a program for a laptop shop that can manage information about available computers, process orders from customers, and UPDATE the stock of laptops accordingly.

- To generate notes/receipts with details of each transaction (order/sale).
- To ensure that the program can read and modIFy data in a text file.
- To test the program with sample data to demonstrate its behavior.

1.2 Objective

- To analyze the requirements of the laptop shop and design a suitable program that meets those requirements.

- To implement the program using appropriate programming concepts and techniques.
- To ensure that the program is user-friendly and can handle dIFferent types of transactions (e.g. ordering from manufacturer, selling to customer).

2 DISCUSSION AND ANALYSIS

2.1 Algorithm

```
Step 1. START
Step 2. Display an options 1--Sell, 2--Order, 3--See Laptops, 4--Close
Step 3. Choose the user’s input 1,2,3, or 4

Step 4. IF user input is 1

    a. Display available laptops
    b. Ask User For Required Laptop
    c. IF the required laptop is available Go to Step 4.d
        1. ELSE IF required laptop is not available, Display available laptops,
           Go to Step 4.b
    d. Ask for required quantity
    e. IF the required quantiy is available Go to Step 4.f
        1. ELSE IF required quantity is not available, Display available
           quantity, Ask want to sell other laptop
           I . IF want to sell other laptop then Go to Step 4.b ELSE Go to Step
           2
    f. Ask user for confirm sell Generate bill ELSE Go to Step 2


Step 5. IF user input is 2

    a. Display Stock laptops
    b. Input the products information from user
    c. IF products already exists increase the required quantity to the exists
       quantity ELSE append the products information


Step 6. IF user input 3
```

a. Display Stock laptops and go to **Step** 2

Step 7. IF user input is 4

a. Exit the program

2.2 Flow Chart

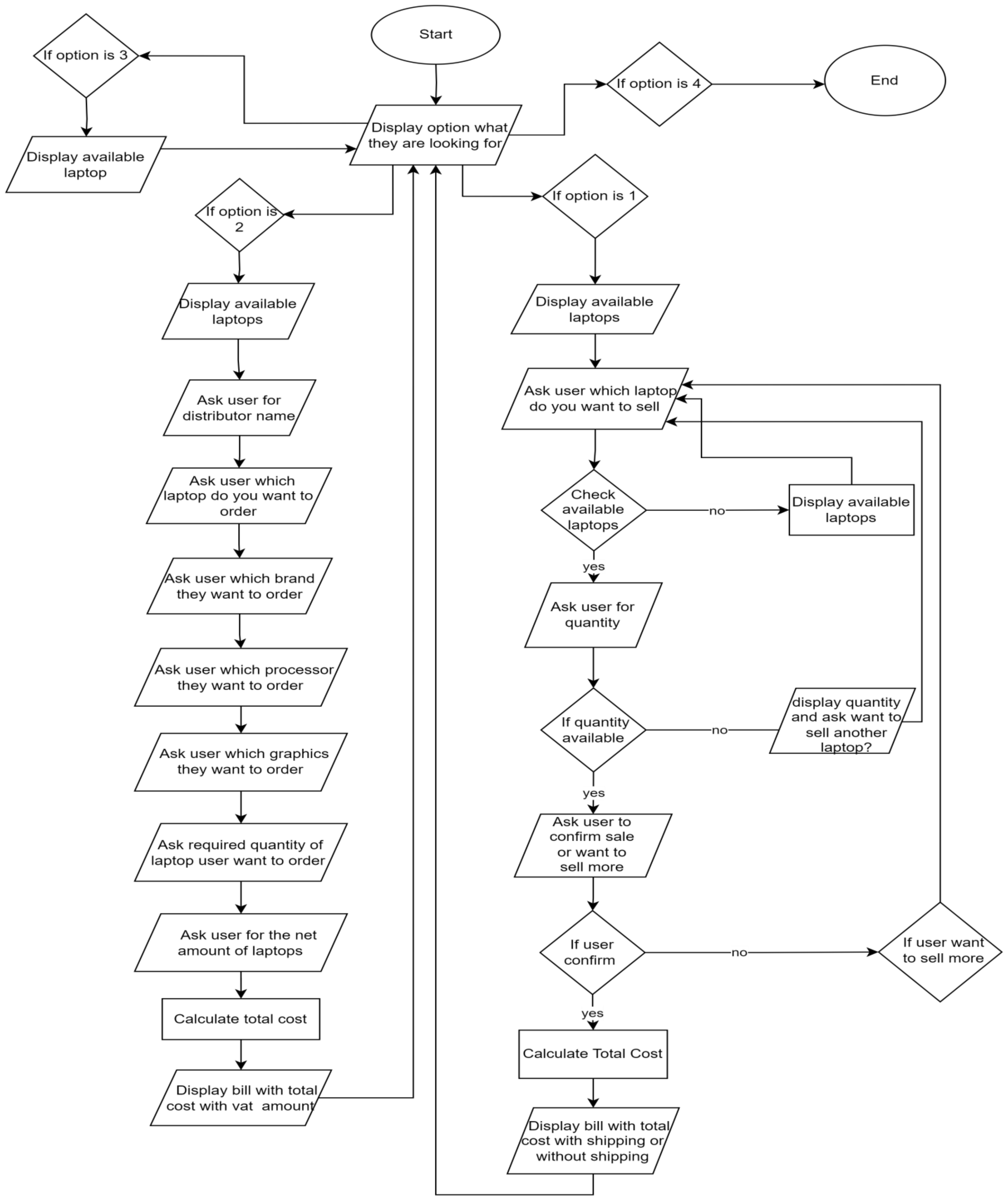

Start
If option is 3
Display option what they are looking for
If option is 4
End
Display available laptop
If option is 2
If option is 1
Display available laptops
Display available laptops
Ask user for distributor name
Ask user which laptop do you want to sell
Ask user which laptop do you want to order
Check available laptops
no
Display available laptops
yes
Ask user which brand they want to order
Ask user for quantity
Ask user which processor they want to order
If quantity available
no
display quantity and ask want to sell another laptop?
Ask user which graphics they want to order
yes
Ask user to confirm sale or want to sell more
Ask required quantity of laptop user want to order
Ask user for the net amount of laptops
If user confirm
no
If user want to sell more
yes
Calculate total cost
Calculate Total Cost
Display bill with total cost with vat amount
Display bill with total cost with shipping or without shipping

Figure 1 Screenshot of FlowChart

2.3 PSEUDOCODE

2.3.1 PSEUDOCODE OF MODULE MAIN

```
IMPORT the read module as rd
IMPORT the operation module as op


DEFINE a function Called start:
    WHILE True:
        PRINT the options menu
        GET the user's choice
        IF the user chose option 1:
            PRINT the list of available laptops
            CALL the display function from the rd module
            CALL the customerr and purchase functions from the op module
        ELSE IF the user chose option 2:
            CALL the display function from the rd module
            CALL the disstributor and order functions from the op module
        ELSE IF the user chose option 3:
            CALL the display function from the rd module
        ELSE IF the user chose option 4:
            Exit the program
        ELSE:
            PRINT an error message
```

```
CALL the start function

CALL the purchase function from the op module
```

2.3.2 PSEUDOCODE OF MODULE READ

```
DEFINE the path to the product file

INITIALIZE an empty list Called products

OPEN the product file in read mode

FOR each line in the file:

    Strip the line and split it by comma

    Append the resulting list to the products list

DEFINE a function Called display:

    PRINT a horizontal line

    PRINT the table headers for Laptops, Brand, Price, Quantity, Processor and Graphic

    PRINT another horizontal line

    FOR each item in the products list:

        IF the item has 6 elements:

            PRINT the item's elements in a formatted row

            PRINT another horizontal line
```

2.3.3 PSEUDO CODE OF OPERATION MODULE

INITIALIZE global variables for laptop name, quantity, customer name, current time, brand sell, processor, graphic, price, net amount, total, purchase list, sell list, money, ship total and shipping money.

DEFINE a function `**customerr**` to get the customer name:

  PROMPT the user to enter the customer name.

  Check IF the entered customer name is valid (i.e., contains only alphabets).

  IF the entered customer name is valid, break out of the loop.

  IF the entered customer name is not valid or empty or contains digits only, display an appropriate error message and continue Prompting the user to enter a valid customer name.

DEFINE a function `**purchase**` to get the laptop name:

  PROMPT the user to enter the laptop name.

  CHECK IF the entered laptop name is valid (i.e., not empty and available in the store).

  IF the entered laptop name is valid, break out of the loop.

  IF the entered laptop name is not valid or empty or contains digits only or not available in the store, display an appropriate error message and continue prompting the user to enter a valid laptop name.

DEFINE a function `**laptopstock**` to check IF the user wants to sell other laptops:

  PROMPT the user to enter 'y' IF they want to sell other laptops or 'n' IF they don't want to sell other laptops.

```
    IF the user enters 'y', display the available laptops and CALL the `purchase` function.
    IF the user enters 'n', break out of the loop.
    IF the user enters an invalid input, display an appropriate error message and continue Prompting the user to enter a valid input.

INITIALIZE a variable `check` as True.

WHILE `check` is True:
    INITIALIZE a global variable for quantity.
    PROMPT the user to enter the required quantity of the laptop.
    CHECK IF the entered quantity is valid (i.e., a number).
    IF the entered quantity is not valid or contains alphabets only, display an appropriate error message and continue Prompting the user to enter a valid quantity.
    CONVERT the entered quantity to an integer.
    Iterate through the products and check IF the entered laptop name matches with any of the available laptops.
        IF the entered laptop name matches with an available laptop and the entered quantity is greater than the available quantity, display an appropriate message and CALL the `laptopstock` function.
        IF the entered quantity is less than or equal to 0, display an appropriate error message.
        Otherwise, set `check` as False and break out of the loop.

INITIALIZE global variables for total amount last, without shipping, total shipping cost, brand sell, processor, graphic, price, net amount, shipping cost and total.
```

```
Iterate through the products and check IF the entered laptop name matches with any of the available laptops.
 IF the entered laptop name matches with an available laptop and the available quantity is greater than or equal to the entered quantity:
    INITIALIZE global variables for brand name, processor, graphic and price.
    Calculate the net amount by multiplying the entered quantity with the price.
    Calculate the shipping cost by multiplying 50 with the entered quantity.
    Calculate the total amount by adding the net amount and the shipping cost.
    INITIALIZE a global variable for current time and set its value as the current date and time.
    Append the total amount to the `money` list.
    Iterate through the `money` list and calculate the total amount last by adding all the total amounts.
    CALL the `withdraw` function from `wr` module.
    Append the net amount to the `shippingmoney` list.
    Iterate through the `shippingmoney` list and calculate `withoutshipping` by adding all the net amounts.
    APPEND the shipping cost to the `ship_total` list.
    Iterate through the `ship_total` list and calculate `total_shipping_cost` by adding all the shipping costs.
WHILE True DO
    PRINT a blank line
    PROMPT user for input with message "Do you want to sell more laptop IF yes then enter 'y' IF no then enter'n' (y/n): "
```

```
        READ user_input
        IF user_input is "y" THEN
           PRINT a blank line
           CALL rd.display()
           PRINT a blank line
           ADD formatted string to purchase_list
           ADD formatted string to sell_list
           CALL purchase()
           BREAK
        ELSE IF user_input is "n" THEN
           CALL ship()
           PRINT a blank line
           CLEAR purchase_list
           CLEAR sell_list
           CLEAR shippingmoney
           CLEAR ship_total
           CLEAR money
        END IF
          IF user_input is neither "y" nor "n" THEN
             PRINT "Invalid input. Please enter 'y' to continue or 'n' to exit."
          END IF
     END WHILE
  END
```

```
FUNCTION ship
   WHILE True DO
      PRINT a blank line
      PROMPT user for input with message "Do you want to ship your laptop IF yes then enter 'y' IF you don't want to ship press 'n': "
      READ shipp
      IF shipp is "y" THEN
         CALL wr.append_to_file()
         CALL bill()
         BREAK
      ELSE IF shipp is "n" THEN
         CALL shipbill()
         CALL wr.withoutorderbill()
         BREAK
      ELSE
         PRINT "Invalid input. Please enter 'y' to ship or 'n' IF you don't want to ship."
      END IF
   END WHILE
END FUNCTION


FUNCTION bill
   PRINT a blank line
   PRINT "Order complete! Your new laptop will be delivered to you soon."
PRINT a blank line
PRINT "Note: The grand total, including the shipping cost"
PRINT a blank line
PRINT formatted string
PRINT formatted string
PRINT formatted string
SET customer to formatted string
PRINT customer
PRINT formatted string with current_time
PRINT formatted string
SET purchase_details to formatted string
PRINT purchase_details
PRINT formatted string
SET after_purchase to formatted string
PRINT after_purchase
PRINT formatted string
FOR EACH purchase_item in purchase_list DO
    PRINT purchase_item
    PRINT formatted string
END FOR
SET total_sell to formatted string with total_amount_last and total_shipping_cost
PRINT total_sell
PRINT formatted string
```

```
    PRINT formatted string
    PRINT formatted string
    PRINT formatted string
END FUNCTION


FUNCTION shipbill
    PRINT a blank line
    PRINT "Order complete! Your new laptop will be delivered to you soon."
    PRINT a blank line
    PRINT "Note: The grand total, doesn't include shipping cost the shipping cost"
    PRINT a blank line
    PRINT formatted string
    PRINT formatted string
    PRINT formatted string
    SET customer to formatted string
    PRINT customer
    PRINT formatted string with current_time
    PRINT formatted string
    SET purchase_details to formatted string
    PRINT purchase_details
    PRINT formatted string
    SET after_purchase to formatted string
    PRINT after_purchase
    PRINT formatted string
    FOR EACH purchase_item in purchase_list DO
        PRINT purchase_item
        PRINT formatted string
    END FOR
    SET total_sell to formatted string with withoutshipping
    PRINT total_sell
    PRINT formatted string
    PRINT formatted string
    PRINT formatted string
    PRINT formatted string
END FUNCTION


DECLARE money_order as empty list
DECLARE distributor_ as empty string
FUNCTION disstributor
    WHILE True DO
        SET global variable distributor_
        TRY
            PROMPT user for input with message "- Enter the name of distributor (Company): "
            READ distributor
            SET distributor_ to distributor
            IF distributor is alphabetical THEN
                PRINT a blank line
                BREAK
            ELSE IF distributor is empty THEN
                PRINT a blank line
                PRINT "* Distributor name can't be Empty"
            ELSE IF distributor is an integer THEN
                PRINT a blank line
                PRINT "* Distributor name can't be number"
            ELSE
                PRINT a blank line
                PRINT "* Enter distributor name correctly"
                PRINT a blank line
            END IF
        EXCEPT
            PRINT a blank line
            BREAK
        END TRY
        PRINT a blank line
    END WHILE
END FUNCTION
```

```
**INITIALIZE** global variables for laptop order details
**DEFINE** function order
**WHILE** True
    **PROMPT** user to enter laptop name
    **IF** laptop name contains alphabets
        **Break** loop
    **ELSE IF** laptop name is empty
        **PRINT** error message
    **ELSE IF** laptop name is a number
        **PRINT** error message
    **ELSE**
        **PRINT** error message
**WHILE** True
    **PROMPT** user to enter brand name
    **IF** brand name contains alphabets
        **Break** loop
    **ELSE** IF brand name is empty
        **PRINT** error message
    **ELSE**
        **PRINT** error message
**WHILE** True
    **PROMPT** user to enter processor name
    **IF** processor name contains alphabets
```

```
        **Break** loop
    **ELSE** IF processor name is empty
        **PRINT** error message
    **ELSE**
        **PRINT** error message
**WHILE** True
    **PROMPT** user to enter graphics name
    **IF** graphics name contains alphabets
        **Break** loop
    **ELSE** IF graphics name is empty
        **PRINT** error message
    **ELSE**
        **PRINT** error message

**WHILE** True
    **PROMPT** user to enter required quantity of laptop
    **IF** quantity is less than or equal to 0
        **PRINT** error message
    **ELSE**
        **Break** loop
**WHILE** True
    **PROMPT** user to enter net amount of laptop
    **IF** net amount is less than or equal to 0
```

```
        PRINT error message
    ELSE
        Break loop
CALCULATE VAT amount as 13% of net amount
CALCULATE total amount as sum of net amount and VAT amount
CALCULATE final total order as product of total amount and quantity required
GET current time
APPEND final total order to money_order list
INITIALIZE total_order_last as 0
FOR each total in money_order list
    ADD total to total_order_last
CALL invorder function from wr module
WHILE True
    PROMPT user IF they want to continue or not
    IF user input is 'y'
        CALL display function from rd module
        Append order details to order_list and sell_order_list
        CALL order function recursively
        Break loop
    ELSE IF user input is 'n'
        CALL order_invoice function from wr module
        CALL orderbill function
        Clear order_list, sell_order_list and money_order lists
        Break loop
    ELSE
        PRINT error message

DEFINE function orderbill
PRINT order completion message
PRINT note about grand total including shipping cost
PRINT header for bill
PRINT distributor name
PRINT date of sell
PRINT header for order details
PRINT laptop order details
For each order item in order_list
    PRINT order item
PRINT total amount
PRINT footer for bill
INITIALIZE rd.products as empty list
OPEN rd.product file for reading
For each line in file
    Strip and split line by comma
    Append line to rd.products list
```

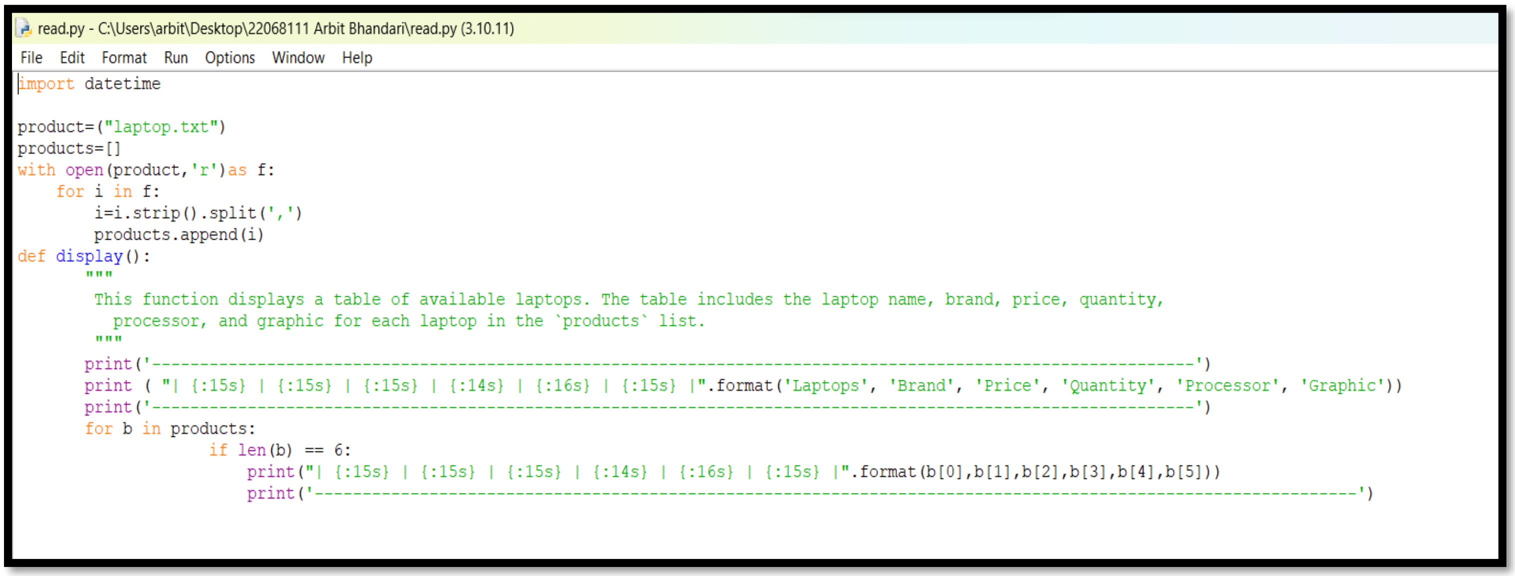
2.3.4 PSEUDOCODE OF WRITE MODULE

```
IMPORT operation module as op
IMPORT read module as rd
DEFINE function withship
INITIALIZE filepath as path to customer file
OPEN file in append mode
IF file is empty
    Write header for bill
    Write customer name
    Write date of sell
    Write header for order details
    Write laptop order details
    For each sell item in op.sell_list
        Write sell item
    Write total amount with shipping cost
    Write footer for bill

DEFINE function withoutorderbill
INITIALIZE filepath as path to customer file
OPEN file in append mode
IF file is empty
    Write header for bill
    Write customer name
    Write date of sell
    Write header for order details
    Write laptop order details
    For each sell item in op.sell_list
        Write sell item
    Write total amount without shipping cost
    Write footer for bill

DEFINE function withdraw
OPEN laptop.txt file in write mode
For each line in rd.products list
    IF first element of line matches op.laptopname
        UPDATE fourth element of line as dIFference with sell laptop
    Write line to file

DEFINE function invorder
INITIALIZE lines as empty list
INITIALIZE found as False
OPEN laptop.txt file in write mode
FOR each line in rd.products list
```

```
    IF first element of line matches op.orderlaptop and second element matches op.brand_order and fIFth element matches op.processor_order and sixth element matches op.graphic_order
        UPDATE fourth element of line as sum of current value and op.quantity_order
        Set found as True
    Write line to file
IF not found
    INITIALIZE i as 1
    INITIALIZE new_laptop_name as op.orderlaptop
    WHILE any first element of rd.products matches new_laptop_name
        UPDATE new_laptop_name as op.orderlaptop + i
        Increment i by 1
    Append new laptop details to lines list and rd.products list
    OPEN laptop.txt file in append mode
    Write lines to file
    PRINT order success message


INITIALIZE rd.products as empty list
OPEN rd.product file for reading
FOR each line in file
    STRIP and SPLIT line by comma
    APPEND line to rd.products list
```

2.3.5 DATA STRUCTURES

Data structures are essential components of software development that enable efficient and effective storage and manipulation of data. Basic data structures such as arrays, linked lists, stacks, and queues, as well as advanced structures like hash tables, heaps, graphs, and trees, are used to represent various types of data and optimize complex operations. The choice of data structure depends on factors such as data size, type, access frequency, and algorithm complexity. Understanding the trade-offs between different data structures can help developers improve application performance and build more powerful and flexible applications (geeksforgeeks, 2023).


read.py - C:\Users\arbit\Desktop\22068111 Arbit Bhandari\read.py (3.10.11)
File Edit Format Run Options Window Help

```python
import datetime

product=("laptop.txt")
products=[]
with open(product,'r')as f:
    for i in f:
        i=i.strip().split(',')
        products.append(i)
def display():
       """
        This function displays a table of available laptops. The table includes the laptop name, brand, price, quantity,
          processor, and graphic for each laptop in the `products` list.
        """
       print('-------------------------------------------------------------------------------------------------------------')
       print ( "| {:15s} | {:15s} | {:15s} | {:14s} | {:16s} | {:15s} |".format('Laptops', 'Brand', 'Price', 'Quantity', 'Processor', 'Graphic'))
       print('-------------------------------------------------------------------------------------------------------------')
       for b in products:
                    if len(b) == 6:
                        print("| {:15s} | {:15s} | {:15s} | {:14s} | {:16s} | {:15s} |".format(b[0],b[1],b[2],b[3],b[4],b[5]))
                        print('--------------------------------------------------------------------------------------------------------------')
```

Figure 2 Screenshot of code where I used data structure

2.4 Where I used data structure

In this code, I have used a list as a data structure to store and organize the data read from the laptop.txt file. The products list is created as an empty list at the beginning of the code. Then, the code opens the laptop.txt file and reads its contents line by line using a for loop. For each line, the code uses the strip and split methods to remove any leading/trailing white spaces and to split the line into a list of values separated by commas. This list of values represents a laptop and its attributes such as name, brand, price, quantity, processor, and graphic. The code then appends this list of values to the products list.

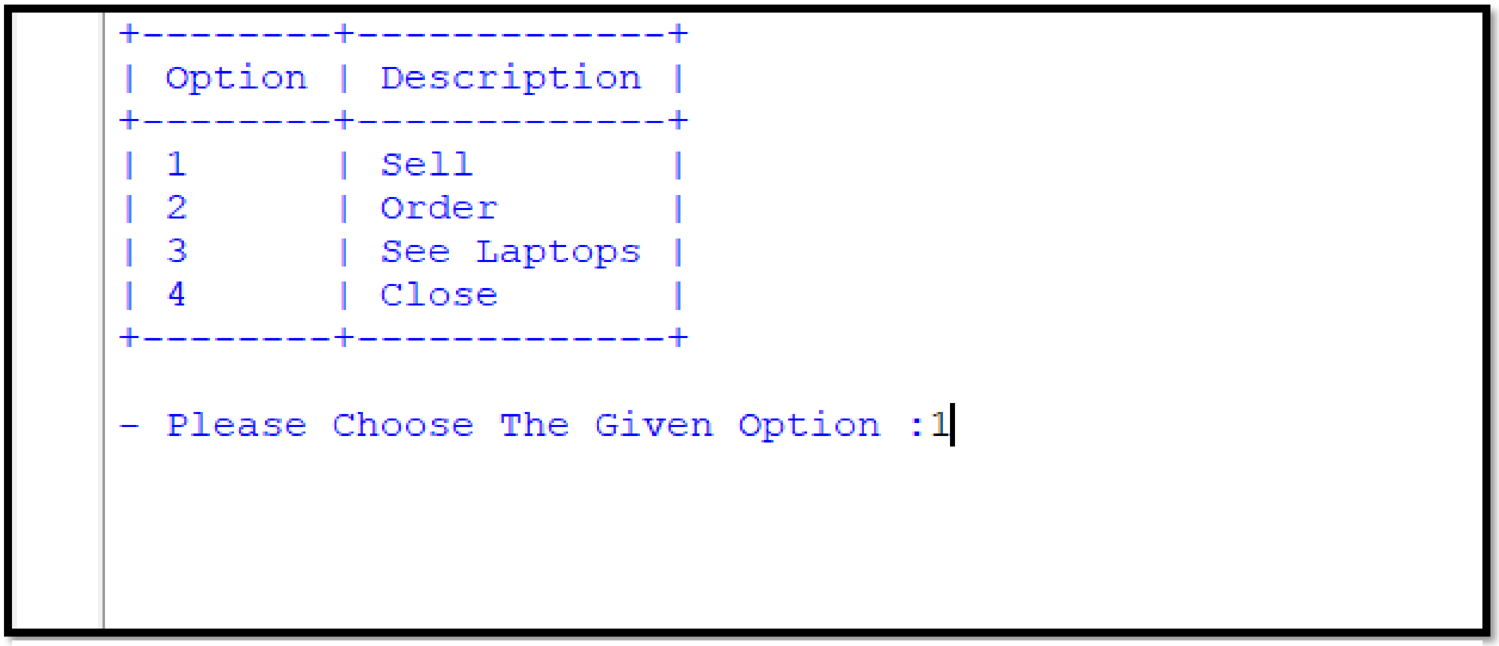
The display function uses another for loop to iterate over each element of the products list (i.e., each laptop) and prints its attributes in a formatted table.

In summary, I have used a list as a data structure to store and organize the data read from the laptop.txt file. The products list is a list of lists, where each inner list represents a laptop and its attributes.

3 PROGRAM

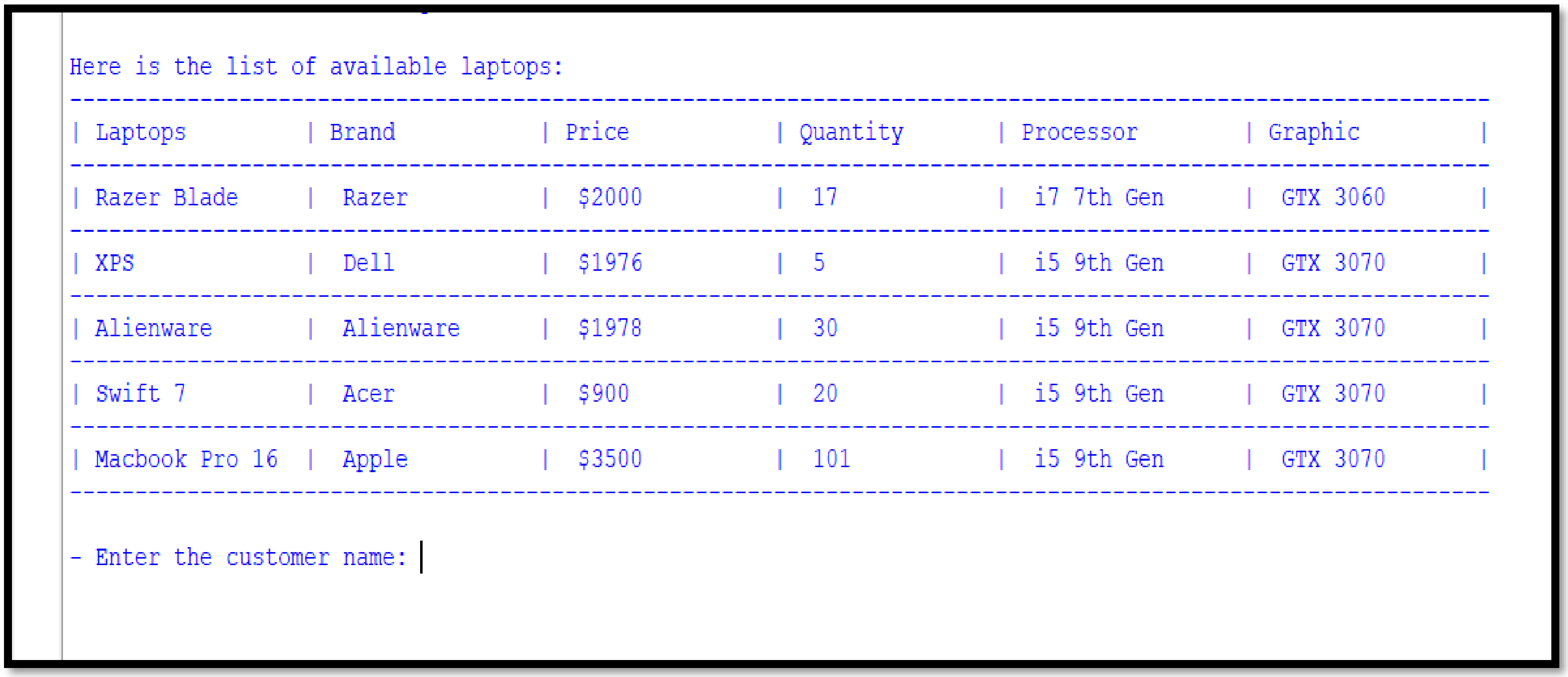
The program manages a laptop shop by reading and updating a text file that contains information about the available laptops. It can process orders from both manufacturers and customers, and keeps track of the current stock of each laptop. When a laptop is sold, the system creates a note or invoice that includes details such as the laptop name, brand, customer name, purchase date and time, total cost (excluding shipping), shipping cost, and total cost (including shipping). Similarly, when laptops are ordered from manufacturers, the system generates a note or invoice that includes the distributor name, laptop name, brand, purchase date and time, net cost (excluding VAT), VAT amount (13% of the net cost), and total cost (including VAT). The notes/invoices can be formatted according to the user's name, and each file is assigned a unique name.

3.1 Implementation of program(Overall program with short explanation)



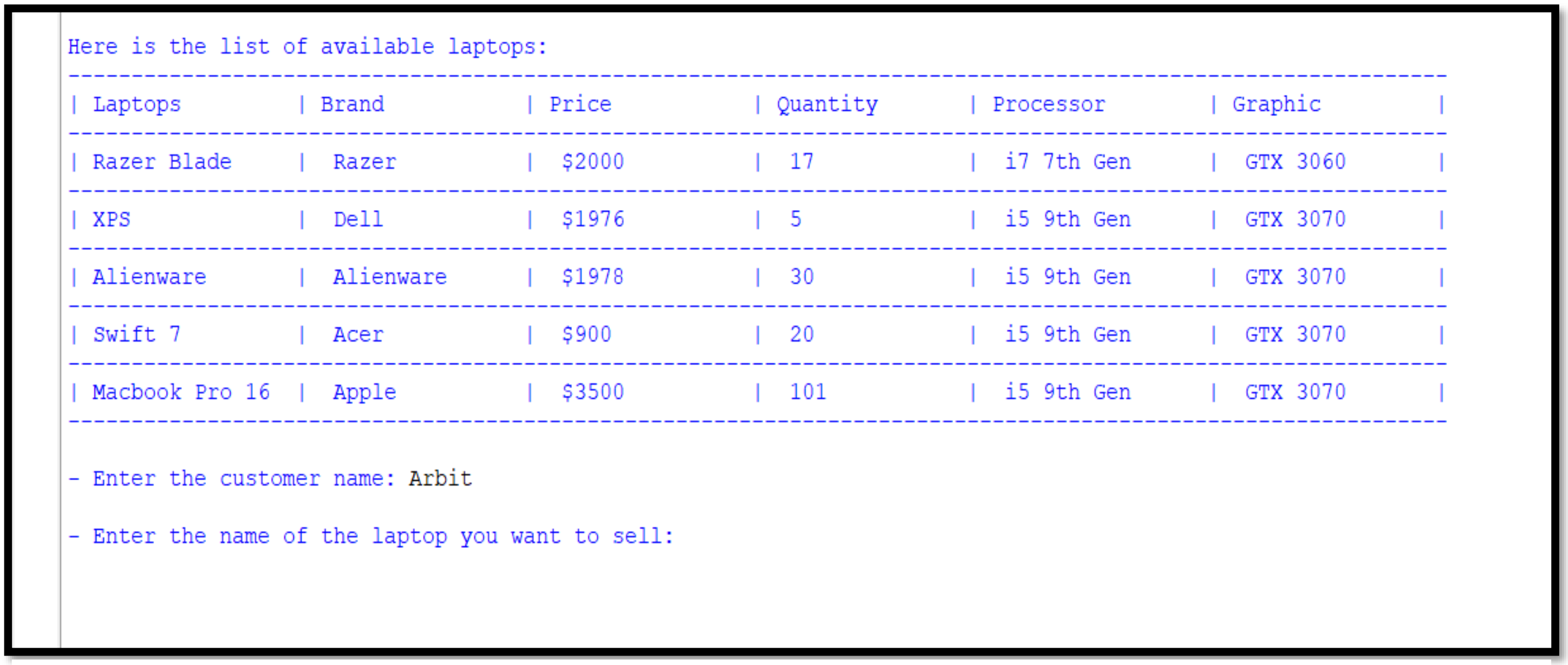
```
+---------+--------------+
| Option  | Description  |
+---------+--------------+
| 1       | Sell         |
| 2       | Order        |
| 3       | See Laptops  |
| 4       | Close        |
+---------+--------------+

- Please Choose The Given Option :1
```

Figure 3 Screenshot of choosing Sell to show overall program



```
Here is the list of available laptops:
---------------------------------------------------------------------------------------------------------------
| Laptops          | Brand            | Price            | Quantity         | Processor        | Graphic          |
---------------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer           |  $2000           |  17              |  i7 7th Gen      |  GTX 3060        |
---------------------------------------------------------------------------------------------------------------
| XPS              |  Dell            |  $1976           |  5               |  i5 9th Gen      |  GTX 3070        |
---------------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware       |  $1978           |  30              |  i5 9th Gen      |  GTX 3070        |
---------------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer            |  $900            |  20              |  i5 9th Gen      |  GTX 3070        |
---------------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple           |  $3500           |  101             |  i5 9th Gen      |  GTX 3070        |
---------------------------------------------------------------------------------------------------------------

- Enter the customer name:
```

Figure 4 Screenshot of available products to sell



```
Here is the list of available laptops:
------------------------------------------------------------------------------------------------------------------
| Laptops           | Brand             | Price             | Quantity         | Processor          | Graphic           |
------------------------------------------------------------------------------------------------------------------
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------------------------------------------------------------------------------------------------------------------
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------------------------------------------------------------------------------------------------------------------
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------------------------------------------------------------------------------------------------------------------
| Swift 7           |  Acer             |  $900             |  20              |  i5 9th Gen        |  GTX 3070         |
------------------------------------------------------------------------------------------------------------------
| Macbook Pro 16    |  Apple            |  $3500            |  101             |  i5 9th Gen        |  GTX 3070         |
------------------------------------------------------------------------------------------------------------------

- Enter the customer name: Arbit

- Enter the name of the laptop you want to sell:
```
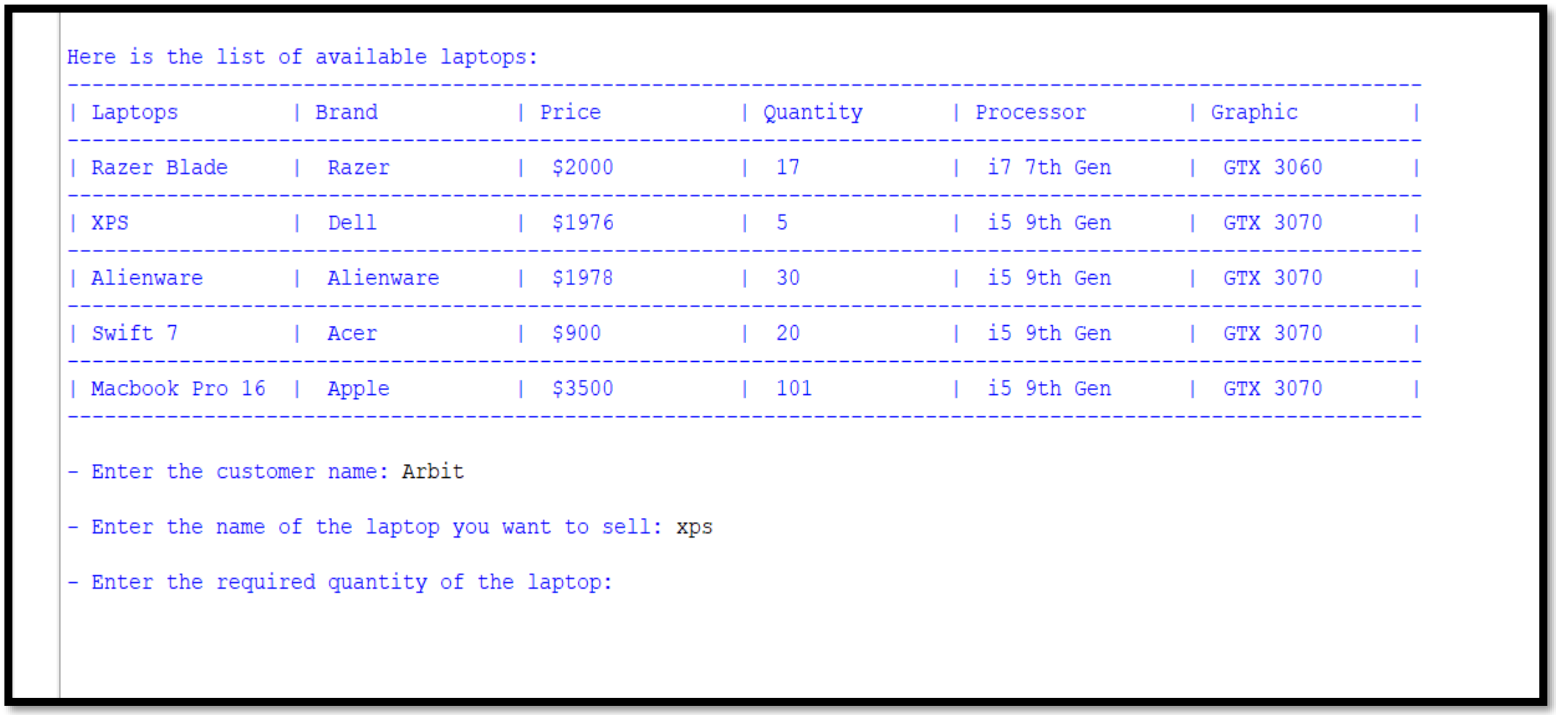

