LONDON METROPOLITAN UNIVERSITY

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Module Code & Module Title

CS4051NI Fundamentals of Computing

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Table of Contents

List of Figures

List of Tables

1. Introduction

1.1 Introduction About the Project

Python is the programming language that I used to develop this project. It is a straightforward program that everyone can understand. It is widely used nowadays for constructing websites and software, task automation, data analysis, and data visualization, among many other areas. Writing is flexible.

Figure 1: Python Image (Logos-World, 2022)

There are many software available in the market like PyCharm, Spyder, PyDev, Idle and many others to create a python code. Among them I preferred to use Python IDLE. IDLE is an initial for Integrated Development and Learning Environment in Python. It simplifies the development of Python code for programmers. IDLE, like Python Shell, can be used to run a single statement as well as create, edit, and run Python programs. IDLE has a full-featured text editor with syntax highlighting, autocompletion, and smart indent for creating Python code. It also has a debugger that supports stepping and breakpoints. This helps in debugging. (educative, n.d.)

This is the first coursework in the Fundamental of Computing module. This program's lecturer is Hrishav Tandukar. He also conducts our workshop classes. He is kind and an excellent teacher. He does really well in this module. He has a lot of knowledge about this field. This coursework was given on week 6 and submission of this coursework on week 12. Also, this assignment counts for 60% of the module mark. The major goal of this project is to develop a Bill Generation system for a costume rental store. Because this is the first course on the subject, some of the information will be unfamiliar to us. We discussed this idea with our friends several times in order to finish it before the deadline. While we work on this project, our expert tutor assists us.

The major objective of this coursework is to develop a billing system for a costume rental store to maintain the record of costumes available for renting. In this project, I can develop the coding section into three portion file, file one is ListSplit.py, another one is ReturnCostume.py and last but not the least Main.py which basically contain the fundamental code of this coursework.

In addition to developing an algorithm, flowchart, pseudocode, and data structures as part of the assignment. We must also submit a report. It is also necessary to provide a description of the processes performed. We should also put our program to the test and report the results. It is important to show that problems were recognized and fixed. An appendix for the code part is included with the conclusion.

While doing this coursework I can use different tools like IDLE , MS-word, draw.io.

- IDLE
  - It does not many packages to know so it simple to learn.
  - It has Standard Library.
  - It is mainly used by the beginner's level who want to practice python to develop its skills.
  - It is one of the best IDE of Python.
  - Add visual impact to our document.
  - Turn our text into compelling diagram.

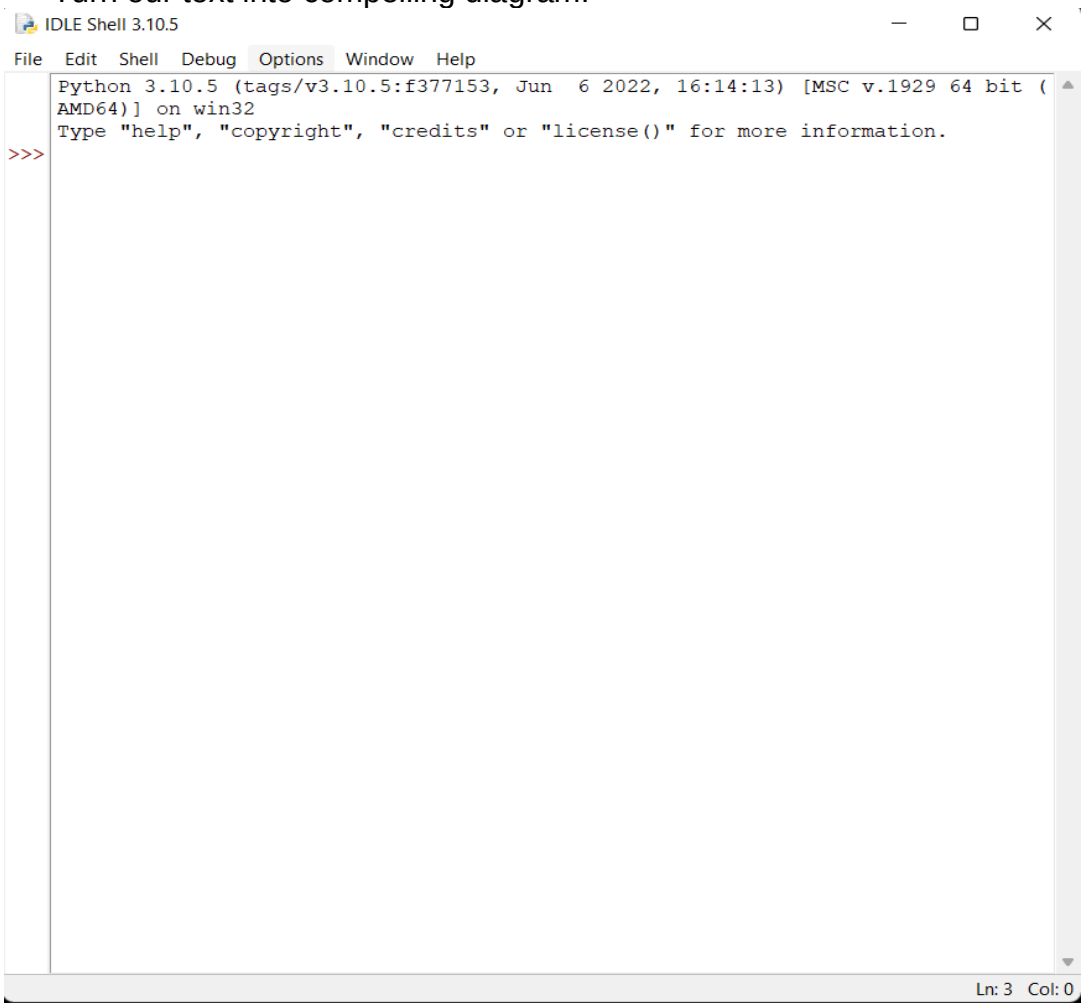

Figure 2: IDLE Shell

- MS-Word
  - It is very friendly user interface to use.
  - It very simple to use.
  - It has many functionalities which make the user easily to do their tasks.

m

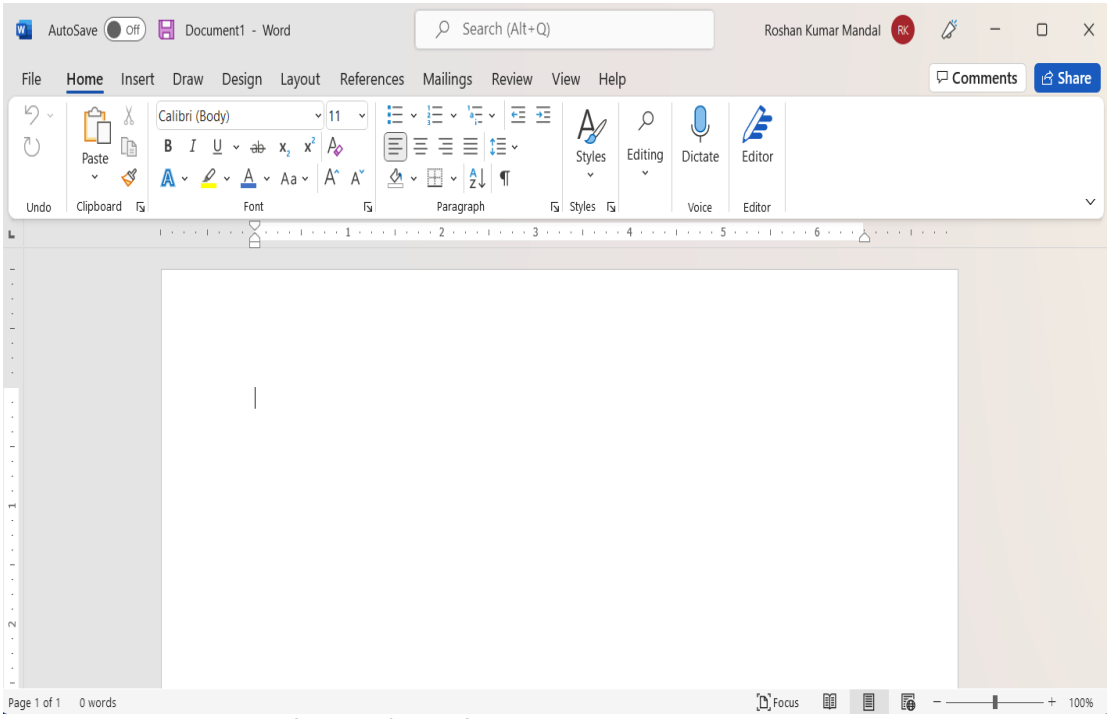

Figure 3:Figure of MS-WORD

1.2 Goal And Objectives

- Goal

  The goal of this course is to create a Bill Generation System that maintains a record of the many costumes available for renting purpose in a Costume Rental Shop.

- Objectives

  a. It helps to maintain the track of costume available for renting purpose.
  b. It helps to update the stock of the costumes after each transaction.
  c. It helps to generate the bill for renting or returning the costume.

2. Discussion and Analysis

We will discuss about and look at the process of creating a Bill Generating System for a costume rental shop including the software requirements and acceptable data formats for storing information in files. The Billing system is a computerized framework that enables clients to manage their track record of renting the costume day-to-day activities digitally. It reduces the possibility of printed items being misplaced, damaged, or destroyed.

2.1 Algorithm

In general term, it a process or set of rules which is being followed during solving problem or performing calculations. In technical term it a well- defined instructions to solve a particular problem of program. The Algorithm of this Program is Given below:

Step 1: Start program
Step 2: Start a Loop Which runs until== “3”
Step 3: Read the Data from Text.txt and store it in file
Step 4: Take input from user
- If user==1, go to Step 5
- If user==2, go to Step 6
- If user==3, got to Step 7

Step 5: Rent the Costume
Step 6: Return the Costume
Step 7: Exit
Function Of Rent Costume
Step 8: Input ID of the Costume
If Costume ID is Valid, go to Step 9
Else, Provide valid Costume ID
Step 9: Input the quantity
If Quantity Available in Stock, go to Step 10
Else, Costume Out Of Stock, Please Visit us Again
Step 10: Input the Name
Step 11: The Rent Bill be Created
Step 12: Created a rent txt file

Function of List Split
Step 12: Declare ListSplit
Step 13: Open Text.txt file
Step 14: Read Lines file and Strip
- Index 0 Costume Name
- Index 1 Brand
- Index 2 Price
- Index 3 Quantity

Function Date Time
Step 15: get Date
Step 16: Print Date Of Now
Step 17: get Time
Step 18: Print Time Of Now

Function Of Return Costume
Step 19: If you want to return the Costume, press 2 then enter the name of person who want to return the costume
Step 20: Input Costume ID which You want to return
If costume ID is valid, go to 21 step
Else, provide valid Costume ID
Step 21: Input the day you have kept the costume
Step 22: Input Do want to return other costume
If yes, go to Step 20
Else, go to Step 23
Step 23: Return Bill Be Printed
Step 24: Return Text file be created
Step 25: Program stop if user want to terminate

2.2 Flowchart

A flowchart is known as symbol representation of an algorithm which is used to display how does a program should work. It can be created by using symbols like rectangle, circle, and so on and the process of creating a flowchart for an algorithm is known as flowcharting.

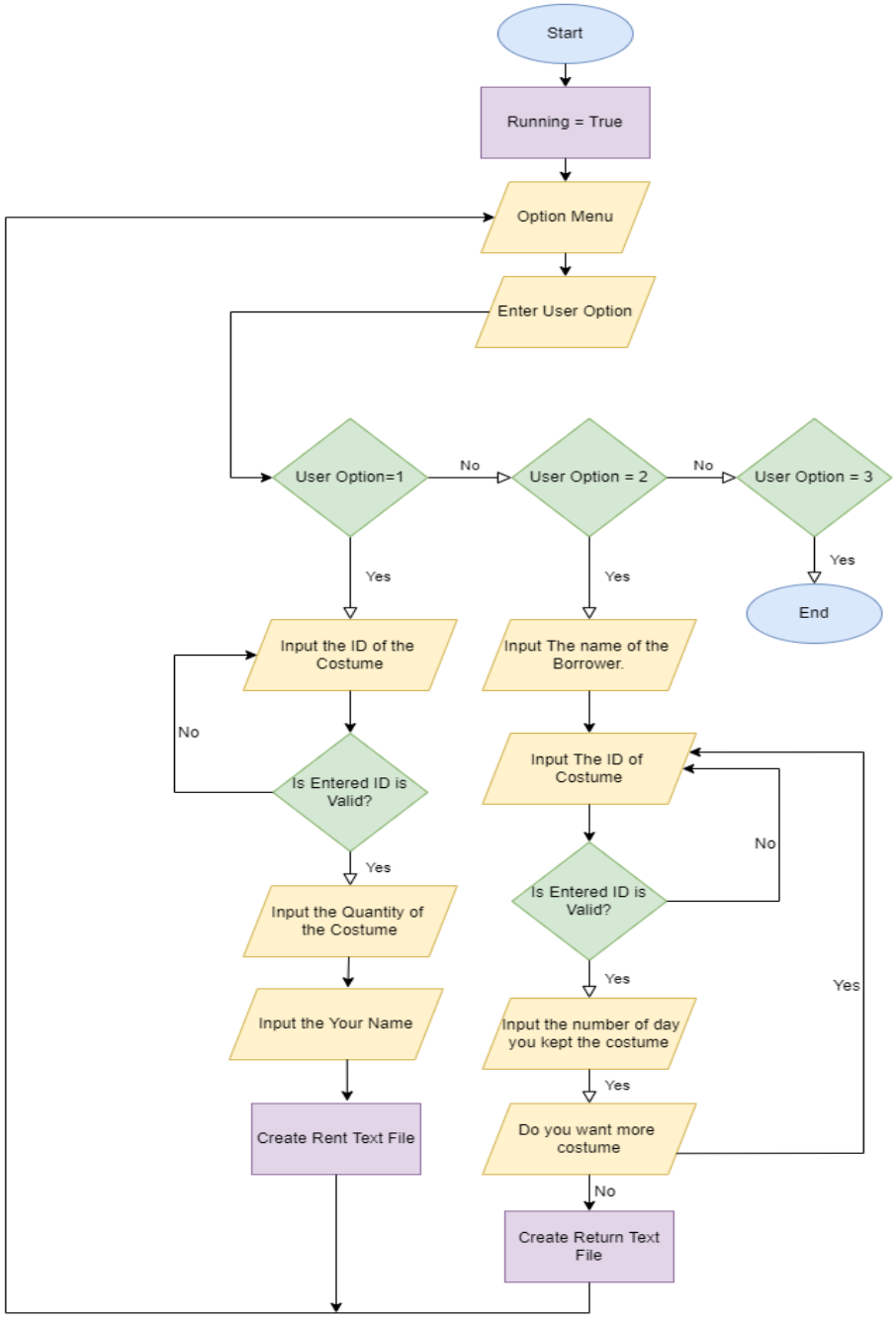

Figure 4: Flowchart of Program

2.3 Pseudocode

……

2.4 Data Structures

Data and its information are essential components, and various implementations are being developed to store it in various ways. Computers handle data and storage precisely and quickly. Data structures control how data is assembled and stored in memory when a computer processes it. There are two types of data structures: linear and non-linear. Arrays, Queues, Stacks, and linked lists are examples of linear data types. Graphs, tree families, and table of contents are examples of non-linear structures.