Figure 5 Screenshot of input customer name to sell



```
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------------------------------------------------------------------------------------------------------------------
| XPS               |  Dell             |  $1976            |  5               |  i5 9th Gen        |  GTX 3070         |
------------------------------------------------------------------------------------------------------------------
| Alienware         |  Alienware        |  $1978            |  30              |  i5 9th Gen        |  GTX 3070         |
------------------------------------------------------------------------------------------------------------------
| Swift 7           |  Acer             |  $900             |  20              |  i5 9th Gen        |  GTX 3070         |
------------------------------------------------------------------------------------------------------------------
| Macbook Pro 16    |  Apple            |  $3500            |  101             |  i5 9th Gen        |  GTX 3070         |
------------------------------------------------------------------------------------------------------------------

- Enter the customer name: Arbit

- Enter the name of the laptop you want to sell: xps

- Enter the required quantity of the laptop:
```
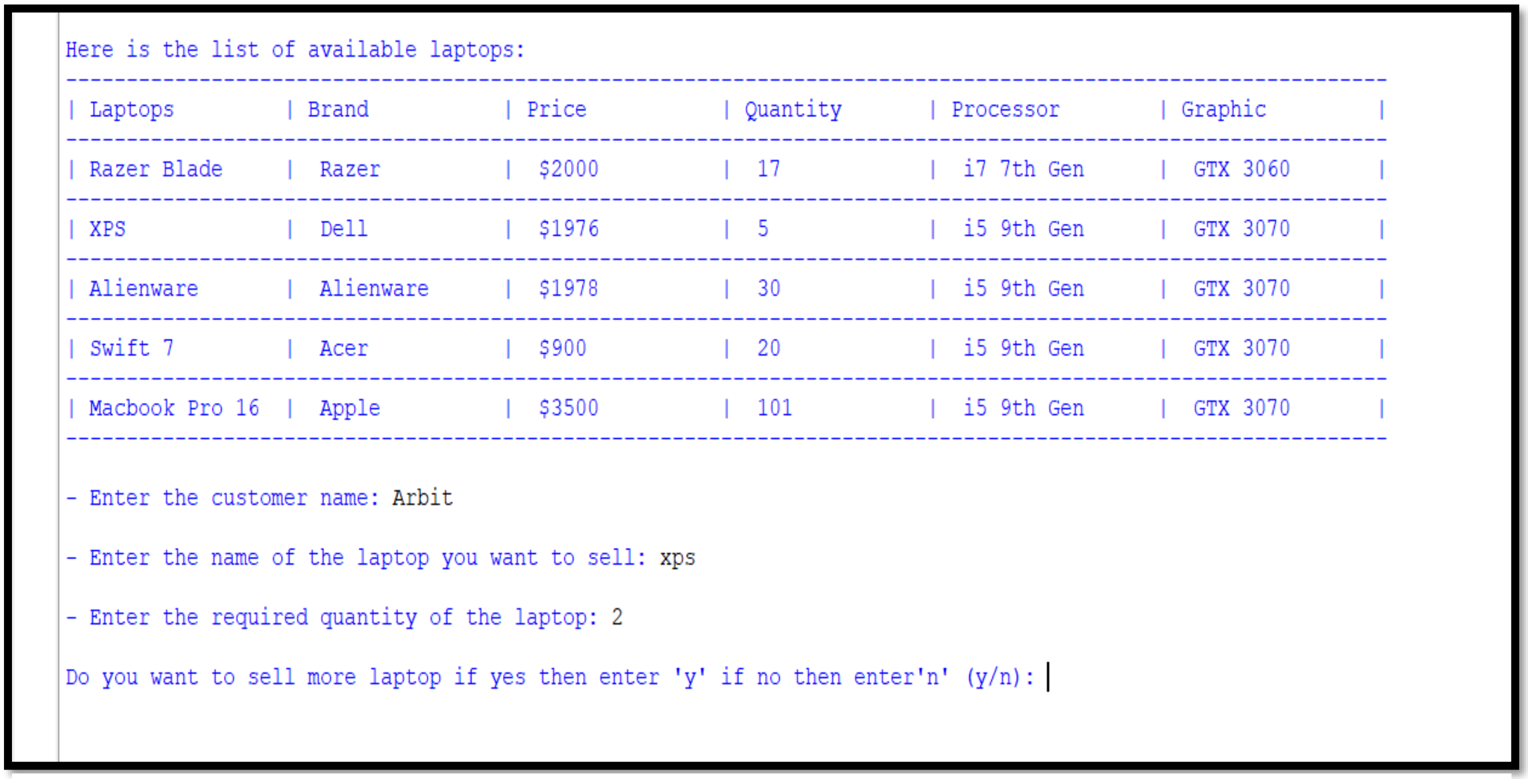

Figure 6 Screenshot of laptop name to sell


```
Here is the list of available laptops:
-----------------------------------------------------------------------------------------------------------
| Laptops          | Brand            | Price            | Quantity        | Processor          | Graphic            |
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| Razer Blade      |  Razer           |  $2000           |  17             |  i7 7th Gen        |  GTX 3060          |
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-----------------------------------------------------------------------------------------------------------
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-----------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer            |  $900            |  20             |  i5 9th Gen        |  GTX 3070          |
-----------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple           |  $3500           |  101            |  i5 9th Gen        |  GTX 3070          |
-----------------------------------------------------------------------------------------------------------

- Enter the customer name: Arbit

- Enter the name of the laptop you want to sell: xps

- Enter the required quantity of the laptop: 2

Do you want to sell more laptop if yes then enter 'y' if no then enter'n' (y/n):
```

Figure 8 Screenshot of sell quantity of laptop

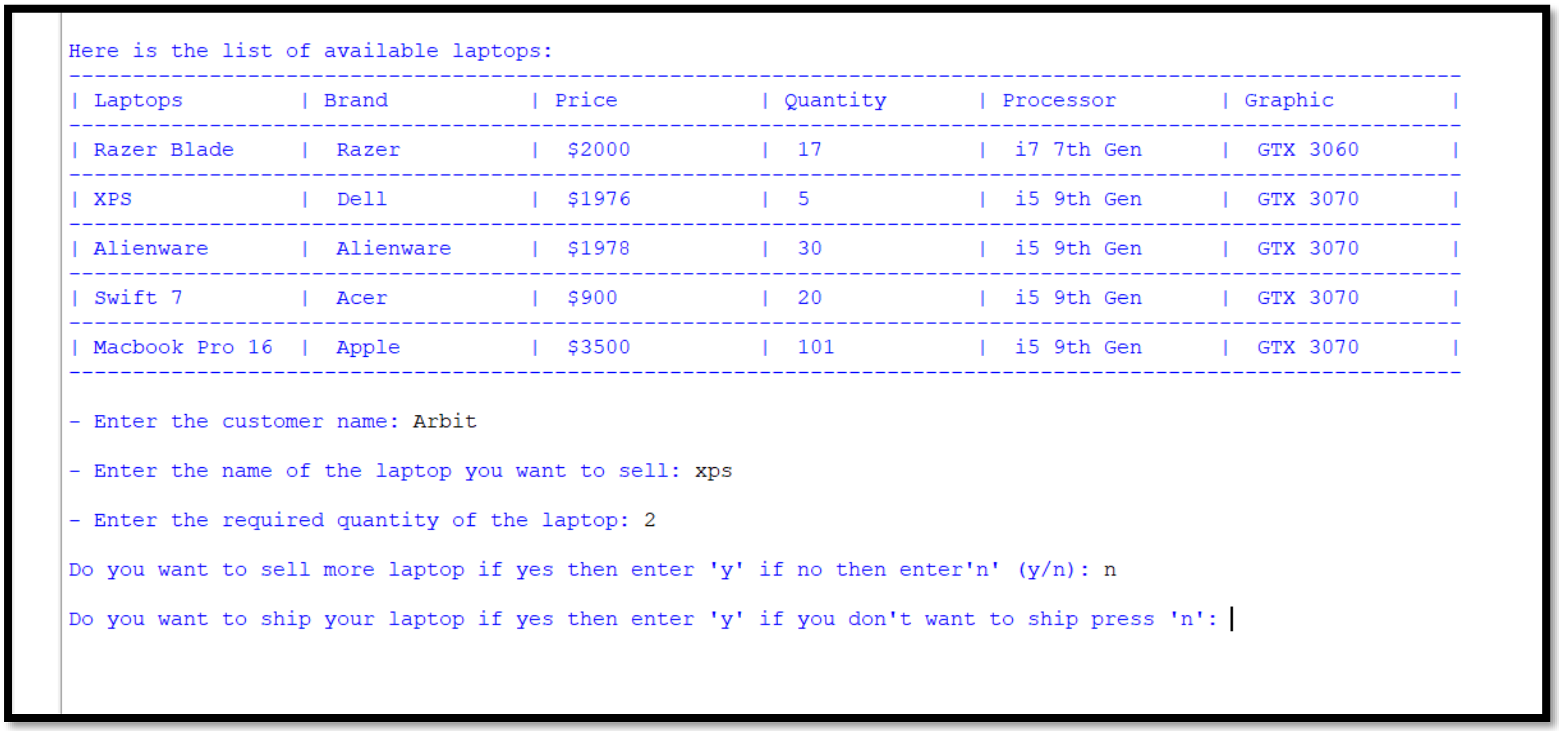
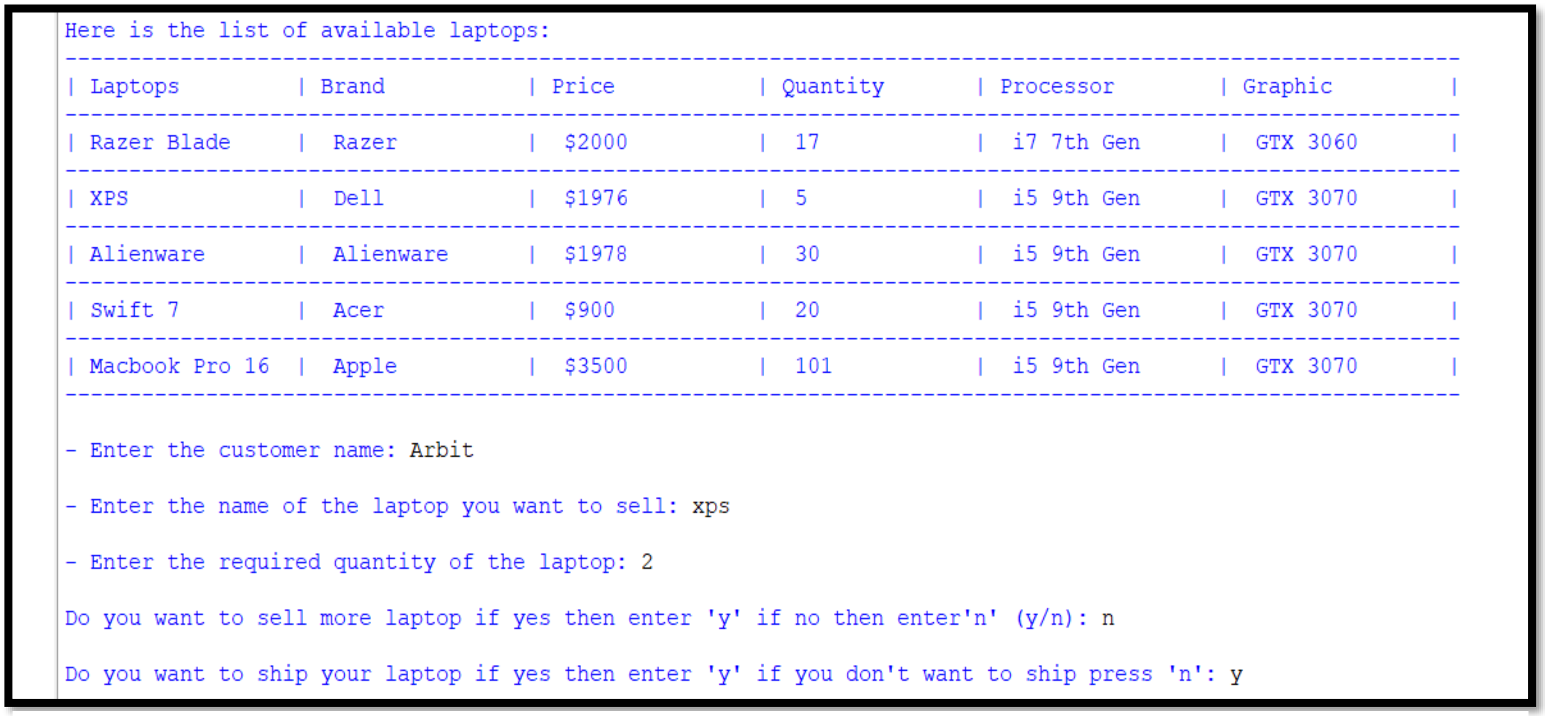
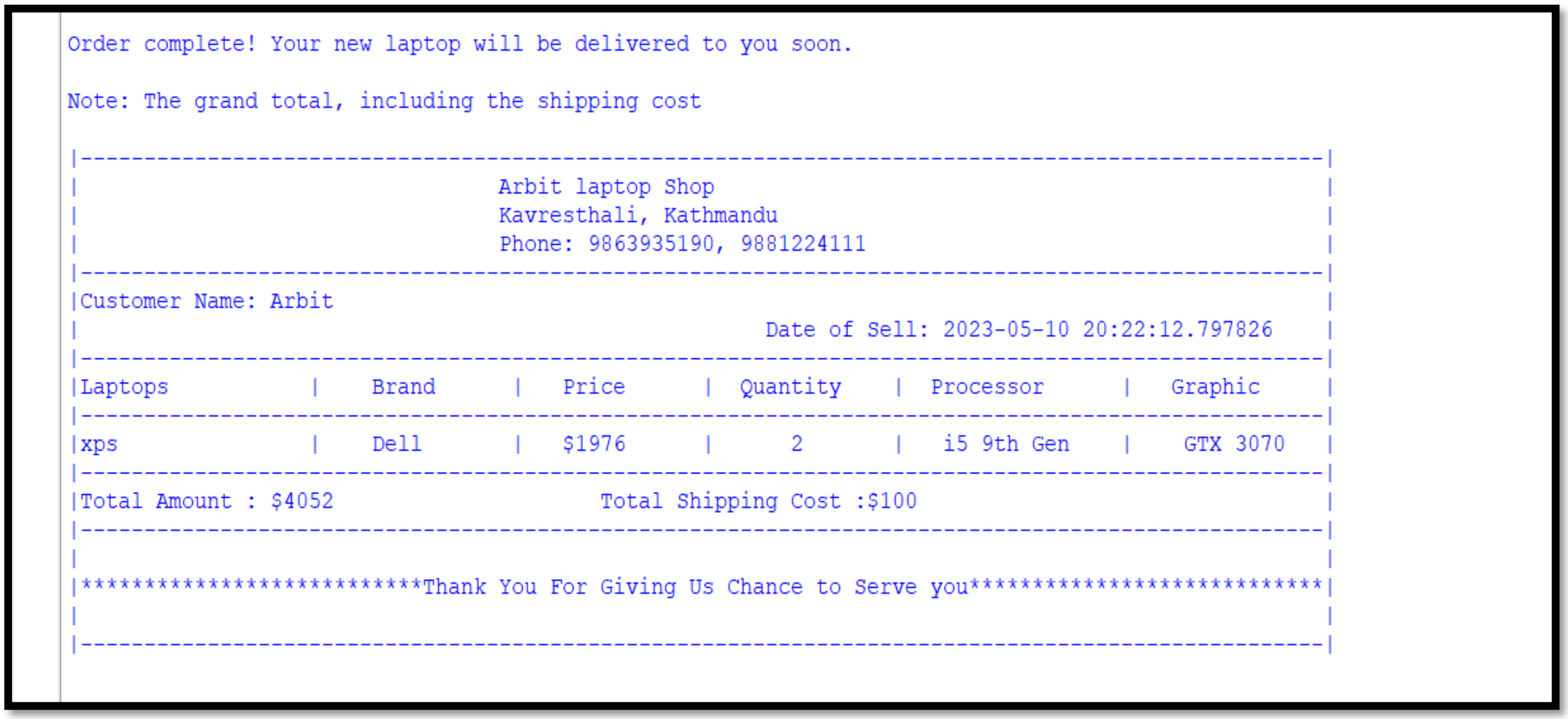

```
Here is the list of available laptops:
-----------------------------------------------------------------------------------------------------------
| Laptops          | Brand            | Price            | Quantity        | Processor          | Graphic            |
-----------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer           |  $2000           |  17             |  i7 7th Gen        |  GTX 3060          |
-----------------------------------------------------------------------------------------------------------
| XPS              |  Dell            |  $1976           |  5              |  i5 9th Gen        |  GTX 3070          |
-----------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware       |  $1978           |  30             |  i5 9th Gen        |  GTX 3070          |
-----------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer            |  $900            |  20             |  i5 9th Gen        |  GTX 3070          |
-----------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple           |  $3500           |  101            |  i5 9th Gen        |  GTX 3070          |
-----------------------------------------------------------------------------------------------------------

- Enter the customer name: Arbit

- Enter the name of the laptop you want to sell: xps

- Enter the required quantity of the laptop: 2

Do you want to sell more laptop if yes then enter 'y' if no then enter'n' (y/n): n

Do you want to ship your laptop if yes then enter 'y' if you don't want to ship press 'n':
```

Figure 7 Screenshot of if user want to sell more laptops or not



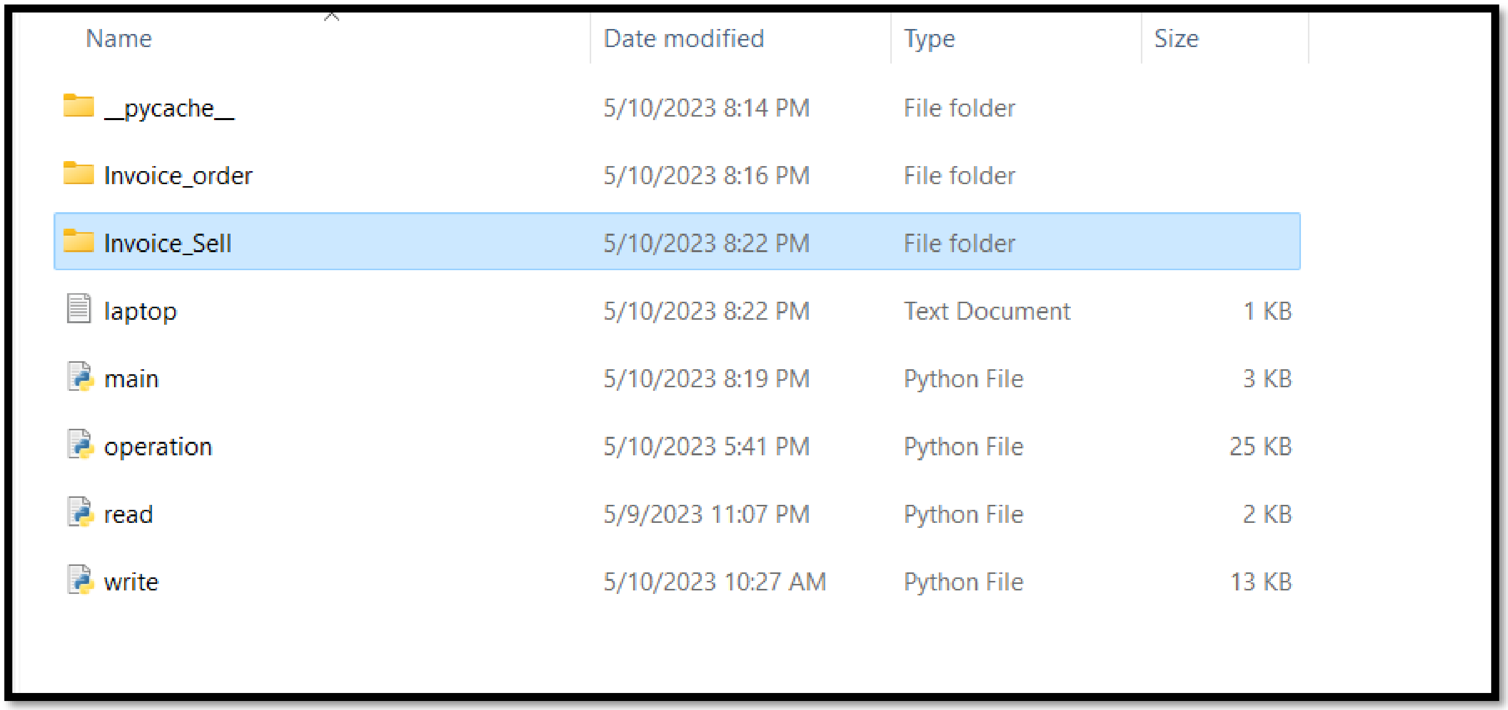
```
Here is the list of available laptops:
-------------------------------------------------------------------------------------------------------------
| Laptops          | Brand            | Price            | Quantity         | Processor          | Graphic          |
-------------------------------------------------------------------------------------------------------------
| Razer Blade     |  Razer            |  $2000            |  17               |  i7 7th Gen       |  GTX 3060         |
-------------------------------------------------------------------------------------------------------------
| XPS             |  Dell             |  $1976            |  5                |  i5 9th Gen       |  GTX 3070         |
-------------------------------------------------------------------------------------------------------------
| Alienware       |  Alienware        |  $1978            |  30               |  i5 9th Gen       |  GTX 3070         |
-------------------------------------------------------------------------------------------------------------
| Swift 7         |  Acer             |  $900             |  20               |  i5 9th Gen       |  GTX 3070         |
-------------------------------------------------------------------------------------------------------------
| Macbook Pro 16  |  Apple            |  $3500            |  101              |  i5 9th Gen       |  GTX 3070         |
-------------------------------------------------------------------------------------------------------------

- Enter the customer name: Arbit

- Enter the name of the laptop you want to sell: xps

- Enter the required quantity of the laptop: 2

Do you want to sell more laptop if yes then enter 'y' if no then enter'n' (y/n): n

Do you want to ship your laptop if yes then enter 'y' if you don't want to ship press 'n': y
```

Figure 10 Screenshot of customer want to ship laptop or not



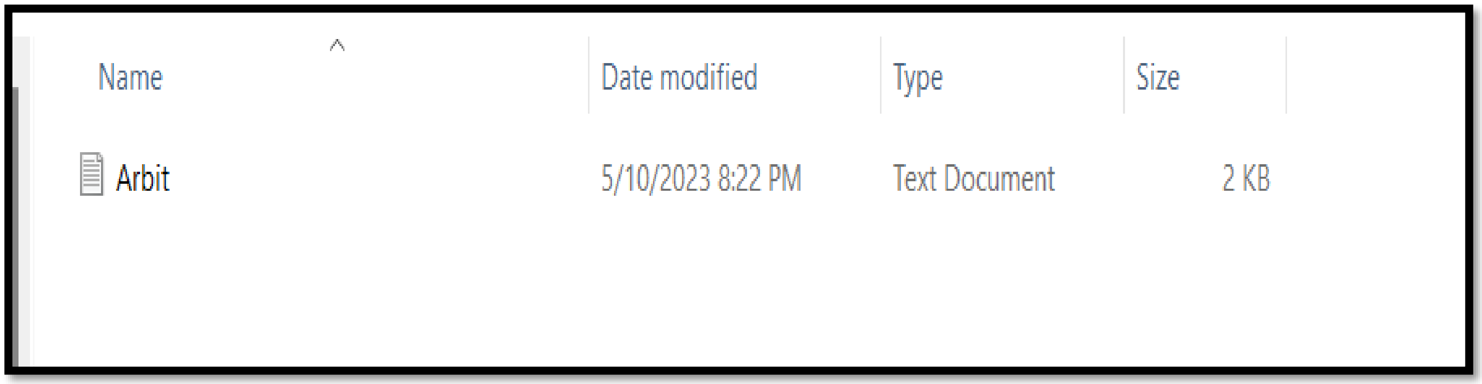
```
Order complete! Your new laptop will be delivered to you soon.

Note: The grand total, including the shipping cost

|--------------------------------------------------------------------------------------------------|
|                                  Arbit laptop Shop                                               |
|                                  Kavresthali, Kathmandu                                          |
|                                  Phone: 9863935190, 9881224111                                   |
|--------------------------------------------------------------------------------------------------|
|Customer Name: Arbit                                                                              |
|                                                       Date of Sell: 2023-05-10 20:22:12.797826   |
|--------------------------------------------------------------------------------------------------|
|Laptops              |    Brand       |    Price      |   Quantity     |   Processor       |    Graphic    |
|--------------------------------------------------------------------------------------------------|
|xps                  |    Dell        |    $1976      |       2        |    i5 9th Gen     |    GTX 3070   |
|--------------------------------------------------------------------------------------------------|
|Total Amount : $4052                       Total Shipping Cost :$100                              |
|--------------------------------------------------------------------------------------------------|
|                                                                                                  |
|***************************Thank You For Giving Us Chance to Serve you****************************|
|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
```

Figure 9 Screenshot of bill after laptop succesfully sell



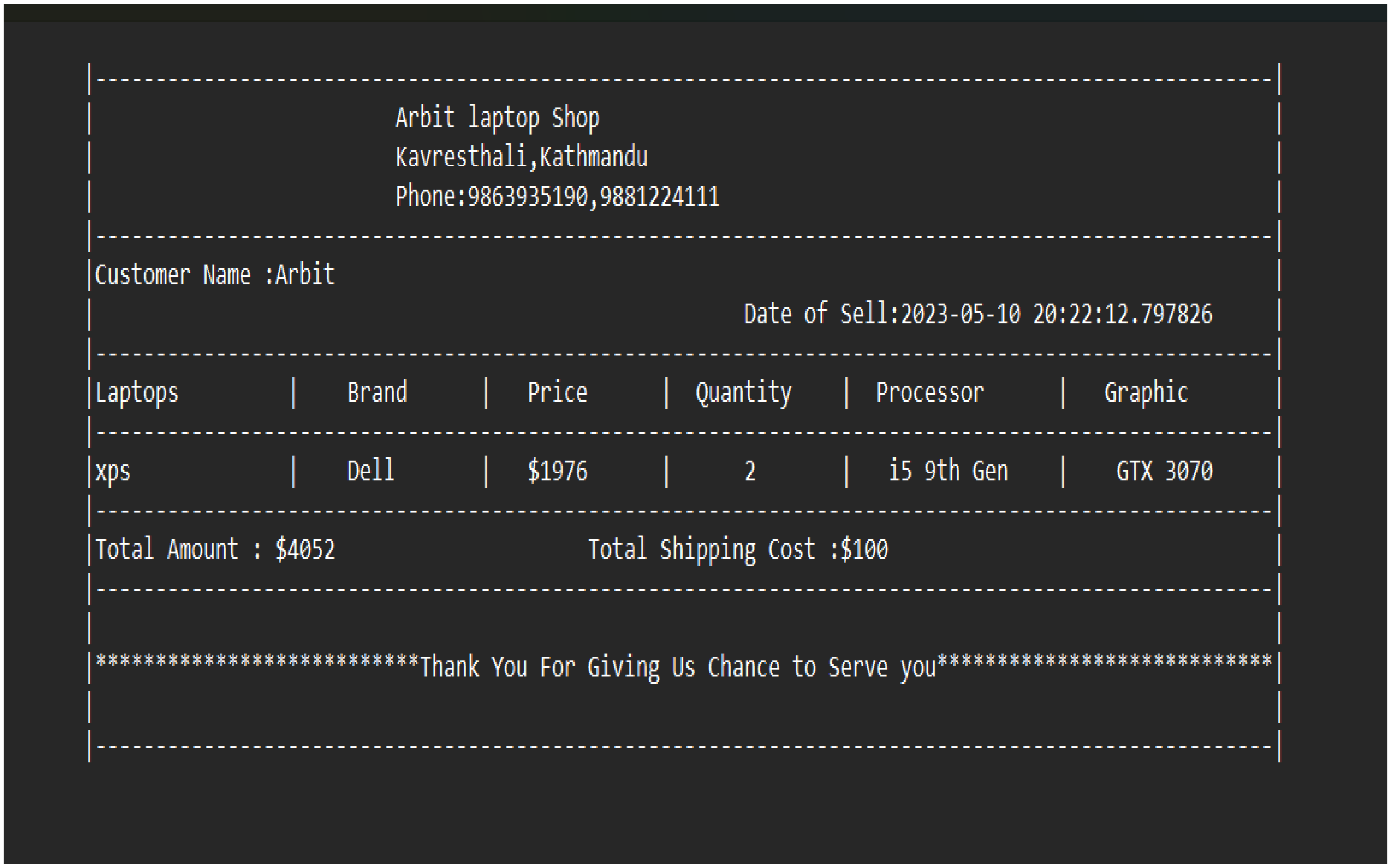
Name	Date modified	Type	Size
__pycache__	5/10/2023 8:14 PM	File folder	
Invoice_order	5/10/2023 8:16 PM	File folder	
Invoice_Sell	5/10/2023 8:22 PM	File folder	
laptop	5/10/2023 8:22 PM	Text Document	1 KB
main	5/10/2023 8:19 PM	Python File	3 KB
operation	5/10/2023 5:41 PM	Python File	25 KB
read	5/9/2023 11:07 PM	Python File	2 KB
write	5/10/2023 10:27 AM	Python File	13 KB

Figure 11 Screenshot of Invoice_sell folder



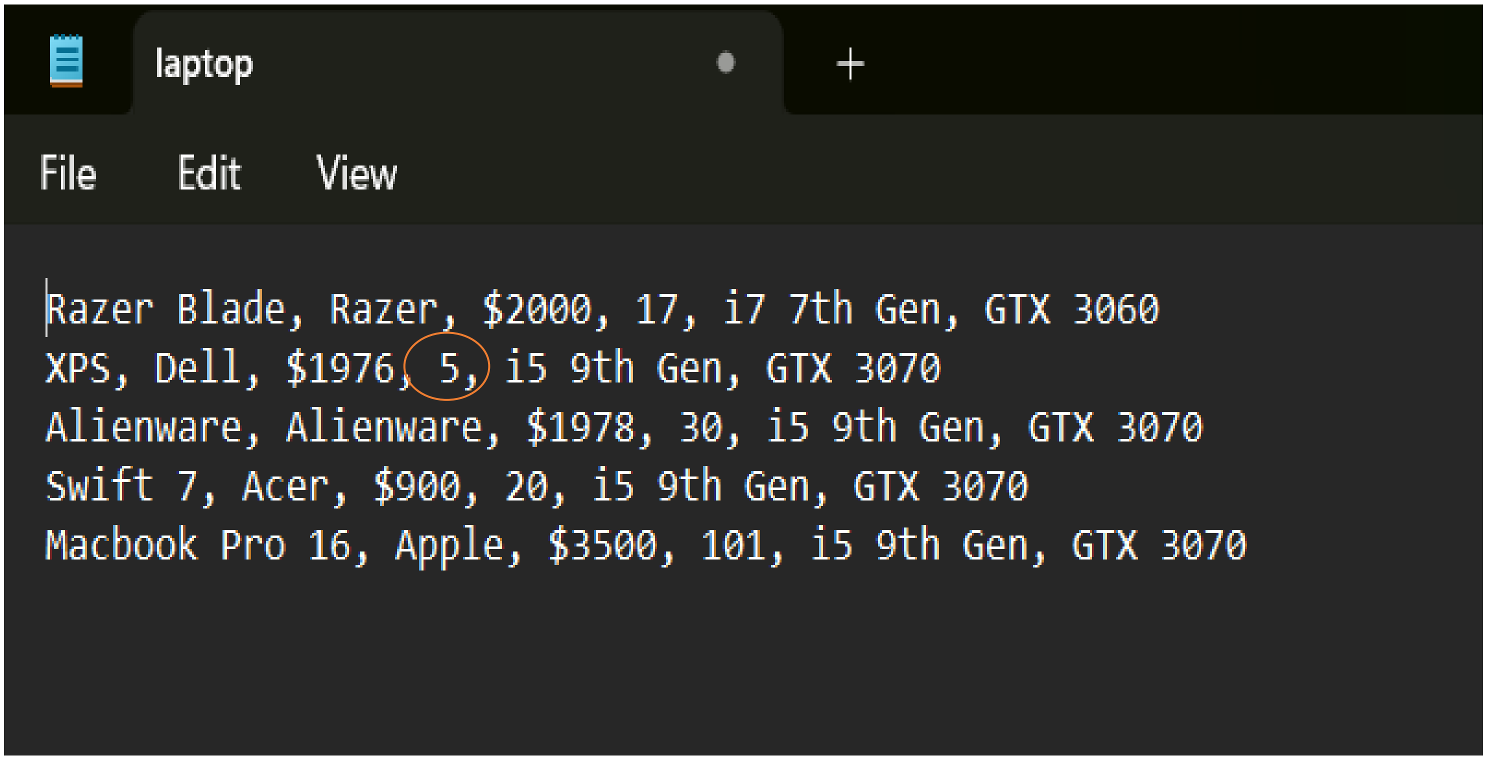
Name	Date modified	Type	Size
Arbit	5/10/2023 8:22 PM	Text Document	2 KB

Figure 12 Screenshot of text file with customer name



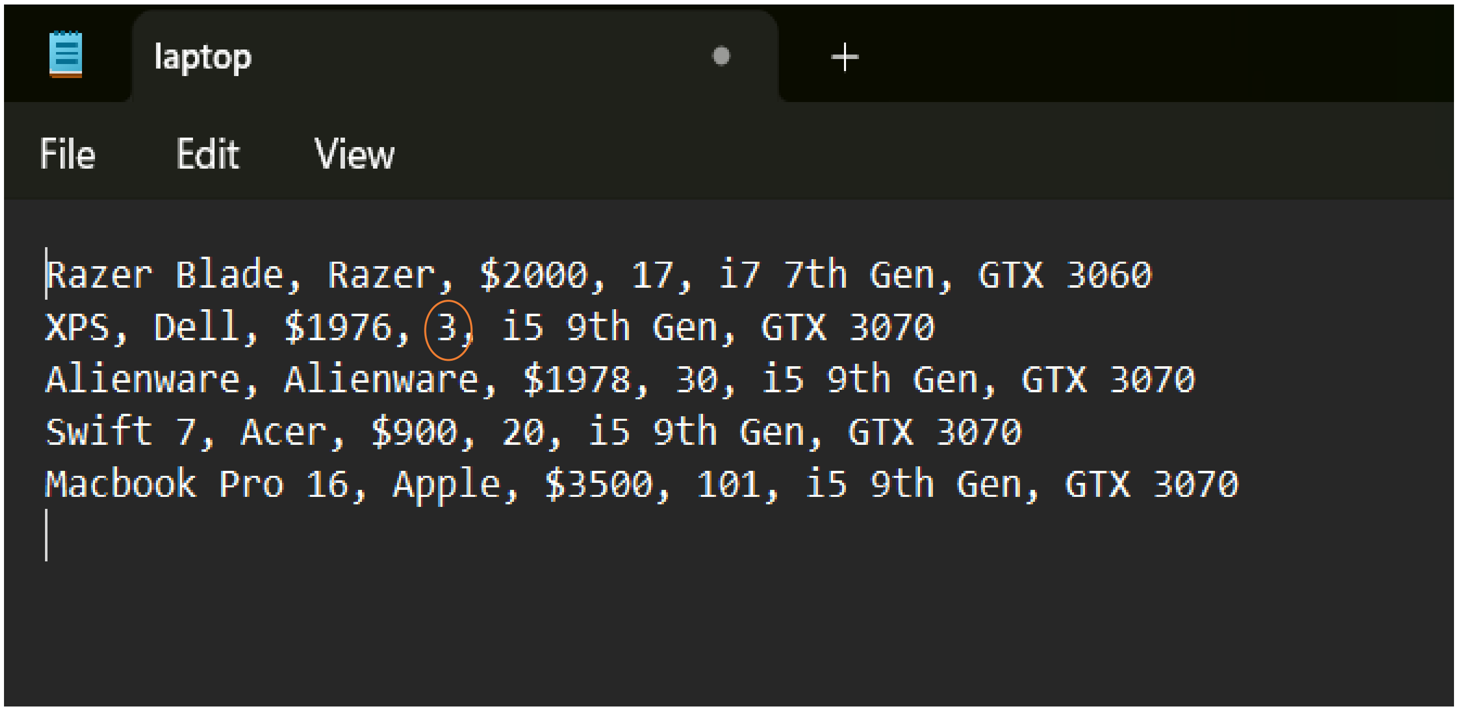
```
|-----------------------------------------------------------------------------------------------|
|                        Arbit laptop Shop                                                      |
|                        Kavresthali,Kathmandu                                                  |
|                        Phone:9863935190,9881224111                                            |
|-----------------------------------------------------------------------------------------------|
|Customer Name :Arbit                                                                           |
|                                                   Date of Sell:2023-05-10 20:22:12.797826     |
|-----------------------------------------------------------------------------------------------|
|Laptops         |    Brand      |   Price      |  Quantity    |  Processor      |   Graphic     |
|-----------------------------------------------------------------------------------------------|
|xps             |    Dell       |   $1976      |      2       |   i5 9th Gen    |    GTX 3070   |
|-----------------------------------------------------------------------------------------------|
|Total Amount : $4052                   Total Shipping Cost :$100                               |
|-----------------------------------------------------------------------------------------------|
|                                                                                               |
|**************************Thank You For Giving Us Chance to Serve you***************************|
|                                                                                               |
|-----------------------------------------------------------------------------------------------|
```

Figure 13 Screenshot of Invoice of sell in txt file



```
Razer Blade, Razer, $2000, 17, i7 7th Gen, GTX 3060
XPS, Dell, $1976, 5, i5 9th Gen, GTX 3070
Alienware, Alienware, $1978, 30, i5 9th Gen, GTX 3070
Swift 7, Acer, $900, 20, i5 9th Gen, GTX 3070
Macbook Pro 16, Apple, $3500, 101, i5 9th Gen, GTX 3070
```