2.4.1 List:

Lists are similar to measured arrays, which are also known as vectors in C++ and Array Lists in Java. Lists do not have to be constantly homogenous, which makes them a fantastic asset in Python. A single list can contain Datatypes such as Integers, Strings, and Objects. Lists are transient, and they may now be changed even after they have been created.

2.4.2 Tuple:

Tuple is a collection of Python protests similar to list. A tuple's sequence of values can be of any type, and they are filed by integer numbers. Commas are used to standardize the value of a tuple. Despite the fact that it isn't necessary, the tuple is typically defined by enclosing the sequence of values in a parenthesis, which aids in understanding Python tuples.

2.4.3 Set

A set is an unorganized collection of data that is effective for making, changeable, and contains no duplicate elements. The order of elements in a set is unknown, yet it may have distinct components. The primary advantage of using a set rather than a list is that it includes an extremely optimized method for determining if a certain component is present in the set.

2.4.4 Dictionary

The dictionary is an unorganized collection of values that is used to store data values like a map. Unlike other data types that retain a single value as an element, the dictionary maintains a key value pair. Polymorphism is not permitted in dictionary keys.

3. Program

For the costume Rent System, a python application was created that can keep the track of the renting and the returning costumes of the store as needed. It was quite to write this program. While writhing this program, there were several disappointments and mishaps. In any case, after studying each of those errors and learning from them, my work on the program was successfully completed. A lot of python research should be done, and more ideas regarding the program should be collected, in order to make progress on the program's aim. Following the introduction to Python, a detailed examination of the program requested for inclusion in the coursework was carried out.

The technique was established at the time to make sense of the coding path necessary to accomplish the program's goal. Following that, a flow chart was created based on a composed algorithm to demonstrate how code would be organized and executed. After incorporating ideas from the algorithm, a flowchart was created. The technique was established at the time to make sense of the coding path necessary to accomplish the program's goal. Following that, a flow chart was created based on a composed algorithm to demonstrate how code would be organized and executed. After incorporating ideas from the algorithm, a flowchart was created.

A module is a Python object with freely named features that may be linked and referenced. A module is nothing more than a file of Python code. A module contains functions, classes, and variables. A module may also include functional code. If you want to build programs that are easy to comprehend, dependable, and maintainable, you should utilize a proprietary programming framework. This is especially true if your application is extensive. Specific programming can be designed in a variety of ways. Writing computer programs, in particular, is an example of product structure innovation that divides your code into smaller portions. These components are referred to as modules.

The entire coding portions can divided into three parts, each of this sections can stores a lot of code which is interrelated to each other. two of the three modules had a few capabilities that were filled with explicit tasks, and the main module was turned into a basic module in which other modules were imported and their capabilities were filled with a range of activities. The main module executes the entire code and displays the results. Complete description of each module that can help you understand the general program growth as well as the operation of each module in the program. These modules were all kept in the same folder.

The portion were given below:

3.1 Main.py

The ListSplit.py, ReturnCostume.py to utilize their functionalities for specific work, portions were imported into the main package. This portion is in charge of the program.

First of all, this modules shows the user variables details. As we enter lists, we collect information about them. If we choose 1, 2, it will import data from the imported Python files, show information, and prompt us to enter more

data as needed. If the user enters 3, the program will be closed. If we input an incorrect phrase, we should strive to rectify it as soon as possible.

Code Of the Main.py Portion

Main.py - C:\Users\itsme\OneDrive\Desktop\My Work\Main.py (3.10.5)

File Edit Format Run Options Window Help

```
print ("************************************************************************")
print ("               WEL-COME to Costume Rental Shop              ")
print ("************************************************************************")
print ("\n")

#using def function
def Shop(ask_user):
    return(ask_user)
loop = True

while loop == True:
    print ("Select your Option")
    print ("Press 1 to Rent a costume.")
    print ("Print 2 to Return a costume.")
    print ("Press 3 to Exit.")

    ask_user =input("Enter a Your option:")
    print("\n")

    if ask_user== "1":
        print ("Let's Rent a Costume")
        print("\n")

        print("************************************************************************")
        print("ID\tCostume Name\tCostume Brand\tPrice\tQuantity")
        print("************************************************************************")

        file = open("Text.txt","r")
        a = 1
        for line in file:
            print(a,"\t"+line.replace(",", "\t"))
            a = a+1

        print("************************************************************************")
        file.close()
        print("\n")

        def costumes(costumeDictionary):
            return(costumeDictionary)
        file = open("Text.txt","r")
        costumeDictionary = {}
        costumeID = 1
        for line in file:
            line = line.replace("\n","")
            costumeDictionary.update({costumeID: line.split(",")})
            costumeID = costumeID + 1
        file.close()

        def valid(validID):
```

Figure 5: Figure of Main.py Code

Main.py - C:\Users\itsme\OneDrive\Desktop\My Work\Main.py (3.10.5)

File Edit Format Run Options Window Help

```
def valid(validID):
    return(validID)

if ask_user == "1":

    validID = int(input("Enter the ID of costume you want to rent: "))
    print("\n")

    while validID <= 0 or validID > len(costumeDictionary):
        print("\n")
        print("**************************************************************************")
        print("             Please provide a valid costume ID !!!                 ")
        print("**************************************************************************")
        print("\n")

        print("**************************************************************************")
        print("ID\tCostume Name\tCostume Brand\tPrice\tQuantity")
        print("**************************************************************************")

        file = open("Text.txt","r")
        a = 1
        for line in file:
            print(a,"\t"+line.replace(",", "\t"))
            a = a+1
        print("**************************************************************************")

        print("\n")



        validID = int(input("Enter the ID costume you want to rent:"))
        print("\n")
    print("Costume ID is" , validID)
    print("Costume is available")
    print("\n")


    def quantity(userQuantity):
        return(userQuantity)

    userQuantity = int(input("Enter the quantity of costume:"))
    print("\n")


    def quantity_sel(quantity_of_selected_costume):
        return(quantity_of_selected_costume)
    quantity_of_selected_costume = costumeDictionary[validID][3]

    while userQuantity <= 0 or userQuantity >int(quantity_of_selected_costume):
```

Figure 6: Figure of Main.py Code(b)

Main.py - C:\Users\itsme\OneDrive\Desktop\My Work\Main.py (3.10.5)

File Edit Format Run Options Window Help

```
        while userQuantity <= 0 or userQuantity >int(quantity_of_selected_costume):
            print("quantity not available")
            print("\n")
            userQuantity = int(input("Enter the quantity of costume:"))
            print("\n")
        print("\n")




        costumeDictionary[validID][3] = int(costumeDictionary[validID][3])-int(userQuantity)

        file = open("Text.txt","w")

        for values in costumeDictionary.values():
            file.write(str(values[0])+","+str(values[1])+","+str(values[2])+","+str(values[3]))
            file.write("\n")
        file.close()
        print(costumeDictionary)
        print("\n")



        a = input("Please enter your name: ")
        print("\n")


    costname = costumeDictionary[validID][0]
    totalquantity = userQuantity
    brand = costumeDictionary[validID][1]
    price = costumeDictionary[validID][2]
    itemprice = costumeDictionary[validID][2].replace("$"," ")
    totalprice = float(itemprice)*float(totalquantity)

    import datetime

    t = str(datetime.datetime.now().year) + "-" + str(datetime.datetime.now().month) + "-" + str(
        datetime.datetime.now().day)
    d = str(t)
    u = str(datetime.datetime.now().hour) + ":" + str(datetime.datetime.now().minute) + ":" + str(
        datetime.datetime.now().second)
    e = str(u)

    print ("************************************************************************")
    print ("\t\tCostume Rental Shop")
    print ("************************************************************************")
    print("------------------------------------------------------------------------")
    print("\t\t\tBILL Details")
    print("------------------------------------------------------------------------")
```

Figure 7: Figure of Main.py Code(c)

Main.py - C:\Users\itsme\OneDrive\Desktop\My Work\Main.py (3.10.5)

File Edit Format Run Options Window Help

```
        print("\t\t\tBILL Details")
        print("-------------------------------------------------------------------------")
        print("\n")
        print("-------------------------------------------------------------------------")
        print("Date: " + d + "\t\t\t\t\tTime: " + e + "")
        print("\nName of Customer: " + str(a) + "")
        print("-------------------------------------------------------------------------")
        print("\n")
        print("-------------------------------------------------------------------------")
        print("COSTUME\t\t\tQUANTITY\tPRICE\t\tTOTAL")
        print("-------------------------------------------------------------------------")
        print(costname,"\t",totalquantity,"\t","\t",price,"\t","\t","$",str(totalprice))
        print("\n-------------------------------------------------------------------------")
        print("\nItems in Rent are: ",costname)
        print("\nBrand of Items are: ",brand)
        print("\n-------------------------------------------------------------------------")
        print("\n")
        print("\tThank You " + a + " For Shopping.\n\t\tPlease Visit Again")
        print("\n-------------------------------------------------------------------------")
        print("\n")
        print("-------------------------------------------------------------------------")
        print("\tRent Details Bill has been Generated")
        print("-------------------------------------------------------------------------")
        print("\n")

        file = open(a + ".txt", "w")  # generate a unique Bill name and open it in write mode.
        file.write("*************************************************************************")
        file.write("\n\t\tCostume Rental Shop")
        file.write("\n*************************************************************************")
        file.write("\nDate: " + d + "\t\t\t\t\tTime: " + e + "")
        file.write("\nName of Customer: " + str(a) + "")
        file.write("\n*************************************************************************")
        file.write("\n-------------------------------------------------------------------------")
        file.write("\nCOSTUME\t\t\t\tQUANTITY\tPRICE\t\tTOTAL")
        file.write("\n-------------------------------------------------------------------------")
        file.write("\n" + costname)
        file.write("\t\t\t" + str(totalquantity))
        file.write("\t\t" + price)
        file.write("\t\t" + str(totalprice))
        file.write("\n-------------------------------------------------------------------------")
        file.write("\nItems in Rent are: " + costname)
        file.write("\nBrand of Items are: " + brand)
        file.write("\n-------------------------------------------------------------------------")

        file.write("\n-------------------------------------------------------------------------")
        file.write("\n\tThank You " + a + " For Shopping.\n\tPlease Visit Again")
        file.write("\n-------------------------------------------------------------------------")
        file.write("\n")
        file.close()
```

Figure 8: Figure of Main.py Code(d)

Main.py - C:\Users\itsme\OneDrive\Desktop\My Work\Main.py (3.10.5)

File Edit Format Run Options Window Help

```
        print("\tRent Details Bill has been Generated")
        print("-------------------------------------------------------------------------")
        print("\n")

        file = open(a + ".txt", "w")  # generate a unique Bill name and open it in write mode.
        file.write("*************************************************************************")
        file.write("\n\t\tCostume Rental Shop")
        file.write("\n*************************************************************************")
        file.write("\nDate: " + d + "\t\t\t\t\tTime: " + e + "")
        file.write("\nName of Customer: " + str(a) + "")
        file.write("\n*************************************************************************")
        file.write("\n-------------------------------------------------------------------------")
        file.write("\nCOSTUME\t\t\t\tQUANTITY\tPRICE\t\tTOTAL")
        file.write("\n-------------------------------------------------------------------------")
        file.write("\n" + costname)
        file.write("\t\t\t" + str(totalquantity))
        file.write("\t\t" + price)
        file.write("\t\t" + str(totalprice))
        file.write("\n-------------------------------------------------------------------------")
        file.write("\nItems in Rent are: " + costname)
        file.write("\nBrand of Items are: " + brand)
        file.write("\n-------------------------------------------------------------------------")

        file.write("\n-------------------------------------------------------------------------")
        file.write("\n\tThank You " + a + " For Shopping.\n\tPlease Visit Again")
        file.write("\n-------------------------------------------------------------------------")
        file.write("\n")
        file.close()



    elif ask_user == "2":
        print("Let's return a Costume")
        print("\n")
        import ReturnCostume
        ReturnCostume.returnCostume()



    elif ask_user == "3":
        print("*************************************************************")
        print("\t Thank You for using our application")
        print("*************************************************************")
        print("\n")
        loop = False
    else:
        print("Invalid Input !!!")
        print("\n")
```

Figure 9: Figure of Main.py Code(e)

3.2 ListSplit.py

This module generates a two-dimensional list of return and rent information from the files Text.txt and Borrower Rent.txt, which are both located in the same folder. The first function reads data from Text.txt, appends it to a two-dimensional list, and displays it while the code runs. The second method

extracts borrower information from borrower Rent.txt, appends it to a 2d list, and displays it as the code is running.

Code for ListSplit.Py

ListSplit.py - C:\Users\itsme\Downloads\New folder (3)\NP01NT4S220043 Roshan N6\ListSplit.py (3.10.5)

File Edit Format Run Options Window Help

```
#creating a program to display dictionary and list of books in proper format of tabular form
#importing datetime module
import datetime

#function created to read the already provided file containg list of books
def read_file():
    file = open("Text.txt","r")
    print(file.read())
    file.close

#function created to display the books in tabular form
def print_dictionary():
    print("\n--------------------------------------------------------------------------------------")
    print("ID\tCostume Name\tCostume Brand\tPrice\tQuantity" )
    print("--------------------------------------------------------------------------------------")

    #creating empty dictionary
    dictionary ={}
    file = open("Text.txt","r")
    costumeID = 0

    #using for loop to display book
    for line in file:
        costumeID = costumeID + 1
        line = line.replace("\n","")
        dictionary [costumeID] = line.split(',')
        line = line.replace(",", "\t")

        print(costumeID, "\t", line)
    print("\n--------------------------------------------------------------------------------------\n")
    print(dictionary)
    file.close()

#function created to display dictionary of available books
def dictionary_costume():
    dic ={}
    file = open("Text.txt","r")
    id_costume = 0
    for line in file:
        id_costume = id_costume + 1
        line = line.replace("\n","")
        dic [id_costume] = line.split(',')
        line = line.replace(",", "\t")

    file.close()
    return dic

#function created to call date and time function
def random_number():
    hour = str(datetime.datetime.now().hour)
```

Figure 10: Figure of ListSplit.py Code

ListSplit.py - C:\Users\itsme\Downloads\New folder (3)\NP01NT4S220043 Roshan N6\ListSplit.py (3.10.5)

File Edit Format Run Options Window Help

```
    print(file.read())
    file.close

#function created to display the books in tabular form
def print_dictionary():
    print("\n-------------------------------------------------------------------------------------")
    print("ID\tCostume Name\tCostume Brand\tPrice\tQuantity" )
    print("-------------------------------------------------------------------------------------")

    #creating empty dictionary
    dictionary ={}
    file = open("Text.txt","r")
    costumeID = 0

    #using for loop to display book
    for line in file:
        costumeID = costumeID + 1
        line = line.replace("\n","")
        dictionary [costumeID] = line.split(',')
        line = line.replace(",", "\t")

        print(costumeID, "\t", line)
    print("\n-------------------------------------------------------------------------------------\n")
    print(dictionary)
    file.close()

#function created to display dictionary of available books
def dictionary_costume():
    dic ={}
    file = open("Text.txt","r")
    id_costume = 0
    for line in file:
        id_costume = id_costume + 1
        line = line.replace("\n","")
        dic [id_costume] = line.split(',')
        line = line.replace(",", "\t")

    file.close()
    return dic

#function created to call date and time function
def random_number():
    hour = str(datetime.datetime.now().hour)
    minute = str(datetime.datetime.now().minute)
    second = str(datetime.datetime.now().second)
    micro = str(datetime.datetime.now().microsecond)

    Random = minute + second + micro
    return Random
```

Figure 11: Figure of ListSplit.py Code(b)

3.3 ReturnCostume.py

Code of ReturnCostume.py

ReturnCostume.py - C:\Users\itsme\Downloads\New folder (3)\NP01NT4S220043 Roshan N6\ReturnCostume.py (3.10.5)

File Edit Format Run Options Window Help

```
import ListSplit
import datetime

random = ListSplit.random_number()
dictionary = ListSplit.dictionary_costume()

def dictionary_write():
    file = open("Text.txt","w")
    for values in dictionary.values():
        file.write(str(values[0]) + ","+ str(values[1])+ ","+str(values[2]) + ","+str(values[3]))
        file.write("\n")
    file.close()

def correctID():
    correct_id = False
    while correct_id == False:
        try:
            value = int(input("Enter the ID of costume you want to Return: "))
            return value
            correct_id = True
            returnCostume()
        except:
            print("****************************************")
            print("Please provide a valid costume ID !!! ")
            print("****************************************")
            print("\n")

def anotherCorrectID():
    correct_id = False
    while correct_id == False:
        try:
            value = int(input("Enter the ID of another costume you want to Return: "))
            return value
            correct_id = True
            returnCostume()
        except:
            print("****************************************")
            print("Please provide a valid costume ID !!! ")
            print("****************************************")
            print("\n")

def day_costumeKept():
    correct_day = False
    while correct_day == False:
        try:
            value = int(input("\nEnter the number of days you have kept the costume for: "))
            return value
            correct_day = True
            returnCostume()
        except:
```

Figure 12:Figure of ReturnCostume.py Code

ReturnCostume.py - C:\Users\itsme\Downloads\New folder (3)\NP01NT4S220043 Roshan N6\ReturnCostume.py (3.10.5)

File Edit Format Run Options Window Help

```
        except:
            print("****************************************")
            print("Please provide a valid Days !!! ")
            print("****************************************")
            print("\n")

def day_costumeKept2():
    correct_day = False
    while correct_day == False:
        try:
            value = int(input("\nEnter the number of days you have kept the another costume for:"))
            return value
            correct_day = True
            returnCostume()
        except:
            print("****************************************")
            print("Please provide a valid Days !!! ")
            print("****************************************")
            print("\n")

def correctName():
    correct_name = False
    while correct_name == False:
        try:
            value = input("\nEnter the name of person who wants to return Costume: ")
            int(value)
            print("Please enter name correctly.(eg. Roshan Mandal) ")
        except:
            value.isalpha()
            return value
            correct_name = True
            returnCostume()

def returnCostume():
    returnList=[]
    fineList =[]

    ListSplit.print_dictionary()

    name = correctName()
    returnCostume = correctID()
    days = day_costumeKept()

    dictionary[returnCostume][3] = int(dictionary[returnCostume][3]) + 1
    returnList.append(dictionary[returnCostume][0])
    dictionary_write()

    if 0 < days < 5:
        print("\nNo fine is charged for this Costume.")
        print("Thank you for returning Costume on time.")
```

Figure 13: Figure of ReturnCostume.py Code(b)

ReturnCostume.py - C:\Users\itsme\Downloads\New folder (3)\NP01NT4S220043 Roshan N6\ReturnCostume.py (3.10.5)

File Edit Format Run Options Window Help

```
        print("Thank you for returning Costume on time.")

    elif days > 5:
          fineAmount = (days-5) * 0.10 * float(dictionary[returnCostume][2].replace("$",""))
          fineList.append(fineAmount)
          totalFine = sum(fineList)
          print("\nCharge for not returning Costume in time: $", totalFine)

    date = str(datetime.date.today())
    hour = str(datetime.datetime.now().hour)
    minute = str(datetime.datetime.now().minute)
    second = str(datetime.datetime.now().second)
    time_display = date+ " " + hour + ":" + minute + ":" +second

    print("Date and time of return: ",time_display)
    print("\n*********************************************************************************")
    print("\n\t\tCostumes after return")
    print("\n*********************************************************************************")

    ListSplit.print_dictionary()

    count = True
    while count == True:
        print("\nDo you want to return another Costume ?")
        another = input("Enter 'y' to return more Costume or else provide any other value: ")

        if another == "Y" or another == "y":
            #calling new variables using other functions
            returnCostume = anotherCorrectID()
            other_days = day_costumeKept2()

            dictionary[returnCostume][3] = int(dictionary[returnCostume][3]) + 1
            returnList.append(dictionary[returnCostume][0])
            dictionary_write()

            if 0 < other_days < 5:
                print("\nNo fine is charged for this Costume.")
                print("Thank you for returning Costume on time.")

            elif other_days > 5:
                fineAmount = (other_days -5) * 0.10 * float(dictionary[returnCostume][2].replace("$",""))
                fineList.append(fineAmount)
                totalFine = sum(fineList)
                print("\nCharge for not returning Costum in time: $", totalFine)

            dictionary_write()
            print("\n*********************************************************************************")
            print("\n\t\tCostumes after return")
            print("\n*********************************************************************************")
            ListSplit.print dictionary()
```

Figure 14: Figure of ReturnCostume.py Code(c)

ReturnCostume.py - C:\Users\itsme\Downloads\New folder (3)\NP01NT4S220043 Roshan N6\ReturnCostume.py (3.10.5)

File Edit Format Run Options Window Help

```
            ListSplit.print_dictionary()

        else:
            count = False
            totalFine = sum(fineList)


            print("*********************************************************************************")
            print("\t\t\t  Costume Rental Shop System")
            print("*********************************************************************************")
            print("=================================================================================")
            print("\t\t\tReturn Coustume BILL Details")
            print("=================================================================================")
            print("\n")
            print("*********************************************************************************")
            print("Date and time of Costume returned: ", time_display)
            print("\nName of the person who returned Costume: ",name)
            print("*********************************************************************************")
            print("\n---------------------------------------------------------------------------------")
            print("\nFine Amount: $",totalFine)
            print("\n---------------------------------------------------------------------------------")
            print("\nList of Costume returned: ")
            for i in range(len(returnList)):
                print(returnList[i])
            print("---------------------------------------------------------------------------------")

            print("\n")
            print("\t\t     Thank You For Returning.\n\t\t\tPlease Visit Again")
            print("\n=================================================================================")
            print("\n")
            print("---------------------------------------------------------------------------------")
            print("\tReturn Bill Details has been Generated")
            print("---------------------------------------------------------------------------------")
            print("\n")

            file1 = open("Return_"+name+"("+random+")"+".txt","w")
            file1.write(" ---------------------------------------------------------------------------------")
            file1.write("\t\tCostume Rental System")
            file1.write("\n---------------------------------------------------------------------------------")
            file1.write("\n=================================================================================")
            file1.write("\n\t\t\tReturn Coustume BILL Details")
            file1.write("\n=================================================================================")
            file1.write("\n")
            file1.write("\n*********************************************************************************")
            file1.write("\nDate and time of Costume returned: " + str(time_display))
            file1.write("\nName of the person who returned Costume: " + str(name))
            file1.write("\n*********************************************************************************")
            file1.write("\n")
            file1.write("---------------------------------------------------------------------------------")
            file1.write("\nFine Amount : $" + str(totalFine))
```

Figure 15: Figure of ReturnCostume.py Code(d)

ReturnCostume.py - C:\Users\itsme\Downloads\New folder (3)\NP01NT4S220043 Roshan N6\ReturnCostume.py (3.10.5)

File Edit Format Run Options Window Help

```
            print("\n-------------------------------------------------------------------------")
            print("\nFine Amount: $",totalFine)
            print("\n-------------------------------------------------------------------------")
            print("\nList of Costume returned: ")
            for i in range(len(returnList)):
                print(returnList[i])
            print("-------------------------------------------------------------------------")

            print("\n")
            print("\t\t     Thank You For Returning.\n\t\t\tPlease Visit Again")
            print("\n=========================================================================")
            print("\n")
            print("-------------------------------------------------------------------------")
            print("\tReturn Bill Details has been Generated")
            print("-------------------------------------------------------------------------")
            print("\n")

            file1 = open("Return_"+name+"("+random+")"+".txt","w")
            file1.write(" -------------------------------------------------------------------------")
            file1.write("\t\tCostume Rental System")
            file1.write("\n-------------------------------------------------------------------------")
            file1.write("\n=========================================================================")
            file1.write("\n\t\t\tReturn Coustume BILL Details")
            file1.write("\n=========================================================================")
            file1.write("\n")
            file1.write("\n*************************************************************************")
            file1.write("\nDate and time of Costume returned: " + str(time_display))
            file1.write("\nName of the person who returned Costume: " + str(name))
            file1.write("\n*************************************************************************")
            file1.write("\n")
            file1.write("-------------------------------------------------------------------------")
            file1.write("\nFine Amount : $" + str(totalFine))
            file1.write("\n-------------------------------------------------------------------------")
            file1.write("\nList of Costume returned: ")
            file1.write("\n\t")
            for i in range(len(returnList)):
                file1.write(returnList[i])

            file1.write("\n-------------------------------------------------------------------------")

            file1.write("\n")
            file1.write("\tThank You " + name + " For Returning.\n\t\tPlease Visit Again ")
            file1.write("\n=========================================================================")
            file1.write("\n")
            file1.write("-------------------------------------------------------------------------")
            file1.write("\n\tReturn Bill Details has been Generated")
            file1.write("\n-------------------------------------------------------------------------")
            file1.write("\n")
            file1.close()
```

Figure 16: Figure of ReturnCostume.py Code(e)

4. Testing

Testing is the process of checking the program should run well or not. It is very necessary to test your program while you are being a developer. It ensure your program that it is working well.
Here are some Testing which are performed to check my program:

4.1 Test 01

Test Number	01
Objective	Show implementation of try except
Action	Provide invalid input.
Expected Result	Program will execute and show invalid pop-pop message.
Actual Result	Test is successful.
Conclusion	Test is successful.

Table 1: Table for implementation of try except

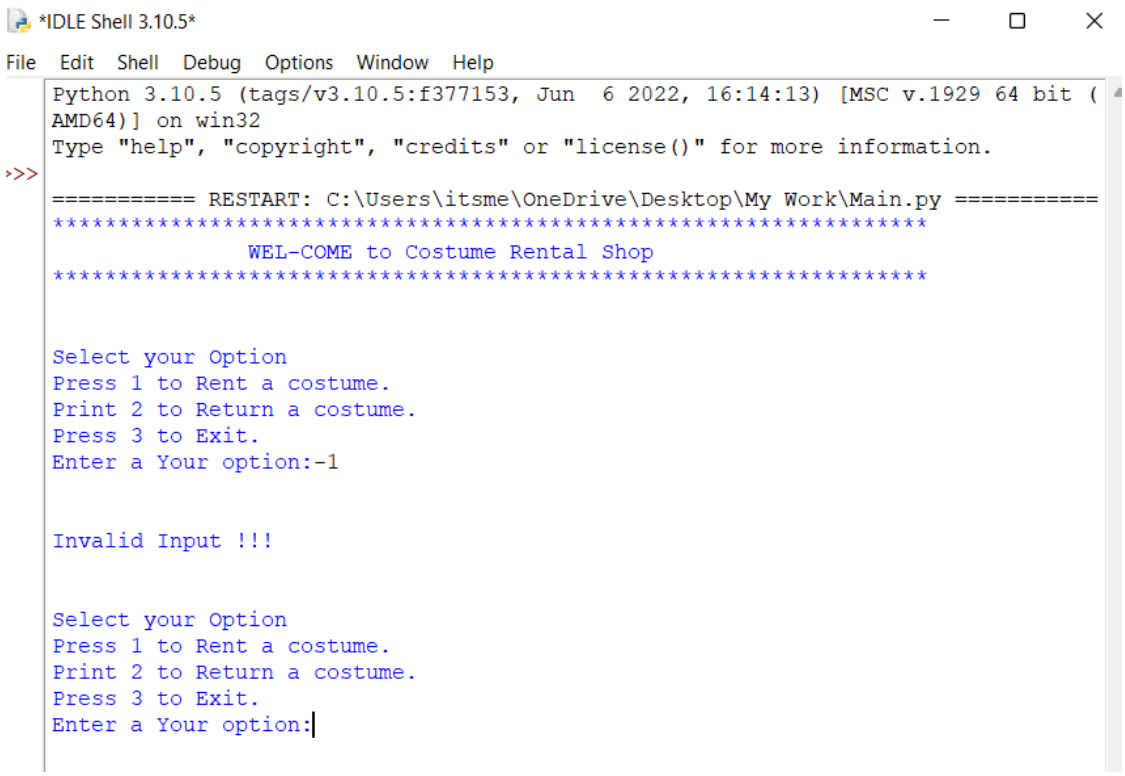

Figure 17: Test 1 figure (a)

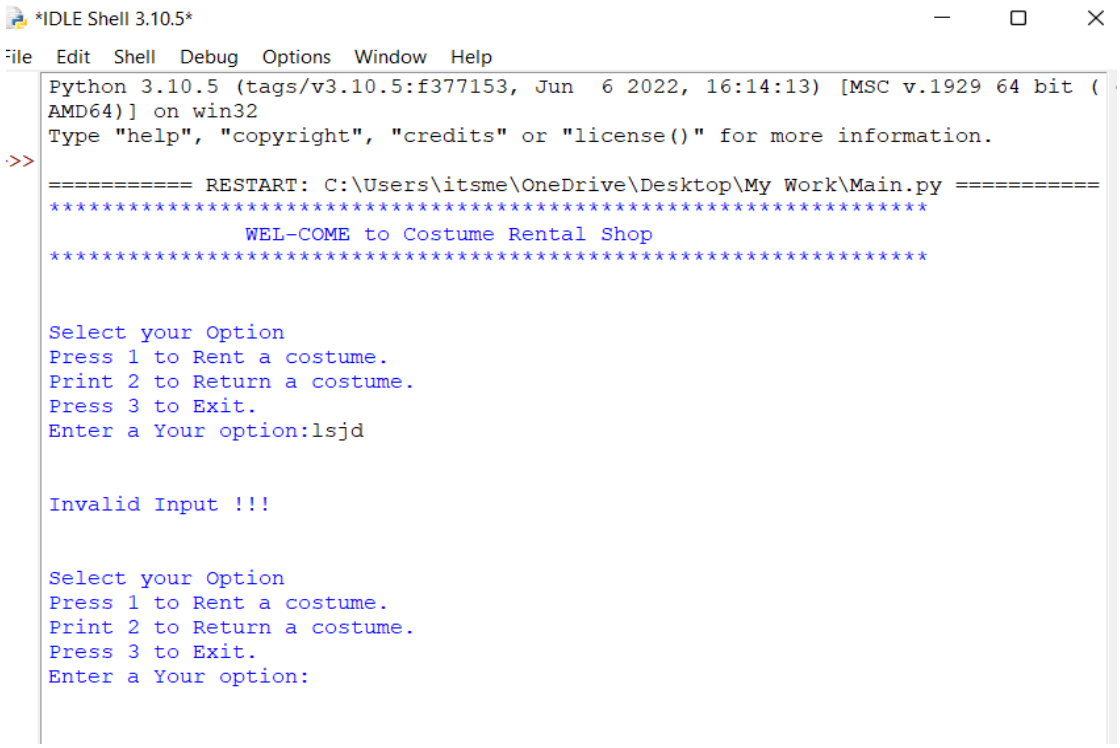

Figure 18: Test 1 figure(b)

4.2 Test 02

4.2.1 Test 02: A

Test Number	02: A
Objective	Renting the costume.
Action	Rent a costume which is given in the stock.
Expected Result	Costume will be rented.
Actual Result	Costume rented successful.
Conclusion	Test is successful.