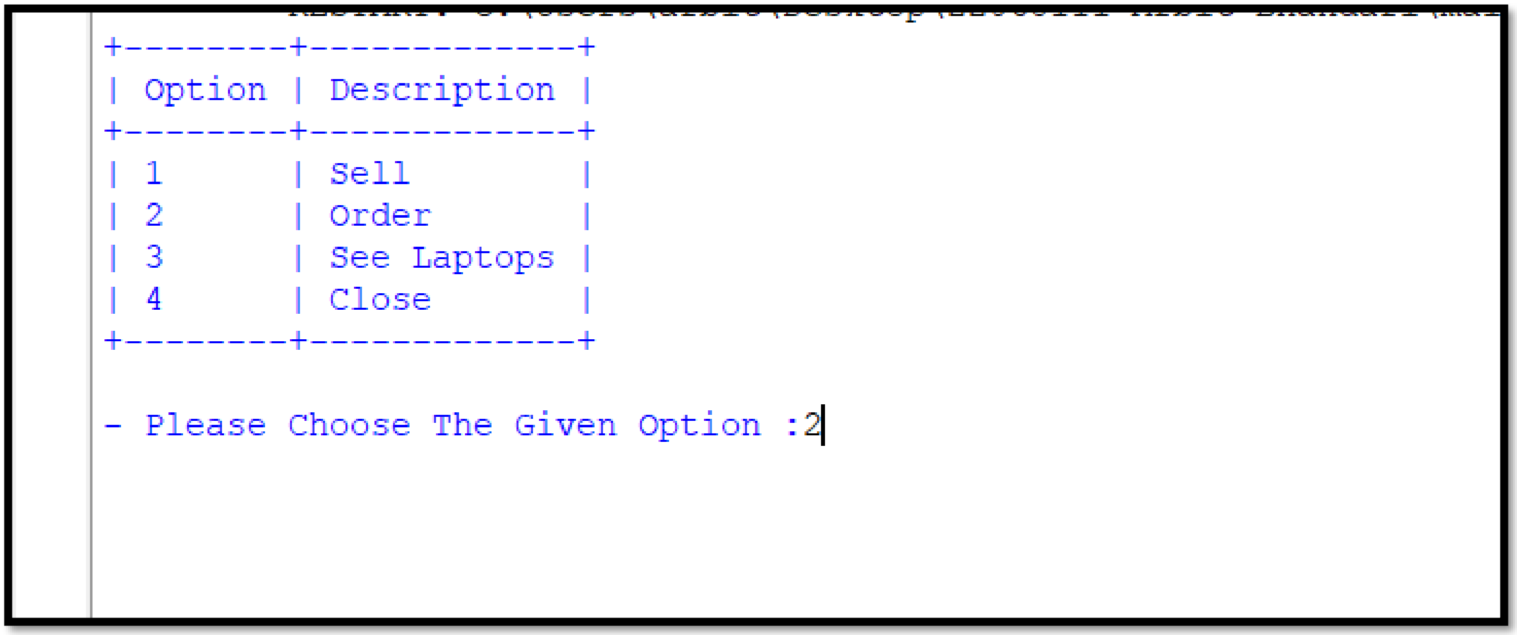
Figure 14 Screenshot of xps quantity before sell



```
Razer Blade, Razer, $2000, 17, i7 7th Gen, GTX 3060
XPS, Dell, $1976, 3, i5 9th Gen, GTX 3070
Alienware, Alienware, $1978, 30, i5 9th Gen, GTX 3070
Swift 7, Acer, $900, 20, i5 9th Gen, GTX 3070
Macbook Pro 16, Apple, $3500, 101, i5 9th Gen, GTX 3070
```

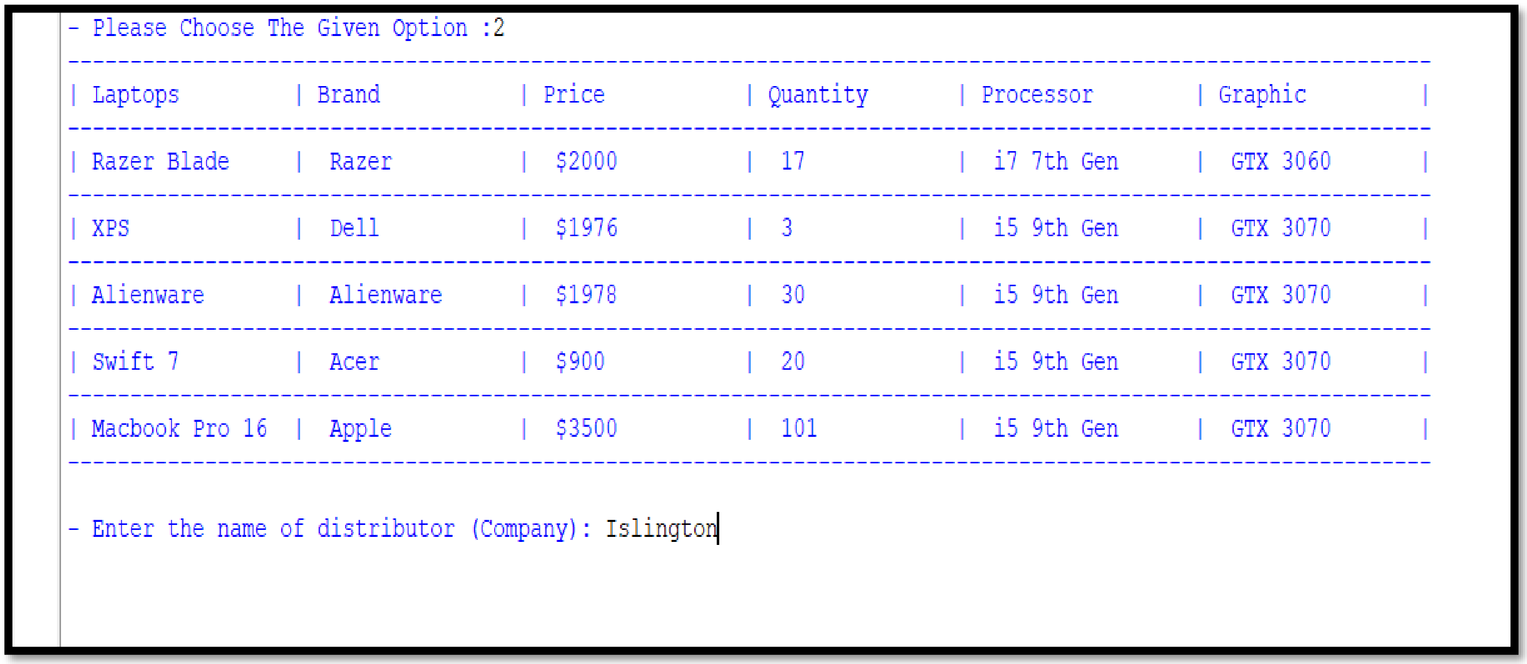
Figure 15 Screenshot of xps quantity after sell 2 laptop

3.2 Showing the complete process for the purchase of the laptop



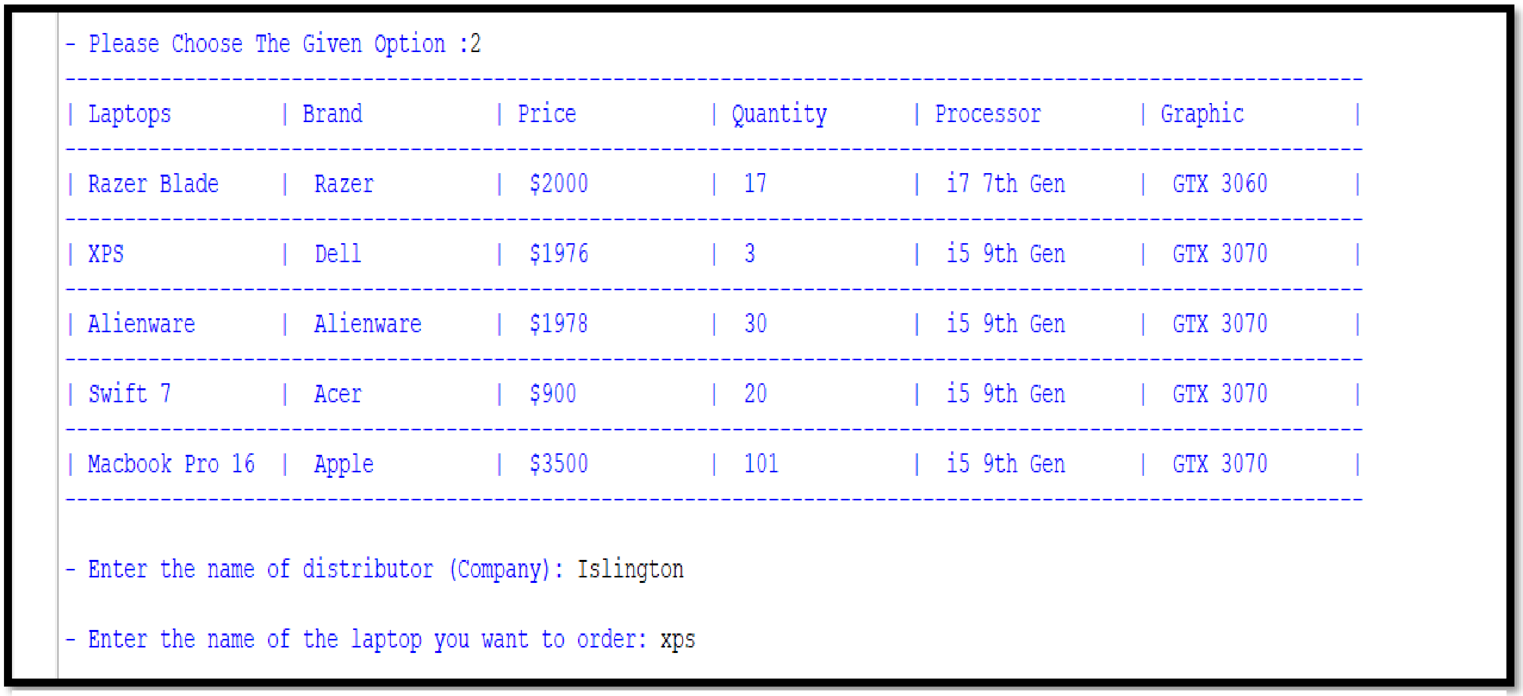
```
+--------+-------------+
| Option | Description |
+--------+-------------+
| 1      | Sell        |
| 2      | Order       |
| 3      | See Laptops |
| 4      | Close       |
+--------+-------------+

- Please Choose The Given Option :2
```

Figure 16 Screenshot of selecting option order(Purchase)



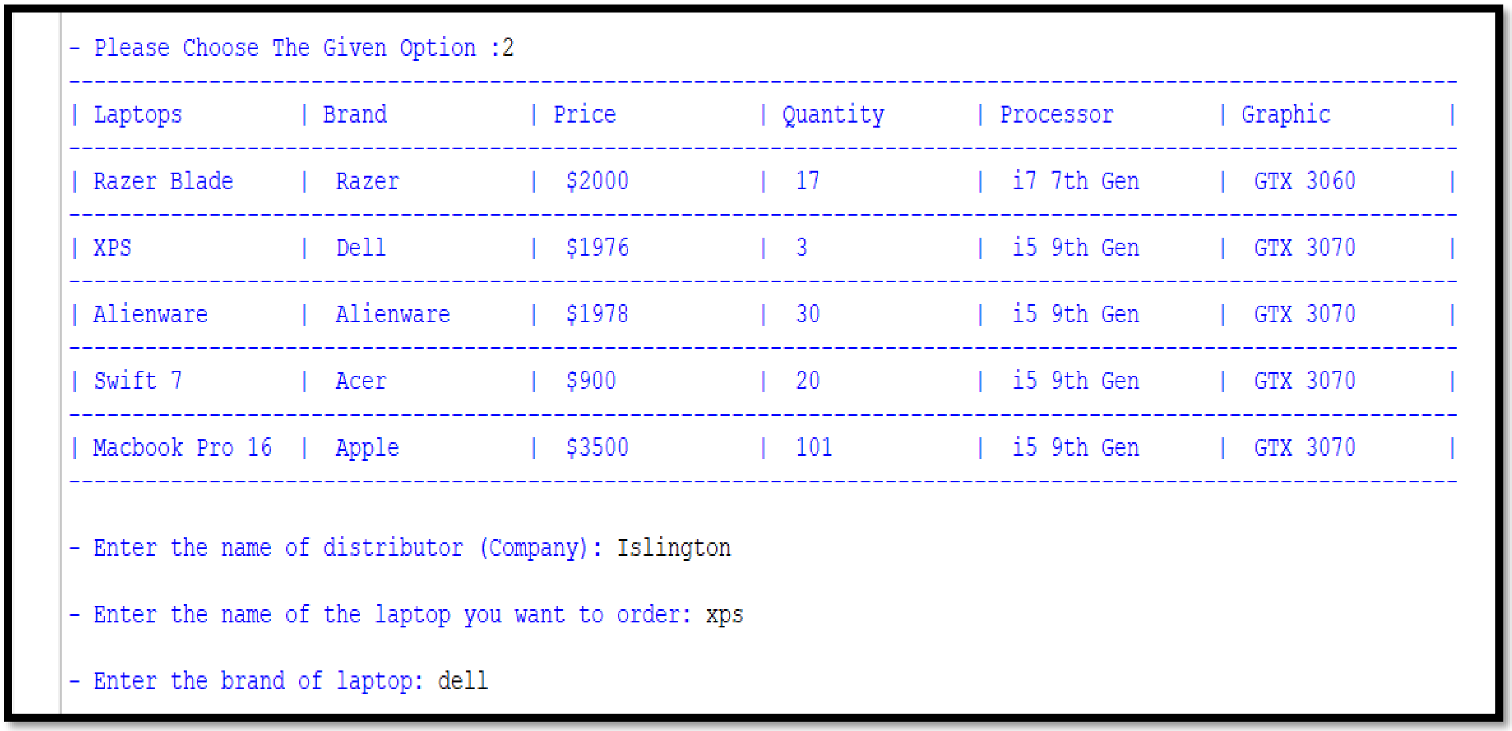
```
- Please Choose The Given Option :2
---------------------------------------------------------------------------------------------------------
| Laptops         | Brand           | Price           | Quantity        | Processor        | Graphic         |
---------------------------------------------------------------------------------------------------------
| Razer Blade     |  Razer          |  $2000          |  17             |  i7 7th Gen      |  GTX 3060       |
---------------------------------------------------------------------------------------------------------
| XPS             |  Dell           |  $1976          |  3              |  i5 9th Gen      |  GTX 3070       |
---------------------------------------------------------------------------------------------------------
| Alienware       |  Alienware      |  $1978          |  30             |  i5 9th Gen      |  GTX 3070       |
---------------------------------------------------------------------------------------------------------
| Swift 7         |  Acer           |  $900           |  20             |  i5 9th Gen      |  GTX 3070       |
---------------------------------------------------------------------------------------------------------
| Macbook Pro 16  |  Apple          |  $3500          |  101            |  i5 9th Gen      |  GTX 3070       |
---------------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): Islington
```

Figure 17 Screenshot of distributor name on order



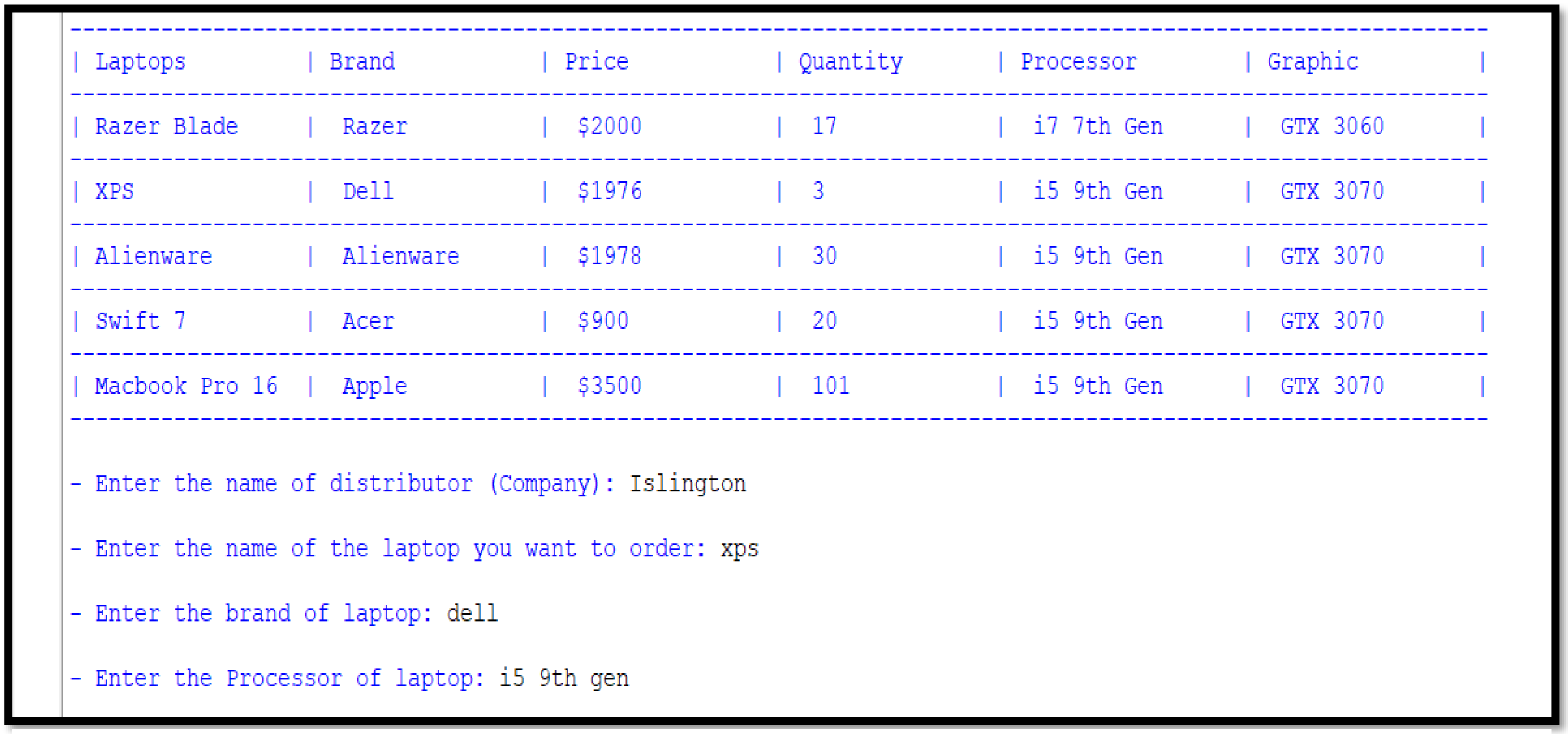
```
- Please Choose The Given Option :2
---------------------------------------------------------------------------------------------------------
| Laptops         | Brand          | Price          | Quantity       | Processor        | Graphic        |
---------------------------------------------------------------------------------------------------------
| Razer Blade     |  Razer         |  $2000         |  17            |  i7 7th Gen      |  GTX 3060      |
---------------------------------------------------------------------------------------------------------
| XPS             |  Dell          |  $1976         |  3             |  i5 9th Gen      |  GTX 3070      |
---------------------------------------------------------------------------------------------------------
| Alienware       |  Alienware     |  $1978         |  30            |  i5 9th Gen      |  GTX 3070      |
---------------------------------------------------------------------------------------------------------
| Swift 7         |  Acer          |  $900          |  20            |  i5 9th Gen      |  GTX 3070      |
---------------------------------------------------------------------------------------------------------
| Macbook Pro 16  |  Apple         |  $3500         |  101           |  i5 9th Gen      |  GTX 3070      |
---------------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): Islington

- Enter the name of the laptop you want to order: xps
```

Figure 18 Screenshot of order laptop name



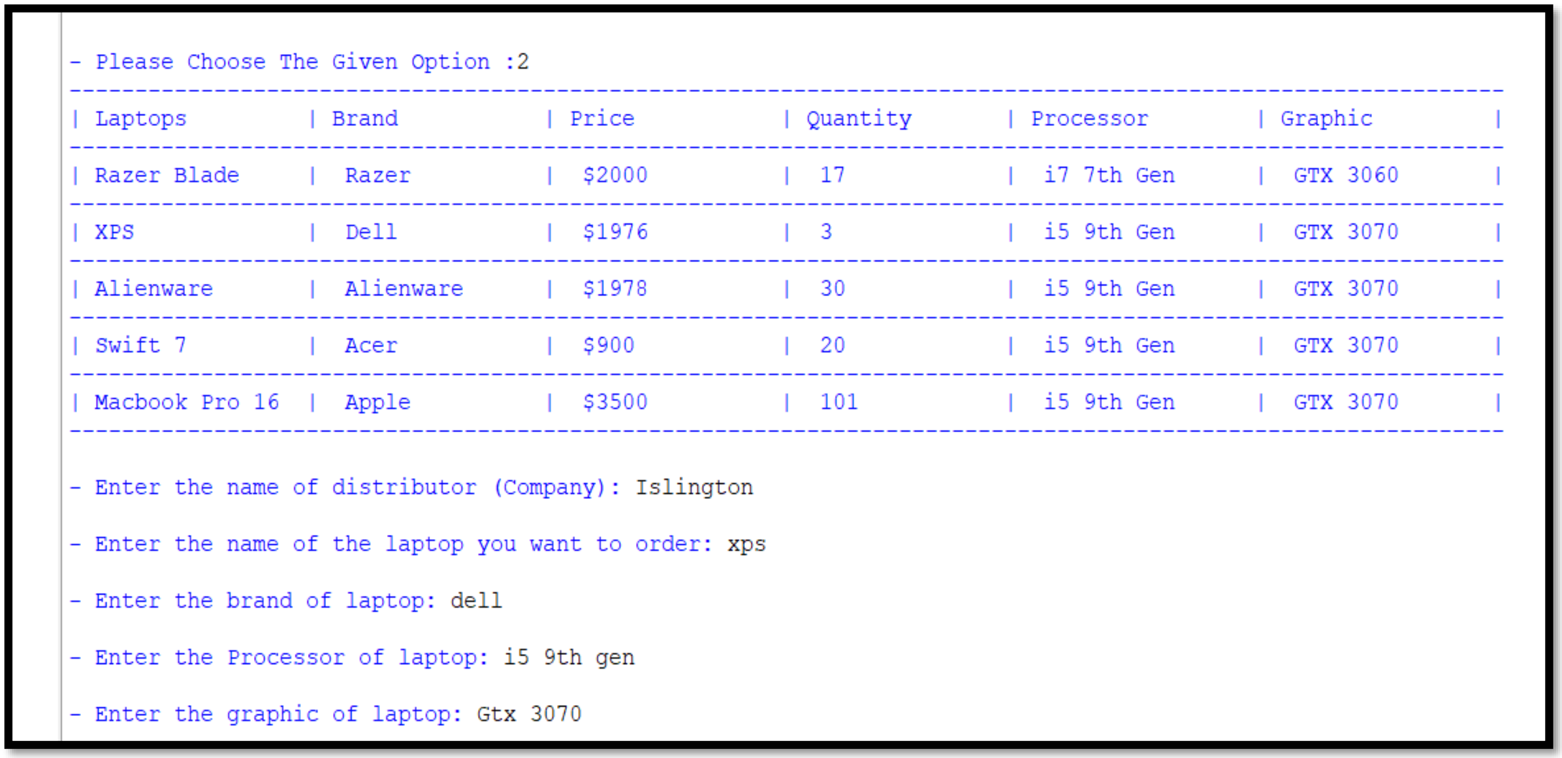
```
- Please Choose The Given Option :2
---------------------------------------------------------------------------------------------------------
| Laptops         | Brand          | Price          | Quantity       | Processor        | Graphic        |
---------------------------------------------------------------------------------------------------------
| Razer Blade     |  Razer         |  $2000         |  17            |  i7 7th Gen      |  GTX 3060      |
---------------------------------------------------------------------------------------------------------
| XPS             |  Dell          |  $1976         |  3             |  i5 9th Gen      |  GTX 3070      |
---------------------------------------------------------------------------------------------------------
| Alienware       |  Alienware     |  $1978         |  30            |  i5 9th Gen      |  GTX 3070      |
---------------------------------------------------------------------------------------------------------
| Swift 7         |  Acer          |  $900          |  20            |  i5 9th Gen      |  GTX 3070      |
---------------------------------------------------------------------------------------------------------
| Macbook Pro 16  |  Apple         |  $3500         |  101           |  i5 9th Gen      |  GTX 3070      |
---------------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): Islington

- Enter the name of the laptop you want to order: xps

- Enter the brand of laptop: dell
```

Figure 19 Screenshot of brand name to order(Purchase)



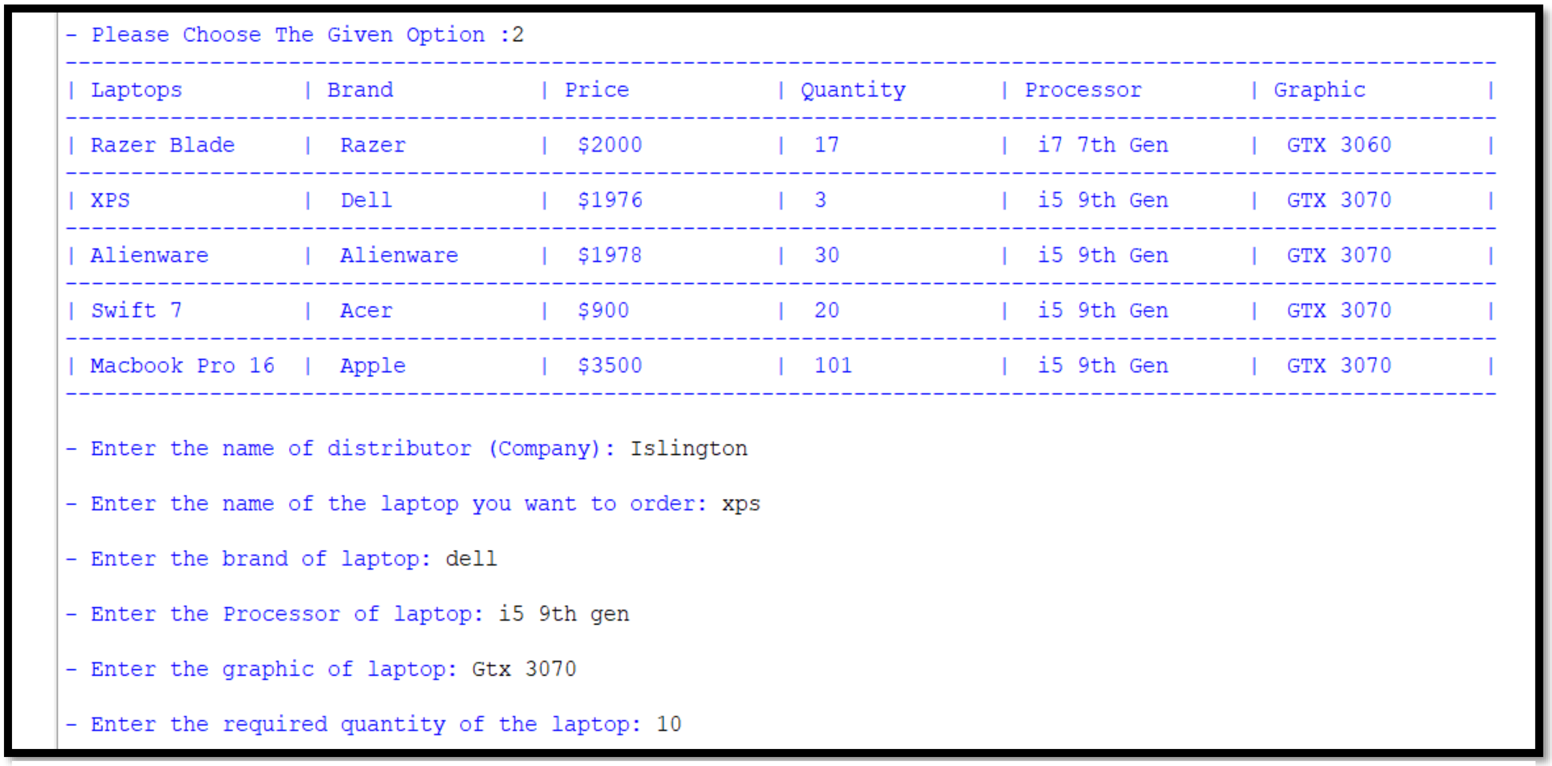
```
-----------------------------------------------------------------------------------------------------------
| Laptops          | Brand            | Price            | Quantity        | Processor         | Graphic          |
-----------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer           |  $2000           |  17             |  i7 7th Gen       |  GTX 3060        |
-----------------------------------------------------------------------------------------------------------
| XPS              |  Dell            |  $1976           |  3              |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware       |  $1978           |  30             |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer            |  $900            |  20             |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple           |  $3500           |  101            |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): Islington

- Enter the name of the laptop you want to order: xps

- Enter the brand of laptop: dell

- Enter the Processor of laptop: i5 9th gen
```

Figure 20 Screenshot of processor name to order (Purchase)



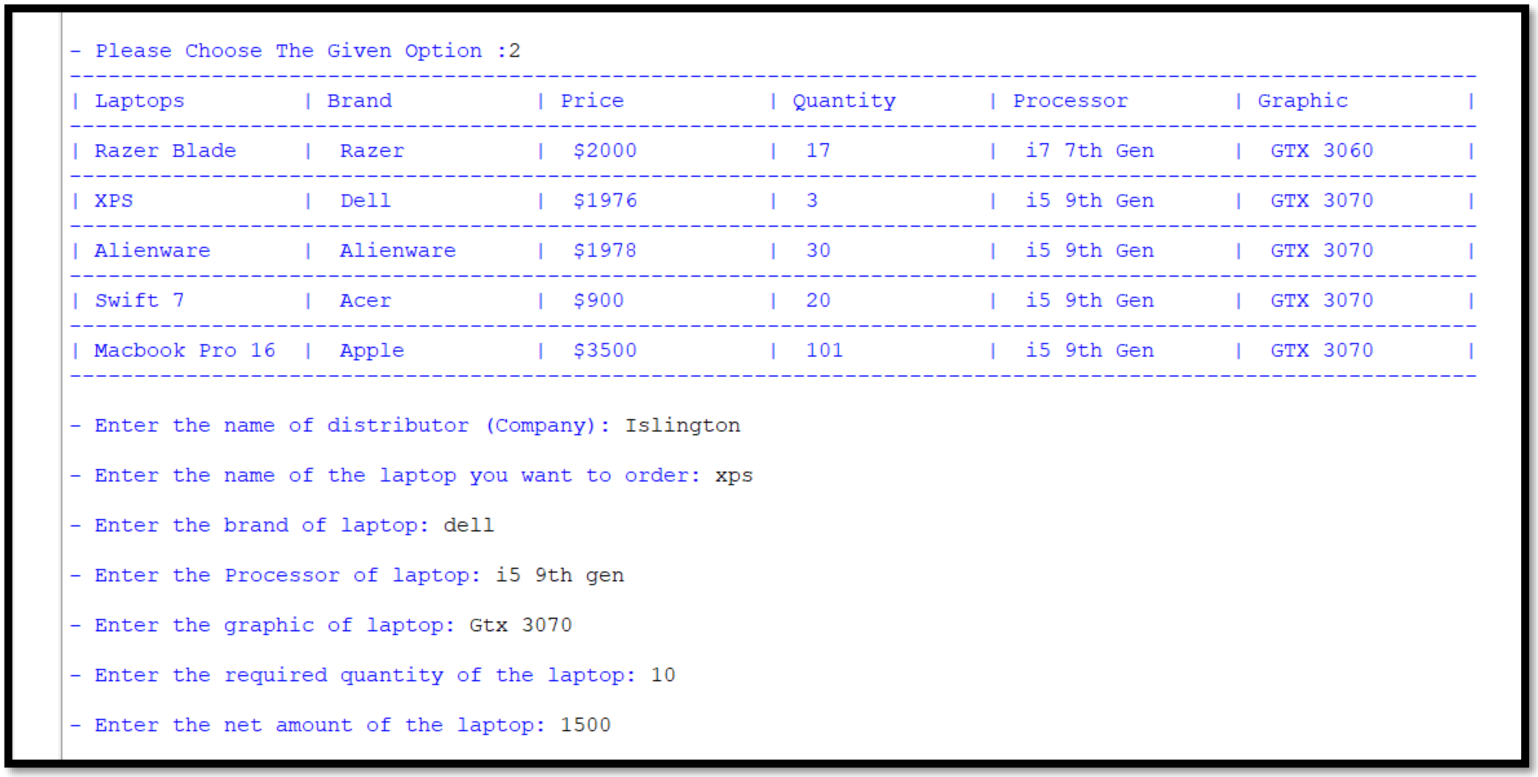
```
- Please Choose The Given Option :2
-----------------------------------------------------------------------------------------------------------
| Laptops          | Brand            | Price            | Quantity        | Processor         | Graphic          |
-----------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer           |  $2000           |  17             |  i7 7th Gen       |  GTX 3060        |
-----------------------------------------------------------------------------------------------------------
| XPS              |  Dell            |  $1976           |  3              |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware       |  $1978           |  30             |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer            |  $900            |  20             |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple           |  $3500           |  101            |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): Islington

- Enter the name of the laptop you want to order: xps

- Enter the brand of laptop: dell

- Enter the Processor of laptop: i5 9th gen

- Enter the graphic of laptop: Gtx 3070
```

Figure 21 Screenshot of graphic name to order (Purchase)



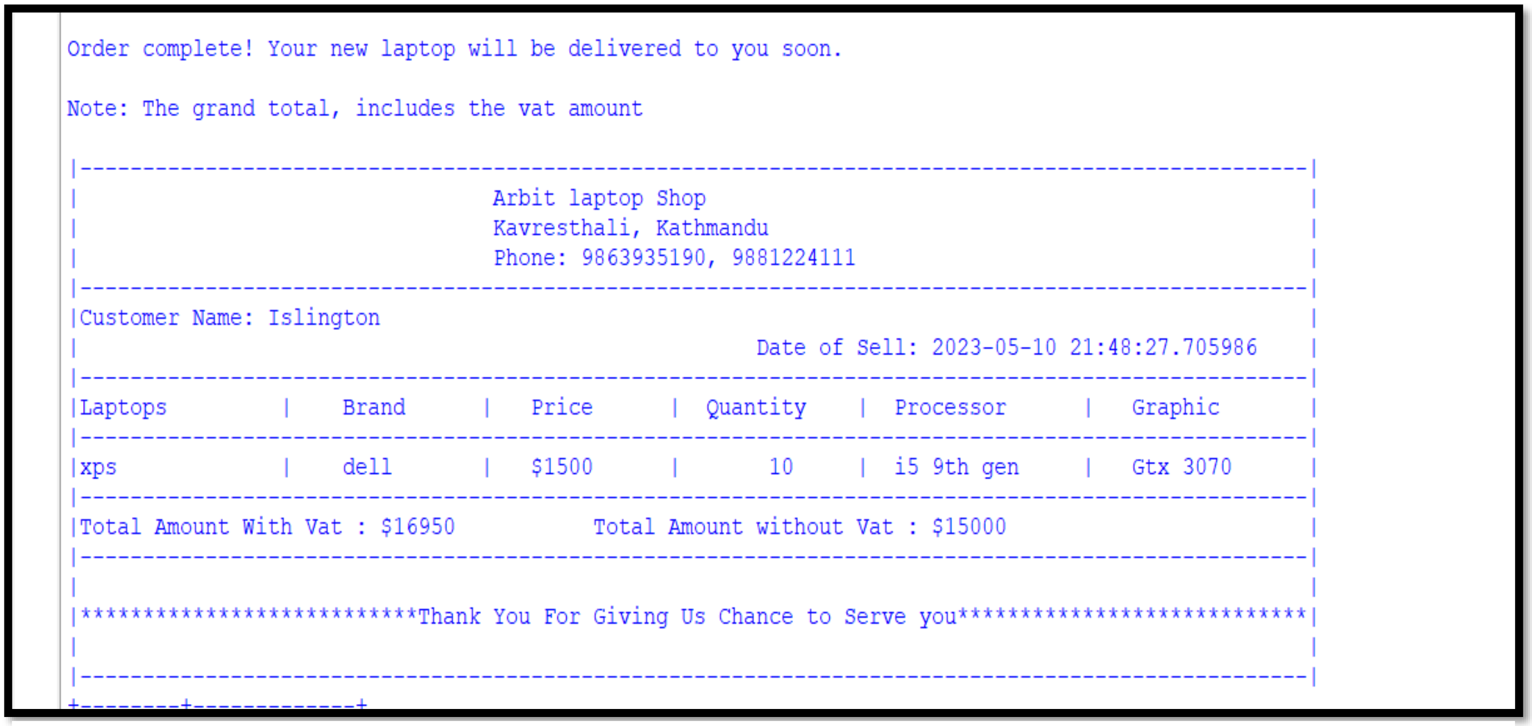
```
- Please Choose The Given Option :2
-------------------------------------------------------------------------------------------------------------
| Laptops          | Brand            | Price            | Quantity         | Processor          | Graphic          |
-------------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer           |  $2000           |  17              |  i7 7th Gen        |  GTX 3060        |
-------------------------------------------------------------------------------------------------------------
| XPS              |  Dell            |  $1976           |  3               |  i5 9th Gen        |  GTX 3070        |
-------------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware       |  $1978           |  30              |  i5 9th Gen        |  GTX 3070        |
-------------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer            |  $900            |  20              |  i5 9th Gen        |  GTX 3070        |
-------------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple           |  $3500           |  101             |  i5 9th Gen        |  GTX 3070        |
-------------------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): Islington

- Enter the name of the laptop you want to order: xps

- Enter the brand of laptop: dell

- Enter the Processor of laptop: i5 9th gen

- Enter the graphic of laptop: Gtx 3070

- Enter the required quantity of the laptop: 10
```

Figure 22 Screenshot of quantity to order (Purchase)



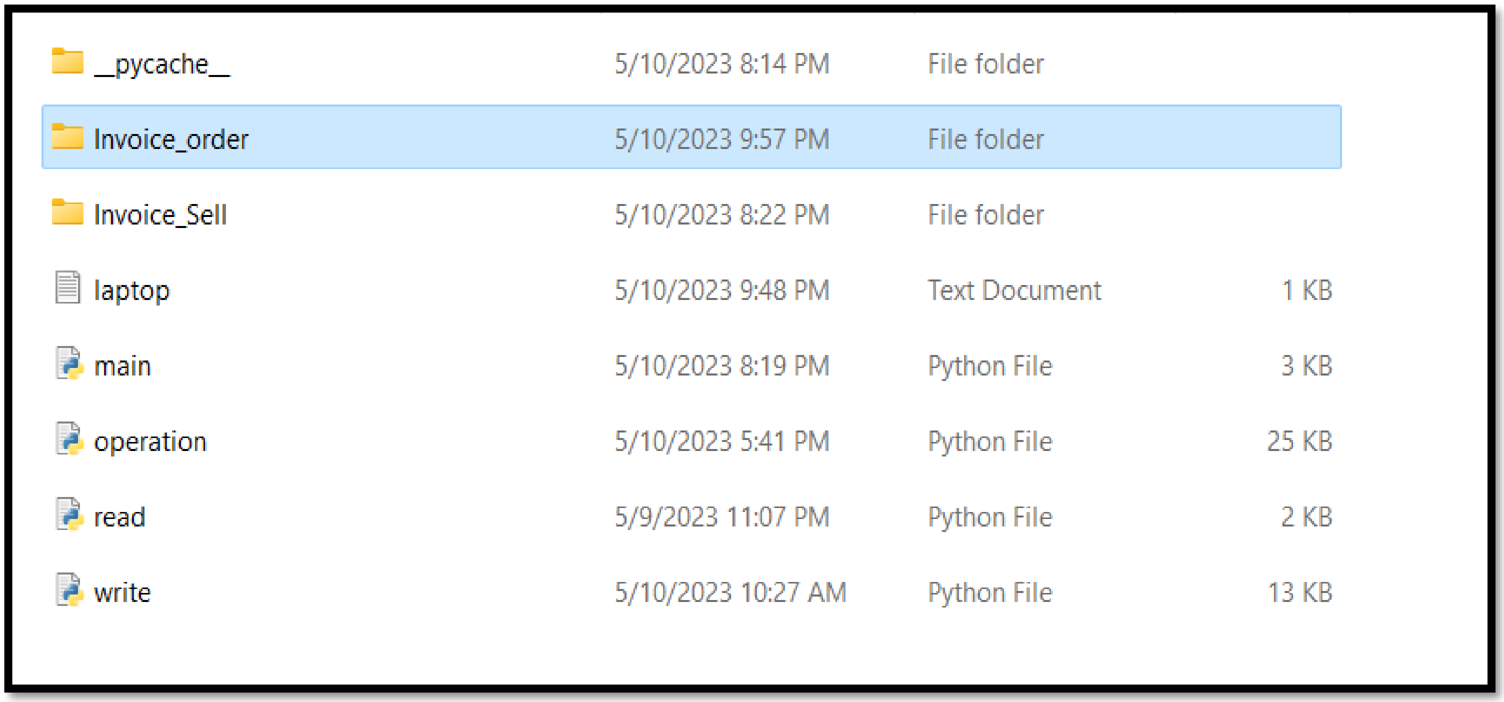
```
- Please Choose The Given Option :2
-------------------------------------------------------------------------------------------------------------
| Laptops          | Brand            | Price            | Quantity         | Processor          | Graphic          |
-------------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer           |  $2000           |  17              |  i7 7th Gen        |  GTX 3060        |
-------------------------------------------------------------------------------------------------------------
| XPS              |  Dell            |  $1976           |  3               |  i5 9th Gen        |  GTX 3070        |
-------------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware       |  $1978           |  30              |  i5 9th Gen        |  GTX 3070        |
-------------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer            |  $900            |  20              |  i5 9th Gen        |  GTX 3070        |
-------------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple           |  $3500           |  101             |  i5 9th Gen        |  GTX 3070        |
-------------------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): Islington

- Enter the name of the laptop you want to order: xps

- Enter the brand of laptop: dell

- Enter the Processor of laptop: i5 9th gen

- Enter the graphic of laptop: Gtx 3070

- Enter the required quantity of the laptop: 10

- Enter the net amount of the laptop: 1500
```