Table 2: Table for Renting Process

Figure 19: Figure for renting process(a)

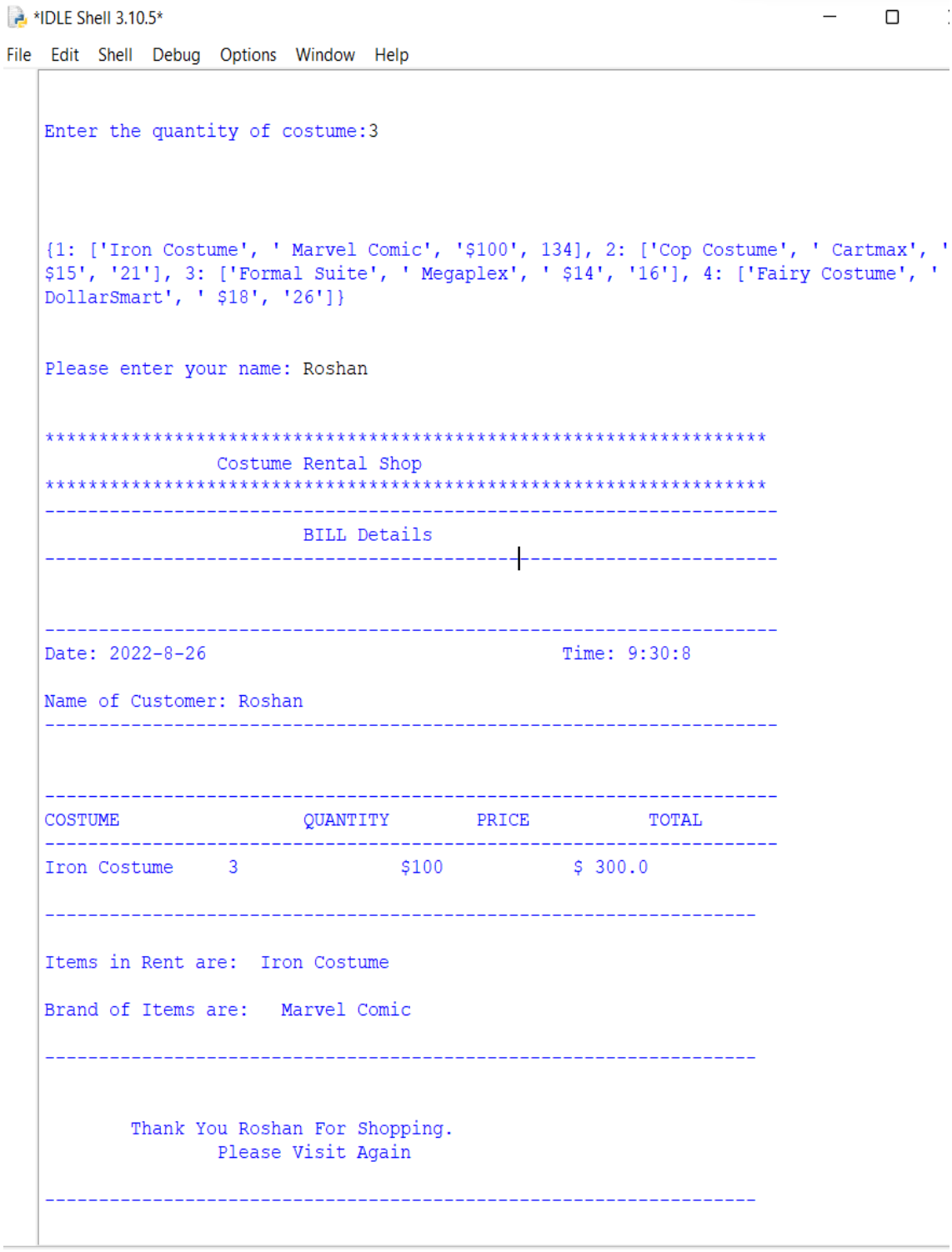

Figure 20: Figure for renting process(b)

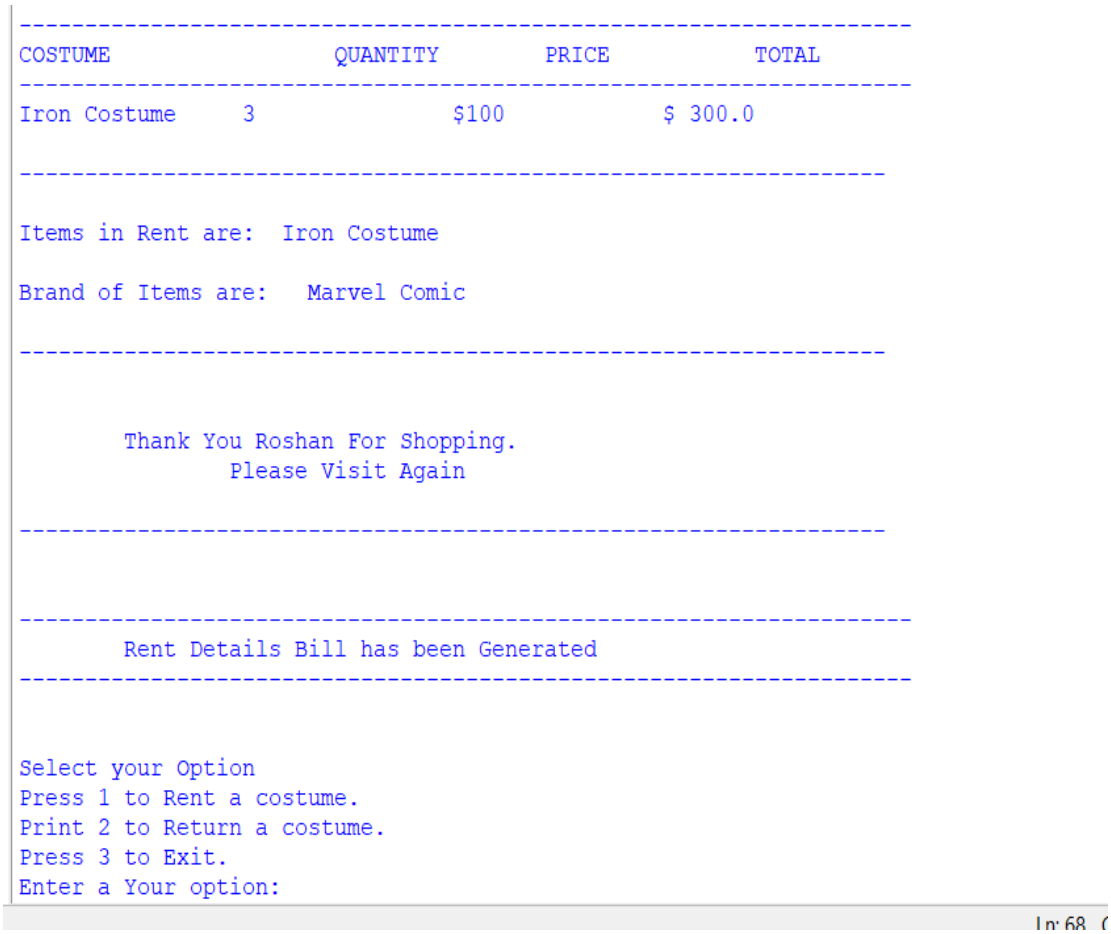

Figure 21: Figure for renting process(a)

4.2.2 Test 02: B

Test Number	02: B
Objective	Return the costume.
Action	Returning the costume.
Expected Result	Costume will be returned.
Actual Result	Costume be returned successful.
Conclusion	Test is successful.

Table 3: Table for Returning the costume Process

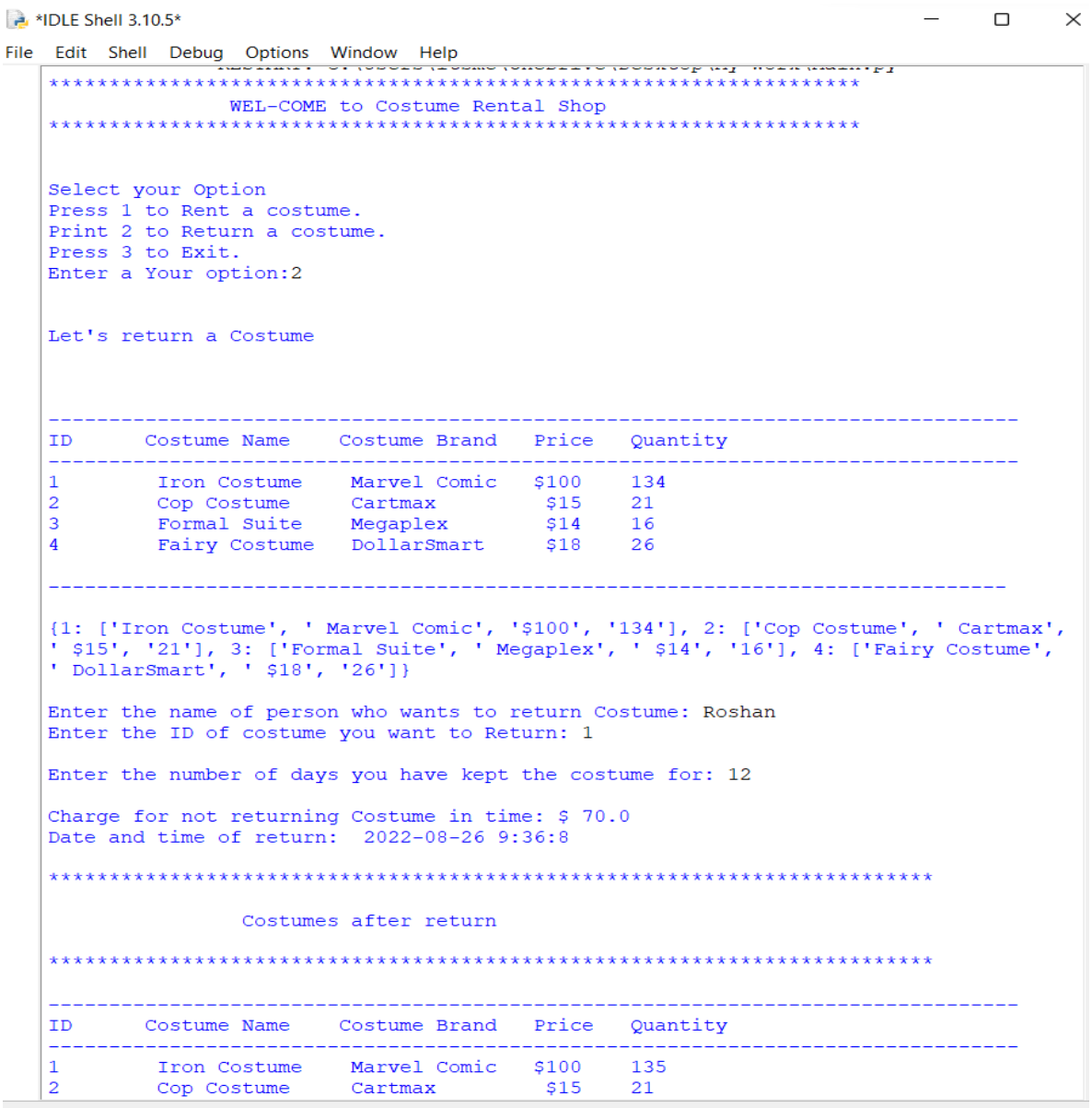

Figure 22: Figure of returning the costume(a)

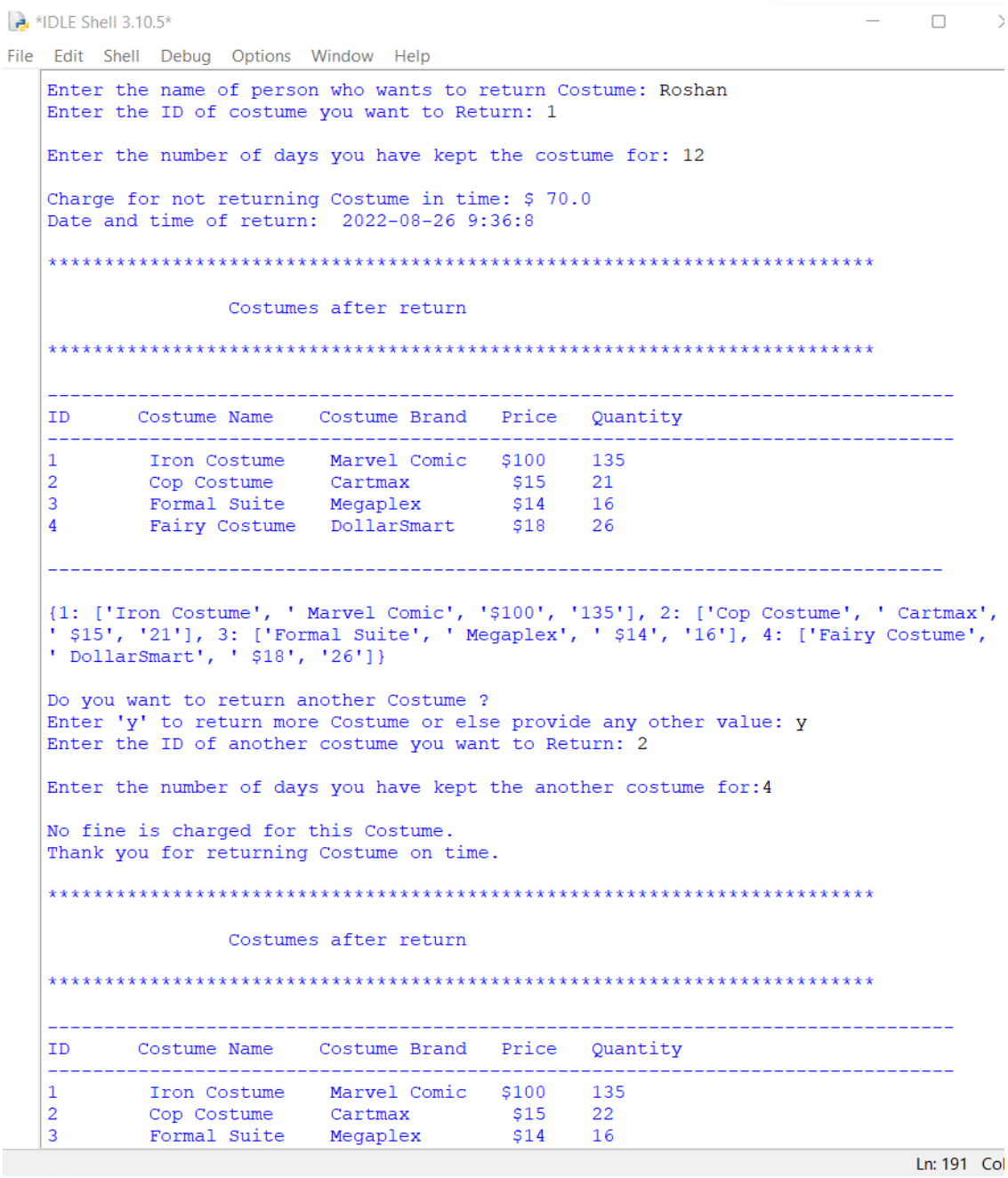

Figure 23: Figure of returning the costume(b)

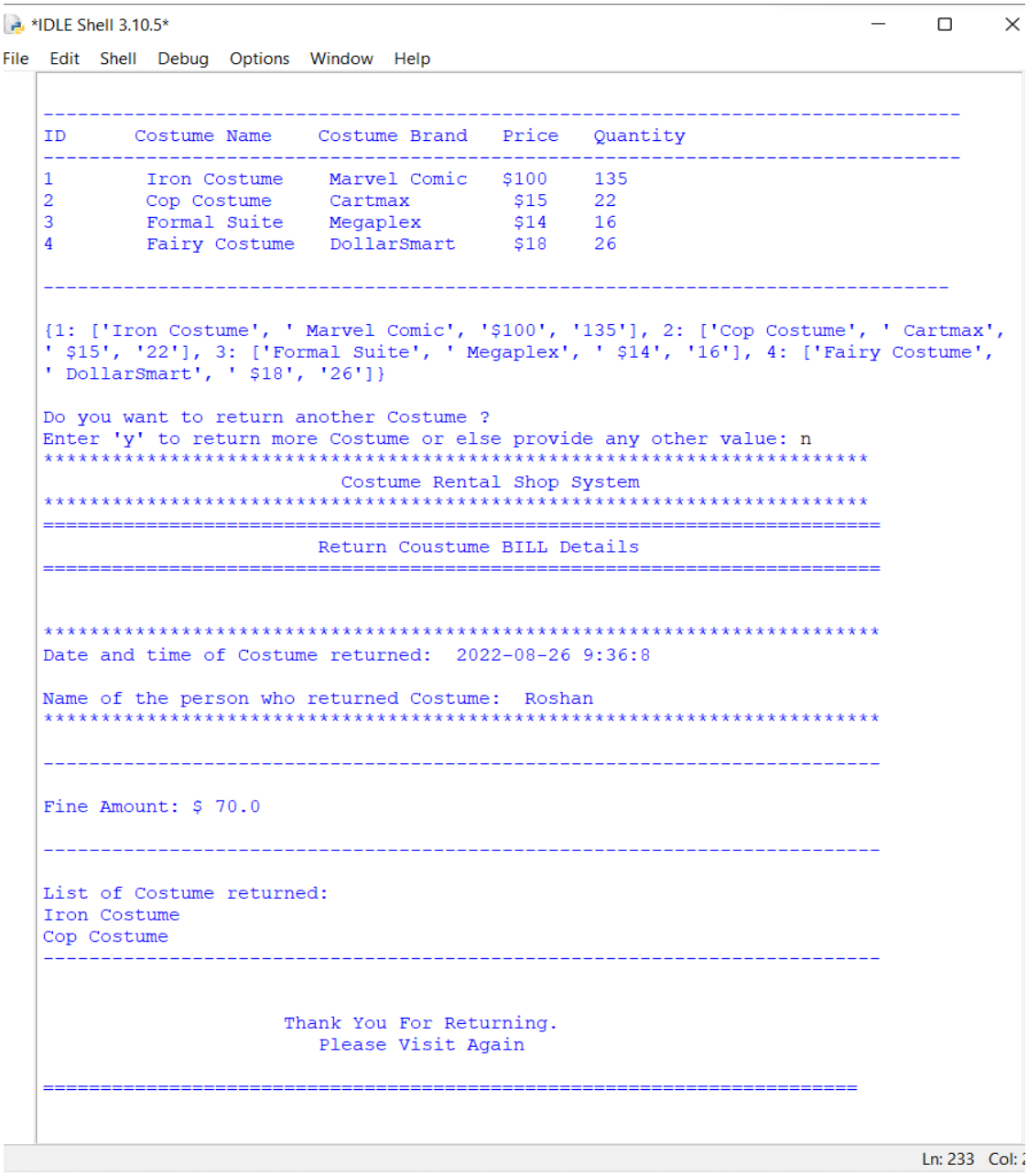

Figure 24: Figure of returning the costume(c)

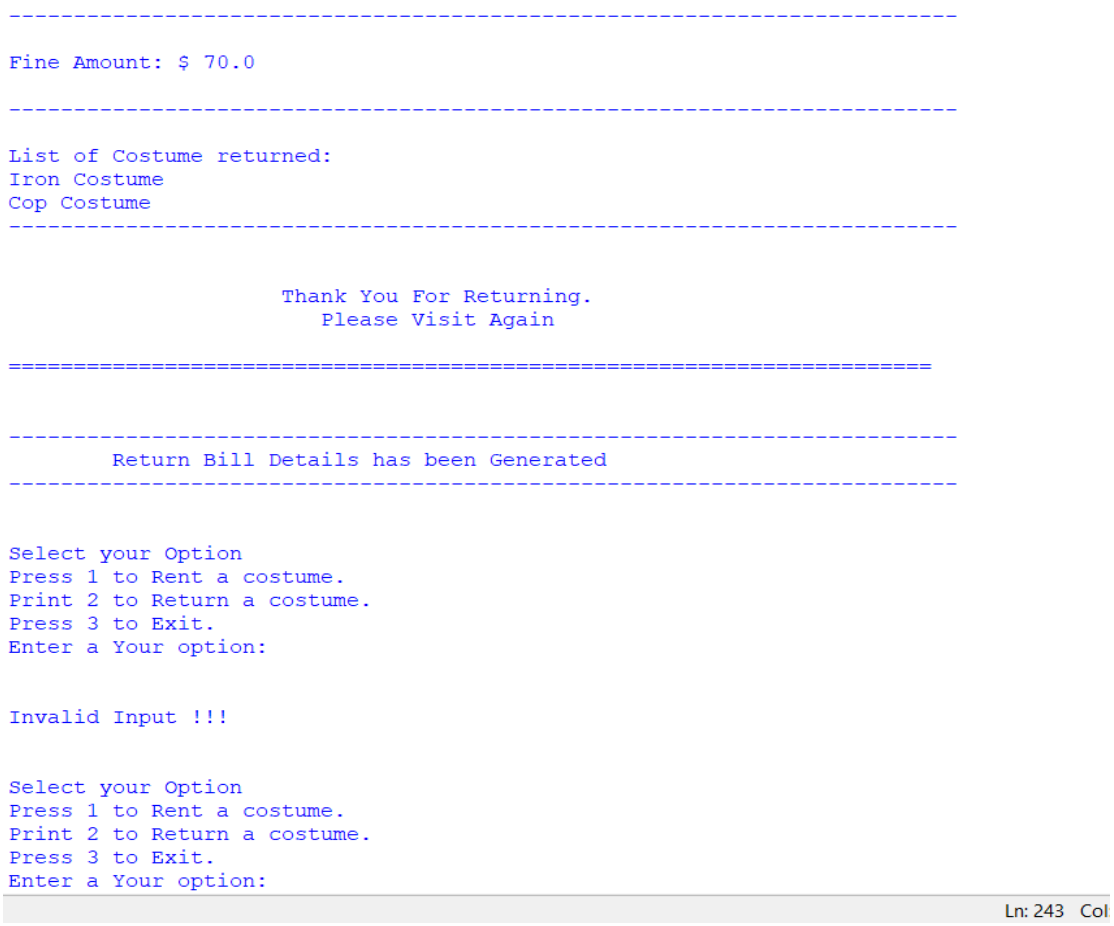

Figure 25: Figure of returning the costume(d)

4.3 Test 03

Test Number	03
Objective	File Generating for renting costume.
Action	1.Show complete renting process. 2.Show output in the shell as well. 3.Finally show the rented costume note in txt file.
Expected Result	Bill of the rented costume will be created.
Actual Result	Bill of the rented costume be generated successful.
Conclusion	The test is successful.

Table 4: Table for file Generation for renting costume.

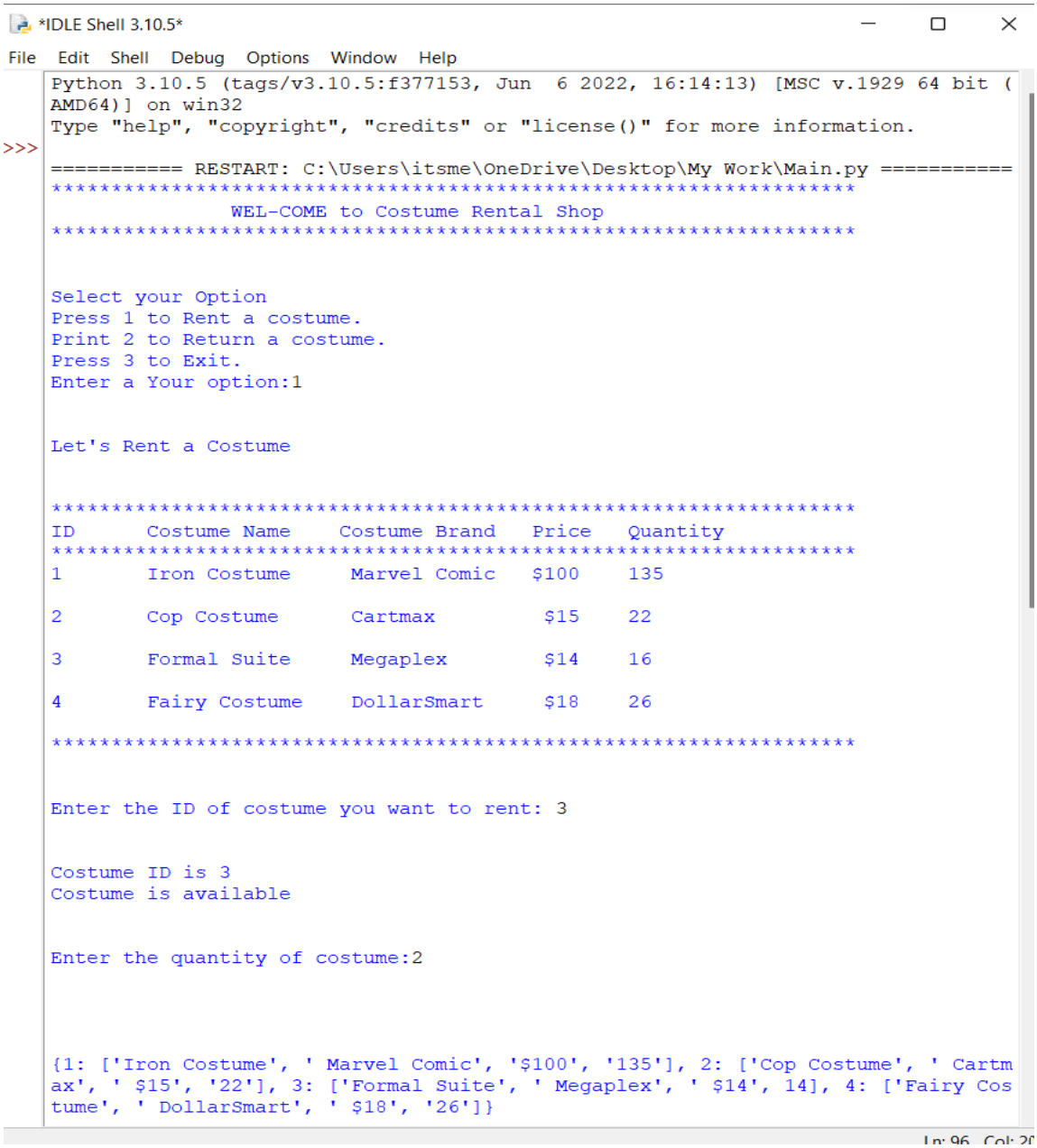

Figure 26: Figure of File Generating for renting costume(a)

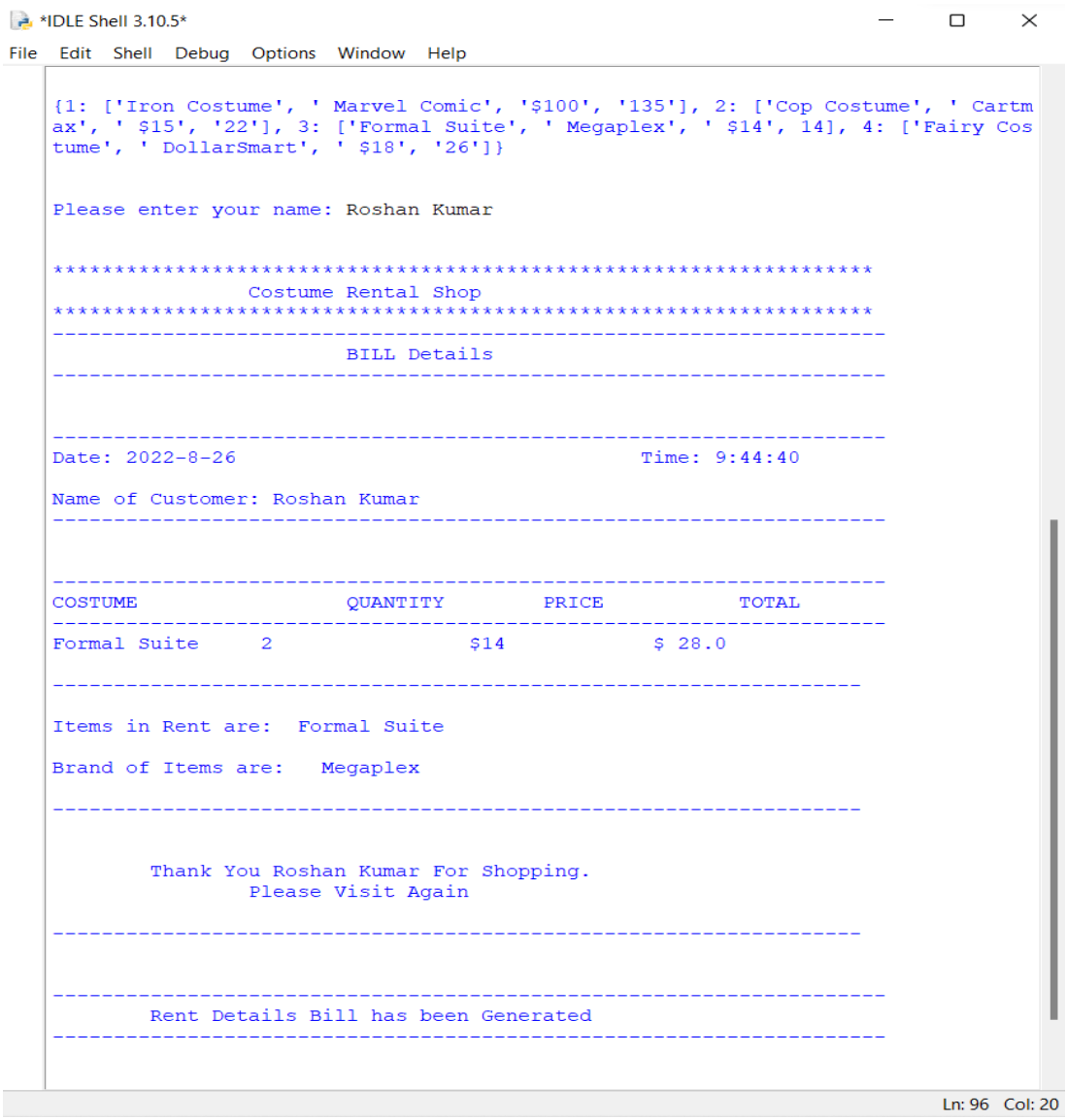

Figure 27: Figure of File Generating for renting costume(b)

```
------------------------------------------------------------------------
COSTUME                 QUANTITY        PRICE           TOTAL
------------------------------------------------------------------------
Formal Suite     2                $14            $ 28.0

------------------------------------------------------------------------

Items in Rent are:  Formal Suite

Brand of Items are:   Megaplex

------------------------------------------------------------------------


        Thank You Roshan Kumar For Shopping.
                Please Visit Again

------------------------------------------------------------------------


------------------------------------------------------------------------
        Rent Details Bill has been Generated
------------------------------------------------------------------------


Select your Option
Press 1 to Rent a costume.
Print 2 to Return a costume.
Press 3 to Exit.
Enter a Your option:


Invalid Input !!!


Select your Option
Press 1 to Rent a costume.
Print 2 to Return a costume.
Press 3 to Exit.
Enter a Your option:
```