Figure 23 Screenshot of net amount of order (Purchase) Laptop



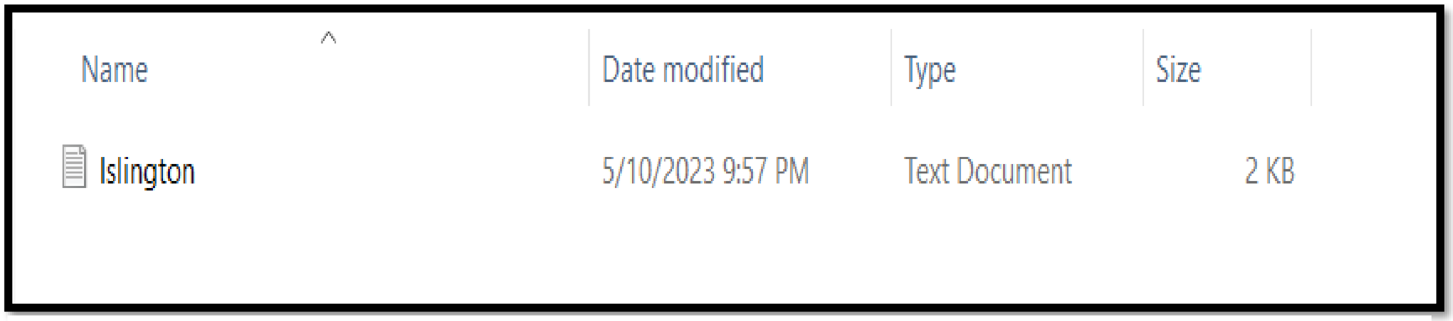
```
Order complete! Your new laptop will be delivered to you soon.

Note: The grand total, includes the vat amount

|--------------------------------------------------------------------------------------------|
|                              Arbit laptop Shop                                             |
|                              Kavresthali, Kathmandu                                        |
|                              Phone: 9863935190, 9881224111                                 |
|--------------------------------------------------------------------------------------------|
|Customer Name: Islington                                                                    |
|                                                   Date of Sell: 2023-05-10 21:48:27.705986  |
|--------------------------------------------------------------------------------------------|
|Laptops          |    Brand      |   Price       |  Quantity     |  Processor       |   Graphic      |
|--------------------------------------------------------------------------------------------|
|xps              |    dell       |   $1500       |      10       |  i5 9th gen      |   Gtx 3070     |
|--------------------------------------------------------------------------------------------|
|Total Amount With Vat : $16950           Total Amount without Vat : $15000                  |
|--------------------------------------------------------------------------------------------|
|                                                                                            |
|**************************Thank You For Giving Us Chance to Serve you***************************|
|                                                                                            |
|--------------------------------------------------------------------------------------------|
+--------+------------+
```

Figure 24 Screenshot of bill of purchased laptop in shell



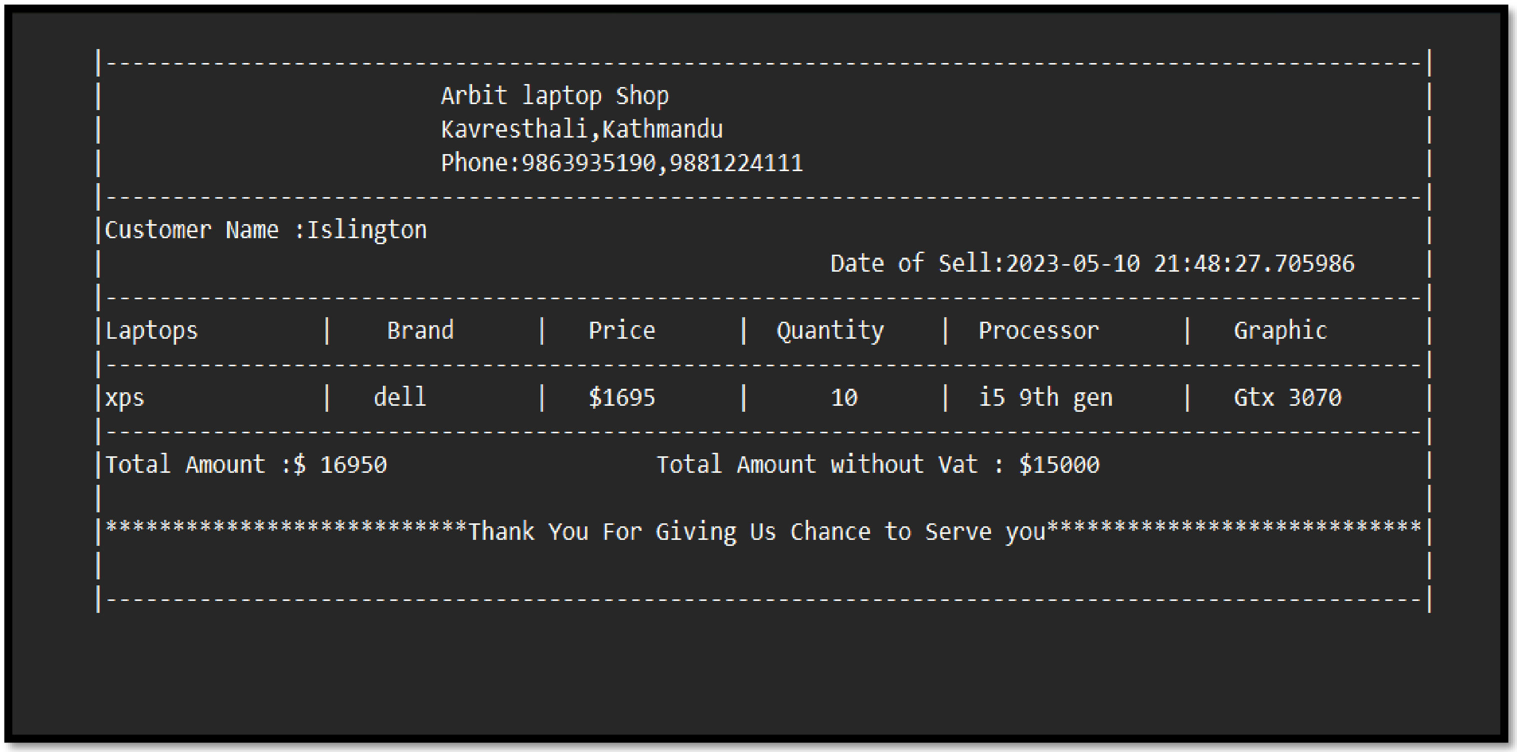
pycache	5/10/2023 8:14 PM	File folder	
Invoice_order	5/10/2023 9:57 PM	File folder	
Invoice_Sell	5/10/2023 8:22 PM	File folder	
laptop	5/10/2023 9:48 PM	Text Document	1 KB
main	5/10/2023 8:19 PM	Python File	3 KB
operation	5/10/2023 5:41 PM	Python File	25 KB
read	5/9/2023 11:07 PM	Python File	2 KB
write	5/10/2023 10:27 AM	Python File	13 KB

Figure 25 Screenshot of Invoice_order where purchase details is strored



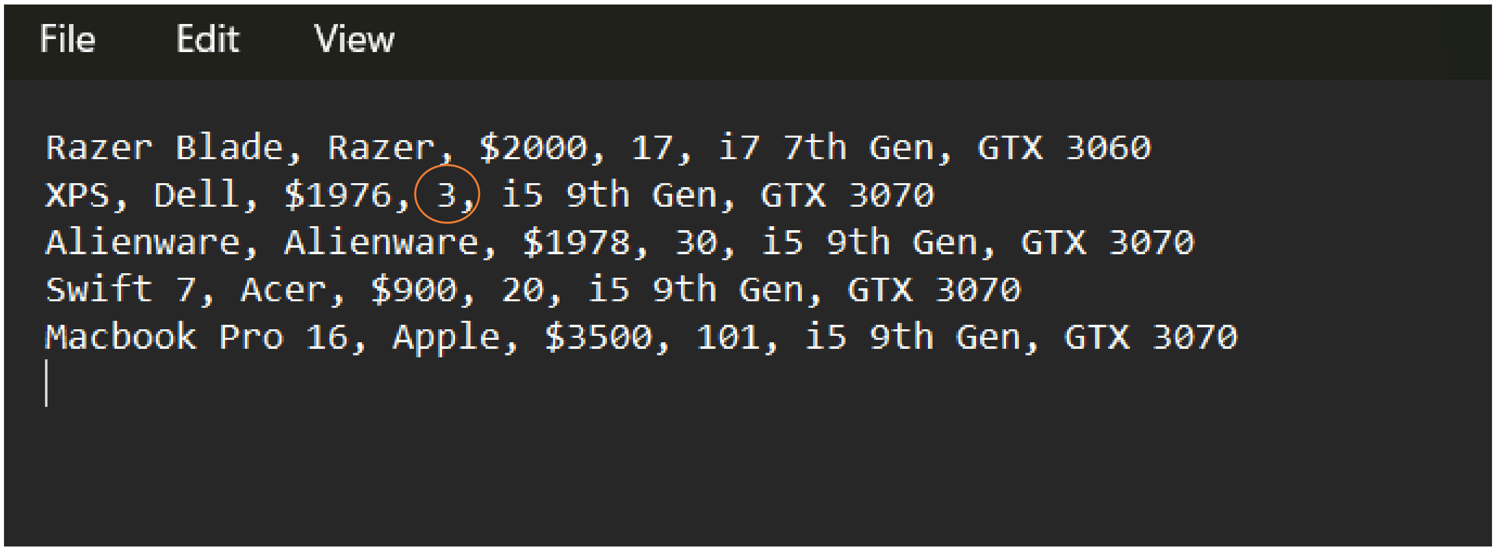
Name	Date modified	Type	Size
Islington	5/10/2023 9:57 PM	Text Document	2 KB

Figure 26 Screenshot of text file of order laptop



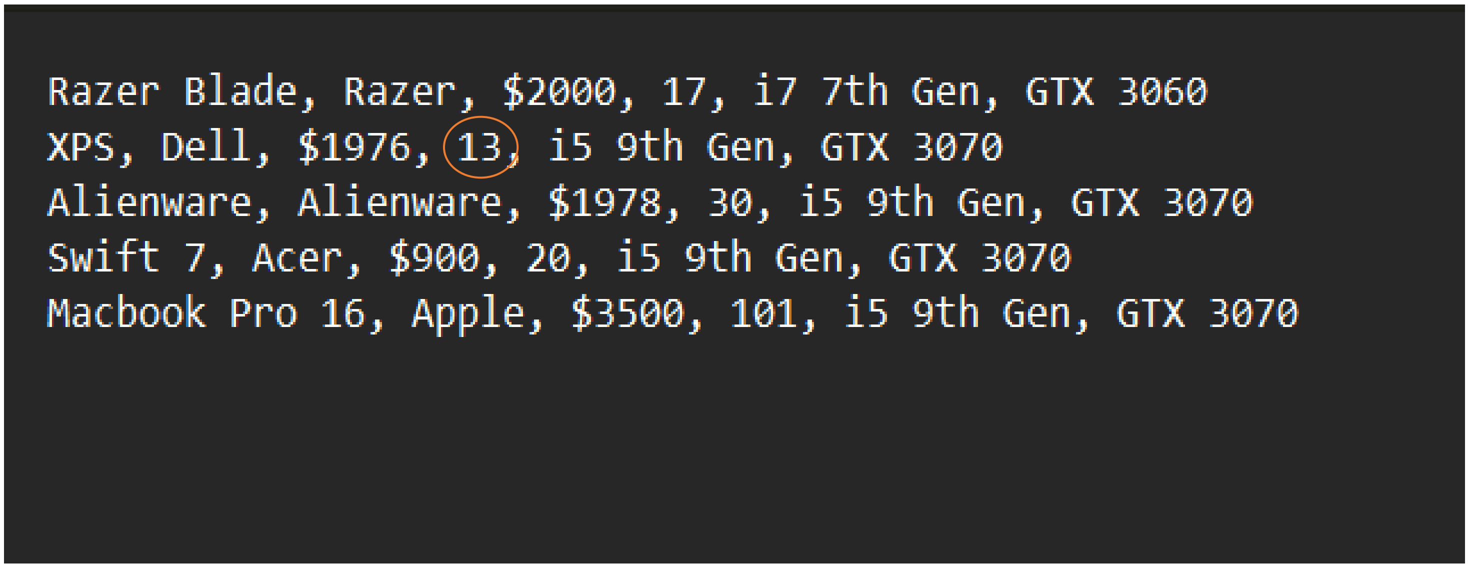
```
|-------------------------------------------------------------------------------------------------|
|                         Arbit laptop Shop                                                       |
|                         Kavresthali,Kathmandu                                                   |
|                         Phone:9863935190,9881224111                                             |
|-------------------------------------------------------------------------------------------------|
|Customer Name :Islington                                                                         |
|                                                     Date of Sell:2023-05-10 21:48:27.705986     |
|-------------------------------------------------------------------------------------------------|
|Laptops          |    Brand      |   Price      |  Quantity    |  Processor       |   Graphic     |
|-------------------------------------------------------------------------------------------------|
|xps              |   dell        |   $1695      |      10      |  i5 9th gen      |   Gtx 3070    |
|-------------------------------------------------------------------------------------------------|
|Total Amount :$ 16950                      Total Amount without Vat : $15000                     |
|                                                                                                 |
|***************************Thank You For Giving Us Chance to Serve you***************************|
|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
```

Figure 27 Screenshot of invoice order in text file of purchased laptop



```
Razer Blade, Razer, $2000, 17, i7 7th Gen, GTX 3060
XPS, Dell, $1976, 3, i5 9th Gen, GTX 3070
Alienware, Alienware, $1978, 30, i5 9th Gen, GTX 3070
Swift 7, Acer, $900, 20, i5 9th Gen, GTX 3070
Macbook Pro 16, Apple, $3500, 101, i5 9th Gen, GTX 3070
```

Figure 28 Screenshot of laptop details file before purchase



```
Razer Blade, Razer, $2000, 17, i7 7th Gen, GTX 3060
XPS, Dell, $1976, 13, i5 9th Gen, GTX 3070
Alienware, Alienware, $1978, 30, i5 9th Gen, GTX 3070
Swift 7, Acer, $900, 20, i5 9th Gen, GTX 3070
Macbook Pro 16, Apple, $3500, 101, i5 9th Gen, GTX 3070
```

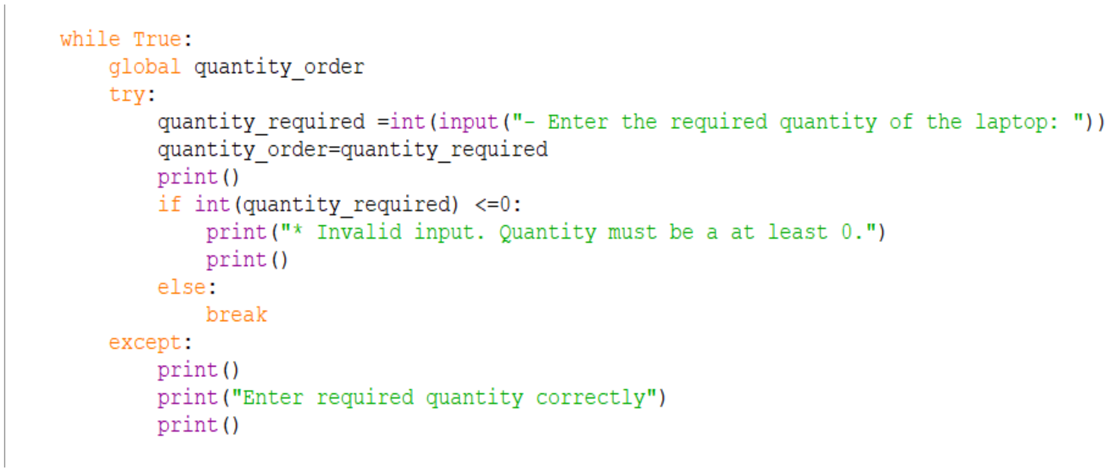
Figure 29 Screenshot of laptop details after purchaselaptops

4 TESTING

4.1 Test 1 To Show implementation of try, except Provide invalid input and show the message

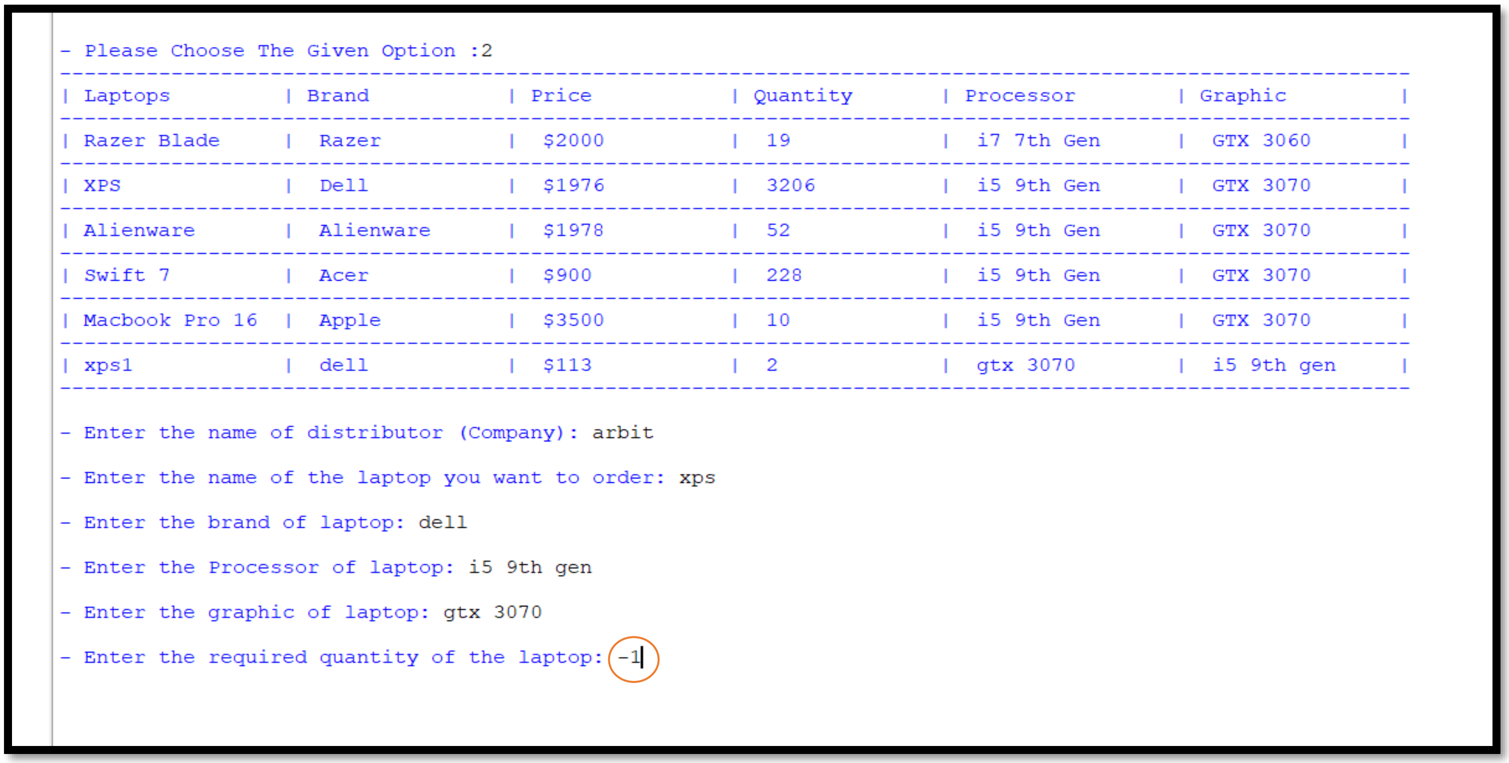
Test no :	**1**
Objective:	To Show implementation of try, except Provide invalid input and show the message
Action:	➡ The main module was run and the order option is selected ➡ The input “-1” was enter
Expected Result:	It should show and error message
Actual Result:	It show an error message
Conclusion	The Test is Successful

Table 1 To Show implementation of try, except Provide invalid input and show the message



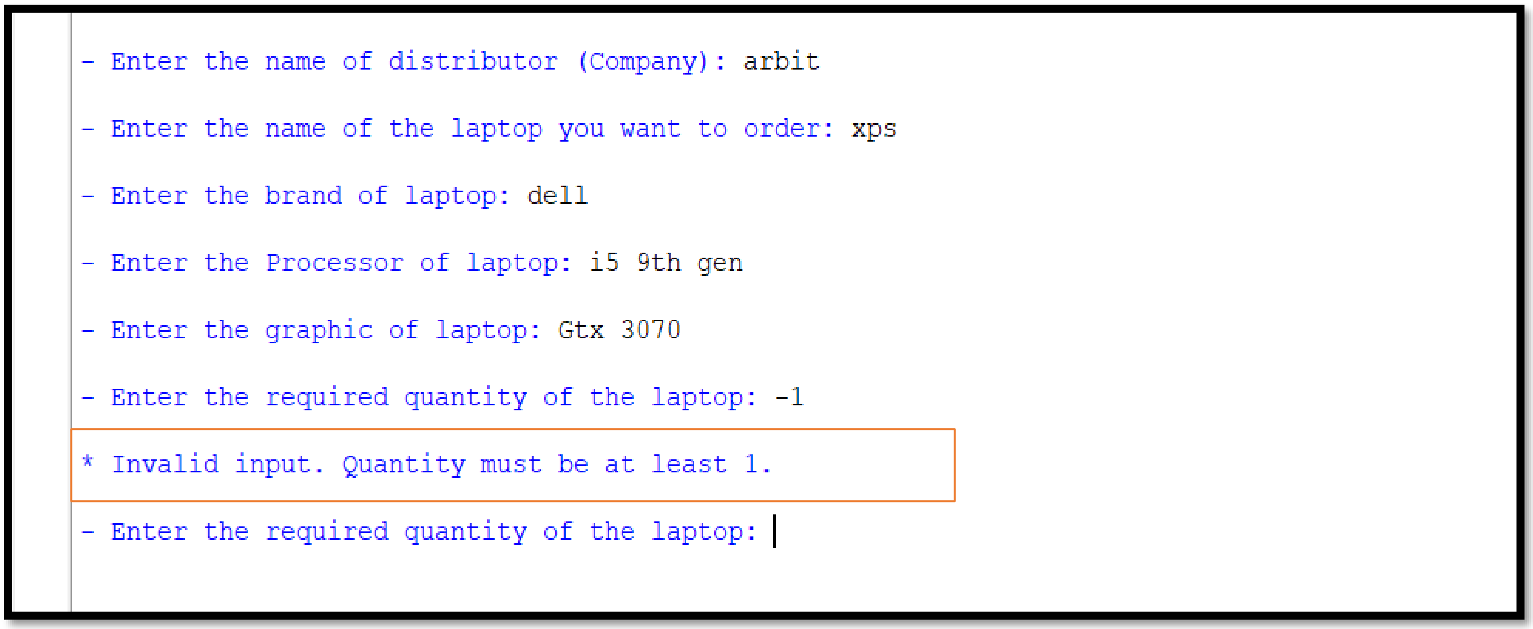
```
while True:
    global quantity_order
    try:
        quantity_required =int(input("- Enter the required quantity of the laptop: "))
        quantity_order=quantity_required
        print()
        if int(quantity_required) <=0:
            print("* Invalid input. Quantity must be a at least 0.")
            print()
        else:
            break
    except:
        print()
        print("Enter required quantity correctly")
        print()
```

Figure 30 ScreenShot of implementation of try, except



```
- Please Choose The Given Option :2
---------------------------------------------------------------------------------------------------------------
| Laptops          | Brand           | Price            | Quantity        | Processor         | Graphic          |
---------------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer          |  $2000           |  19             |  i7 7th Gen       |  GTX 3060        |
---------------------------------------------------------------------------------------------------------------
| XPS              |  Dell           |  $1976           |  3206           |  i5 9th Gen       |  GTX 3070        |
---------------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware      |  $1978           |  52             |  i5 9th Gen       |  GTX 3070        |
---------------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer           |  $900            |  228            |  i5 9th Gen       |  GTX 3070        |
---------------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple          |  $3500           |  10             |  i5 9th Gen       |  GTX 3070        |
---------------------------------------------------------------------------------------------------------------
| xps1             |  dell           |  $113            |  2              |  gtx 3070         |  i5 9th gen      |
---------------------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): arbit

- Enter the name of the laptop you want to order: xps

- Enter the brand of laptop: dell

- Enter the Processor of laptop: i5 9th gen

- Enter the graphic of laptop: gtx 3070

- Enter the required quantity of the laptop: -1
```

Figure 31 Screenshot of giving invalid input



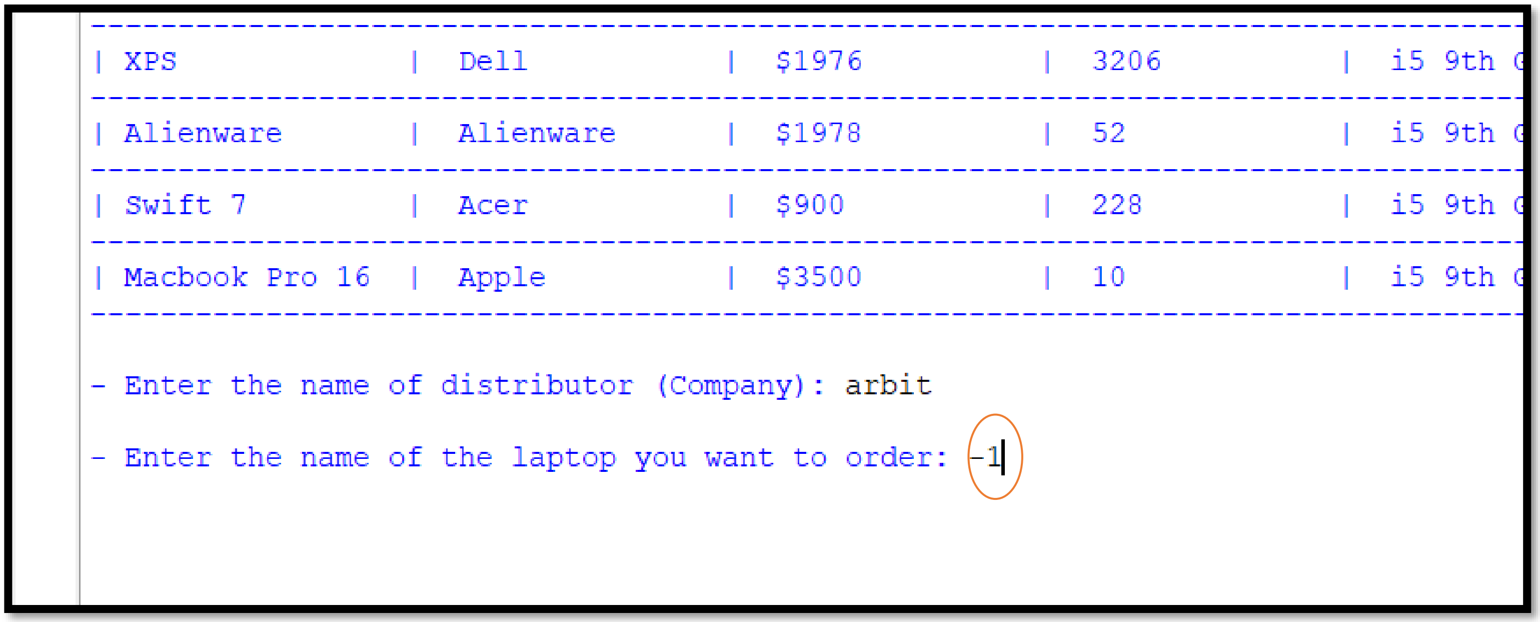
```
- Enter the name of distributor (Company): arbit

- Enter the name of the laptop you want to order: xps

- Enter the brand of laptop: dell

- Enter the Processor of laptop: i5 9th gen

- Enter the graphic of laptop: Gtx 3070

- Enter the required quantity of the laptop: -1

* Invalid input. Quantity must be at least 1.

- Enter the required quantity of the laptop:
```

Figure 32 Screenshot of error message as invalid input in try, except implementation

4.2 Test 2 To provide the negative value as input and non existed value as input in purchase

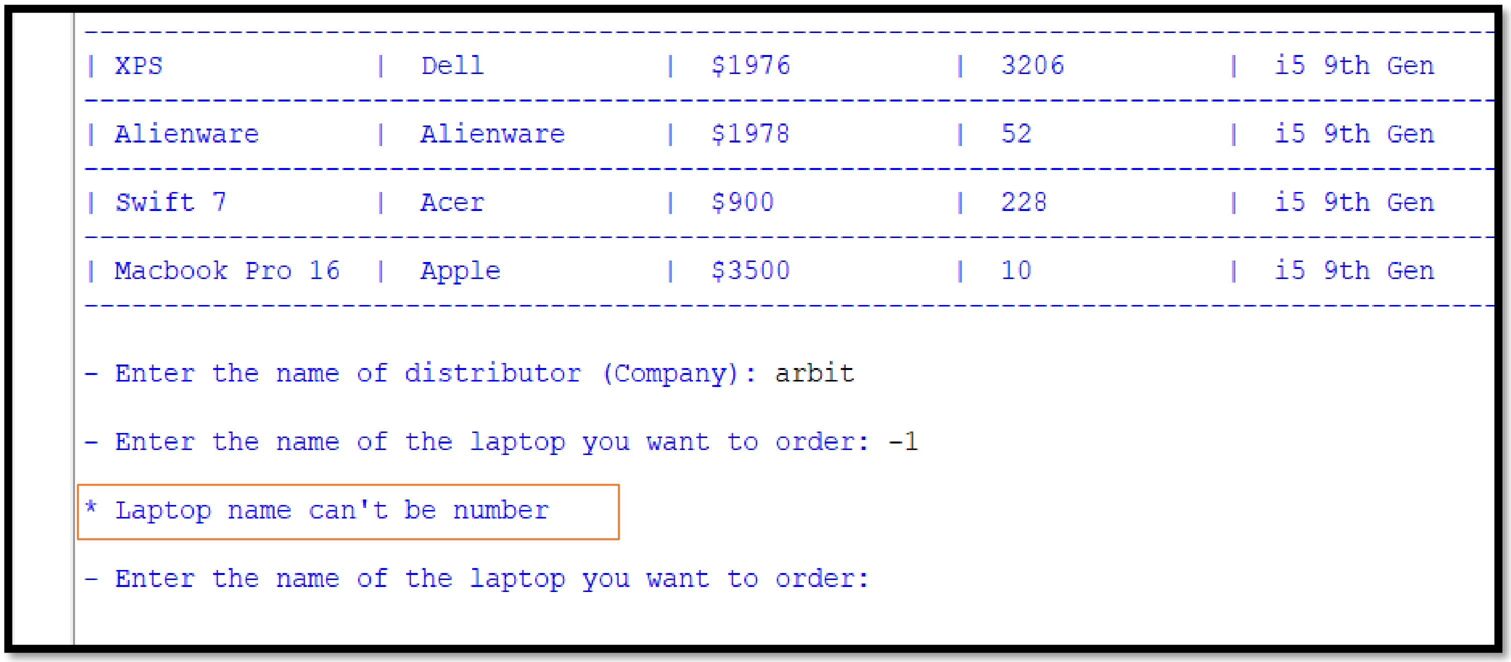
Test no :	**2**
Objective:	To provide the negative value as input and non existed value as input
Action:	➡ The main module was run and the purchase option was selected ➡ "-1" and "=" was entered in input
Expected Result:	It should show an error message as we input negative and invalid input
Actual Result:	It show an error message as we put negative and invalid input
Conclusion	The Test is Successful

Table 2 To provide the negative value as input and non existed

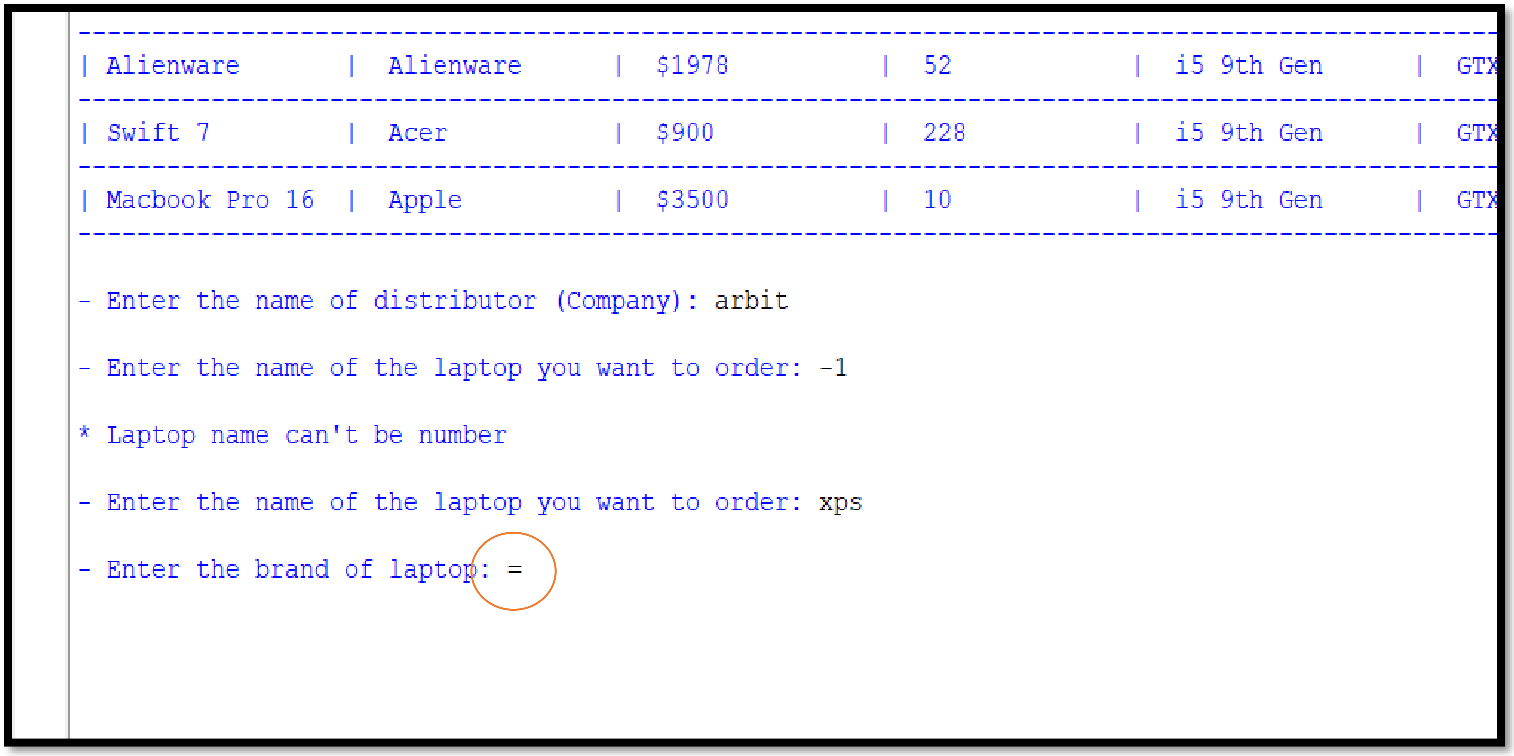


```
----------------------------------------------------------------------------------------
| XPS             |  Dell        |  $1976       |  3206        |  i5 9th G
----------------------------------------------------------------------------------------
| Alienware       |  Alienware   |  $1978       |  52          |  i5 9th G
----------------------------------------------------------------------------------------
| Swift 7         |  Acer        |  $900        |  228         |  i5 9th G
----------------------------------------------------------------------------------------
| Macbook Pro 16  |  Apple       |  $3500       |  10          |  i5 9th G
----------------------------------------------------------------------------------------

- Enter the name of distributor (Company): arbit

- Enter the name of the laptop you want to order: -1
```