Ln: 106 Col: 20

Figure 28: Figure of File Generating for renting costume(c)

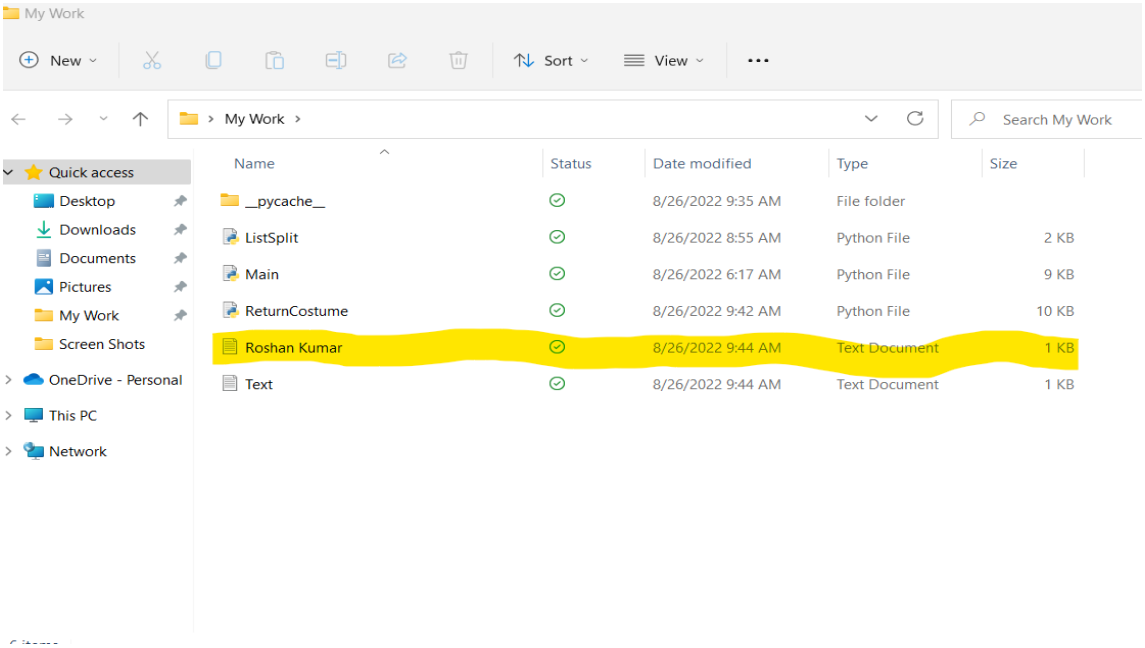

Figure 29: Rented Costume file generated in txt

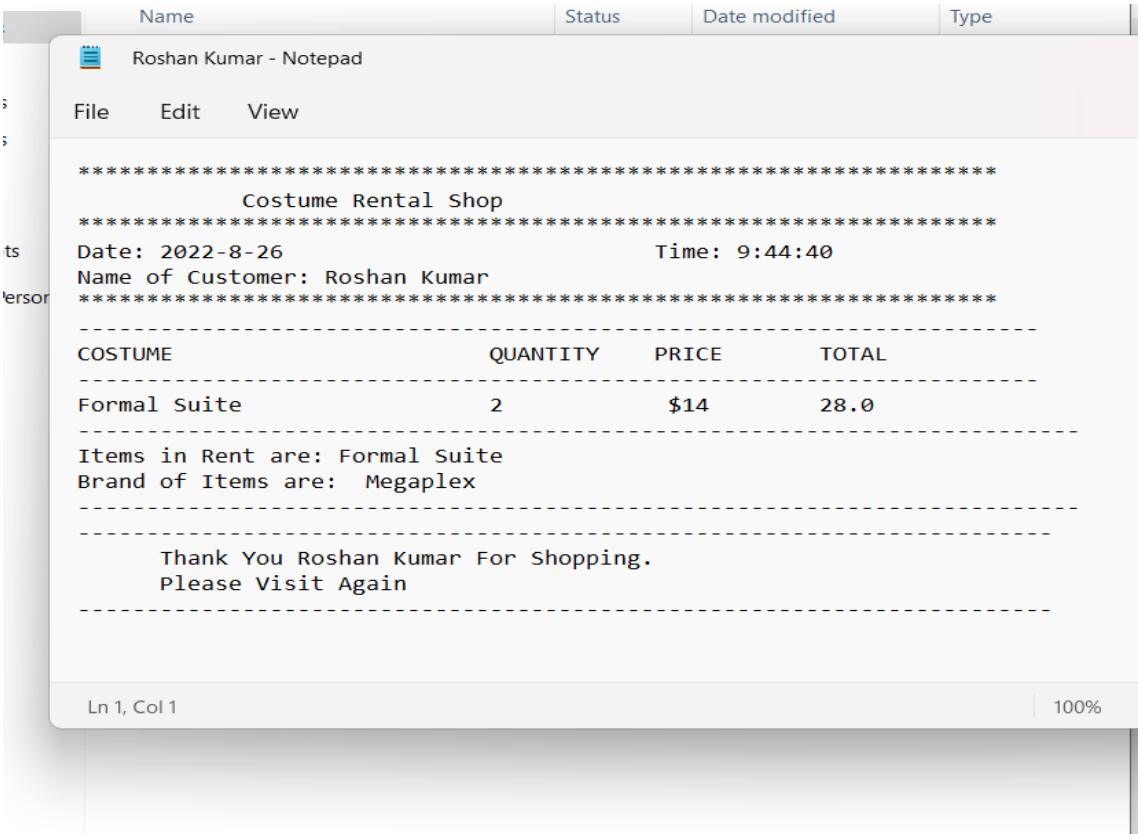

Figure 30: Rented costume txt file been open

4.4 Test 04

Test Number	04
Objective	File Generating for returning the costume.
Action	1.Show complete renting process. 2.Show output in the shell as well. 3.Finally show the rented costume note in txt file.
Expected Result	Text File will be generated for return the costume.
Actual Result	Text file be generated successful.
Conclusion	Test is successful.

Table 5: Table of file generating for returning process.

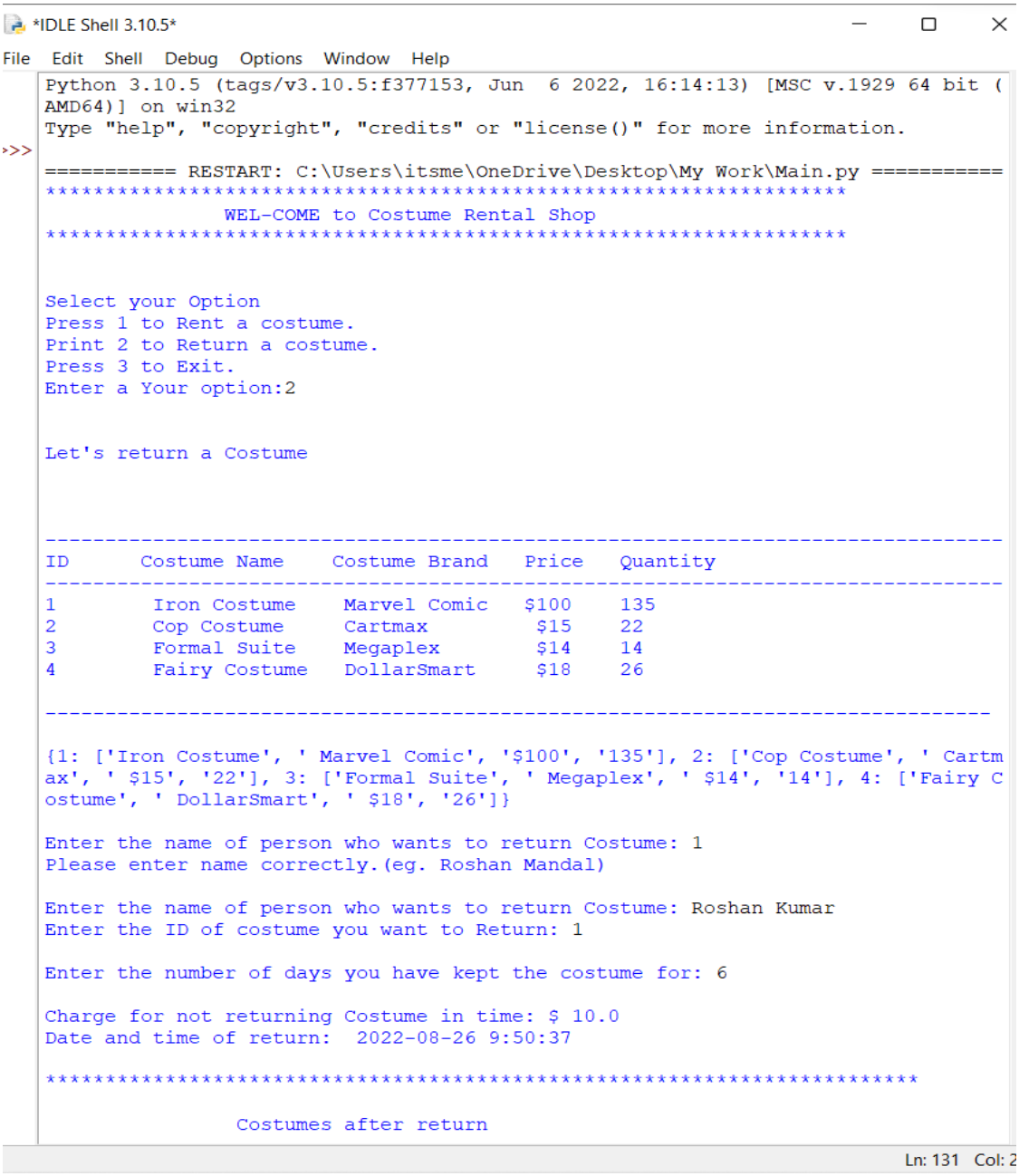

Figure 31: Figure of File Generating for return costume(a)

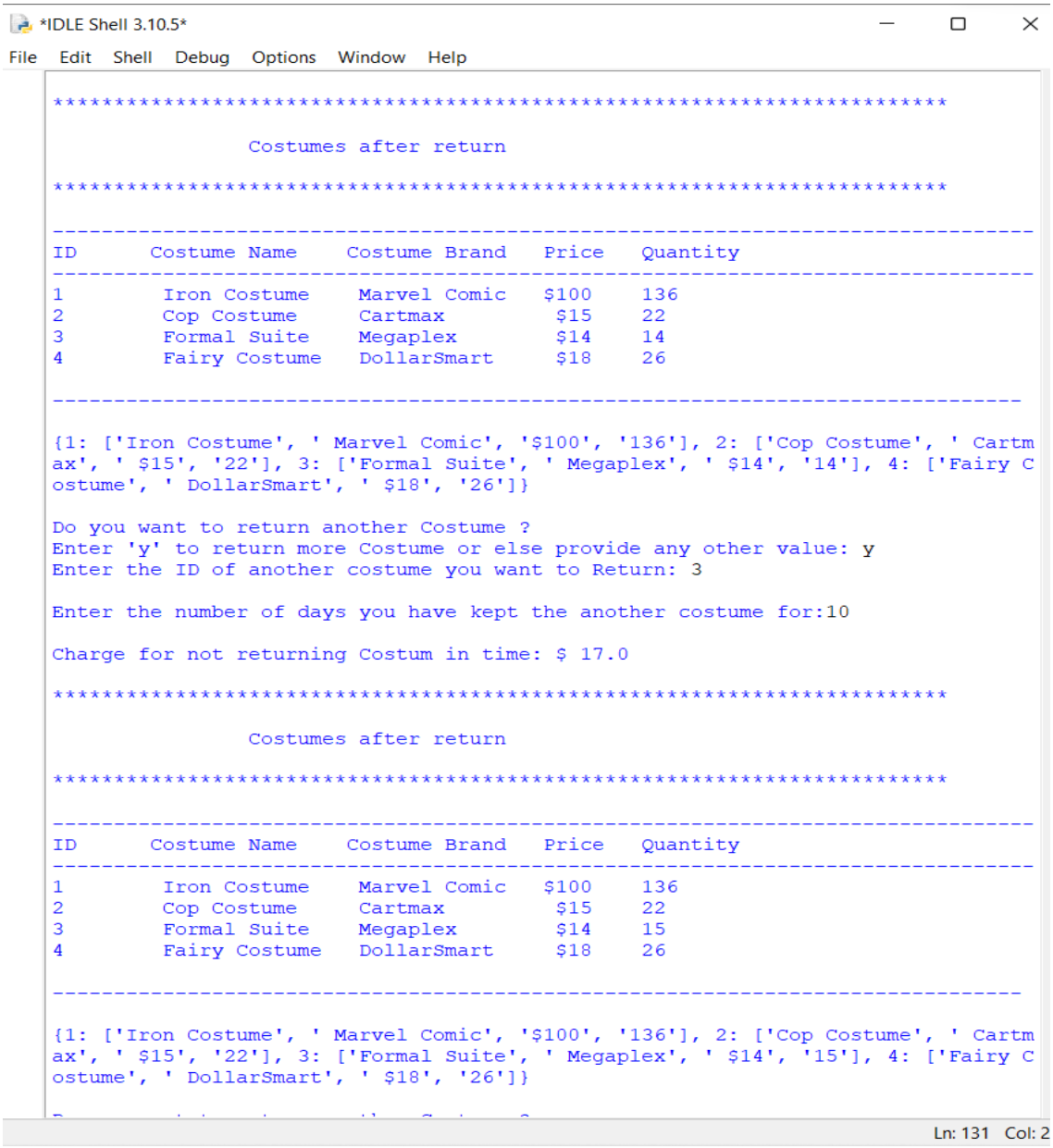

Figure 32: Figure of File Generating for return costume(b)