Figure 33 Screenshot of negative input in purchase

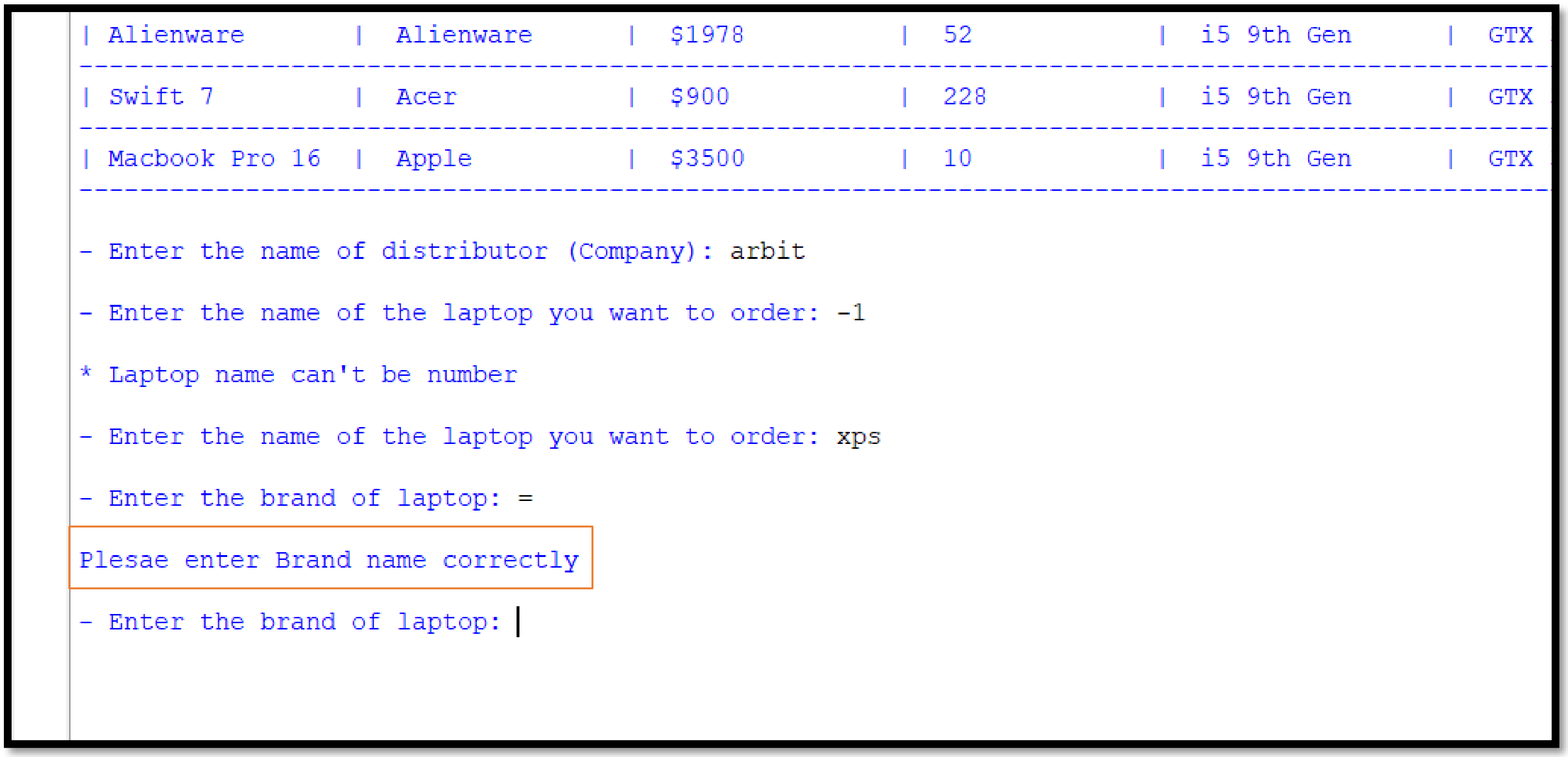


```
----------------------------------------------------------------------------------------
| XPS             |  Dell         |  $1976        |  3206        |  i5 9th Gen
----------------------------------------------------------------------------------------
| Alienware       |  Alienware    |  $1978        |  52          |  i5 9th Gen
----------------------------------------------------------------------------------------
| Swift 7         |  Acer         |  $900         |  228         |  i5 9th Gen
----------------------------------------------------------------------------------------
| Macbook Pro 16  |  Apple        |  $3500        |  10          |  i5 9th Gen
----------------------------------------------------------------------------------------

- Enter the name of distributor (Company): arbit

- Enter the name of the laptop you want to order: -1

* Laptop name can't be number

- Enter the name of the laptop you want to order:
```



```
-------------------------------------------------------------------------------------------------
| Alienware       |  Alienware       |  $1978           |  52              |  i5 9th Gen      |  GTX
-------------------------------------------------------------------------------------------------
| Swift 7         |  Acer            |  $900            |  228             |  i5 9th Gen      |  GTX
-------------------------------------------------------------------------------------------------
| Macbook Pro 16  |  Apple           |  $3500           |  10              |  i5 9th Gen      |  GTX
-------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): arbit

- Enter the name of the laptop you want to order: -1

* Laptop name can't be number

- Enter the name of the laptop you want to order: xps

- Enter the brand of laptop: =
```

Figure 35 Screenshot of non existed value as input in purchase



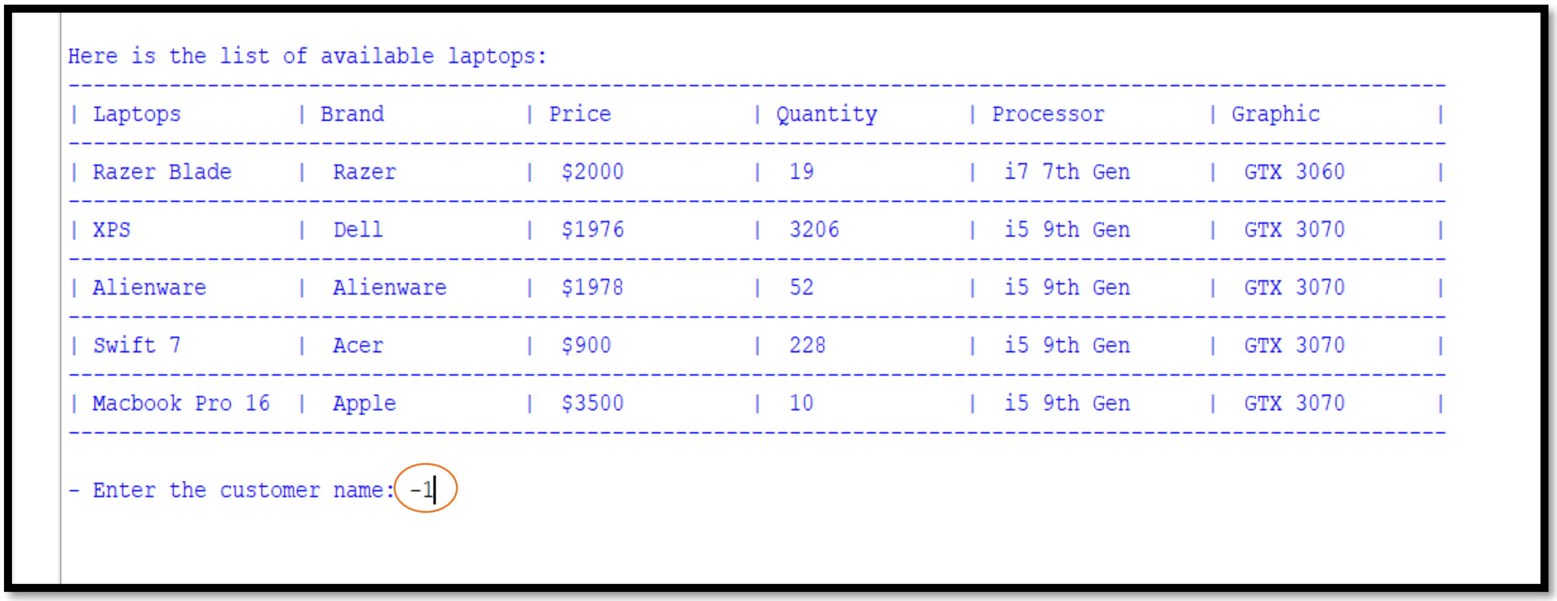
```
| Alienware      |  Alienware     |  $1978         |  52            |  i5 9th Gen      |  GTX
--------------------------------------------------------------------------------------------------
| Swift 7        |  Acer          |  $900          |  228           |  i5 9th Gen      |  GTX
--------------------------------------------------------------------------------------------------
| Macbook Pro 16 |  Apple         |  $3500         |  10            |  i5 9th Gen      |  GTX
--------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): arbit

- Enter the name of the laptop you want to order: -1

* Laptop name can't be number

- Enter the name of the laptop you want to order: xps

- Enter the brand of laptop: =

Plesae enter Brand name correctly

- Enter the brand of laptop:
```

Figure 36 Screenshot of error message as non existed value as input

4.3 Test 2 To provide the negative value as input and non existed value as input in sell

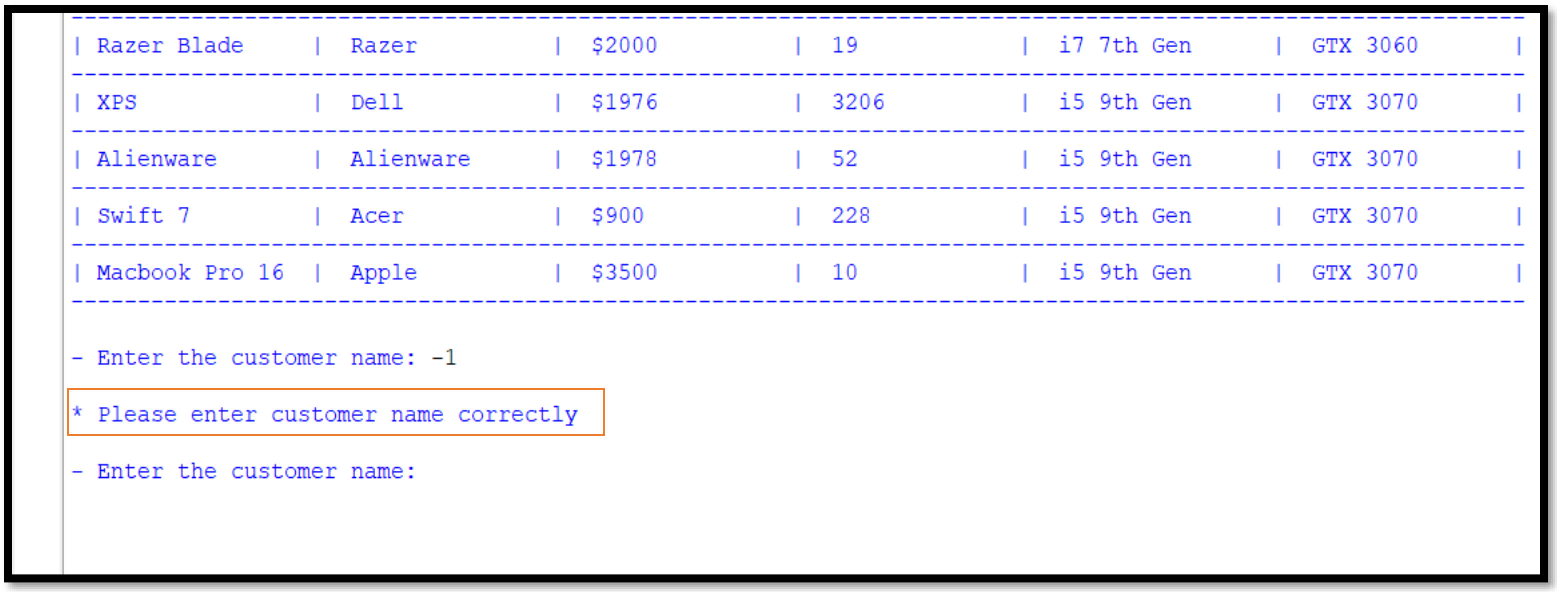
Test no :	**2**
Objective:	To provide the negative value as input and non existed value as input in sell
Action:	➡ The main module was run and the sell option was selected ➡ "-1" and "Islington" was entered as input
Expected Result:	It should show and error message as we input negative value and invalid input
Actual Result:	It show and error message as we input negative value and invalid input
Conclusion	The Test is Successful

Table 3 To provide the negative value as input and non existed value as input in sell



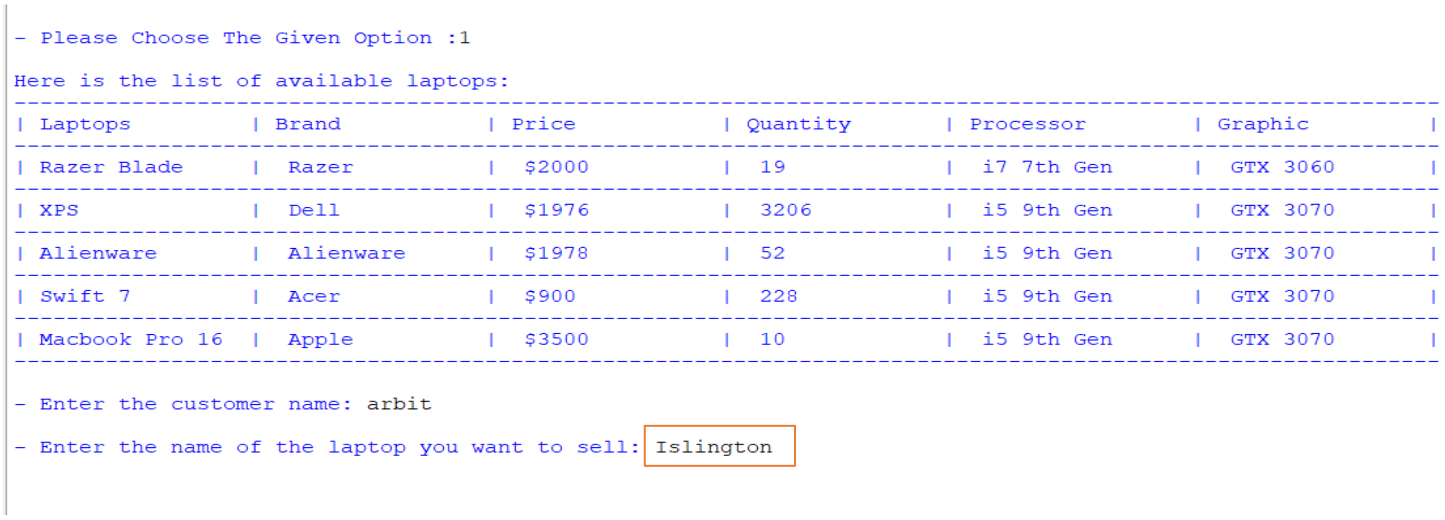
```
Here is the list of available laptops:
-----------------------------------------------------------------------------------------------------------------
| Laptops          | Brand            | Price            | Quantity        | Processor         | Graphic          |
-----------------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer           |  $2000           |  19             |  i7 7th Gen       |  GTX 3060        |
-----------------------------------------------------------------------------------------------------------------
| XPS              |  Dell            |  $1976           |  3206           |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware       |  $1978           |  52             |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer            |  $900            |  228            |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple           |  $3500           |  10             |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------------

- Enter the customer name: -1
```

Figure 37 Screenshot of negative value as input in sell



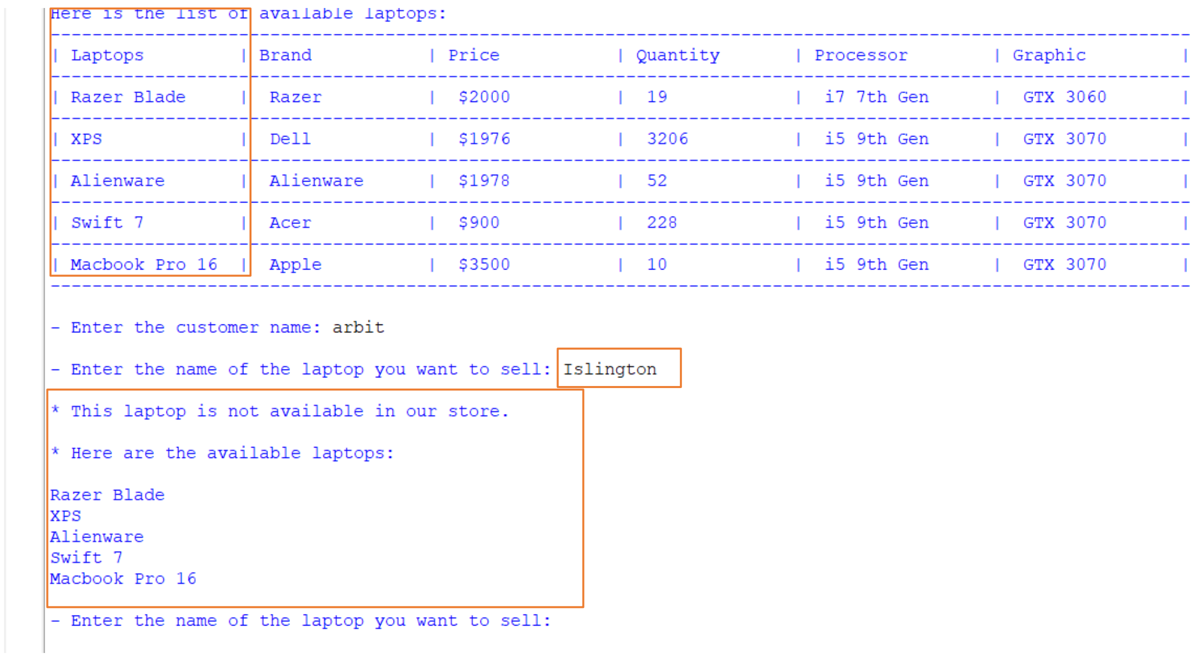
```
------------------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer            |  $2000            |  19               |  i7 7th Gen        |  GTX 3060       |
------------------------------------------------------------------------------------------------------------------
| XPS              |  Dell             |  $1976            |  3206             |  i5 9th Gen        |  GTX 3070       |
------------------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware        |  $1978            |  52               |  i5 9th Gen        |  GTX 3070       |
------------------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer             |  $900             |  228              |  i5 9th Gen        |  GTX 3070       |
------------------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple            |  $3500            |  10               |  i5 9th Gen        |  GTX 3070       |
------------------------------------------------------------------------------------------------------------------

- Enter the customer name: -1

* Please enter customer name correctly

- Enter the customer name:
```

Figure 38 Screenshot of error message as input is negative in sell



```
- Please Choose The Given Option :1

Here is the list of available laptops:
------------------------------------------------------------------------------------------------------------------
| Laptops          | Brand             | Price             | Quantity          | Processor          | Graphic         |
------------------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer            |  $2000            |  19               |  i7 7th Gen        |  GTX 3060       |
------------------------------------------------------------------------------------------------------------------
| XPS              |  Dell             |  $1976            |  3206             |  i5 9th Gen        |  GTX 3070       |
------------------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware        |  $1978            |  52               |  i5 9th Gen        |  GTX 3070       |
------------------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer             |  $900             |  228              |  i5 9th Gen        |  GTX 3070       |
------------------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple            |  $3500            |  10               |  i5 9th Gen        |  GTX 3070       |
------------------------------------------------------------------------------------------------------------------

- Enter the customer name: arbit

- Enter the name of the laptop you want to sell: Islington
```

Figure 39 Screenshot of non existed value as input in sell



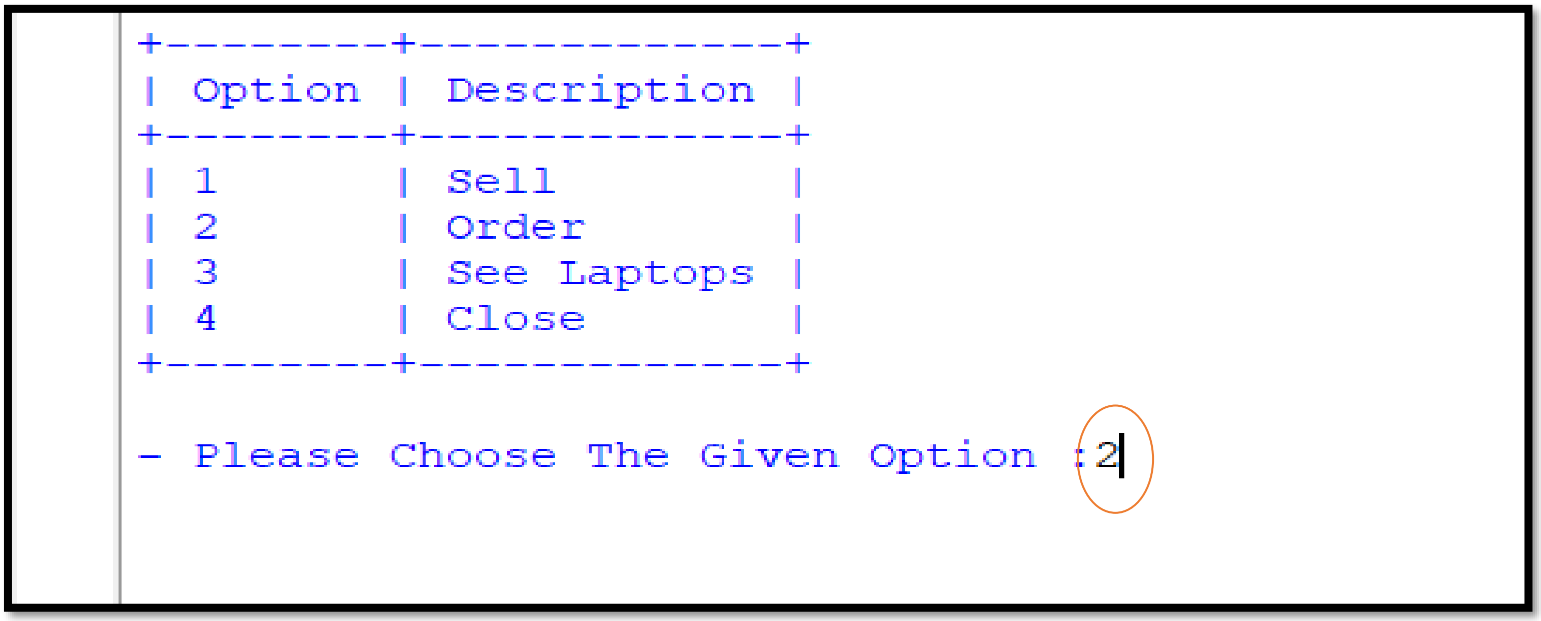
```
Here is the list of available laptops:
-----------------------------------------------------------------------------------------------------------
| Laptops          |  Brand             |  Price             |  Quantity       |  Processor         |  Graphic          |
-----------------------------------------------------------------------------------------------------------
| Razer Blade      |   Razer            |   $2000            |   19            |   i7 7th Gen       |   GTX 3060        |
-----------------------------------------------------------------------------------------------------------
| XPS              |   Dell             |   $1976            |   3206          |   i5 9th Gen       |   GTX 3070        |
-----------------------------------------------------------------------------------------------------------
| Alienware        |   Alienware        |   $1978            |   52            |   i5 9th Gen       |   GTX 3070        |
-----------------------------------------------------------------------------------------------------------
| Swift 7          |   Acer             |   $900             |   228           |   i5 9th Gen       |   GTX 3070        |
-----------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |   Apple            |   $3500            |   10            |   i5 9th Gen       |   GTX 3070        |
-----------------------------------------------------------------------------------------------------------

- Enter the customer name: arbit

- Enter the name of the laptop you want to sell: Islington

* This laptop is not available in our store.

* Here are the available laptops:

Razer Blade
XPS
Alienware
Swift 7
Macbook Pro 16

- Enter the name of the laptop you want to sell:
```

Figure 40 Screenshot of information message as input is non existed value in sell

4.4 Test 3 To Purchase multiples laptops and show the file generator of purchase

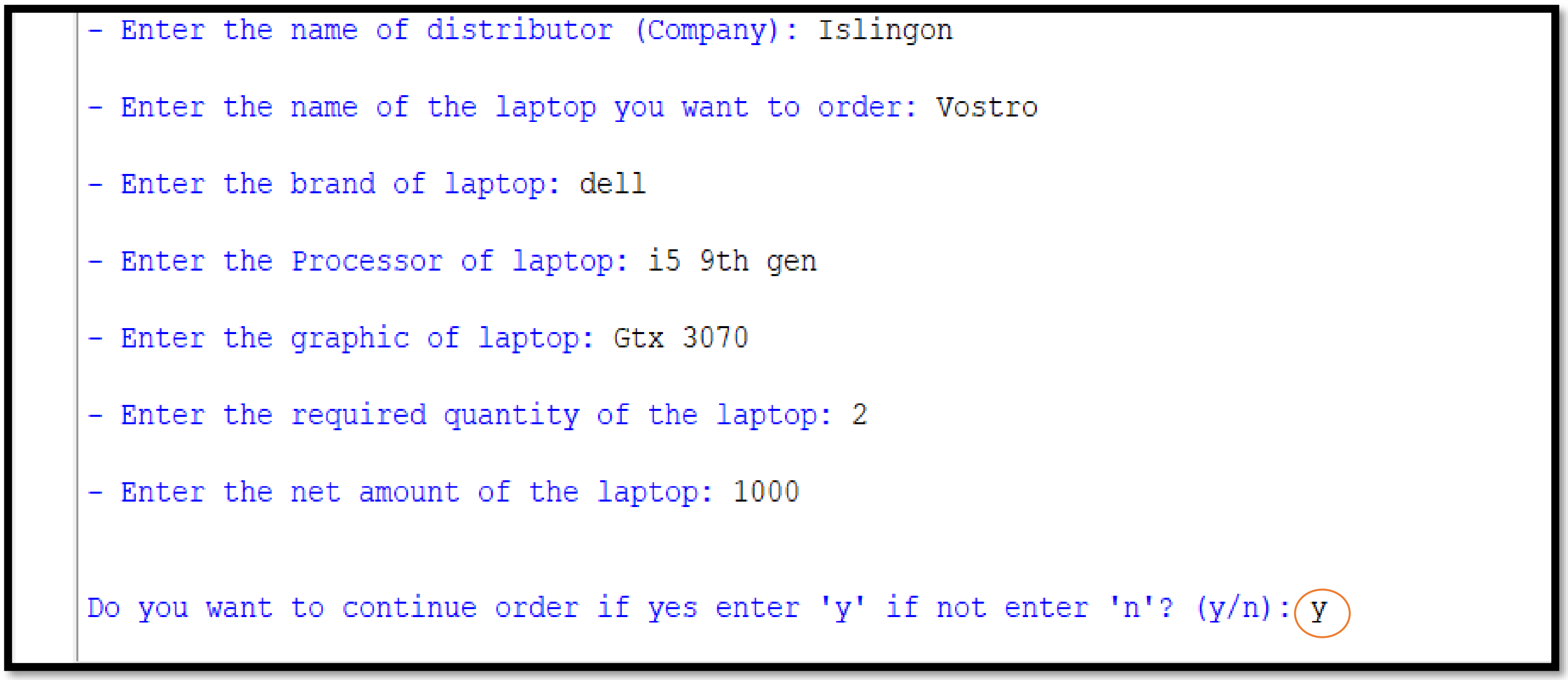
Test no :	**3**
Objective:	To Purchase multiples laptops and show the file generator
Action:	➡ The main module was run and the purchase option was selected ➡ Enter all the required data to purchase laptop ➡ Buy multiple laptops ➡ Showing Invoice in text file
Expected Result:	The laptop should purchase and laptops details should written in txt file
Actual Result:	The laptop got purchase and laptops details got written in txt file
Conclusion	The Test is Successful

Table 4 To Purchase multiples laptops and show the file generator of purchase



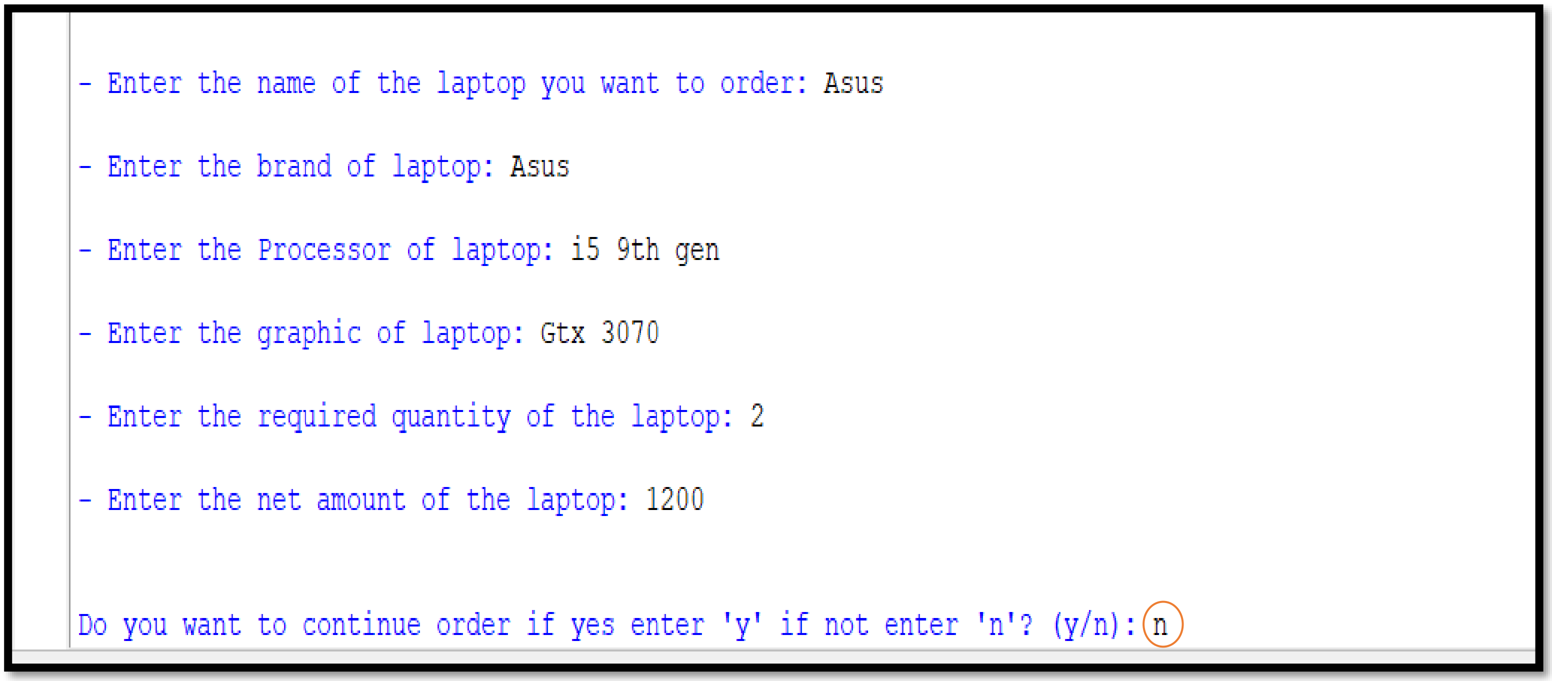
```
+---------+--------------+
| Option  | Description  |
+---------+--------------+
| 1       | Sell         |
| 2       | Order        |
| 3       | See Laptops  |
| 4       | Close        |
+---------+--------------+

- Please Choose The Given Option :2
```

Figure 41 Screenshot of choosing Purchase(order)



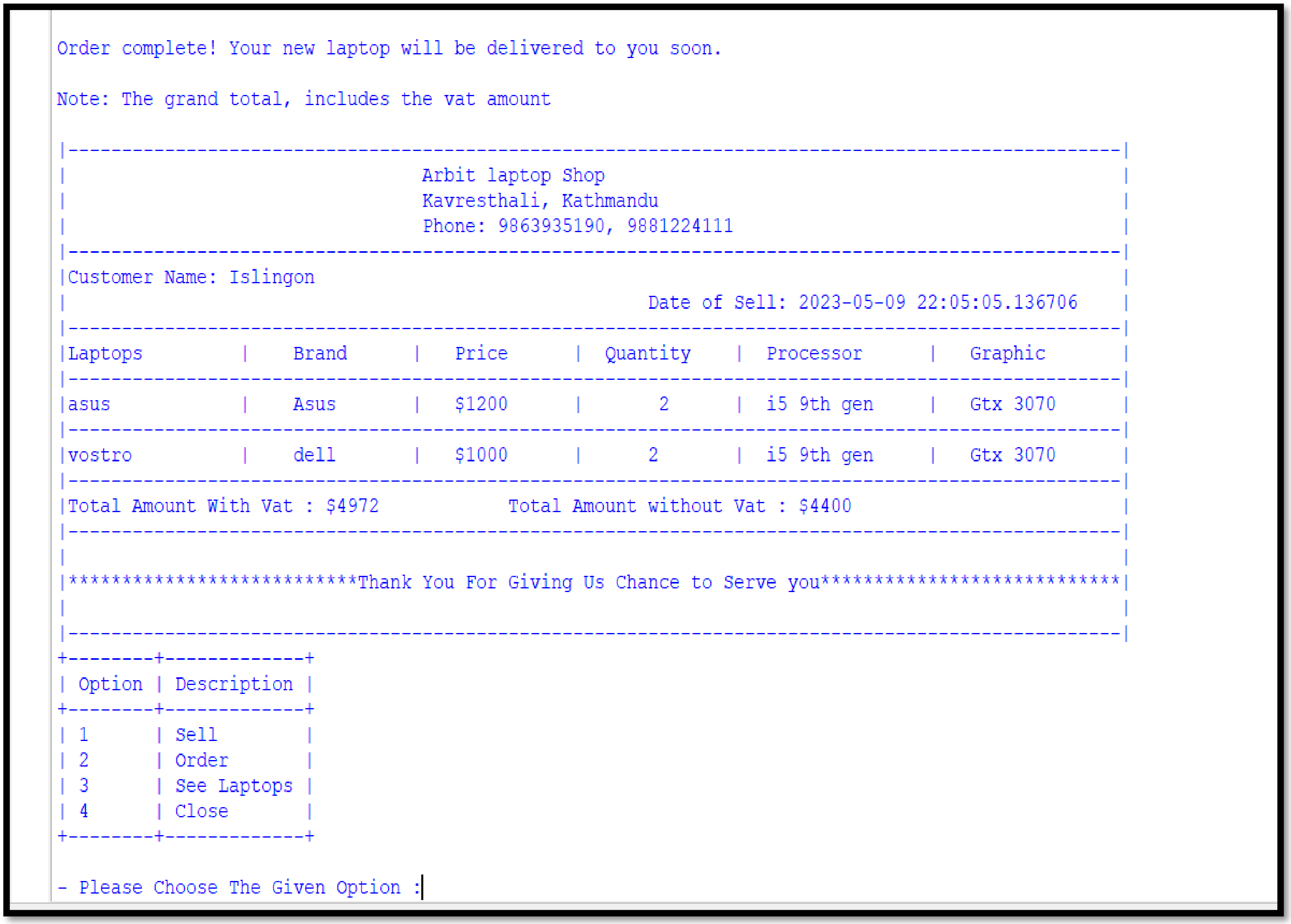
```
- Enter the name of distributor (Company): Islingon

- Enter the name of the laptop you want to order: Vostro

- Enter the brand of laptop: dell

- Enter the Processor of laptop: i5 9th gen

- Enter the graphic of laptop: Gtx 3070

- Enter the required quantity of the laptop: 2

- Enter the net amount of the laptop: 1000


Do you want to continue order if yes enter 'y' if not enter 'n'? (y/n): y
```

Figure 42 Screenshot of purchasing 1st laptop



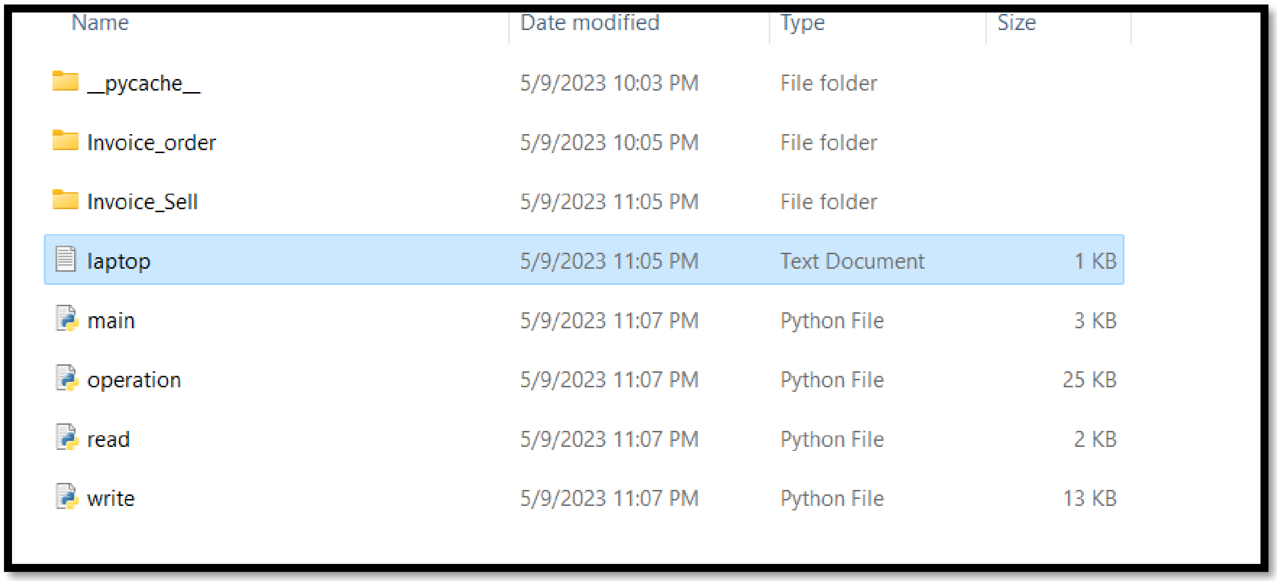
```
- Enter the name of the laptop you want to order: Asus

- Enter the brand of laptop: Asus

- Enter the Processor of laptop: i5 9th gen

- Enter the graphic of laptop: Gtx 3070

- Enter the required quantity of the laptop: 2

- Enter the net amount of the laptop: 1200


Do you want to continue order if yes enter 'y' if not enter 'n'? (y/n): n
```

Figure 43 Screenshot of purchase of 2nd laptop



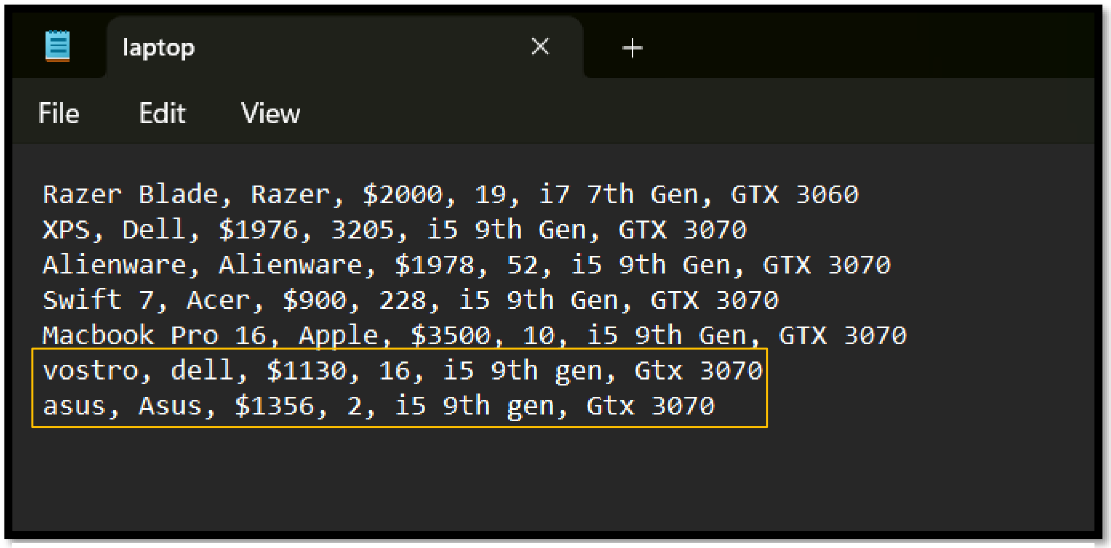
```
Order complete! Your new laptop will be delivered to you soon.

Note: The grand total, includes the vat amount

|-------------------------------------------------------------------------------------------|
|                                Arbit laptop Shop                                          |
|                                Kavresthali, Kathmandu                                     |
|                                Phone: 9863935190, 9881224111                              |
|-------------------------------------------------------------------------------------------|
|Customer Name: Islingon                                                                    |
|                                                   Date of Sell: 2023-05-09 22:05:05.136706 |
|-------------------------------------------------------------------------------------------|
|Laptops          |    Brand      |  Price        | Quantity     |  Processor       |  Graphic |
|-------------------------------------------------------------------------------------------|
|asus             |    Asus       |  $1200        |      2       |  i5 9th gen      |  Gtx 3070 |
|-------------------------------------------------------------------------------------------|
|vostro           |    dell       |  $1000        |     2        |  i5 9th gen      |  Gtx 3070 |
|-------------------------------------------------------------------------------------------|
|Total Amount With Vat : $4972           Total Amount without Vat : $4400                   |
|-------------------------------------------------------------------------------------------|
|                                                                                           |
|***************************Thank You For Giving Us Chance to Serve you*****************************|
|                                                                                           |
|-------------------------------------------------------------------------------------------|
+--------+-------------+
| Option | Description |
+--------+-------------+
| 1      | Sell        |
| 2      | Order       |
| 3      | See Laptops |
| 4      | Close       |
+--------+-------------+

- Please Choose The Given Option :
```