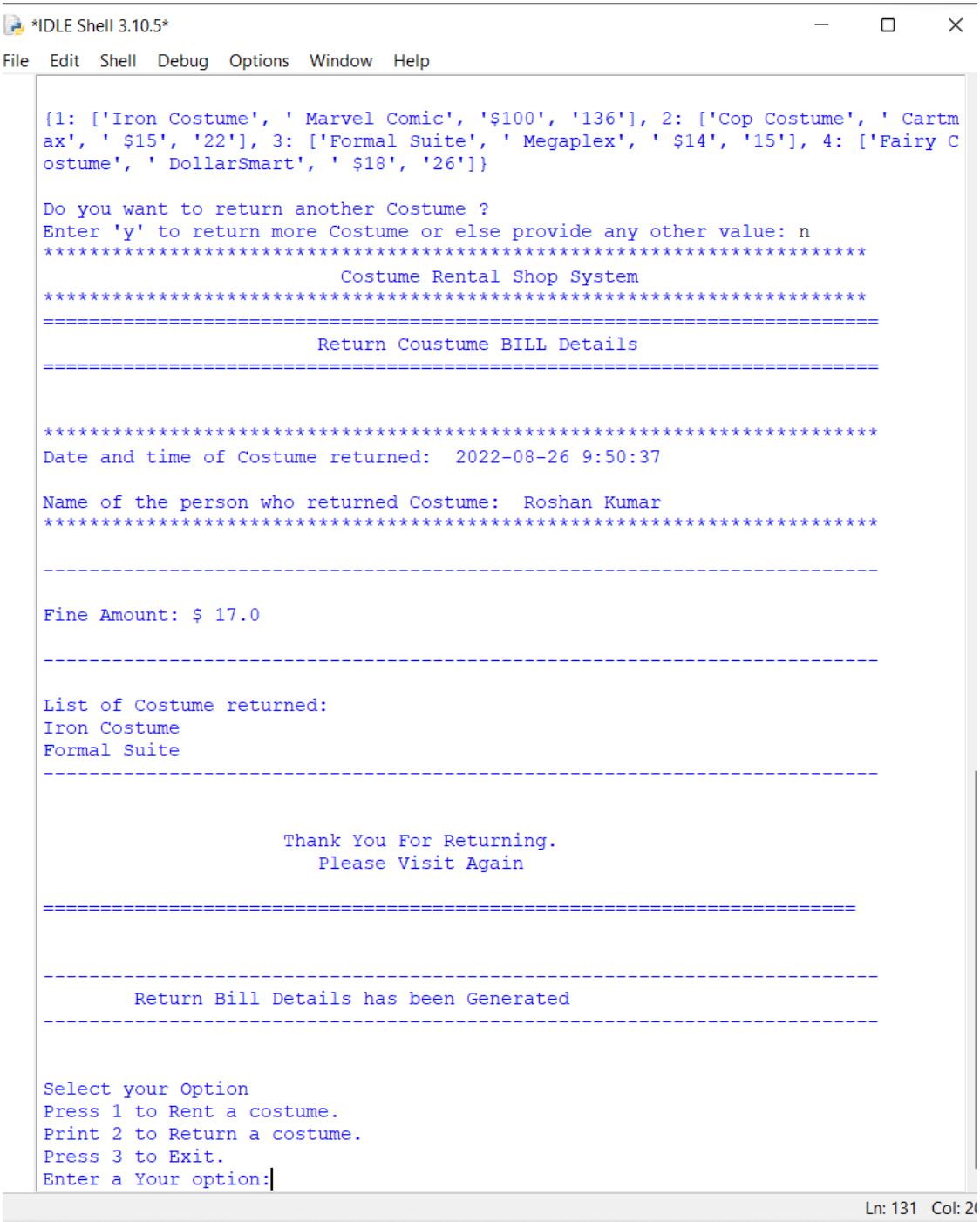

Figure 33: Figure of File Generating for renting costume(c)

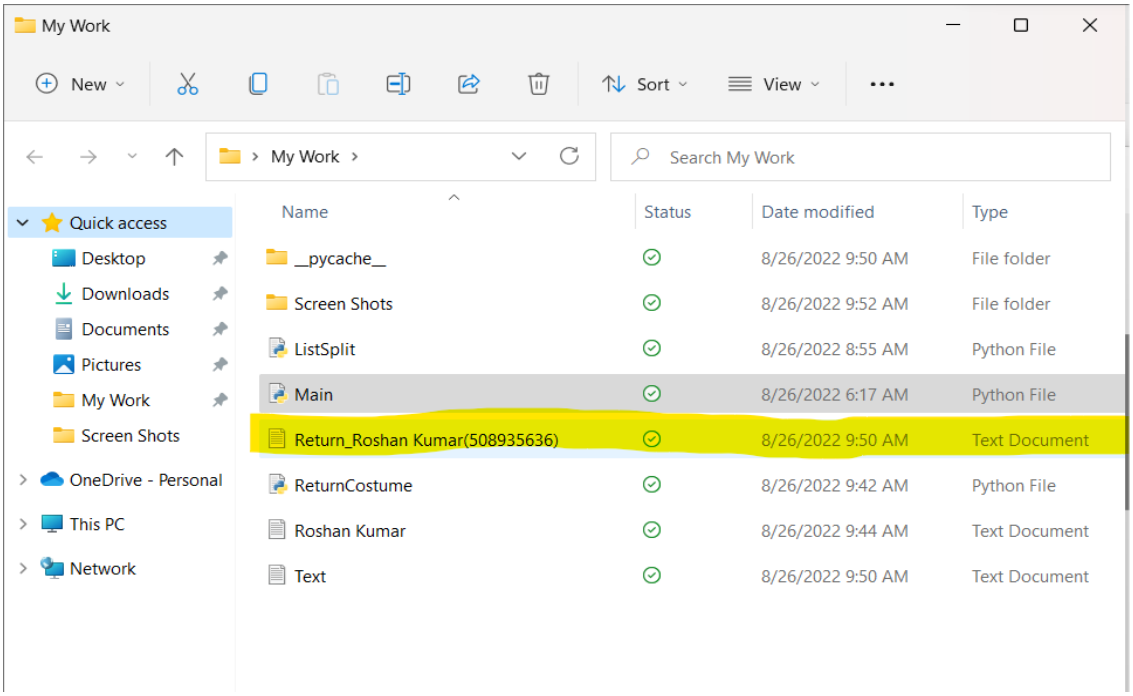

Figure 34: Returned Costume file generated in text

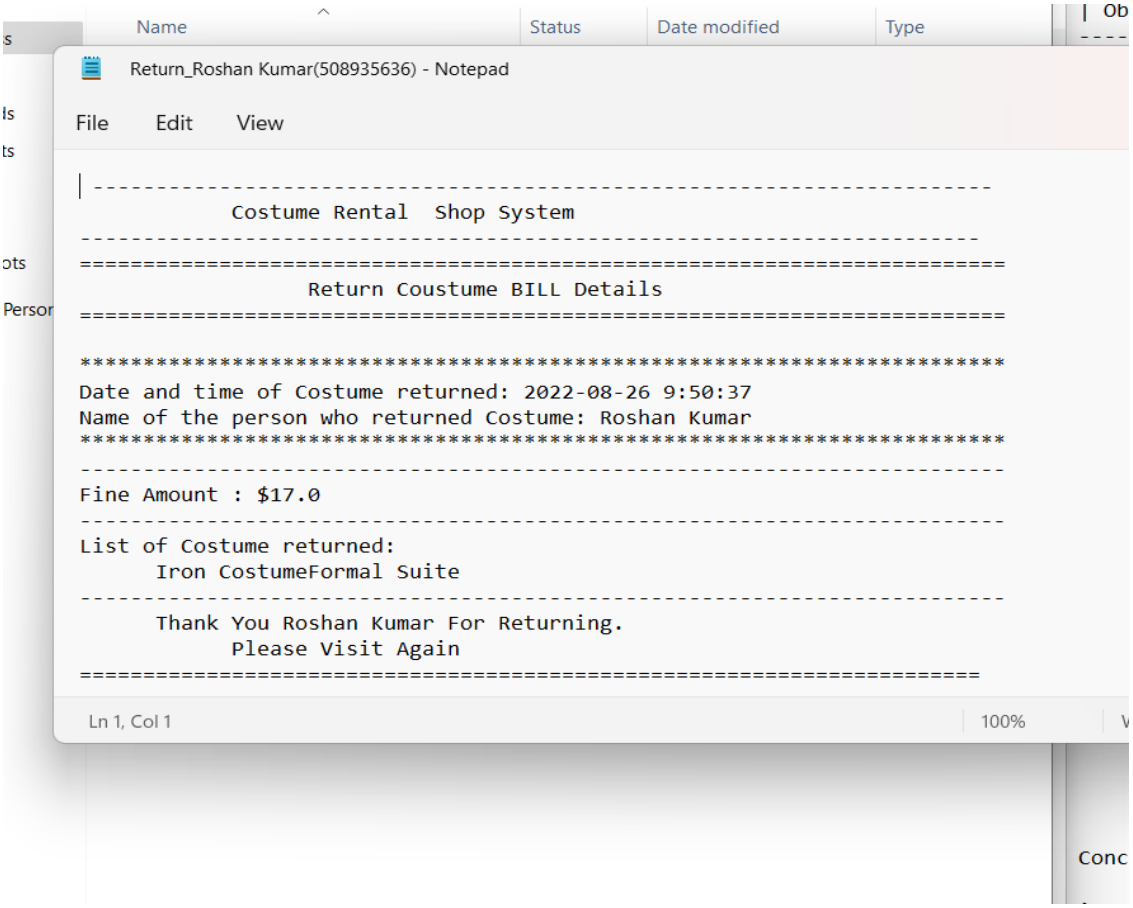

Figure 35: Figure 36: Rented costume txt file been open

4.5 Test 05

Test Number	05
Objective	Update in the Stock/Quantity
Action	1.Show the quantity been deducted while renting the costume. 2.Show the quantity being added while returning the costume.
Expected Result	Quantity will be deducted or added while renting and returning the costume.
Actual Result	Quantity been deduct or add while renting and returning the costume.
Conclusion	The Test is successful.

Table 6: Table for Update in the Stock

```
Let's Rent a Costume

**********************************************************************
ID      Costume Name    Costume Brand   Price   Quantity
**********************************************************************
1       Iron Costume     Marvel Comic   $100    136

2       Cop Costume      Cartmax         $15    22

3       Formal Suite     Megaplex        $14    15

4       Fairy Costume    DollarSmart     $18    26

**********************************************************************

Enter the ID of costume you want to rent: 1

Costume ID is 1
Costume is available

Enter the quantity of costume:5



{1: ['Iron Costume', ' Marvel Comic', '$100', 131], 2: ['Cop Costume', ' Cartmax
', ' $15', '22'], 3: ['Formal Suite', ' Megaplex', ' $14', '15'], 4: ['Fairy Cos
tume', ' DollarSmart', ' $18', '26']}

Please enter your name:
```

Figure 37: Figure of deduct quantity while renting process

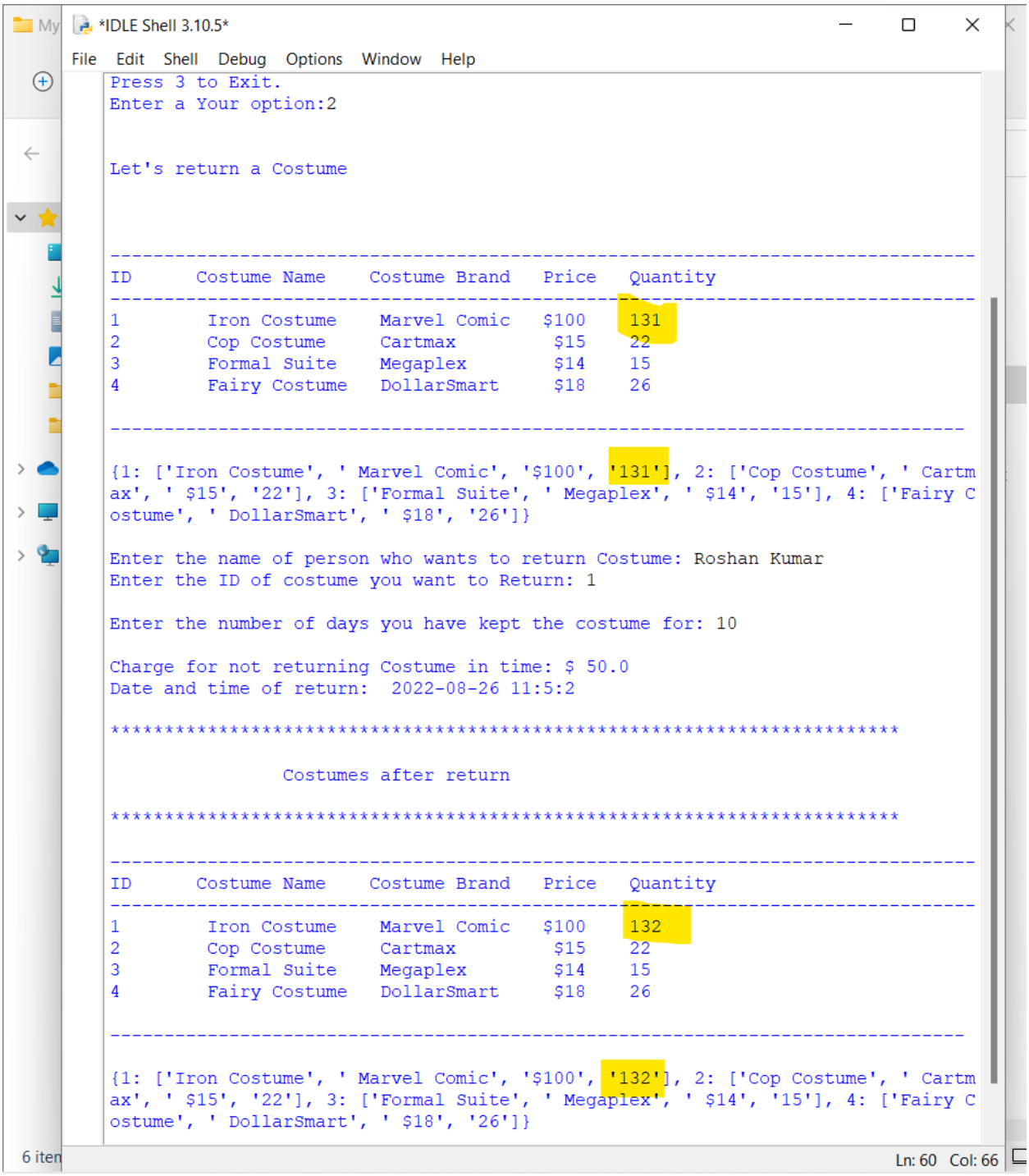

Figure 38: Figure of added in quantity while returning the costume process

5. Conclusion

This was the 1st coursework of this Fundamental of Computing of module. This provides for 60% of our module grade. In this coursework, I had develop a bill generating system for a costume rental shop for maintain the record of the costumes available for renting in Python. The entire program was written using the Python IDLE software. I could divide the coding part in three parts. First one was ListSplit, another was ReturnCostume and at last but not the least Main file which was basically contained the main structure code of this assignement.

5.1 Difficulties

While doing this 1st Assignment of this computing module I have been faced multiple difficulties. First, when I about to start this coursework, I have been no idea how and where to started from. I am little bit familiar from this coursework but even I couldn't get the situation. I have been asked my tutor again and he explain the scenario and then I got this.