Figure 44 Screenshot of bill purchased of multiple laptops



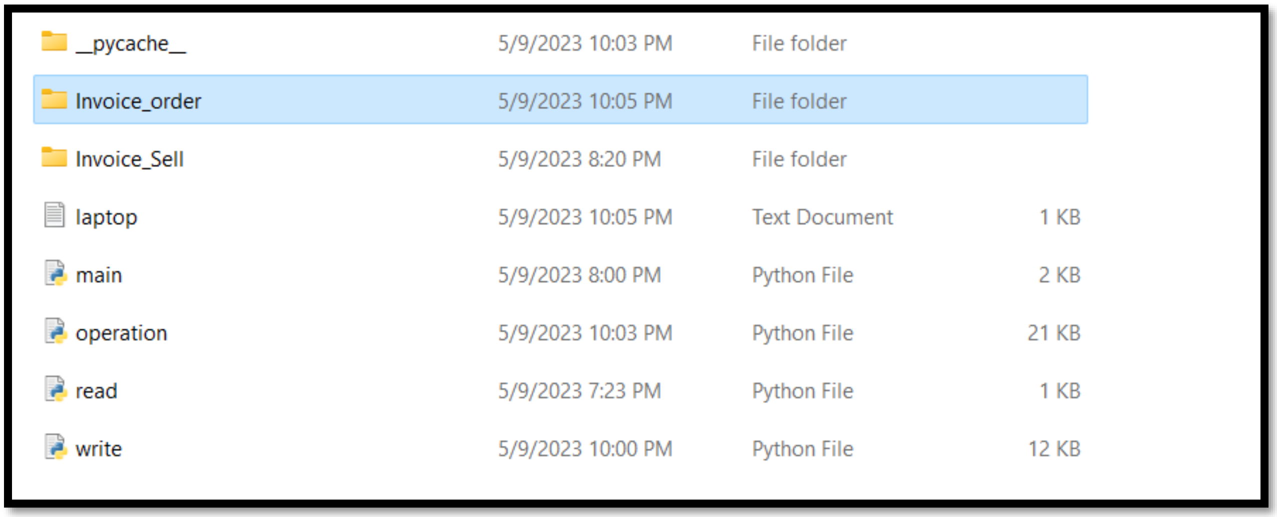
Name	Date modified	Type	Size
__pycache__	5/9/2023 10:03 PM	File folder	
Invoice_order	5/9/2023 10:05 PM	File folder	
Invoice_Sell	5/9/2023 11:05 PM	File folder	
laptop	5/9/2023 11:05 PM	Text Document	1 KB
main	5/9/2023 11:07 PM	Python File	3 KB
operation	5/9/2023 11:07 PM	Python File	25 KB
read	5/9/2023 11:07 PM	Python File	2 KB
write	5/9/2023 11:07 PM	Python File	13 KB

Figure 45 Screenshot of clicking laptops details in text file



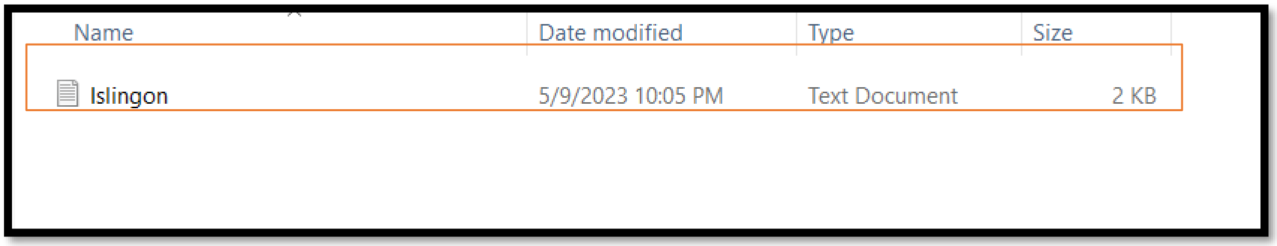
```
Razer Blade, Razer, $2000, 19, i7 7th Gen, GTX 3060
XPS, Dell, $1976, 3205, i5 9th Gen, GTX 3070
Alienware, Alienware, $1978, 52, i5 9th Gen, GTX 3070
Swift 7, Acer, $900, 228, i5 9th Gen, GTX 3070
Macbook Pro 16, Apple, $3500, 10, i5 9th Gen, GTX 3070
vostro, dell, $1130, 16, i5 9th gen, Gtx 3070
asus, Asus, $1356, 2, i5 9th gen, Gtx 3070
```

Figure 46 Screenshot of purchased laptops append details in text file



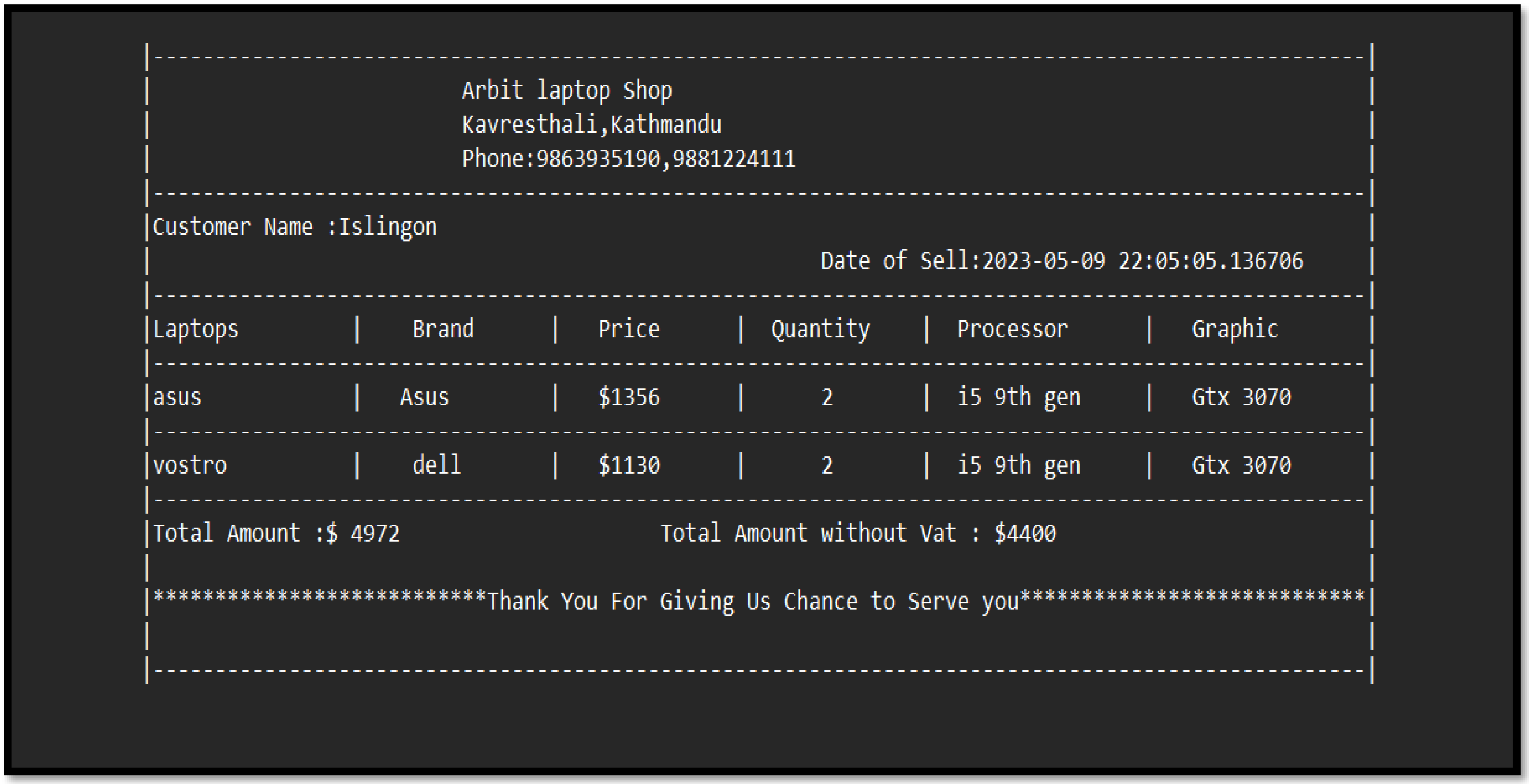
__pycache__	5/9/2023 10:03 PM	File folder	
Invoice_order	5/9/2023 10:05 PM	File folder	
Invoice_Sell	5/9/2023 8:20 PM	File folder	
laptop	5/9/2023 10:05 PM	Text Document	1 KB
main	5/9/2023 8:00 PM	Python File	2 KB
operation	5/9/2023 10:03 PM	Python File	21 KB
read	5/9/2023 7:23 PM	Python File	1 KB
write	5/9/2023 10:00 PM	Python File	12 KB

Figure 47 Screenshot of Invoice_order folder



Name	Date modified	Type	Size
Islingon	5/9/2023 10:05 PM	Text Document	2 KB

Figure 48 Screenshot of purchase invoice in txt file with distributor(Company) name



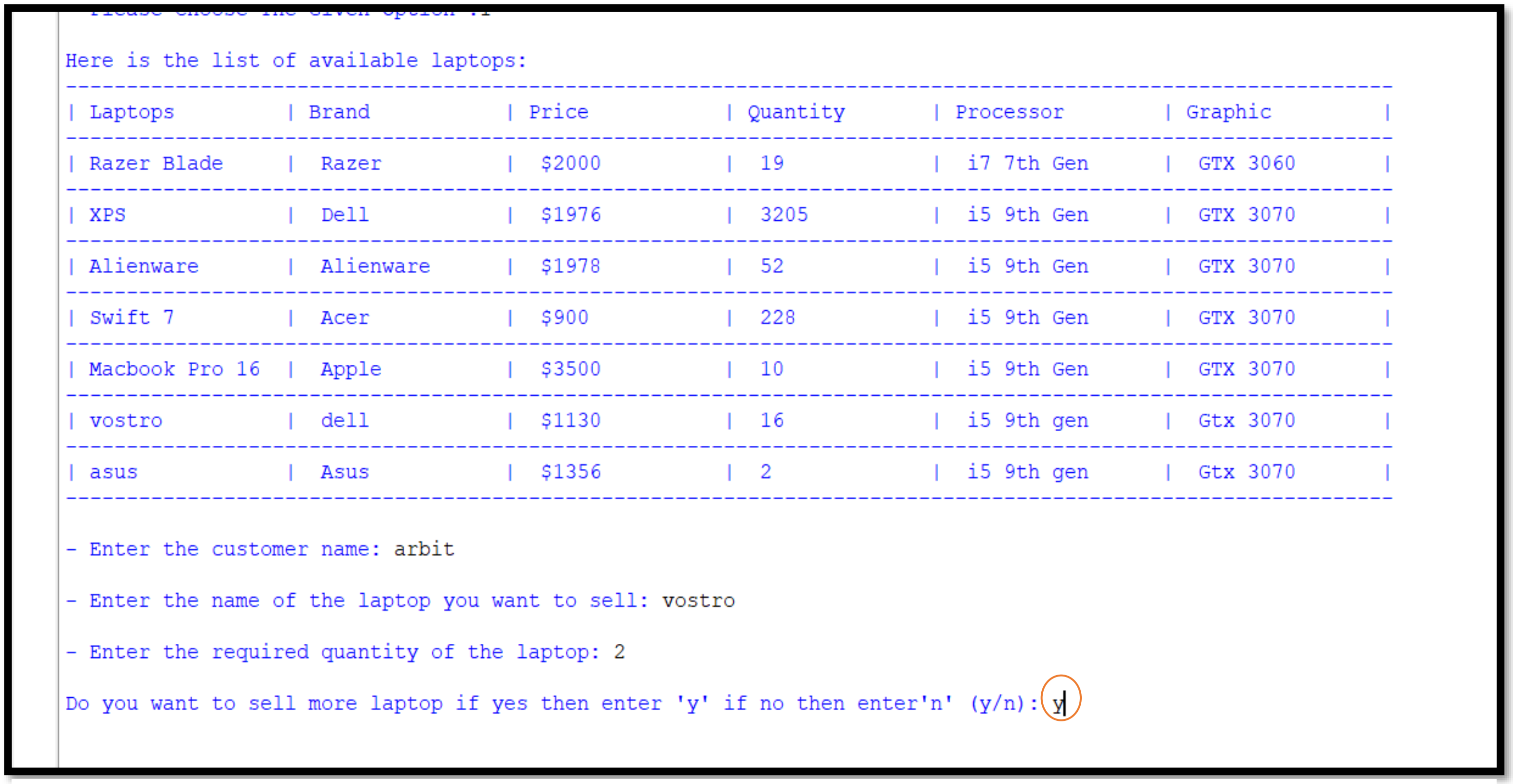
```
|-----------------------------------------------------------------------------------------------|
|                         Arbit laptop Shop                                                     |
|                         Kavresthali,Kathmandu                                                 |
|                         Phone:9863935190,9881224111                                           |
|-----------------------------------------------------------------------------------------------|
|Customer Name :Islingon                                                                        |
|                                                     Date of Sell:2023-05-09 22:05:05.136706    |
|-----------------------------------------------------------------------------------------------|
|Laptops          |    Brand       |    Price      |  Quantity     |  Processor      |   Graphic  |
|-----------------------------------------------------------------------------------------------|
|asus             |   Asus         |    $1356      |      2        |  i5 9th gen     |   Gtx 3070 |
|-----------------------------------------------------------------------------------------------|
|vostro           |    dell        |    $1130      |      2        |  i5 9th gen     |   Gtx 3070 |
|-----------------------------------------------------------------------------------------------|
|Total Amount :$ 4972                        Total Amount without Vat : $4400                   |
|                                                                                               |
|***************************Thank You For Giving Us Chance to Serve you****************************|
|                                                                                               |
|-----------------------------------------------------------------------------------------------|
```

Figure 49 Screenshot of Invoice of purchased laptop

4.5 TEST 4 To sales multiples laptop and show file generator

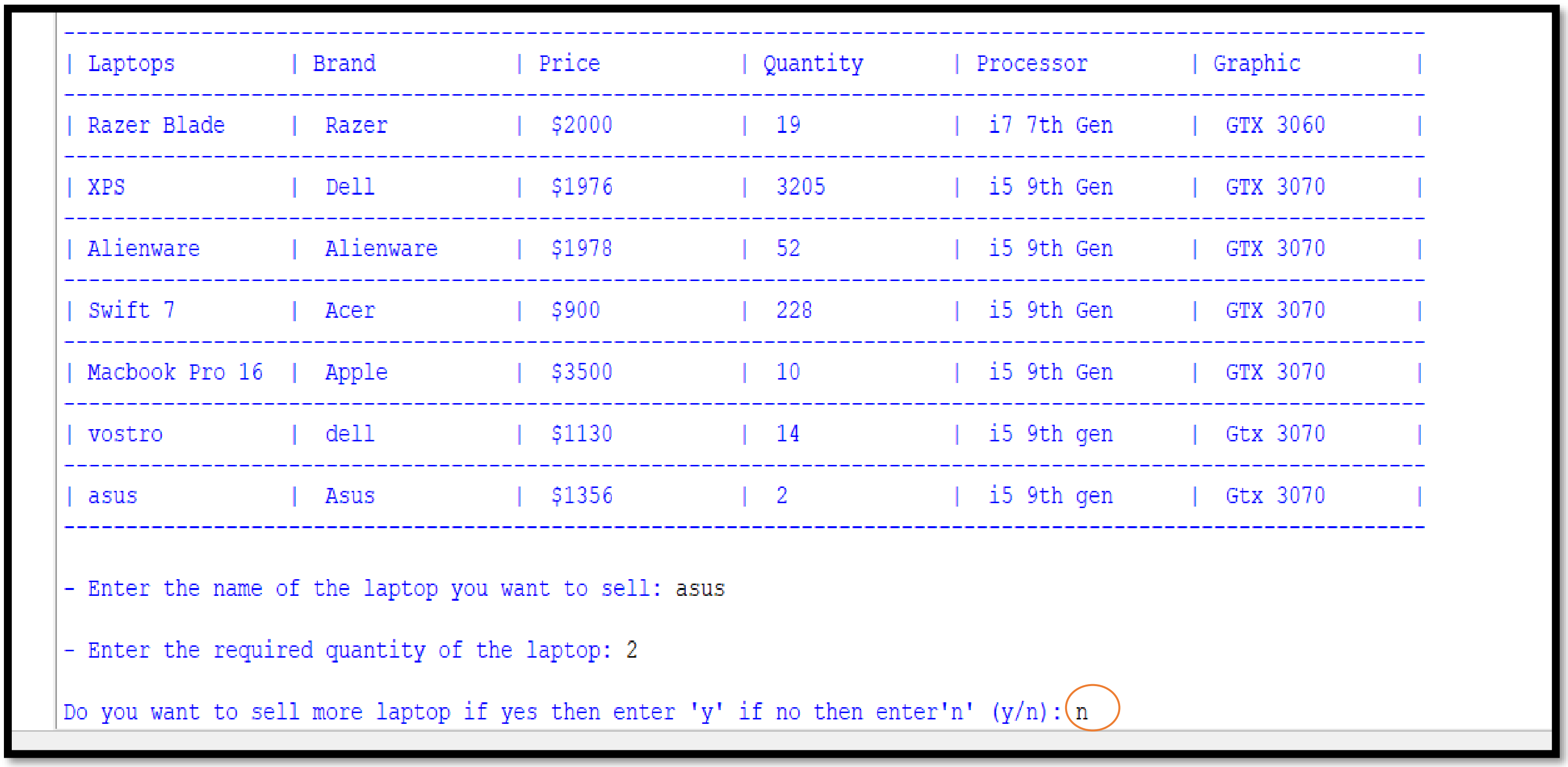
Test no :	4
Objective:	To sales multiples laptop and show file generator
Action:	➡ The main module was run and the sell option was selected ➡ Enter all the required input to sell ➡ Sold multiple laptops
Expected Result:	The laptop should sell and laptops sell details should written in txt file
Actual Result:	The laptop got sell and laptops sell details got written in txt file
Conclusion	The Test is Successful

Table 5 To sales multiples laptop and show file generator



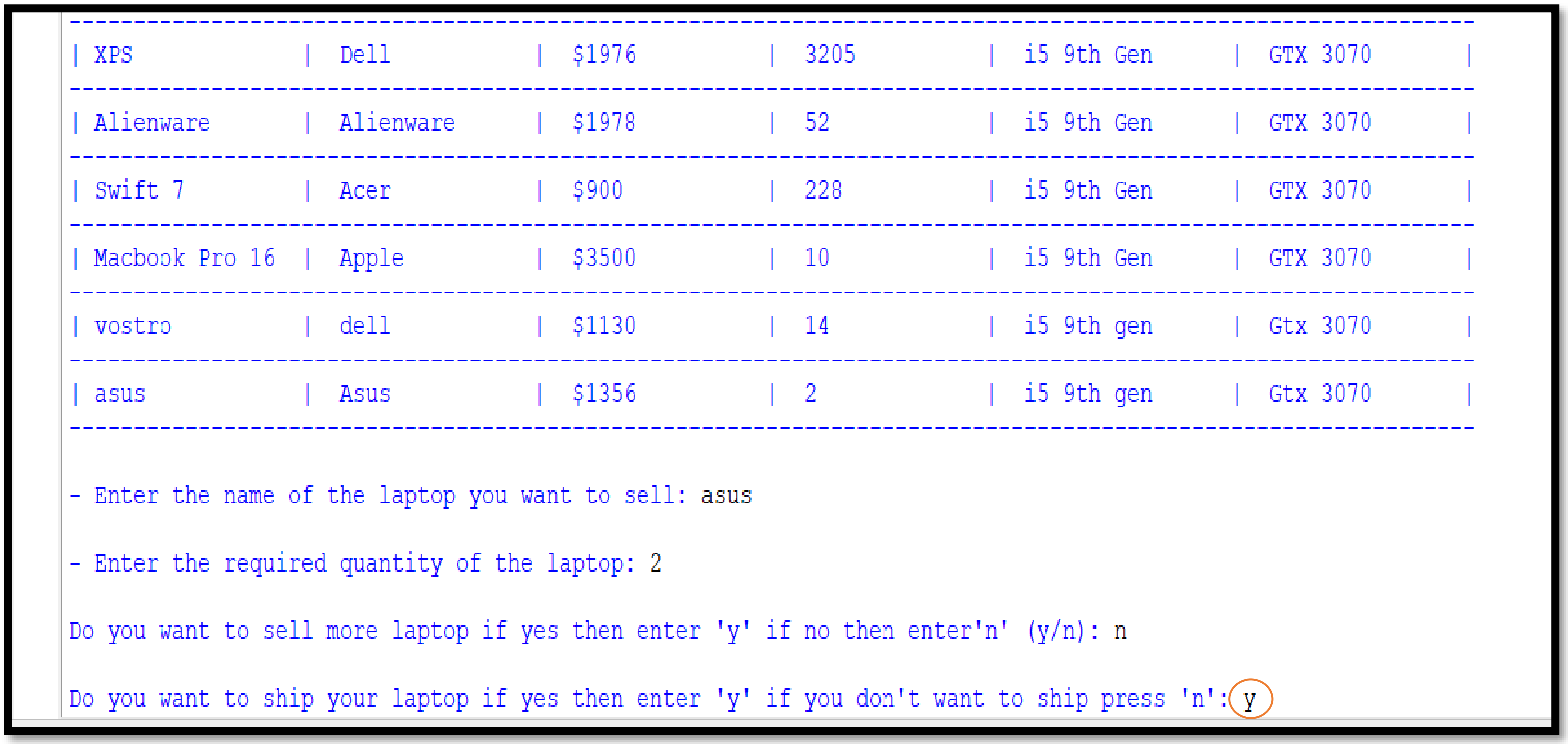
```
Here is the list of available laptops:
-------------------------------------------------------------------------------------------------------------
| Laptops           | Brand             | Price             | Quantity         | Processor          | Graphic           |
-------------------------------------------------------------------------------------------------------------
| Razer Blade       |  Razer            |  $2000            |  19              |  i7 7th Gen        |  GTX 3060         |
-------------------------------------------------------------------------------------------------------------
| XPS               |  Dell             |  $1976            |  3205            |  i5 9th Gen        |  GTX 3070         |
-------------------------------------------------------------------------------------------------------------
| Alienware         |  Alienware        |  $1978            |  52              |  i5 9th Gen        |  GTX 3070         |
-------------------------------------------------------------------------------------------------------------
| Swift 7           |  Acer             |  $900             |  228             |  i5 9th Gen        |  GTX 3070         |
-------------------------------------------------------------------------------------------------------------
| Macbook Pro 16    |  Apple            |  $3500            |  10              |  i5 9th Gen        |  GTX 3070         |
-------------------------------------------------------------------------------------------------------------
| vostro            |  dell             |  $1130            |  16              |  i5 9th gen        |  Gtx 3070         |
-------------------------------------------------------------------------------------------------------------
| asus              |  Asus             |  $1356            |  2               |  i5 9th gen        |  Gtx 3070         |
-------------------------------------------------------------------------------------------------------------

- Enter the customer name: arbit

- Enter the name of the laptop you want to sell: vostro

- Enter the required quantity of the laptop: 2

Do you want to sell more laptop if yes then enter 'y' if no then enter'n' (y/n): y
```

Figure 50 Screenshot of sell of 1st laptop



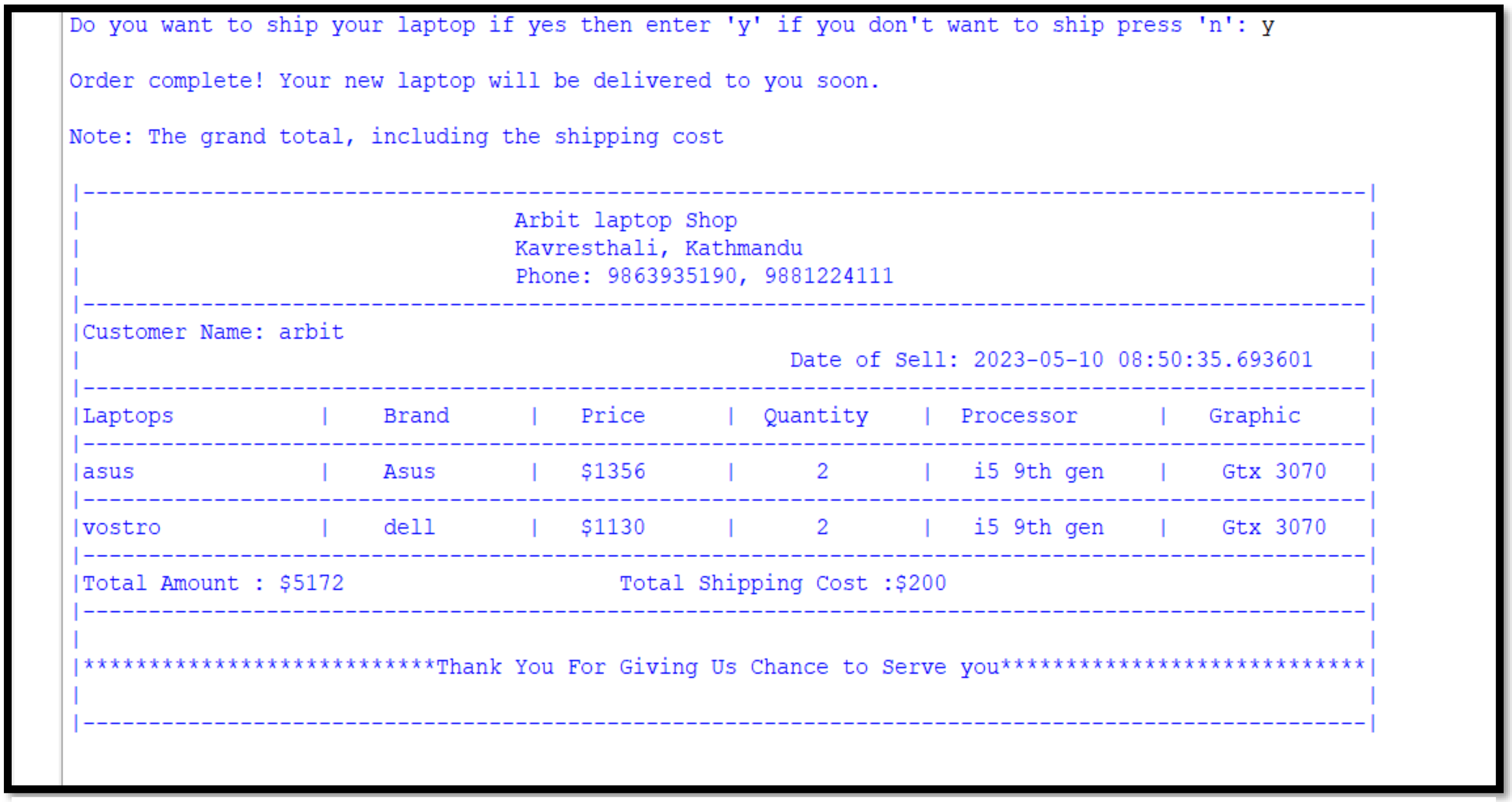
```
-----------------------------------------------------------------------------------------------------------
| Laptops          | Brand           | Price           | Quantity        | Processor         | Graphic         |
-----------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer          |  $2000          |  19             |  i7 7th Gen       |  GTX 3060       |
-----------------------------------------------------------------------------------------------------------
| XPS              |  Dell           |  $1976          |  3205           |  i5 9th Gen       |  GTX 3070       |
-----------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware      |  $1978          |  52             |  i5 9th Gen       |  GTX 3070       |
-----------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer           |  $900           |  228            |  i5 9th Gen       |  GTX 3070       |
-----------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple          |  $3500          |  10             |  i5 9th Gen       |  GTX 3070       |
-----------------------------------------------------------------------------------------------------------
| vostro           |  dell           |  $1130          |  14             |  i5 9th gen       |  Gtx 3070       |
-----------------------------------------------------------------------------------------------------------
| asus             |  Asus           |  $1356          |  2              |  i5 9th gen       |  Gtx 3070       |
-----------------------------------------------------------------------------------------------------------

- Enter the name of the laptop you want to sell: asus

- Enter the required quantity of the laptop: 2

Do you want to sell more laptop if yes then enter 'y' if no then enter'n' (y/n):n
```

Figure 51 Screenshot of sell of 2nd laptop



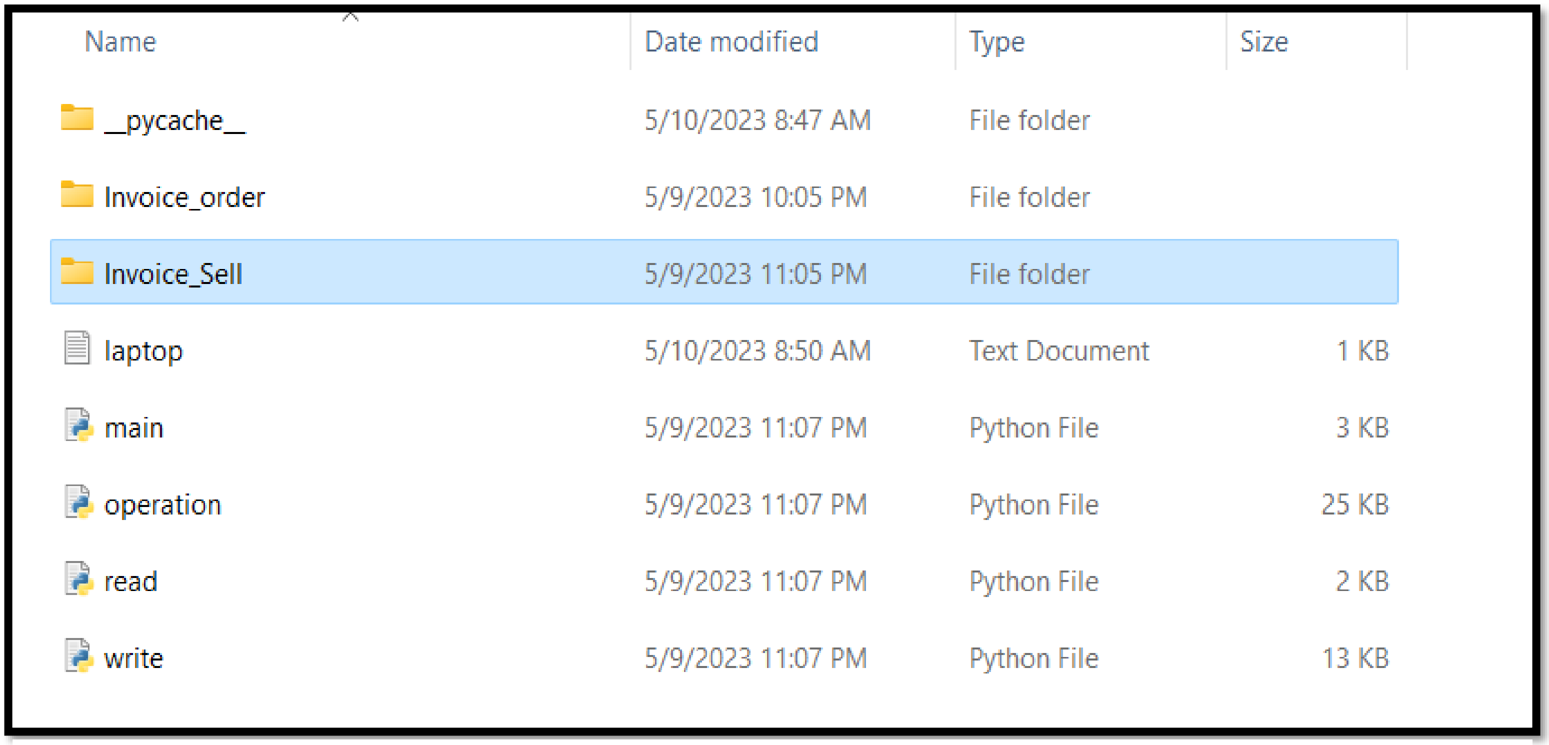
```
-----------------------------------------------------------------------------------------------------------
| XPS              |  Dell           |  $1976          |  3205           |  i5 9th Gen       |  GTX 3070       |
-----------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware      |  $1978          |  52             |  i5 9th Gen       |  GTX 3070       |
-----------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer           |  $900           |  228            |  i5 9th Gen       |  GTX 3070       |
-----------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple          |  $3500          |  10             |  i5 9th Gen       |  GTX 3070       |
-----------------------------------------------------------------------------------------------------------
| vostro           |  dell           |  $1130          |  14             |  i5 9th gen       |  Gtx 3070       |
-----------------------------------------------------------------------------------------------------------
| asus             |  Asus           |  $1356          |  2              |  i5 9th gen       |  Gtx 3070       |
-----------------------------------------------------------------------------------------------------------

- Enter the name of the laptop you want to sell: asus

- Enter the required quantity of the laptop: 2

Do you want to sell more laptop if yes then enter 'y' if no then enter'n' (y/n): n

Do you want to ship your laptop if yes then enter 'y' if you don't want to ship press 'n':y
```

Figure 52 Screenshot of IF customer want to ship or not the laptop



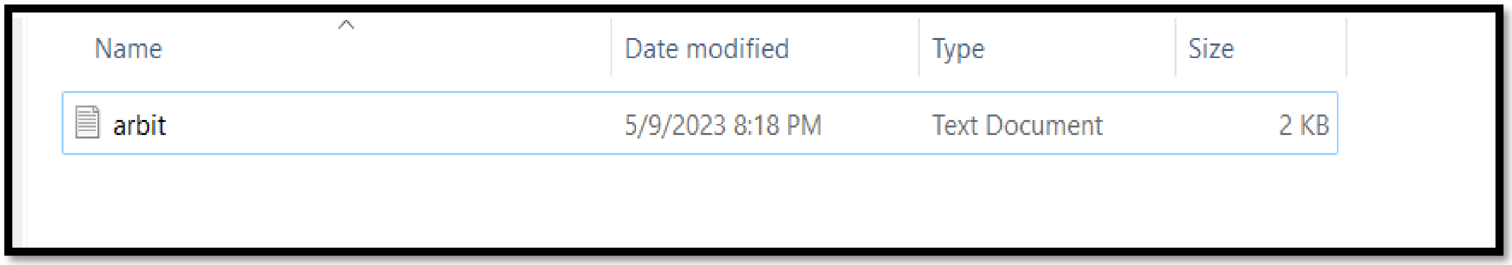
```
Do you want to ship your laptop if yes then enter 'y' if you don't want to ship press 'n': y

Order complete! Your new laptop will be delivered to you soon.

Note: The grand total, including the shipping cost

|-------------------------------------------------------------------------------------------|
|                                  Arbit laptop Shop                                        |
|                                  Kavresthali, Kathmandu                                   |
|                                  Phone: 9863935190, 9881224111                            |
|-------------------------------------------------------------------------------------------|
|Customer Name: arbit                                                                       |
|                                                     Date of Sell: 2023-05-10 08:50:35.693601    |
|-------------------------------------------------------------------------------------------|
|Laptops           |    Brand      |   Price       |  Quantity     |  Processor       |   Graphic     |
|-------------------------------------------------------------------------------------------|
|asus              |    Asus       |   $1356       |      2        |   i5 9th gen     |    Gtx 3070   |
|-------------------------------------------------------------------------------------------|
|vostro            |    dell       |   $1130       |      2        |   i5 9th gen     |    Gtx 3070   |
|-------------------------------------------------------------------------------------------|
|Total Amount : $5172                     Total Shipping Cost :$200                         |
|-------------------------------------------------------------------------------------------|
|                                                                                           |
|***************************Thank You For Giving Us Chance to Serve you****************************|
|                                                                                           |
|-------------------------------------------------------------------------------------------|
```

Figure 53 Screenshot of bill generator of sell laptops



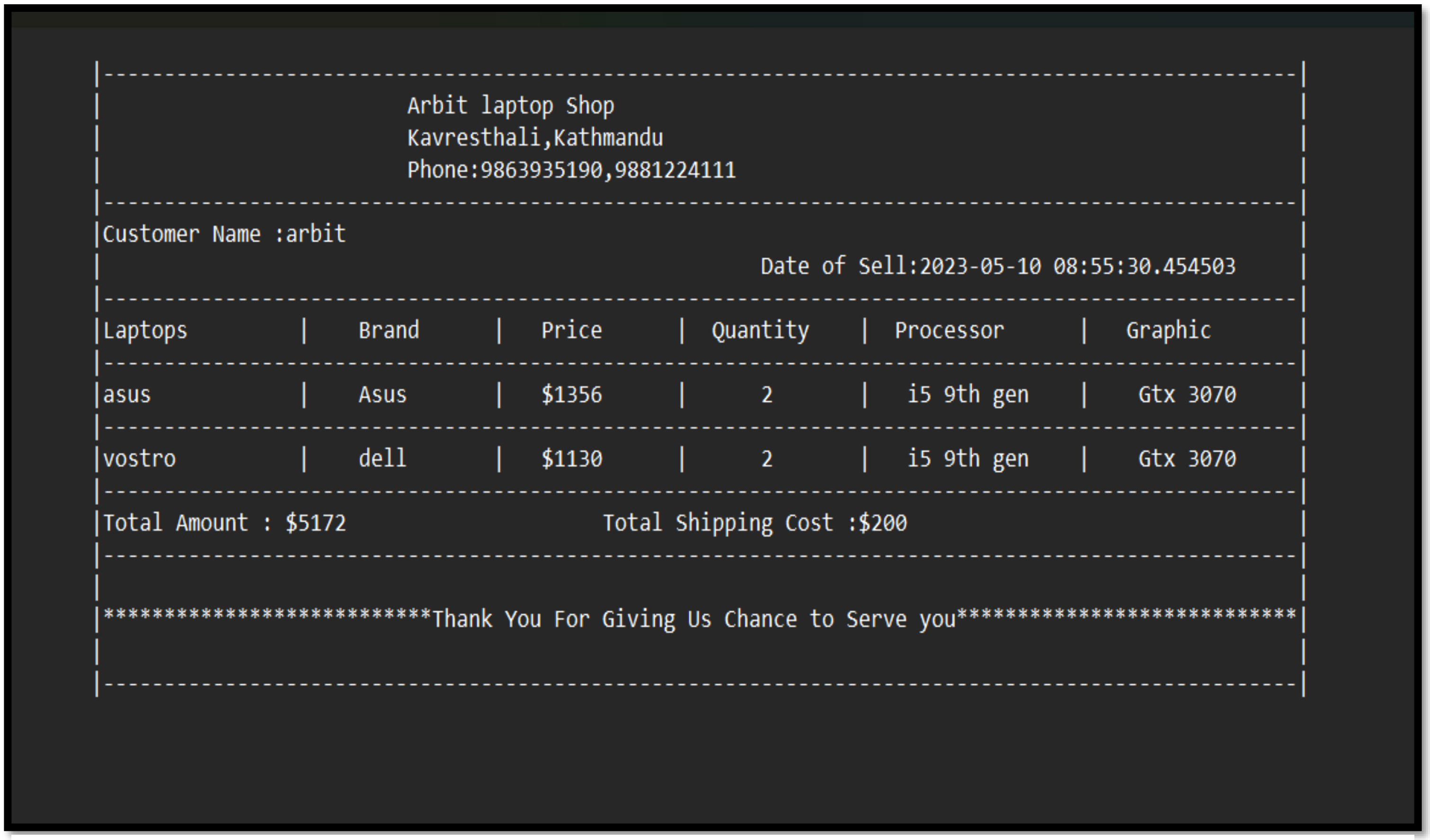
Name	Date modified	Type	Size
__pycache__	5/10/2023 8:47 AM	File folder	
Invoice_order	5/9/2023 10:05 PM	File folder	
Invoice_Sell	5/9/2023 11:05 PM	File folder	
laptop	5/10/2023 8:50 AM	Text Document	1 KB
main	5/9/2023 11:07 PM	Python File	3 KB
operation	5/9/2023 11:07 PM	Python File	25 KB
read	5/9/2023 11:07 PM	Python File	2 KB
write	5/9/2023 11:07 PM	Python File	13 KB

Figure 54 Screenshot of Invoice sell folder



Name	Date modified	Type	Size
arbit	5/9/2023 8:18 PM	Text Document	2 KB

Figure 55 Screenshot of text file of sell with customer name



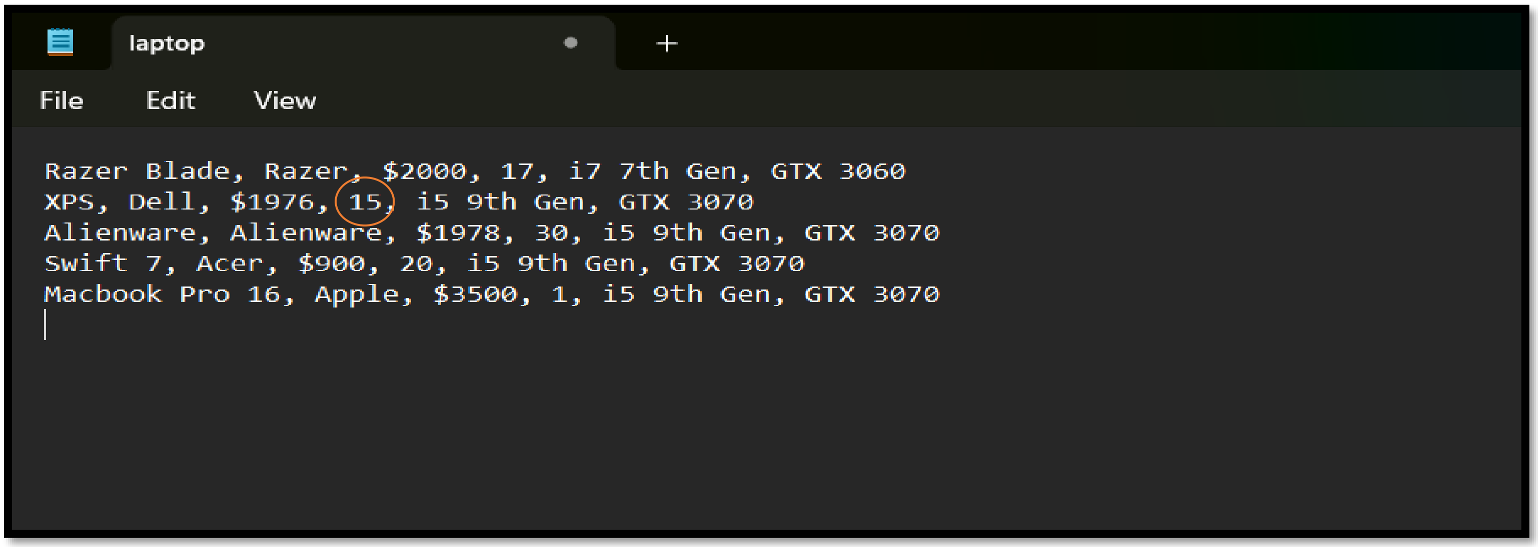
```
|-------------------------------------------------------------------------------------------|
|                         Arbit laptop Shop                                                 |
|                         Kavresthali,Kathmandu                                             |
|                         Phone:9863935190,9881224111                                       |
|-------------------------------------------------------------------------------------------|
|Customer Name :arbit                                                                       |
|                                                     Date of Sell:2023-05-10 08:55:30.454503    |
|-------------------------------------------------------------------------------------------|
|Laptops         |    Brand      |   Price      |  Quantity    |  Processor       |   Graphic     |
|-------------------------------------------------------------------------------------------|
|asus            |    Asus       |   $1356      |     2        |   i5 9th gen     |    Gtx 3070   |
|-------------------------------------------------------------------------------------------|
|vostro          |    dell       |   $1130      |     2        |   i5 9th gen     |    Gtx 3070   |
|-------------------------------------------------------------------------------------------|
|Total Amount : $5172                    Total Shipping Cost :$200                          |
|-------------------------------------------------------------------------------------------|
|                                                                                           |
|***************************Thank You For Giving Us Chance to Serve you****************************|
|                                                                                           |
|-------------------------------------------------------------------------------------------|
```

Figure 56 Screenshot of invoice of bill of selling multiples laptop

4.6 TEST 5 To show the UPDATE stock of laptops While selling

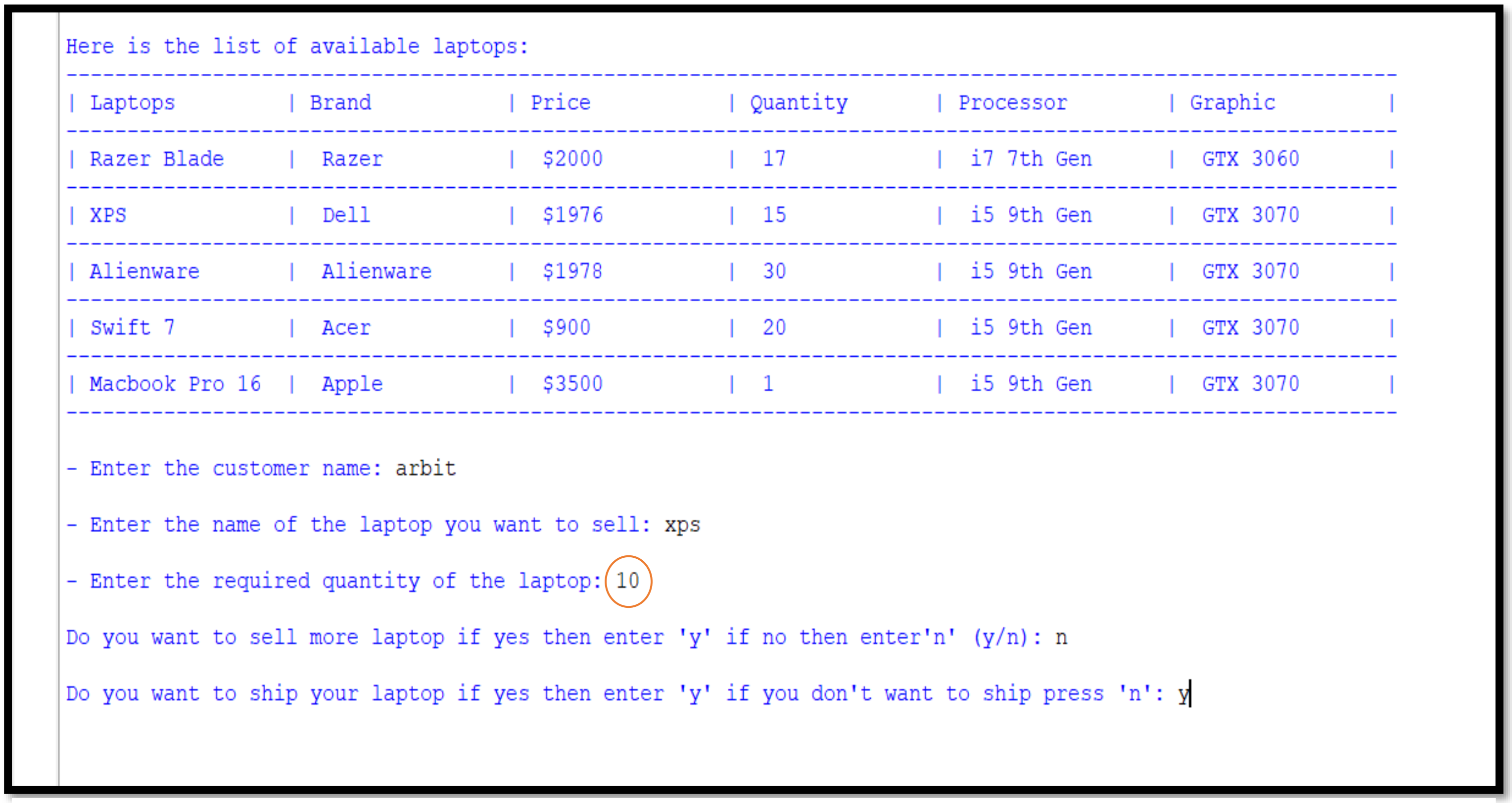
Test no :	**5**
Objective:	To show the UPDATE stock of laptops while sell
Action:	➡ The main module was run and the sell option was selected ➡ Enter all the required input to sell ➡ Sell laptops
Expected Result:	The laptop should sell and the stock should decrease by sell laptops
Actual Result:	The laptop got sell and the stock got decrease by sell laptops
Conclusion	The Test is Successful

Table 6 To show the update stock of laptops while selling



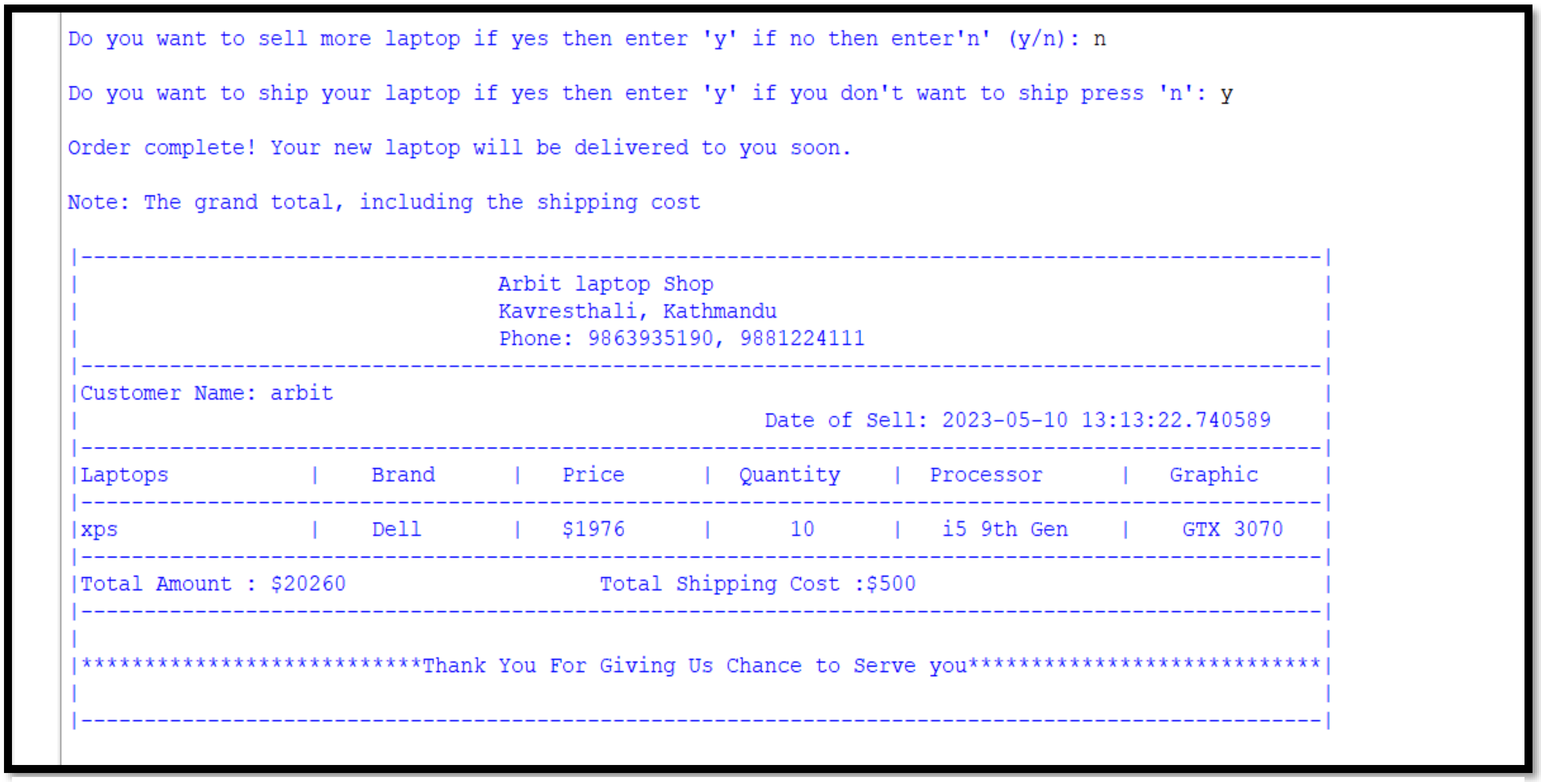
```
Razer Blade, Razer, $2000, 17, i7 7th Gen, GTX 3060
XPS, Dell, $1976, 15, i5 9th Gen, GTX 3070
Alienware, Alienware, $1978, 30, i5 9th Gen, GTX 3070
Swift 7, Acer, $900, 20, i5 9th Gen, GTX 3070
Macbook Pro 16, Apple, $3500, 1, i5 9th Gen, GTX 3070
```

Figure 57 Screenshot of quantity of xps before sell



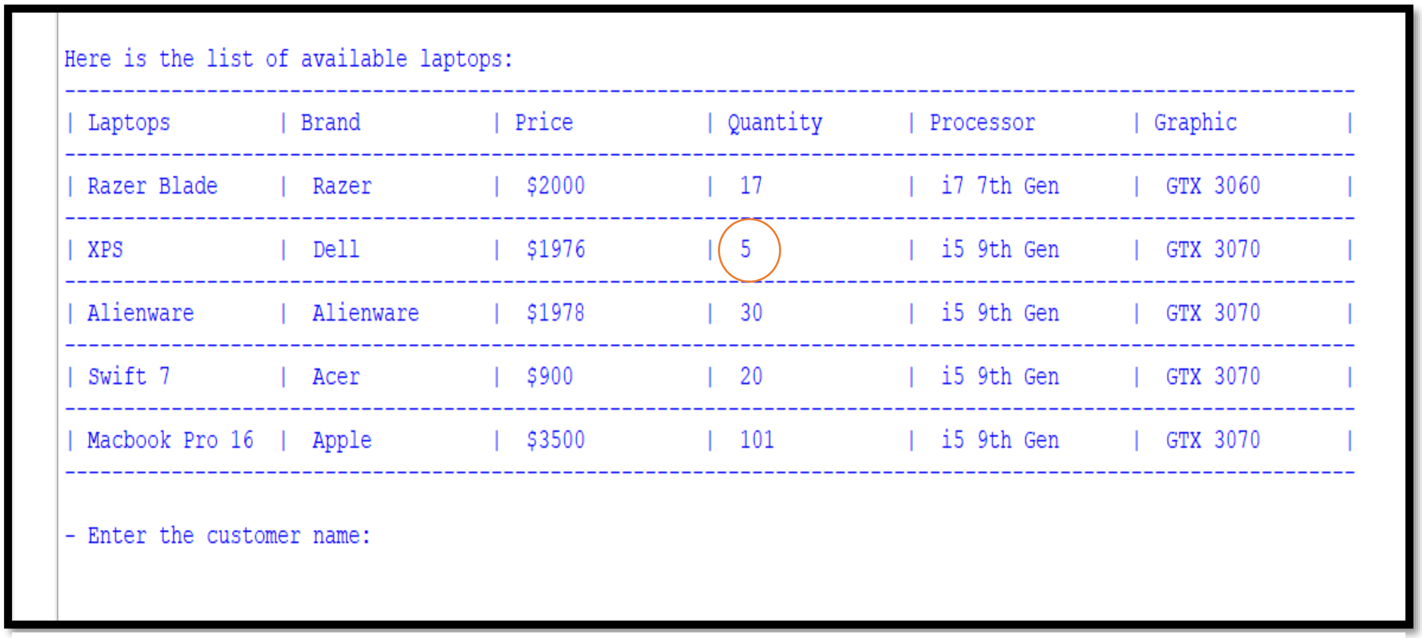
```
Here is the list of available laptops:
-----------------------------------------------------------------------------------------------------------------
| Laptops          | Brand            | Price            | Quantity        | Processor         | Graphic          |
-----------------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer           |  $2000           |  17             |  i7 7th Gen       |  GTX 3060        |
-----------------------------------------------------------------------------------------------------------------
| XPS              |  Dell            |  $1976           |  15             |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware       |  $1978           |  30             |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer            |  $900            |  20             |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple           |  $3500           |  1              |  i5 9th Gen       |  GTX 3070        |
-----------------------------------------------------------------------------------------------------------------

- Enter the customer name: arbit

- Enter the name of the laptop you want to sell: xps

- Enter the required quantity of the laptop: 10

Do you want to sell more laptop if yes then enter 'y' if no then enter'n' (y/n): n

Do you want to ship your laptop if yes then enter 'y' if you don't want to ship press 'n': y
```

Figure 58 Screenshot of selling 10 xps laptops



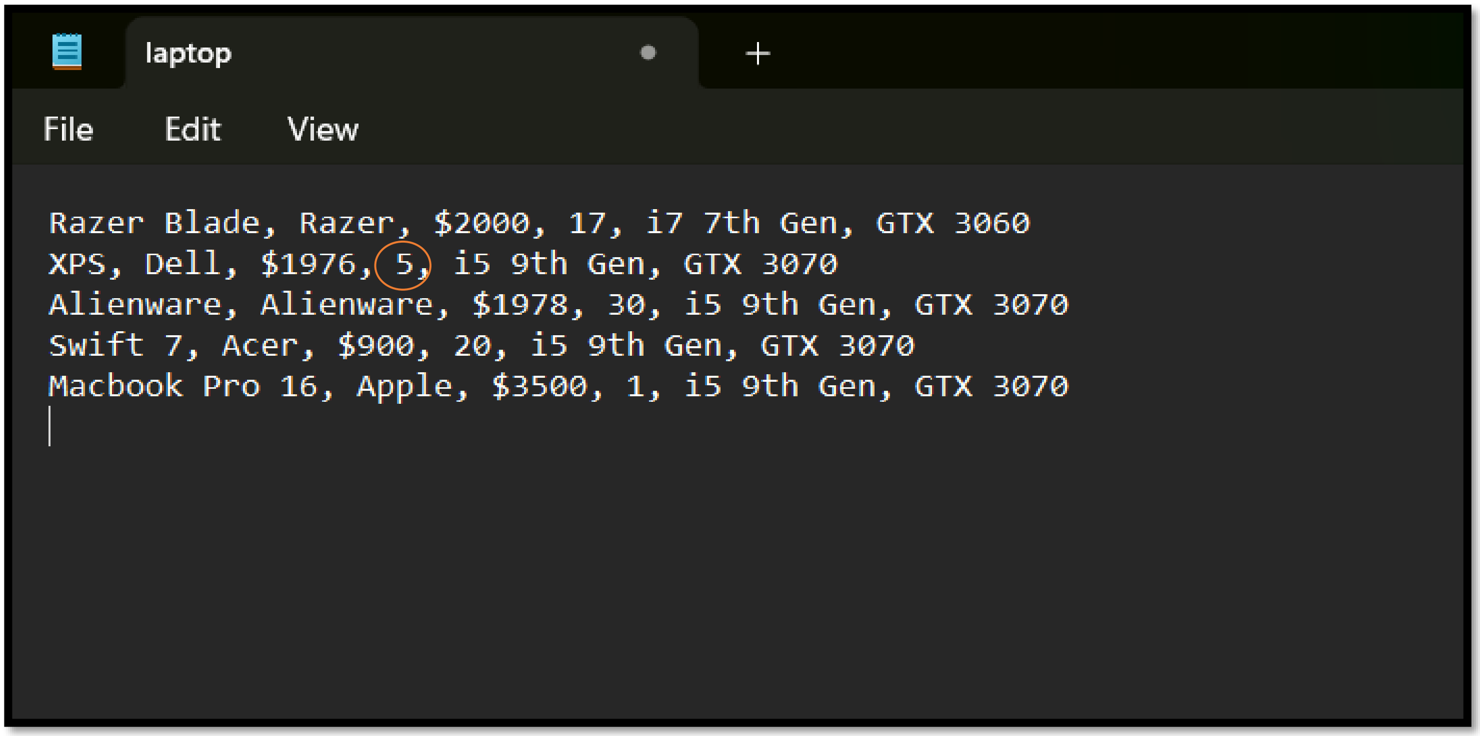
```
Do you want to sell more laptop if yes then enter 'y' if no then enter'n' (y/n): n

Do you want to ship your laptop if yes then enter 'y' if you don't want to ship press 'n': y

Order complete! Your new laptop will be delivered to you soon.

Note: The grand total, including the shipping cost

|---------------------------------------------------------------------------------------------------|
|                                  Arbit laptop Shop                                                |
|                                  Kavresthali, Kathmandu                                           |
|                                  Phone: 9863935190, 9881224111                                    |
|---------------------------------------------------------------------------------------------------|
|Customer Name: arbit                                                                               |
|                                                     Date of Sell: 2023-05-10 13:13:22.740589      |
|---------------------------------------------------------------------------------------------------|
|Laptops          |    Brand      |    Price     |   Quantity    |  Processor      |   Graphic       |
|---------------------------------------------------------------------------------------------------|
|xps              |    Dell       |    $1976     |       10      |   i5 9th Gen    |    GTX 3070     |
|---------------------------------------------------------------------------------------------------|
|Total Amount : $20260                     Total Shipping Cost :$500                                |
|---------------------------------------------------------------------------------------------------|
|                                                                                                   |
|***************************Thank You For Giving Us Chance to Serve you****************************|
|                                                                                                   |
|---------------------------------------------------------------------------------------------------|
```

Figure 59 Screenshot of bill of sell laptop



```
Here is the list of available laptops:
------------------------------------------------------------------------------------------------------
| Laptops        | Brand          | Price          | Quantity       | Processor      | Graphic        |
------------------------------------------------------------------------------------------------------
| Razer Blade    |  Razer         |  $2000         |  17            |  i7 7th Gen    |  GTX 3060      |
------------------------------------------------------------------------------------------------------
| XPS            |  Dell          |  $1976         |  5             |  i5 9th Gen    |  GTX 3070      |
------------------------------------------------------------------------------------------------------
| Alienware      |  Alienware     |  $1978         |  30            |  i5 9th Gen    |  GTX 3070      |
------------------------------------------------------------------------------------------------------
| Swift 7        |  Acer          |  $900          |  20            |  i5 9th Gen    |  GTX 3070      |
------------------------------------------------------------------------------------------------------
| Macbook Pro 16 |  Apple         |  $3500         |  101           |  i5 9th Gen    |  GTX 3070      |
------------------------------------------------------------------------------------------------------

- Enter the customer name:
```

Figure 60 Screenshot of updated laptop after selling xps laptop in shell



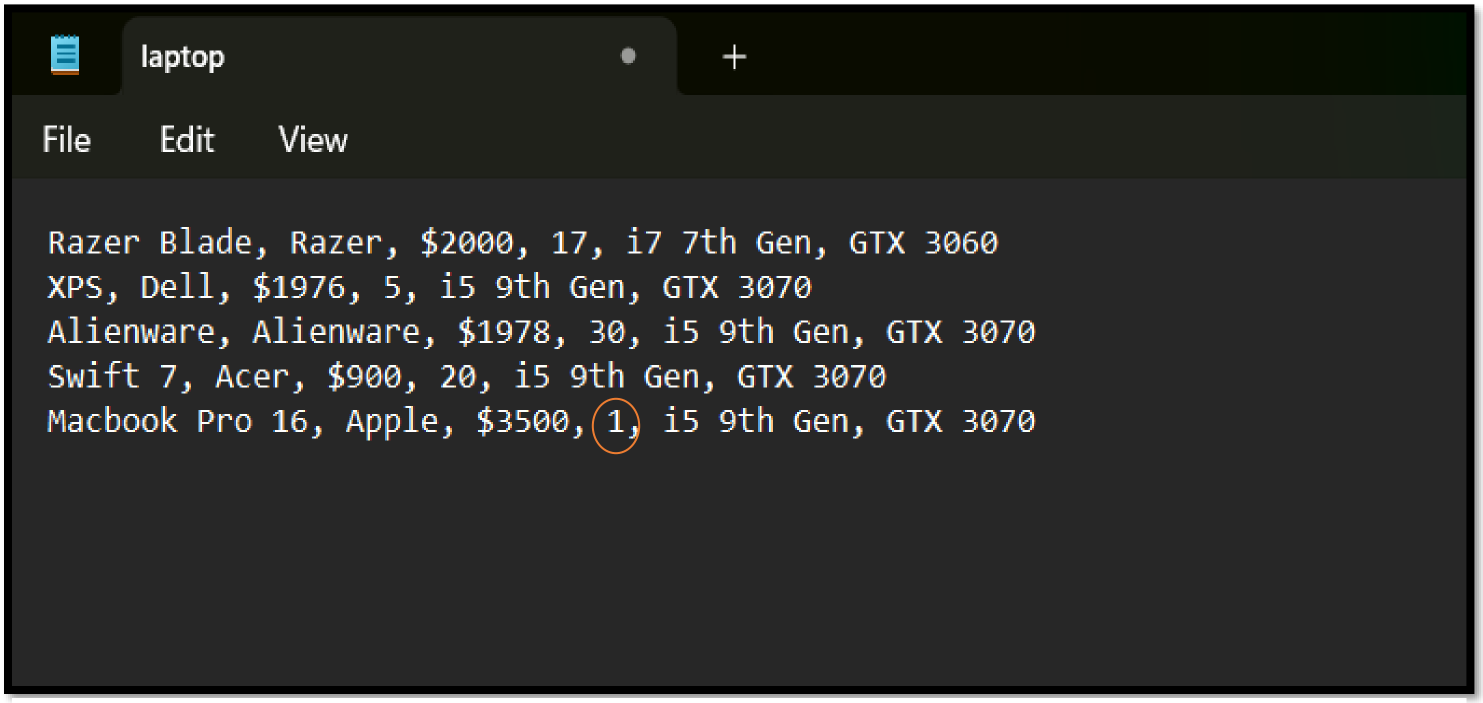
```
Razer Blade, Razer, $2000, 17, i7 7th Gen, GTX 3060
XPS, Dell, $1976, 5, i5 9th Gen, GTX 3070
Alienware, Alienware, $1978, 30, i5 9th Gen, GTX 3070
Swift 7, Acer, $900, 20, i5 9th Gen, GTX 3070
Macbook Pro 16, Apple, $3500, 1, i5 9th Gen, GTX 3070
```

Figure 61 Screenshot of updated quantity on xps after sell 10 laptops in txt file

4.7 TEST 5 To show the UPDATE stock of laptops WHILE purchase

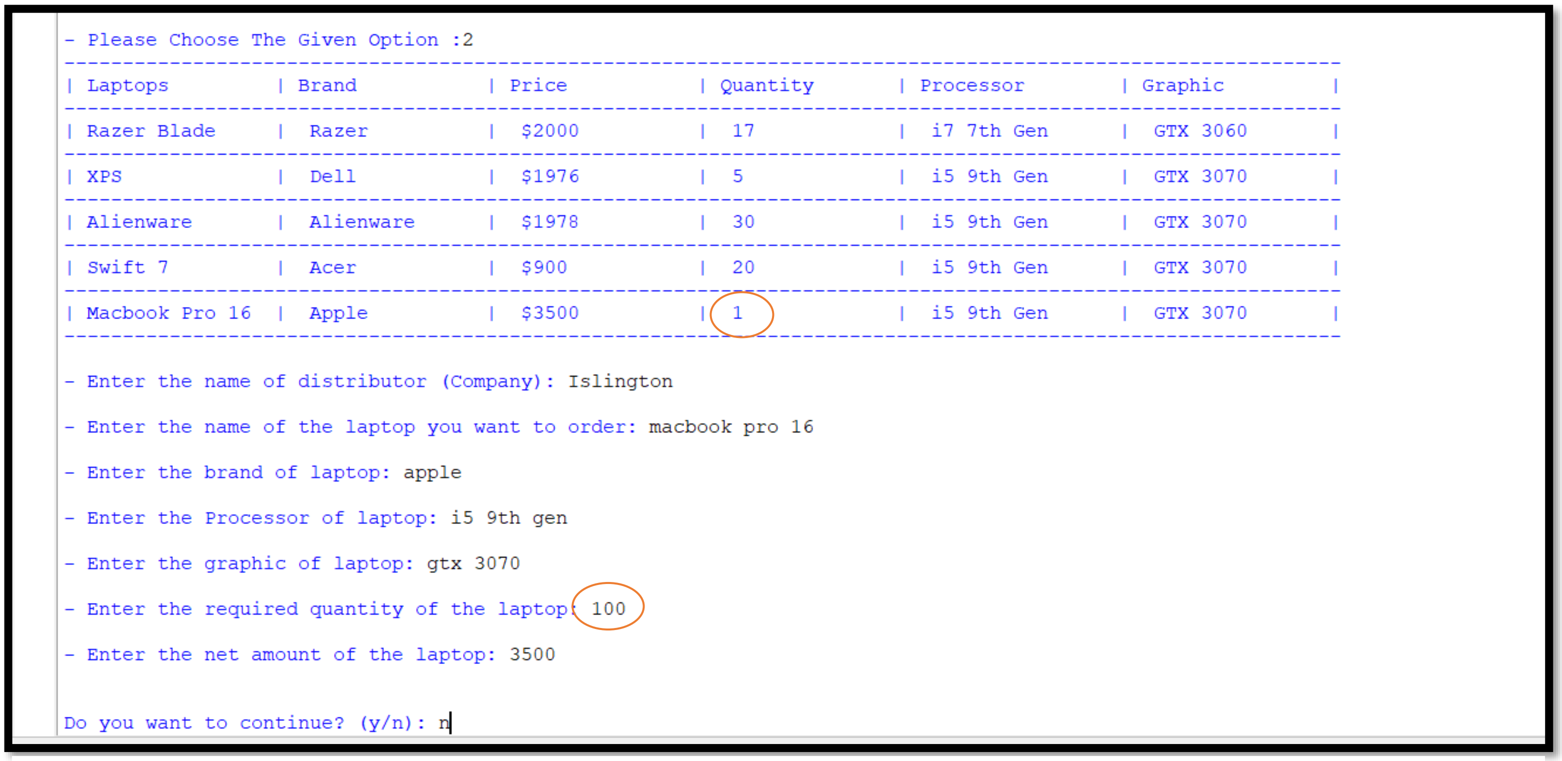
Test no :	**5**
Objective:	To show the update stock of laptops in purchase
Action:	➡ The main module was run and the sell option was selected ➡ Enter all the required input to purchase ➡ Purchase laptops
Expected Result:	The laptop should sell and laptops sell details should written in txt file
Actual Result:	The laptop got purchase and laptops stock got append
Conclusion	The Test is Successful

Table 7 To show the update stock of laptops while purchase



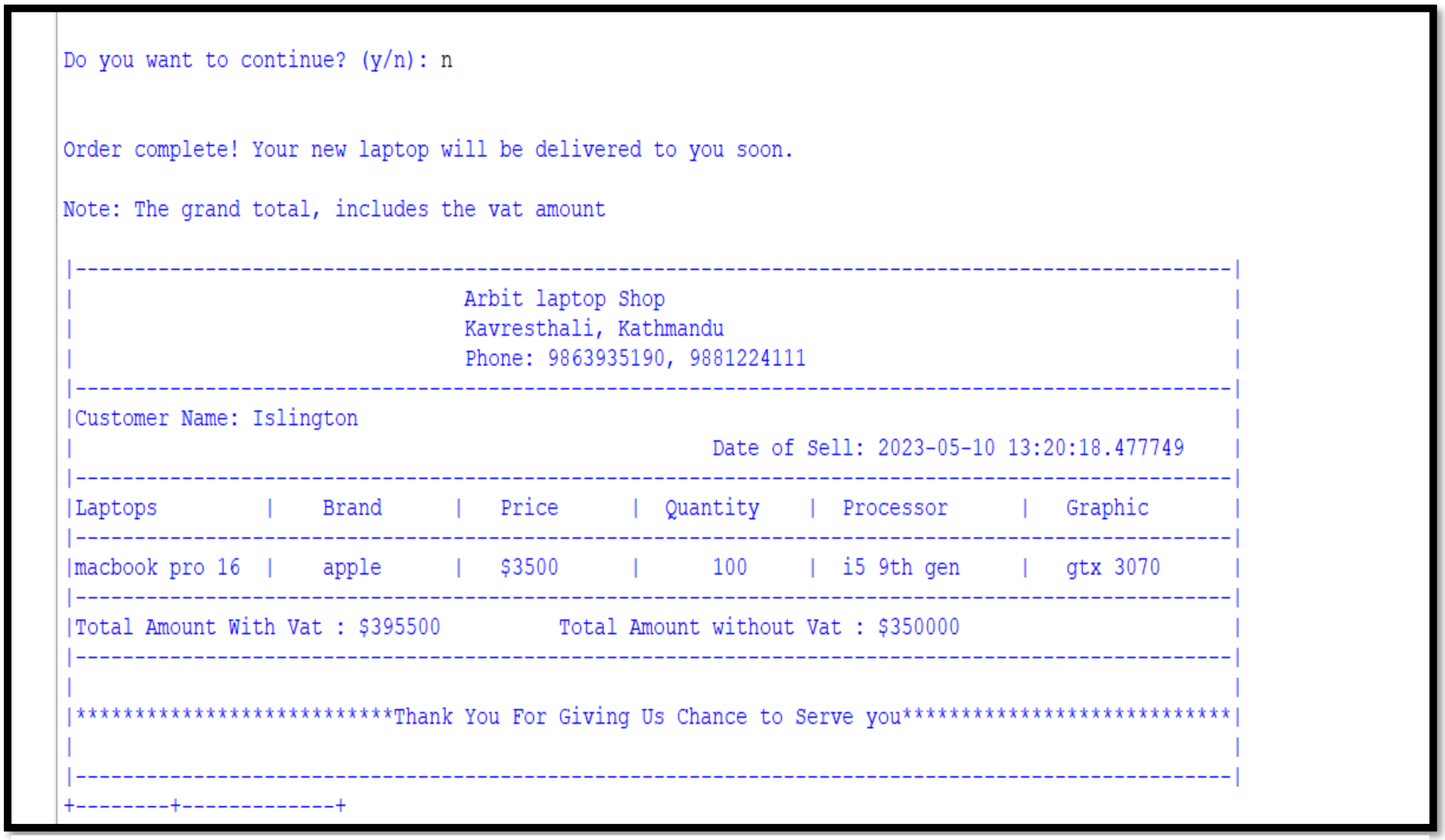
```
Razer Blade, Razer, $2000, 17, i7 7th Gen, GTX 3060
XPS, Dell, $1976, 5, i5 9th Gen, GTX 3070
Alienware, Alienware, $1978, 30, i5 9th Gen, GTX 3070
Swift 7, Acer, $900, 20, i5 9th Gen, GTX 3070
Macbook Pro 16, Apple, $3500, 1, i5 9th Gen, GTX 3070
```

Figure 62 Screenshot of laptop stock before purchase in txt file



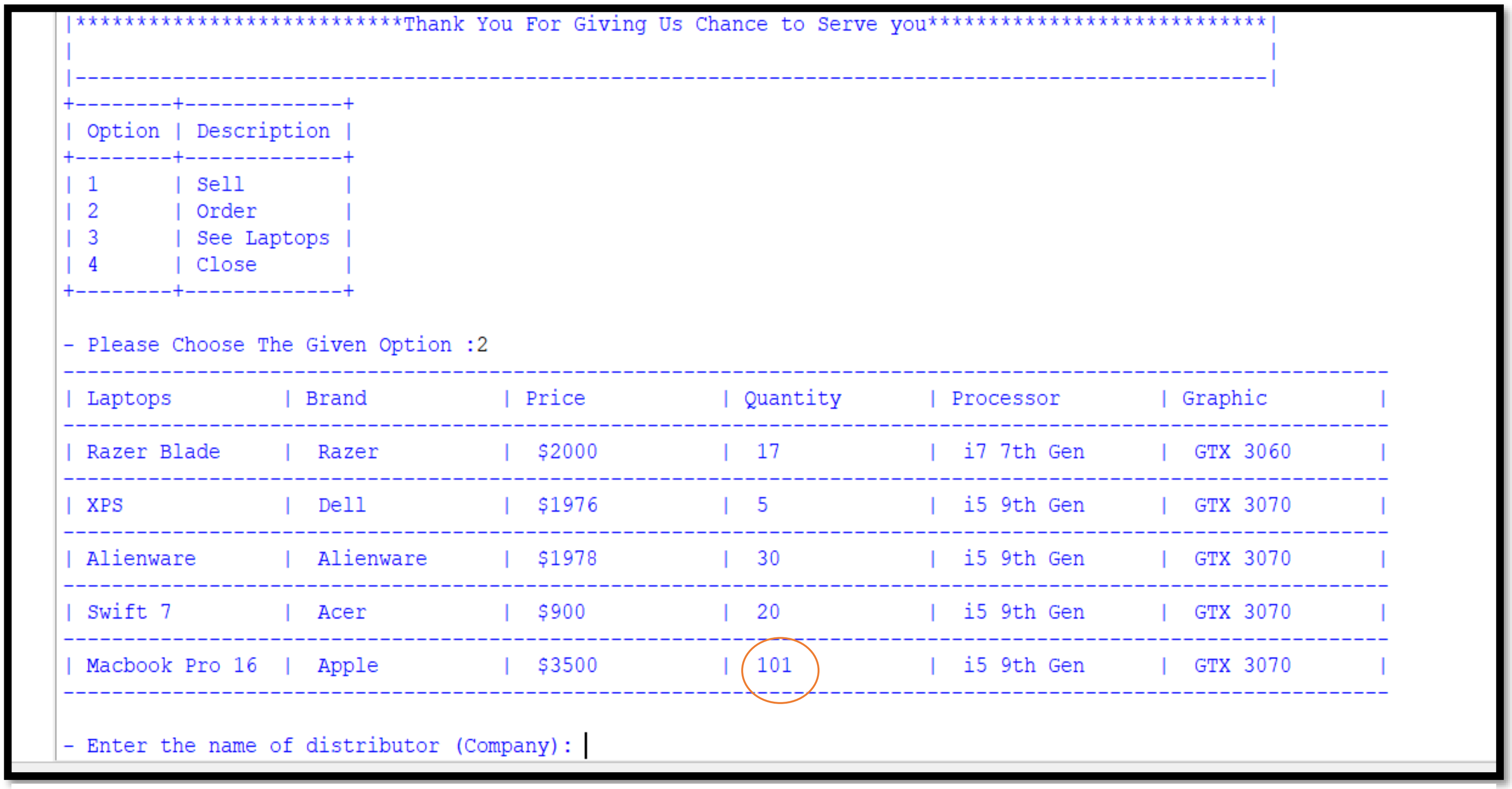
```
- Please Choose The Given Option :2
------------------------------------------------------------------------------------------------------------
| Laptops           | Brand             | Price             | Quantity         | Processor          | Graphic           |
------------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer            |  $2000            |  17              |  i7 7th Gen        |  GTX 3060         |
------------------------------------------------------------------------------------------------------------
| XPS              |  Dell             |  $1976            |  5               |  i5 9th Gen        |  GTX 3070         |
------------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware        |  $1978            |  30              |  i5 9th Gen        |  GTX 3070         |
------------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer             |  $900             |  20              |  i5 9th Gen        |  GTX 3070         |
------------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple            |  $3500            |  1               |  i5 9th Gen        |  GTX 3070         |
------------------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company): Islington

- Enter the name of the laptop you want to order: macbook pro 16

- Enter the brand of laptop: apple

- Enter the Processor of laptop: i5 9th gen

- Enter the graphic of laptop: gtx 3070

- Enter the required quantity of the laptop: 100

- Enter the net amount of the laptop: 3500


Do you want to continue? (y/n): n
```