5.2 How Can Faced those Difficulties

To get overcome this type of difficulties I always discussed with my pals and got solution and I joined discussion class. One of the main reasons made me overcome from these difficulties is our great tutor. They are very friendly and kind. They assisted us while we stocked in any problem by solving these difficulties. Even I could also get some solution from internet and many others.

5.3 What Did I learn?

While going through this assignment I am able to learn a lot about Python. First, it improved my coding, debugging skill and several of the ideas. And it can also clear my concept about the Bill Generating System of shops and stores.

Appendix

Main.py Code

```
print ("**********************************************************************")
print ("              WEL-COME to Costume Rental Shop              ")
print ("**********************************************************************")
print ("\n")

#using def function
def Shop(ask_user):
    return(ask_user)
loop = True

while loop == True:
    print ("Select your Option")
    print ("Press 1 to Rent a costume.")
    print ("Print 2 to Return a costume.")
    print ("Press 3 to Exit.")

    ask_user =input("Enter a Your option:")
    print("\n")

    if ask_user== "1":
        print ("Let's Rent a Costume")
        print("\n")

        print("**********************************************************************")
        print("ID\tCostume Name\tCostume Brand\tPrice\tQuantity")
        print("**********************************************************************")

        file = open("Text.txt","r")
        a = 1
        for line in file:
            print(a,"\t"+line.replace(",", "\t"))
            a = a+1

        print("**********************************************************************")
        file.close()
        print("\n")

        def costumes(costumeDictionary):
            return(costumeDictionary)
        file = open("Text.txt","r")
        costumeDictionary = {}
```

```
costumeID = 1
for line in file:
    line = line.replace("\n","")
    costumeDictionary.update({costumeID: line.split(",")})
    costumeID = costumeID + 1
file.close()

def valid(validID):
    return(validID)

if ask_user == "1":

    validID = int(input("Enter the ID of costume you want to rent: "))
    print("\n")

    while validID <= 0 or validID > len(costumeDictionary):
        print("\n")
        print("**********************************************************************")
        print("            Please provide a valid costume ID !!!                 ")
        print("**********************************************************************")
        print("\n")

        print("**********************************************************************")
        print("ID\tCostume Name\tCostume Brand\tPrice\tQuantity")
        print("**********************************************************************")

        file = open("Text.txt","r")
        a = 1
        for line in file:
            print(a,"\t"+line.replace(",", "\t"))
            a = a+1
        print("**********************************************************************")

        print("\n")



        validID = int(input("Enter the ID costume you want to rent:"))
        print("\n")
    print("Costume ID is" , validID)
    print("Costume is available")
    print("\n")


    def quantity(userQuantity):
        return(userQuantity)
```

```
        userQuantity = int(input("Enter the quantity of costume:"))
        print("\n")


        def quantity_sel(quantity_of_selected_costume):
            return(quantity_of_selected_costume)
        quantity_of_selected_costume = costumeDictionary[validID][3]

        while userQuantity <= 0 or userQuantity >int(quantity_of_selected_costume):
            print("quantity not available")
            print("\n")
            userQuantity = int(input("Enter the quantity of costume:"))
            print("\n")
        print("\n")




        costumeDictionary[validID][3] = int(costumeDictionary[validID][3])-
int(userQuantity)

        file = open("Text.txt","w")

        for values in costumeDictionary.values():
            file.write(str(values[0])+","+str(values[1])+","+str(values[2])+","+str(values[3]))
            file.write("\n")
        file.close()
        print(costumeDictionary)
        print("\n")



        a = input("Please enter your name: ")
        print("\n")


    costname = costumeDictionary[validID][0]
    totalquantity = userQuantity
    brand = costumeDictionary[validID][1]
    price = costumeDictionary[validID][2]
    itemprice = costumeDictionary[validID][2].replace("$"," ")
    totalprice = float(itemprice)*float(totalquantity)

    import datetime
```

```
        t = str(datetime.datetime.now().year) + "-" + str(datetime.datetime.now().month) +
"-" + str(
            datetime.datetime.now().day)
        d = str(t)
        u = str(datetime.datetime.now().hour) + ":" + str(datetime.datetime.now().minute) +
":" + str(
            datetime.datetime.now().second)
        e = str(u)

        print ("**********************************************************************")
        print ("\t\tCostume Rental Shop")
        print ("**********************************************************************")
        print("----------------------------------------------------------------------")
        print("\t\t\tBILL Details")
        print("----------------------------------------------------------------------")
        print("\n")
        print("----------------------------------------------------------------------")
        print("Date: " + d + "\t\t\t\t\tTime: " + e + "")
        print("\nName of Customer: " + str(a) + "")
        print("----------------------------------------------------------------------")
        print("\n")
        print("----------------------------------------------------------------------")
        print("COSTUME\t\t\tQUANTITY\tPRICE\t\tTOTAL")
        print("----------------------------------------------------------------------")
        print(costname,"\t",totalquantity,"\t","\t",price,"\t","\t","$",str(totalprice))
        print("\n----------------------------------------------------------------------")
        print("\nItems in Rent are: ",costname)
        print("\nBrand of Items are: ",brand)
        print("\n----------------------------------------------------------------------")
        print("\n")
        print("\tThank You " + a + " For Shopping.\n\t\tPlease Visit Again")
        print("\n----------------------------------------------------------------------")
        print("\n")
        print("----------------------------------------------------------------------")
        print("\tRent Details Bill has been Generated")
        print("----------------------------------------------------------------------")
        print("\n")

        file = open(a + ".txt", "w")  # generate a unique Bill name and open it in write mode.
        file.write("**********************************************************************")
        file.write("\n\t\tCostume Rental Shop")
        file.write("\n**********************************************************************")
        file.write("\nDate: " + d + "\t\t\t\t\tTime: " + e + "")
        file.write("\nName of Customer: " + str(a) + "")
        file.write("\n**********************************************************************")
        file.write("\n----------------------------------------------------------------------")
```

```
        file.write("\nCOSTUME\t\t\t\tQUANTITY\tPRICE\t\tTOTAL")
        file.write("\n-------------------------------------------------------------------------")
        file.write("\n" + costname)
        file.write("\t\t\t" + str(totalquantity))
        file.write("\t\t" + price)
        file.write("\t\t" + str(totalprice))
        file.write("\n-------------------------------------------------------------------------")
        file.write("\nItems in Rent are: " + costname)
        file.write("\nBrand of Items are: " + brand)
        file.write("\n-------------------------------------------------------------------------")

        file.write("\n-------------------------------------------------------------------------")
        file.write("\n\tThank You " + a + " For Shopping.\n\tPlease Visit Again")
        file.write("\n-------------------------------------------------------------------------")
        file.write("\n")
        file.close()



    elif ask_user == "2":
        print("Let's return a Costume")
        print("\n")
        import ReturnCostume
        ReturnCostume.returnCostume()



    elif ask_user == "3":
        print("*************************************************************")
        print("\t Thank You for using our application")
        print("*************************************************************")
        print("\n")
        loop = False
    else:
        print("Invalid Input !!!")
        print("\n")
```

ListSplit.py Code

```
#creating a program to display dictionary and list of in proper format of tabular form
#importing datetime module
import datetime

#function created to read the already provided file containg list of
def read_file():
    file = open("Text.txt","r")
    print(file.read())
    file.close

#function created to display the  in tabular form
def print_dictionary():
    print("\n---------------------------------------------------------------------------------")
    print("ID\tCostume Name\tCostume Brand\tPrice\tQuantity" )
    print("---------------------------------------------------------------------------------")

    #creating empty dictionary
    dictionary ={}
    file = open("Text.txt","r")
    costumeID = 0

    #using for loop to display book
    for line in file:
        costumeID = costumeID + 1
        line = line.replace("\n","")
        dictionary [costumeID] = line.split(',')
        line = line.replace(",", "\t")

        print(costumeID, "\t", line)
    print("\n---------------------------------------------------------------------------------\n")
    print(dictionary)
    file.close()

#function created to display dictionary of available
def dictionary_costume():
    dic ={}
    file = open("Text.txt","r")
    id_costume = 0
    for line in file:
        id_costume = id_costume + 1
        line = line.replace("\n","")
        dic [id_costume] = line.split(',')
        line = line.replace(",", "\t")
```

```
    file.close()
    return dic

#function created to call date and time function
def random_number():
    hour = str(datetime.datetime.now().hour)
    minute = str(datetime.datetime.now().minute)
    second = str(datetime.datetime.now().second)
    micro = str(datetime.datetime.now().microsecond)

    Random = minute + second + micro
    return Random
```

ReturnCostume.py Code

```
import ListSplit
import datetime

random = ListSplit.random_number()
dictionary = ListSplit.dictionary_costume()

def dictionary_write():
    file = open("Text.txt","w")
    for values in dictionary.values():
        file.write(str(values[0]) + ","+ str(values[1])+ ","+str(values[2]) + ","+str(values[3]))
        file.write("\n")
    file.close()

def correctID():
    correct_id = False
    while correct_id == False:
        try:
            value = int(input("Enter the ID of costume you want to Return: "))
            return value
            correct_id = True
            returnCostume()
        except:
            print("**************************************")
            print("Please provide a valid costume ID !!! ")
            print("**************************************")
            print("\n")

def anotherCorrectID():
    correct_id = False
```

```
    while correct_id == False:
        try:
            value = int(input("Enter the ID of another costume you want to Return: "))
            return value
            correct_id = True
            returnCostume()
        except:
            print("****************************************")
            print("Please provide a valid costume ID !!! ")
            print("****************************************")
            print("\n")

def day_costumeKept():
    correct_day = False
    while correct_day == False:
        try:
            value = int(input("\nEnter the number of days you have kept the costume for: "))
            return value
            correct_day = True
            returnCostume()
        except:
            print("****************************************")
            print("Please provide a valid Days !!! ")
            print("****************************************")
            print("\n")

def day_costumeKept2():
    correct_day = False
    while correct_day == False:
        try:
            value = int(input("\nEnter the number of days you have kept the another
costume for:"))
            return value
            correct_day = True
            returnCostume()
        except:
            print("****************************************")
            print("Please provide a valid Days !!! ")
            print("****************************************")
            print("\n")

def correctName():
    correct_name = False
    while correct_name == False:
        try:
            value = input("\nEnter the name of person who wants to return Costume: ")
```

```
            int(value)
            print("Please enter name correctly.(eg. Roshan Mandal) ")
        except:
            value.isalpha()
            return value
            correct_name = True
            returnCostume()

def returnCostume():
    returnList=[]
    fineList =[]

    ListSplit.print_dictionary()

    name = correctName()
    returnCostume = correctID()
    days = day_costumeKept()

    dictionary[returnCostume][3] = int(dictionary[returnCostume][3]) + 1
    returnList.append(dictionary[returnCostume][0])
    dictionary_write()

    if 0 < days < 5:
        print("\nNo fine is charged for this Costume.")
        print("Thank you for returning Costume on time.")

    elif days > 5:
          fineAmount = (days-5) * 0.10 * float(dictionary[returnCostume][2].replace("$",""))
          fineList.append(fineAmount)
          totalFine = sum(fineList)
          print("\nCharge for not returning Costume in time: $", totalFine)

    date = str(datetime.date.today())
    hour = str(datetime.datetime.now().hour)
    minute = str(datetime.datetime.now().minute)
    second = str(datetime.datetime.now().second)
    time_display = date+ " " + hour + ":" + minute + ":" +second

    print("Date and time of return: ",time_display)
    print("\n*********************************************************************")
    print("\n\t\tCostumes after return")
    print("\n*********************************************************************")

    ListSplit.print_dictionary()

    count = True
```

```
    while count == True:
        print("\nDo you want to return another Costume ?")
        another = input("Enter 'y' to return more Costume or else provide any other value:
")

        if another == "Y" or another == "y":
            #calling new variables using other functions
            returnCostume = anotherCorrectID()
            other_days = day_costumeKept2()

            dictionary[returnCostume][3] = int(dictionary[returnCostume][3]) + 1
            returnList.append(dictionary[returnCostume][0])
            dictionary_write()

            if 0 < other_days < 5:
                print("\nNo fine is charged for this Costume.")
                print("Thank you for returning Costume on time.")

            elif other_days > 5:
                fineAmount = (other_days -5) * 0.10 *
float(dictionary[returnCostume][2].replace("$",""))
                fineList.append(fineAmount)
                totalFine = sum(fineList)
                print("\nCharge for not returning Costum in time: $", totalFine)

            dictionary_write()
            print("\n*********************************************************************************")
            print("\n\t\tCostumes after return")
            print("\n*********************************************************************************")
            ListSplit.print_dictionary()

        else:
            count = False
            totalFine = sum(fineList)


            print("*********************************************************************")
            print("\t\t\t  Costume Rental Shop System")
            print("*********************************************************************")

print("=================================================================
===========")
            print("\t\t\tReturn Coustume BILL Details")

print("=================================================================
===========")
```

```
        print("\n")
        print("*************************************************************************")
        print("Date and time of Costume returned: ", time_display)
        print("\nName of the person who returned Costume: ",name)
        print("*************************************************************************")
        print("\n-------------------------------------------------------------------------")
        print("\nFine Amount: $",totalFine)
        print("\n-------------------------------------------------------------------------")
        print("\nList of Costume returned: ")
        for i in range(len(returnList)):
            print(returnList[i])
        print("-------------------------------------------------------------------------")

        print("\n")
        print("\t\t     Thank You For Returning.\n\t\t\tPlease Visit Again")

print("\n=============================================================
==========")
        print("\n")
        print("-------------------------------------------------------------------------")
        print("\tReturn Bill Details has been Generated")
        print("-------------------------------------------------------------------------")
        print("\n")

        file1 = open("Return_"+name+"("+random+")"+".txt","w")
        file1.write(" -------------------------------------------------------------------------")
        file1.write("\t\tCostume Rental System")
        file1.write("\n-------------------------------------------------------------------------")

file1.write("\n=============================================================
================")
        file1.write("\n\t\t\tReturn Coustume BILL Details")

file1.write("\n=============================================================
================")
        file1.write("\n")
        file1.write("\n*************************************************************************")
        file1.write("\nDate and time of Costume returned: " + str(time_display))
        file1.write("\nName of the person who returned Costume: " + str(name))
        file1.write("\n*************************************************************************")
        file1.write("\n")
        file1.write("-------------------------------------------------------------------------")
        file1.write("\nFine Amount : $" + str(totalFine))
        file1.write("\n-------------------------------------------------------------------------")
        file1.write("\nList of Costume returned: ")
        file1.write("\n\t")
```

```
        for i in range(len(returnList)):
            file1.write(returnList[i])

        file1.write("\n-------------------------------------------------------------------------")

        file1.write("\n")
        file1.write("\tThank You " + name + " For Returning.\n\t\tPlease Visit Again ")

file1.write("\n=================================================================
===============")
        file1.write("\n")
        file1.write("-------------------------------------------------------------------------")
        file1.write("\n\tReturn Bill Details has been Generated")
        file1.write("\n-------------------------------------------------------------------------")
        file1.write("\n")
        file1.close()
```

Bibliography

(n.d.). Retrieved from educative: https://www.educative.io/answers/definition-idle

(2022, Jul 20). Retrieved from Logos-World: https://logos-world.net/python-logo/