Figure 63 Screenshot of purchasing laptops to updated quantity



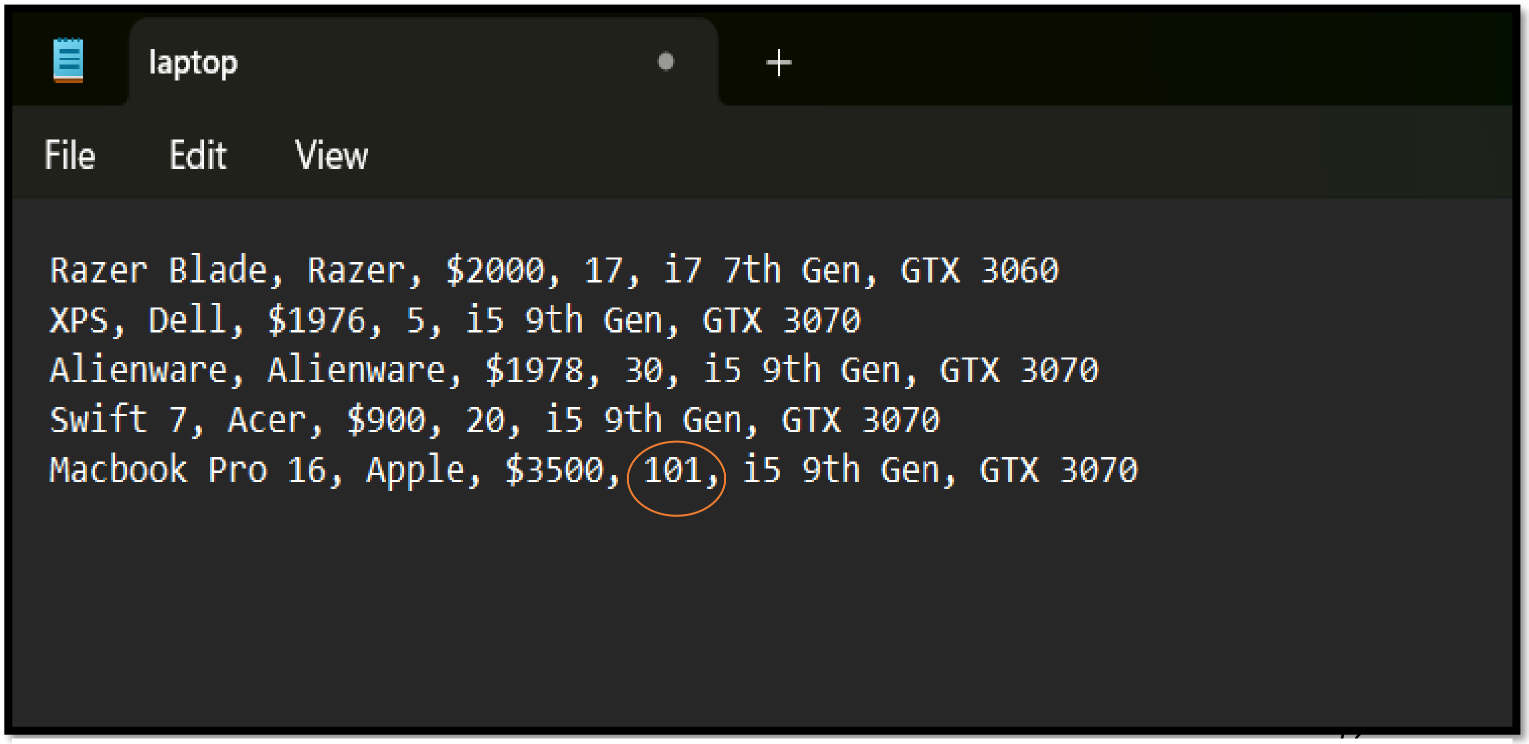
```
Do you want to continue? (y/n): n


Order complete! Your new laptop will be delivered to you soon.

Note: The grand total, includes the vat amount

|-----------------------------------------------------------------------------------------------|
|                                Arbit laptop Shop                                              |
|                                Kavresthali, Kathmandu                                         |
|                                Phone: 9863935190, 9881224111                                  |
|-----------------------------------------------------------------------------------------------|
|Customer Name: Islington                                                                       |
|                                                     Date of Sell: 2023-05-10 13:20:18.477749    |
|-----------------------------------------------------------------------------------------------|
|Laptops          |    Brand      |   Price      |  Quantity    |  Processor      |   Graphic     |
|-----------------------------------------------------------------------------------------------|
|macbook pro 16  |    apple      |   $3500      |      100     |  i5 9th gen     |   gtx 3070    |
|-----------------------------------------------------------------------------------------------|
|Total Amount With Vat : $395500          Total Amount without Vat : $350000                     |
|-----------------------------------------------------------------------------------------------|
|                                                                                               |
|***************************Thank You For Giving Us Chance to Serve you****************************|
|                                                                                               |
|-----------------------------------------------------------------------------------------------|
+--------+-------------+
```

Figure 64 Screenshot of bill of purchase laptop to updated stock laptop



```
|****************************Thank You For Giving Us Chance to Serve you*****************************|
|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
+--------+-------------+
| Option | Description |
+--------+-------------+
| 1      | Sell        |
| 2      | Order       |
| 3      | See Laptops |
| 4      | Close       |
+--------+-------------+

- Please Choose The Given Option :2
--------------------------------------------------------------------------------------------------------------
| Laptops          | Brand           | Price           | Quantity        | Processor         | Graphic         |
--------------------------------------------------------------------------------------------------------------
| Razer Blade      |  Razer          |  $2000          |  17             |  i7 7th Gen       |  GTX 3060       |
--------------------------------------------------------------------------------------------------------------
| XPS              |  Dell           |  $1976          |  5              |  i5 9th Gen       |  GTX 3070       |
--------------------------------------------------------------------------------------------------------------
| Alienware        |  Alienware      |  $1978          |  30             |  i5 9th Gen       |  GTX 3070       |
--------------------------------------------------------------------------------------------------------------
| Swift 7          |  Acer           |  $900           |  20             |  i5 9th Gen       |  GTX 3070       |
--------------------------------------------------------------------------------------------------------------
| Macbook Pro 16   |  Apple          |  $3500          |  101            |  i5 9th Gen       |  GTX 3070       |
--------------------------------------------------------------------------------------------------------------

- Enter the name of distributor (Company):
```

Figure 65 Screenshot of updated laptop after purchase laptop



```
Razer Blade, Razer, $2000, 17, i7 7th Gen, GTX 3060
XPS, Dell, $1976, 5, i5 9th Gen, GTX 3070
Alienware, Alienware, $1978, 30, i5 9th Gen, GTX 3070
Swift 7, Acer, $900, 20, i5 9th Gen, GTX 3070
Macbook Pro 16, Apple, $3500, 101, i5 9th Gen, GTX 3070
```

Figure 66 Screenshot of updated laptop stock in txt file after purchase

5 References

geeksforgeeks. (2023, May 10). *Data Structures - GeeksforGeeks*. Retrieved from geeksforgeeks: https://www.geeksforgeeks.org/data-structures/

CONCLUSION

In conclusion, developing a program that can manage the information of available laptops in a text file and make changes to the stock based on orders and sales is an important task for a laptop rental shop. The program should generate notes/receipts for each transaction, including details such as laptop name, brand, customer name, date and time of purchase, price, shipping cost, and total amount to be paid.

The program should be able to read and update the stock of each laptop in the text file accordingly. It should also generate invoices when the shop purchases laptops from manufacturers, including details such as the net amount, VAT amount, and gross amount.

Overall, the development of such a program requires a good understanding of programming languages and data structures. It is important to carefully design the program and test it thoroughly to ensure that it functions as intended. While there may be some challenges in developing the program, with patience and perseverance, it is possible to create a reliable and efficient system for managing the inventory of laptops in a rental shop.

6 APPENDIX

6.1 APPENDIX OF MAIN MODULES

```
import read as rd

import operation as op



def start():
    """
    This function displays a menu of options for the user to choose from. The options include selling a laptop,
       ordering a laptop, seeing available laptops, and closing the program. If the user chooses to sell a laptop,
       the `display` function is called to show available laptops and then the 'customerr' and 'purchase' functions are called.
       If the user chooses to order a laptop, the 'display' function is called to show available laptops and then the 'distributor' and
       'order' functions are called. If the user chooses to see available laptops, the 'display' function is called. If the user
       chooses to close the program, the 'exit' function is called. If the user enters an invalid input, an error message is displayed
       and the user is prompted again.
    """
    while True:
        print("+--------+-------------+")
        print("| Option | Description |")
        print("+--------+-------------+")
        print("| 1      | Sell        |")
        print("| 2      | Order       |")
        print("| 3      | See Laptops |")
        print("| 4      | Close       |")
        print("+--------+-------------+")
        print()
        user = input("- Please Choose The Given Option :")
        if user == "1":
            print()
            print("Here is the list of available laptops:")
            rd.display()
            print()
            op.customerr()
            op.purchase()
            print()



        elif user == "2":
            rd.display()
            print()
            op.disstributor()
            op.order()


        elif user == "3":
            print()
            rd.display()
            print()
```

```
        elif user == "4":
            exit()

        else:
            print()
            print("* Please Choose Between 1,2,3 and 4 ")
            print()




start()
op.purchase()
```

6.2 APPENDIX OF OPERATION MODULES

```
import read as rd
import write as wr


def laptopstock():
    """
    This function allows the user to sell laptops. The user is prompted to enter whether
they
    want to sell another laptop or not. If the user enters 'y', the function displays available
      laptops and calls the purchase function. If the user enters 'n', the function exits. If
the user
        enters an invalid input, an error message is displayed and the user is prompted
again.
```

```
    """
    while True:
        print()
        another_laptop = input("- Do you want to sell other laptops if yes then press 'y' if no
then press 'n' : ")
        print()
        if another_laptop.lower() == "y":
            rd.display()
            print()
            purchase()


            break
        elif another_laptop.lower() == "n":
            break
        else:
            print("Invalid input. Please enter 'y' to continue or 'n' to exit.")
            print()






laptopname=""
quantity=""
customer_=""
current_time=""
brand_sell=""
processor_=""
graphic_=""
```

```
price_=""

netamount=""

total=""

purchase_list=[]

sell_list=[]

money=[]

ship_total=[]

shippingmoney=[]

def customerr():
    """

    This function prompts the user to enter a customer name and stores it in the global
variable `customer_`.

    The function checks if the entered name is valid (i.e., contains only alphabetic
characters). If the name is valid,

      the function exits. If the name is not valid or if it is an empty string, an error message
is displayed and the user

        is prompted again.
    """


    global customer_

    while True:

            customer_name = input("- Enter the customer name: ")

            customer_=customer_name

            if customer_name.replace(" ", "").isalpha():

                print()

                break

            elif customer_name == "":

                print("\n* You can't continue without typing customer.")

                print()
            elif customer_name.isdigit():
                print()
                print("* Please enter customer name correctly")
                print()
            else:
                print()
                print("* Please enter customer name correctly")
                print()




def purchase():
    """
    This function prompts the user to enter the name of the laptop they want to sell and
stores it in the global variable `laptopname`. The function checks if the entered laptop
name is valid (i.e., not a digit, not an empty string, and available in the store). If the
laptop name is valid, the function exits. If the laptop name is not valid, an error message
is displayed and the user is prompted again.
    """
    global laptopname
    while True:
        laptop_name = input("- Enter the name of the laptop you want to sell:
").lower().strip()
        laptopname=laptop_name
        if laptop_name.isdigit():
            print("\n* Invalid input. Please enter the name of the laptop.\n")
        elif laptop_name == "":
            print("\n* Laptop name can't be empty.\n")
        elif laptop_name not in [b[0].lower() for b in rd.products]:
```

```
        print("\n* This laptop is not available in our store.\n")
        print("* Here are the available laptops:")
        print()
        for a in rd.products:
            print(a[0])
        print()
    else:
        break

check = True
while check:
    global quantity
    print()
    quantity_required = input("- Enter the required quantity of the laptop: ")
    quantity=quantity_required
    if quantity_required.isalpha():
        print("\n* Invalid input. Quantity must be a number.")
        continue
    try:
        quantity_required = int(quantity_required)
    except:
        print("\n* Invalid input. Quantity must be a number.")
        continue
    for i in rd.products:
        for j in i:
            if laptop_name.lower() == j.lower():
                if quantity_required > int(i[3]):
                    print("\n* We have",i[3]," Laptops right now")
            print()
            print("- Here is the list of available laptops with there quantity")
            rd.display()
            laptopstock()
            check=False
            break
        elif quantity_required <= 0:
            print("\n* You need to sell at least 1 laptop.")
        else:
            check = False
            break


global total_amount_last
total_amount_last = 0
global withoutshipping
withoutshipping=0
global total_shipping_cost
total_shipping_cost=0
for a in rd.products:
    if laptop_name in a[0].lower():
        if int(a[3]) >= quantity_required:
            global brand_sell
            brand_name = a[1]
            brand_sell=brand_name
            global processor_
            processor = a[4]
            processor_=processor
```

```
global graphic_
graphic = a[5]
graphic_=graphic
global price_
price = int(a[2].replace("$", ""))
price_=price
global netamount
net_amount = quantity_required * price
netamount=net_amount
global shipping_cost
shipping_cost = 50*quantity_required
global total
total_amount = net_amount + shipping_cost
total=total_amount
global current_time
currenttime=rd.datetime.datetime.now()
current_time=currenttime
money.append(total)
for total in money:
    total_amount_last=total_amount_last+total
wr.withdraw()
shippingmoney.append(netamount)
for shipping in shippingmoney:
    withoutshipping=withoutshipping+shipping
ship_total.append(shipping_cost)
for shipped in ship_total:
    total_shipping_cost=total_shipping_cost+shipped
```

```
        while True:
            print()
            user_input = input("Do you want to sell more laptop if yes then enter 'y' if no then enter'n' (y/n): ")
            if user_input.lower() == "y":
                    print()
                    rd.display()
                    print()
                    purchase_list.append(f"|{laptopname:18s}|   {brand_sell:11s} | ${price:<10}| {quantity:^12} |  {processor_:15s}|   {graphic_:7s}   |")
                    sell_list.append(f"\t\t\t\t\t\t|{laptopname:16s}|   {brand_sell:11s} | ${price:<10}| {quantity:^12} |  {processor_:15s}|   {graphic_:7s}     |\n")
                    purchase()
                    break
            elif user_input.lower() == "n":
                ship()
                print()
                purchase_list.clear()
                sell_list.clear()
                shippingmoney.clear()
                ship_total.clear()
                money.clear()
                break
            else:
                print("Invalid input. Please enter 'y' to continue or 'n' to exit.")
```

```
def ship():
    """
    This function prompts the user to enter whether they want to ship their laptop or not.
    If the user enters 'y', the `withship` function is called and then the `bill` function is
called.
      If the user enters 'n', the `shipbill` function is called and then the `withoutorderbill`
function is called.
      If the user enters an invalid input, an error message is displayed and the user is
prompted again.
    """
    while True:
        print()
        shipp = input("Do you want to ship your laptop if yes then enter 'y' if you don't want
to ship press 'n': ")
        if shipp.lower() == "y":
            wr.withship()


            bill()
            break
        elif shipp.lower() == "n":


            shipbill()
            wr.withoutorderbill()
            break
        else:
            print("Invalid input. Please enter 'y' to ship or 'n' if you don't want to ship.")


def bill():
    """
    This function generates and displays a bill for the user's purchase if they want to ship.
    The bill includes the customer name, date of sell, purchase details
      (laptop name, brand, price, quantity, processor, and graphic), total amount, and total
shipping cost.
      The function also displays a thank you message to the customer.
    """
    print()
    print("Order complete! Your new laptop will be delivered to you soon.")
    print()
    print("Note: The grand total, including the shipping cost")
    print()
    print("|----------------------------------------------------------------------------------------------|")
    print("| \t\t\t\t  Arbit laptop Shop                                          |")
    print("| \t\t\t\t  Kavresthali, Kathmandu                                      |")
    print("| \t\t\t\t  Phone: 9863935190, 9881224111                               |")
    print("|----------------------------------------------------------------------------------------------|")
    customer = f"|{'Customer Name: ' + customer_:40s} \t\t\t\t\t                  |"
    print(customer)
    print("|                                          " + "Date of Sell: " + str(current_time) + "    |")
    print("|----------------------------------------------------------------------------------------------|")
    purchase_details = f"|{'Laptops':18s}|    {'Brand':11s}|   {'Price':10s} |  {'Quantity':12s}|
{'Processor':15s}|   {'Graphic':7s}     |"
    print(purchase_details)
    print("|----------------------------------------------------------------------------------------------|")
    after_purchase = f"|{laptopname:18s}|   {brand_sell:11s} |   ${price_:<9} |
{quantity:^12} |  {processor_:15s}|   {graphic_:7s}   |"
    print(after_purchase)
    print("|----------------------------------------------------------------------------------------------|")
    for purchase_item in purchase_list:
        print(purchase_item)
        print("|-----------------------------------------------------------------------------------------------|")
    total_sell = f"|{'Total Amount : $' + str(total_amount_last):40s} {'Total Shipping Cost :$'+str(total_shipping_cost):9s} \t\t\t\t   |"

    print(total_sell)
    print("|-----------------------------------------------------------------------------------------------|")
    print("|                                                                                               |")
    print("|*************************Thank You For Giving Us Chance to Serve you***************************|")
    print("|                                                                                               |")
    print("|-----------------------------------------------------------------------------------------------|")

def shipbill():
    """
    This function generates and displays a bill for the user's purchase if they don't want to ship.
      The bill includes the customer name, date of sell, purchase details
      (laptop name, brand, price, quantity, processor, and graphic), and total amount (excluding shipping cost).
      The function also displays a thank you message to the customer.
    """
    print()
    print("Order complete! Your new laptop will be delivered to you soon.")
    print()
    print("Note: The grand total, doesn't include shipping cost the shipping cost")
    print()
    print("|-----------------------------------------------------------------------------------------------|")
    print("| \t\t\t\t  Arbit laptop Shop                                      |")
    print("| \t\t\t\t  Kavresthali, Kathmandu                                      |")
    print("| \t\t\t\t  Phone: 9863935190, 9881224111                              |")
    print("|-----------------------------------------------------------------------------------------------|")
    customer = f"|{'Customer Name: ' + customer_:40s} \t\t\t\t\t                 |"
    print(customer)
    print("|                                          " + "Date of Sell: " + str(current_time) + "    |")
    print("|-----------------------------------------------------------------------------------------------|")
    purchase_details = f"|{'Laptops':18s}|    {'Brand':11s}|   {'Price':10s} |  {'Quantity':12s}|
{'Processor':15s}|   {'Graphic':7s}     |"
    print(purchase_details)
    print("|-----------------------------------------------------------------------------------------------|")
    after_purchase = f"|{laptopname:18s}|   {brand_sell:11s} |   ${price_:<9} |
{quantity:^12} |  {processor_:15s}|   {graphic_:7s}   |"
    print(after_purchase)
    print("|-----------------------------------------------------------------------------------------------|")
    for purchase_item in purchase_list:
        print(purchase_item)
        print("|-----------------------------------------------------------------------------------------------|")
    total_sell = f"|{'Total Amount : $' + str(withoutshipping):40s} \t\t\t\t\t                 |"
    print(total_sell)
    print("|-----------------------------------------------------------------------------------------------|")
    print("|                                                                              |")
    print("|*************************Thank You For Giving Us Chance to Serve
you***************************|")
    print("|                                                                              |")
    print("|-----------------------------------------------------------------------------------------------|")
```

```
money_order=[]

vatno=[]

distributor_=""

def disstributor():
    """
    This function prompts the user to enter the name of a distributor (company) and
stores it in the global variable
      'distributor_'. The function checks if the entered distributor name is valid
      (i.e., contains only alphabetic characters and is not an empty string).
        If the distributor name is valid, the function exits. If the distributor name is not valid
or if an exception occurs,
        an error message is displayed and the user is prompted again.
    """
    while True:
        global distributor_
        try:
            distributor = input("- Enter the name of distributor (Company): ")
            distributor_=distributor
            if distributor.isalpha():
                print()
                break
            elif distributor =="":
                print()
                print("* Distributor name can't be Empty")
            elif int(distributor):
                print()
                print("* Distributor name can't be number")
            else:
                print()
                print("* Enter distributor name correctly")
                print()
        except:
            print()
            break
        print()

orderlaptop=""
brand_order=""
processor_order=""
graphic_order=""
quantity_order=""
total_order=""
order_list=[]
sell_order_list=[]


def order():
    """
    This function prompts the user to enter the name of the laptop they want to order and
stores it in the global variable
       'orderlaptop'. The function checks if the entered laptop name is valid
       (i.e., contains at least one alphabetic character and is not an empty string).
       If the laptop name is valid, the function exits. If the laptop name is not valid or
       if an exception occurs, an error message is displayed and the user is prompted
again.
    """
    while True:
        global orderlaptop
        try:
            order_laptop = input("- Enter the name of the laptop you want to order: 
").lower().strip()
            orderlaptop=order_laptop
            print()
            if any(char.isalpha() for char in order_laptop):
                break
            elif order_laptop == "":
                print("* Please enter laptop name.")
            elif int(order_laptop):
                print("* Laptop name can't be number")
            else:
                print("* Enter Laptop name correctly")

        except:
           print("* Enter Laptop name correctly")
        print()



    while True:
        global brand_order
        try:
            brand_name = input("- Enter the brand of laptop: ").strip()
            brand_order=brand_name
            print()
            if any(char.isalpha() for char in brand_order):
                break
            elif brand_name == "":
                print("* Please enter brand name")
                print()
            else:
                print("Plesae enter Brand name correctly")
                print()
        except:
            print("Enter brand name correctly")
            print()
    while True:
        global processor_order
        try:
            processor = input("- Enter the Processor of laptop: ").strip()
            processor_order=processor
            print()
            if any(char.isalpha() for char in processor):
                break
            elif processor=="":
                print("* Please enter processor name")
                print()
            else:
                print("* Please enter processor name correctly")
                print()
        except:
           print("* Please enter processor name correctly")
           print()



    while True:
        global graphic_order
        try:
            graphics = input("- Enter the graphic of laptop: ").strip()
            graphic_order=graphics
            print()
            if any(char.isalpha() for char in graphics):
                break

            elif graphics=="":
                print("* Enter graphic name correctly")
                print()
            else:
                print("* Enter graphic name correctly")
                print()
        except:
            break



    while True:
        global quantity_order
        try:
            quantity_required =int(input("- Enter the required quantity of the laptop: "))
            quantity_order=quantity_required
            print()
            if int(quantity_required) <=0:
                print("* Invalid input. Quantity must be at least 1.")
                print()
            else:
                break
        except:
            print()
            print("* Enter required quantity correctly")
            print()

    while True:
        global net_amount_order
        try:
         net_amount = int(input("- Enter the net amount of the laptop: "))
         net_amount_order=net_amount
         print()

         if net_amount <= 0:
            print("* Invalid input. Net amount must be at least 0.")
            print()

         else:
            break

        except :
          print()
          print("* Enter a valid net amount.")
          print()

    global total_order_last
    total_order_last = 0
    global novatt
    novatt=0
    novatt=0
```

```
    global vat
    vat_amount = int(net_amount*13/100)
    vat=vat_amount
    global total_order
    total_amount = net_amount+vat_amount
    total_order=total_amount
    total_order_final=total_order*quantity_required
    global current_time
    currenttime=rd.datetime.datetime.now()
    current_time=currenttime
    global withvatt
    withvatt=net_amount*quantity_order
    withnovat=net_amount*quantity_required
    money_order.append(total_order_final)
    for total in money_order:
        total_order_last=total_order_last+total
    wr.invorder()
    vatno.append(withnovat)
    for currentvat in vatno:
        novatt=novatt+currentvat
    while True:
        print()
        user_input = input("Do you want to continue order laptop if yes enter 'y' in no enter
'n' (y/n): ")
        if user_input.lower() == "y":
            print()
            rd.display()
            print()
            order_list.append(f"|{orderlaptop:16s}|    {brand_order:11s}|   ${net_amount:<9} |
{quantity_order:^12} |  {processor_order:15s}|   {graphic_order:14s}|")

            sell_order_list.append(f"\t\t\t\t\t\t|{order_laptop:16s}| {brand_order:^11s}   |
${int(total_order):<10}| {quantity_order:^12} |  {processor_order:15s}|
{graphic_order:14s}|\n")

            order()

            break

        elif user_input.lower() == "n":

            wr.order_invoice()

            print()

            orderbill()

            order_list.clear()

            sell_order_list.clear()

            money_order.clear()

            vatno.clear()


            break

        else:

            print("Invalid input. Please enter 'y' to continue or 'n' to exit.")









def orderbill():

    """

    This function generates and displays a bill for the user's order.

    The bill includes the distributor name, date of sell, order details (laptop name, brand,
price, quantity, processor, and graphic),
    total amount with VAT, and total amount without VAT. The function also displays a
thank you message to the customer.
    """
    print()
    print("Order complete! Your new laptop will be delivered to you soon.")
    print()
    print("Note: The grand total, includes the vat amount")
    print()
    print("|-----------------------------------------------------------------------------------------------|")
    print("| \t\t\t\t  Arbit laptop Shop                                      |")
    print("| \t\t\t\t  Kavresthali, Kathmandu                                 |")
    print("| \t\t\t\t  Phone: 9863935190, 9881224111                          |")
    print("|-----------------------------------------------------------------------------------------------|")
    distributor_order = f"|{'Customer Name: ' + distributor_:40s} \t\t\t\t\t                 |"
    print(distributor_order)
    print("|                                          " + "Date of Sell: " + str(current_time) + "    |")
    print("|-----------------------------------------------------------------------------------------------|")
    order_details = f"|{'Laptops':16s}|    {'Brand':11s}|   {'Price':10s} |  {'Quantity':12s}|
{'Processor':15s}|   {'Graphic':7s}       |"
    print(order_details)
    print("|-----------------------------------------------------------------------------------------------|")
    after_order = f"|{orderlaptop:16s}|    {brand_order:11s}|   ${net_amount_order:<9} |
{quantity_order:^12}|  {processor_order:15s}|   {graphic_order:14}|"
    print(after_order)
    print("|-----------------------------------------------------------------------------------------------|")
    for order_item in order_list:
        print(order_item)
        print("|-----------------------------------------------------------------------------------------------|")
    total_order_ok = f"|{'Total Amount With Vat : $' + str(total_order_last):40s} {'Total
Amount without Vat : $' + str(novatt):40s}      \t   |"
```

```
    print(total_order_ok)
    print("|--------------------------------------------------------------------------------------------------|")
    print("|                                                                                    |")
    print("|***************************Thank You For Giving Us Chance to Serve
you****************************|")
    print("|                                                                                    |")
    print("|--------------------------------------------------------------------------------------------------|")




    rd.products=[]
    with open(rd.product)as f:
        for line in f:
            line=line.strip().split(",")
            rd.products.append(line)
```

6.3 APPENDIX OF WRITE MODULE

```
import operation as op
import read as rd
```

```
def withship():
    """
    This function generates a bill for the user's purchase and saves it to a text file.
    The bill includes the customer name, date of sell, purchase details (laptop name,
brand, price, quantity, processor, and graphic),
      total amount, and total shipping cost. The function also displays a thank you
message to the customer.
      The bill is saved to a text file in the `Invoice_Sell` directory with the filename being
the customer's name.
    """
    filepath =r"Invoice_Sell\\" + op.customer_ + ".txt"
    with open(filepath, 'a') as w:
        if w.tell() == 0:
            w.write("\t\t\t\t\t\t|----------------------------------------------------------------------------------
--------------|\n")
            w.write("\t\t\t\t\t\t| \t\t\t\t  Arbit laptop Shop                                     |\n")
            w.write("\t\t\t\t\t\t| \t\t\t\t  Kavresthali,Kathmandu
|\n")
            w.write("\t\t\t\t\t\t| \t\t\t\t  Phone:9863935190,9881224111
|\n")
            w.write("\t\t\t\t\t\t|----------------------------------------------------------------------------------
--------------|\n")
            customer=f"\t\t\t\t\t\t|{'Customer Name :'+op.customer_:40s} \t\t\t\t\t
|\n"
            w.write(customer)
            w.write("\t\t\t\t\t\t|                                        "+"Date of
Sell:"+str(op.current_time)+"     |\n")
            w.write("\t\t\t\t\t\t|----------------------------------------------------------------------------------
--------------|\n")
```

```
        header = f"\t\t\t\t\t\t|{'Laptops':16s}|    {'Brand':11s}|   {'Price':10s} |
{'Quantity':12s}|  {'Processor':15s}|   {'Graphic':7s}       |\n"

        w.write(header)

        w.write("\t\t\t\t\t\t|--------------------------------------------------------------------------------
--------------|\n")

      after_purchase = f"\t\t\t\t\t\t|{op.laptopname:16s}|   {op.brand_sell:11s} |
${op.price_:<10}| {op.quantity:^12} |  {op.processor_:15s}|   {op.graphic_:7s}     |\n"

      w.write(after_purchase)

      w.write("\t\t\t\t\t\t|------------------------------------------------------------------------------------
----------|\n")

      for sell_item in op.sell_list:

              w.write(sell_item)

              w.write("\t\t\t\t\t\t|-----------------------------------------------------------------------------
--------------------|\n")

      total_sell = f"\t\t\t\t\t\t|{'Total Amount : $' + str(op.total_amount_last):40s} {'Total
Shipping Cost :$'+str(op.total_shipping_cost):9s} \t\t\t\t         |\n"

      w.write(total_sell)

      w.write("\t\t\t\t\t\t|------------------------------------------------------------------------------------
----------|\n")

      w.write("\t\t\t\t\t\t|                                                                                   |\n")

      w.write("\t\t\t\t\t\t|***************************Thank You For Giving Us Chance to
Serve you***************************|\n")

      w.write("\t\t\t\t\t\t|                                                                                   |\n")

      w.write("\t\t\t\t\t\t|------------------------------------------------------------------------------------
----------|\n")


def withoutorderbill():# no shipping function bill
   """

   This function generates a bill for the user's purchase and saves it to a text file.

     The bill includes the customer name, date of sell, purchase details (laptop name,
brand, price, quantity, processor, and graphic),
    and total amount (excluding shipping cost). The function also displays a thank you
message to the customer.

        The bill is saved to a text file in the `Invoice_Sell` directory with the filename being
the customer's name.

    """

    filepath = r"Invoice_Sell\\" + op.customer_ + "_no_ship.txt"

    with open(filepath, 'a') as w:

        if w.tell() == 0:

            w.write("\t\t\t\t\t\t|--------------------------------------------------------------------------------
--------------|\n")

            w.write("\t\t\t\t\t\t| \t\t\t\t  Arbit laptop Shop                                                    |\n")

            w.write("\t\t\t\t\t\t| \t\t\t\t  Kavresthali,Kathmandu
|\n")

            w.write("\t\t\t\t\t\t| \t\t\t\t  Phone:9863935190,9881224111
|\n")

            w.write("\t\t\t\t\t\t|--------------------------------------------------------------------------------
--------------|\n")

            customer=f"\t\t\t\t\t\t|{'Customer Name :'+op.customer_:40s} \t\t\t\t\t
|\n"

            w.write(customer)

            w.write("\t\t\t\t\t\t|                                                  "+"Date of
Sell:"+str(op.current_time)+"     |\n")

            w.write("\t\t\t\t\t\t|--------------------------------------------------------------------------------
--------------|\n")

            header = f"\t\t\t\t\t\t|{'Laptops':16s}|    {'Brand':11s}|   {'Price':10s} |
{'Quantity':12s}|  {'Processor':15s}|   {'Graphic':7s}       |\n"

            w.write(header)

            w.write("\t\t\t\t\t\t|--------------------------------------------------------------------------------
--------------|\n")

        after_purchase = f"\t\t\t\t\t\t|{op.laptopname:16s}|   {op.brand_sell:11s} |
${op.price_:<10}| {op.quantity:^12} |  {op.processor_:15s}|   {op.graphic_:7s}     |\n"

        w.write(after_purchase)
        w.write("\t\t\t\t\t\t|-----------------------------------------------------------------------------------
----------|\n")
        for sell_item in op.sell_list:
              w.write(sell_item)
              w.write("\t\t\t\t\t\t|--------------------------------------------------------------------------------
----------------|\n")
        total_sell = f"\t\t\t\t\t\t|{'Total Amount :$ ' + str(op.withoutshipping):40s} \t\t\t\t\t
|\n"
        w.write(total_sell)
        w.write("\t\t\t\t\t\t|-----------------------------------------------------------------------------------
----------|\n")
        w.write("\t\t\t\t\t\t|                                                                              |\n")
        w.write("\t\t\t\t\t\t|**************************Thank You For Giving Us Chance to
Serve you***************************|\n")
        w.write("\t\t\t\t\t\t|                                                                              |\n")
        w.write("\t\t\t\t\t\t|-----------------------------------------------------------------------------------
----------|\n")




def withdraw():
                 """
    This function updates the quantity of a laptop in the `products` list and saves the
updated list to a text file.
      The function searches for the laptop with the name stored in the `laptopname`
variable and subtracts the quantity stored in the
      `quantity` variable from its quantity. The updated `products` list is then saved to a
text file named `laptop.txt`.
    """
                 with open("laptop.txt", "w") as file:
                    for line in rd.products:
```

```
                    if line[0].lower() == op.laptopname:
                        line[3] =(" ")+str(int(line[3]) - int(op.quantity))
                    file.write(",".join(line)+ "\n")



def invorder():
        """
    This function updates the quantity of a laptop in the `products` list and saves the updated list to a text file.
      The function searches for the laptop with the name, brand, processor, and graphic stored in the `orderlaptop`,
        `brand_order`, `processor_order`, and `graphic_order` variables, respectively. If the laptop is found, its quantity
        is increased by the quantity stored in the `quantity_order` variable. If the laptop is not found, a new laptop with
        the entered details is added to the `products` list. The updated `products` list is then saved to a text file named `laptop.txt`.
    """
        lines=[]
        found=False
        with open("laptop.txt", "w") as file:
                for line in rd.products:
                    if line[0].strip().lower() == op.orderlaptop.strip().lower():
                        if line[1].strip().lower() == op.brand_order.strip().lower():
                          if line[4].strip().lower() == op.processor_order.strip().lower():
                            if line[5].strip().lower() == op.graphic_order.strip().lower():
                              line[3] =" "+str(int(line[3]) + int(op.quantity_order))
                              found = True
                    file.write(",".join(line)+ "\n")
        if not found:
            i = 1
            new_laptop_name = op.orderlaptop
            while any(neww[0].strip().lower() == new_laptop_name.strip().lower() for neww
in rd.products):
                new_laptop_name = op.orderlaptop + str(i)
                i += 1
            lines.append(", ".join([new_laptop_name, op.brand_order,
"$"+str(op.total_order), str(op.quantity_order), op.processor_order, op.graphic_order]))
            rd.products.append(lines)
            with open("laptop.txt", "a") as o:
                o.write("\n".join(lines)+"\n")



            rd.products=[]
            with open(rd.product)as f:
                for line in f:
                    line=line.strip().split(",")
                    rd.products.append(line)




def order_invoice():
    filepath = r"Invoice_order\\" + op.distributor_+ ".txt"
    with open(filepath, 'a') as w:
        if w.tell() == 0:
            w.write("\t\t\t\t\t\t|------------------------------------------------------------------------------------
--------------|\n")
            w.write("\t\t\t\t\t\t| \t\t\t\t  Arbit laptop Shop                                        |\n")
        w.write("\t\t\t\t\t\t| \t\t\t\t  Kavresthali,Kathmandu
|\n")

        w.write("\t\t\t\t\t\t| \t\t\t\t  Phone:9863935190,9881224111
|\n")

        w.write("\t\t\t\t\t\t|---------------------------------------------------------------------------------
--------------|\n")

        customer=f"\t\t\t\t\t\t|{'Customer Name :'+op.distributor_:40s} \t\t\t\t\t
|\n"

        w.write(customer)

        w.write("\t\t\t\t\t\t|                                              "+"Date of
Sell:"+str(op.current_time)+"     |\n")

        w.write("\t\t\t\t\t\t|---------------------------------------------------------------------------------
--------------|\n")

        header = f"\t\t\t\t\t\t|{'Laptops':16s}|    {'Brand':11s}|   {'Price':10s} |
{'Quantity':12s}|  {'Processor':15s}|   {'Graphic':7s}       |\n"

        w.write(header)

        w.write("\t\t\t\t\t\t|---------------------------------------------------------------------------------
--------------|\n")

        after_purchase = f"\t\t\t\t\t\t|{op.orderlaptop:16s}|   {op.brand_order:11s} |
${int(op.total_order):<10}| {op.quantity_order:^12} |  {op.processor_order:15s}|
{op.graphic_order:14}|\n"

        w.write(after_purchase)

        w.write("\t\t\t\t\t\t|---------------------------------------------------------------------------------
--------------|\n")

        for order_item in op.sell_order_list:

                w.write(order_item)

                w.write("\t\t\t\t\t\t|----------------------------------------------------------------------
-----------------------|\n")

        orderfinish = f"\t\t\t\t\t\t|{'Total Amount :$ ' + str(op.total_order_last):40s} {'Total
Amount without Vat : $' + str(op.novatt):40s}      \t         |\n"

        w.write(orderfinish)

        w.write("\t\t\t\t\t\t|
|\n")
```

```
            w.write("\t\t\t\t\t\t|**************************Thank You For Giving Us Chance to
Serve you***************************|\n")

            w.write("\t\t\t\t\t\t|
|\n")

            w.write("\t\t\t\t\t\t|--------------------------------------------------------------------------------
--------------|\n")
```

6.4 APPENDIX OF READ MODULE

```
import datetime


product=("laptop.txt")

products=[]

with open(product,'r')as f:

    for i in f:

        i=i.strip().split(',')

        products.append(i)

def display():

       """

        This function displays a table of available laptops. The table includes the laptop
name, brand, price, quantity,

          processor, and graphic for each laptop in the `products` list.

        """

       print('--------------------------------------------------------------------------------------------------
------')

       print ( "| {:15s} | {:15s} | {:15s} | {:14s} | {:16s} | {:15s} |".format('Laptops', 'Brand',
'Price', 'Quantity', 'Processor', 'Graphic'))

       print('--------------------------------------------------------------------------------------------------
------')

       for b in products:
          if len(b) == 6:
             print("| {:15s} | {:15s} | {:15s} | {:14s} | {:16s} | {:15s}
|".format(b[0],b[1],b[2],b[3],b[4],b[5]))
             print('----------------------------------------------------------------------------------------
--------------------')
```