UNIVERSITY
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"CELEBRATING DREAMS"

MINOR PROJECT REPORT

ON

"Invoice Management Application 'Amazon Mart' "

Submitted to **School of Engineering & Technology, ITM UNIVERSITY, GWALIOR** in Partial fulfilment of the Requirements for the **Second Year** of **Bachelors of Technology** in **Computer Science & Engineering**

Submitted By:

ADITYA GOYAL (BETN1CS19078)

AASHIRWAD KUMAR (BETN1CS19077)

AMAN GUPTA (BETN1CS19079)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

SCHOOL OF ENGINEERING & TECHNOLOGY

ITM UNIVERSITY, GWALIOR, MP (474001)

INDIA

ITM UNIVERSITY, GWALIOR

(Affiliated to All India Council of Technical Education)

School of Engineering & Technology

Certificate

This is to certify that the Minor Project Work entitled **"Invoice Management System – Amazon Mart"**, which is being submitted in partial fulfilment of the requirements for the **Second Year** of **Bachelors of Technology** in **Computer Science & Engineering** is the result if the work completed by:

Aditya Goyal (BETN1CS19078)

Aashirwad Kumar (BETN1CS19077)

Aman Gupta (BETN1CS19079)

Under my supervision and Guidance

Signature of Trainer	Signature of Co-Guide
Designation:	Designation:
Date:	Date:

DECLARATION

We with this declare that the work entitled "Invoice Management System – Amazon Mart" submitted to the Department of Computer Science Engineering, School of Engineering and Technology, ITM University, Gwalior (M.P.) Our work is done under the supervision of Madhav Vyas. The dissertation doesn't contain any part which has been submitted for award of any degree either in this University or in any other University. We further declare that the work is free from any plagiarism.

Name of Candidates along with their Signature

Aditya Goyal (BETN1CS19078)

Aashirwad Kumar (BETN1CS19077)

Aman Gupta (BETN1CS19079)

Verified by trainer

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I respect and thank Dr. Pallavi Khatri for providing us an opportunity to do the project work and giving us all support and guidance which made us complete the project duly. She took keen interest on our project work and guided us all along and provided all the necessary information for developing a good system.

At last but not the least we would like to thank our classmates who trusted us and helped us through the errand.

Finally, we thank all other unnamed who helped us in various ways to gain knowledge and have a good training.

Abstract

This e-Billing and invoicing application is used to overcome the entire problem which they are facing currently, and making complete atomization of manual billing and invoicing application.

Earlier an invoice management application was limited to pen & paper, but today various online platforms have come with advanced tools to manage a seamless invoice management application. By sending a bill to your customers reflects your authenticity and liability that enhances the way you ask for your customer to make you paid. To keep a track of sales and other transactions going within the business, this financial document - invoice is important. It functions as proof in case of any formal issues occurring plus of the transaction for any taxation of business.

Content

List of Abbreviations

GUI – Graphical User Interface

IDLE – Integrated Development & Learning Environment

IDE – Integrated Development Environment

CSE – Computer Science & Engineering

SOET – School of Engineering & Technology

BG - Background

BD - Border

List of Figures

Chapter - 1 Introduction

Invoice Management software is a python based project. We have developed invoice system using python GUI using Tkinter module and other python basic concepts. We have also used file handling for generating the bill and storing it in a desired location. It is tied in with composing a program in python of a Departmental Store that offers essentials items for kids, men & women. The owner of the shop has all the desired rights to access the bill of customer along with date, time, name and phone number. The owner can search it through the bill number.

1.1 - Purpose

The primary motivation behind composing this coursework is to build up a program in python, utilizing loop concept as well as file read and write for the given scenario of an departmental store. It ought to likewise module algorithm, pseudocode, flowchart and data structure of the program.

1.2 - Problem Statement

The issue offered was to build up an application which read the text document and show the data accessible. After that the program should to create a invoice for a customer or consumer, with each purchase of the given item.

1.3 - Aim & Objectives

The fundamental focus of this coursework is to take in the idea of programming in python and can compose a program for the given command. Similarly, another target of this coursework is learning the concept of Tkinter module & file read and write in python programming language and know almost data structure in python. To achieve this aim will be made to finish all the work in the given

time frame. Additionally, more research and study relating with this errand will be made.

1.4 - Purposed Approach

To solve all the given work in this coursework, certain methodologies will be made which are follows.

1. At the primary, study and research will be done to take care of the issue of building up a program and its related point.
2. Then a program will be made in python which will coordinate the given instruction.
3. Data structures required for composing the program will be chosen according to requirement of the given instruction of program.
4. An algorithm of the program will be built where everything the program wills be considered.
5. A flowchart will be drawn to indicate how a code execute and work in the program. It is easy to understand how our program work in the real time.
6. Pseudocode will be made to demonstrate the normal understanding way of the program. It is look like a program but actual it is concept of program it does not execute. Pseudocode is just English language but structure is program.
7. Finally, testing will be improved the situation the composed program so error and bugs will be settled and it can convey the right wanted outcome.

1.5 - Target Audience

This task will be useful for understudies, programmer, software engineers, analysts and particularly for those students who look for premium and need to learn python programming dialect. As well as it is useful for those commercials propose which is required billing system store for individual customer.

1.6 - Hardware & Software Requirements

Adjacent to PC, no an equipment is required however in programming we utilize pyCharm IDE which ought to be installed in computer.

1.7 - Scope of Project

This undertaking outlines the thoughts and techniques for composing programs in pythons utilizing loop concept. It additionally comprises algorithm, pseudocode, flowchart and data structure of the program. therefore, this undertaking will be extremely useful for every one of those understudies, programmer, software engineers and python learner students to discover how the code execute and work in the program. Similarly, it will instruct the strategy of different data structure which has been utilized as a part of the program. At last, as the program is composed with great clarification in each progression so it will help every one of those students who discover trouble in python.

1.8 - Features of Project

The features of this application as follows;

1. To build an application which work in loop statement and show accessible items which are stored in text file. The application should wait for user to enter purchase details of interest. Application should not close or stop until and unless the user chooses to do as such.
2. Application had user interacts features which is request every question with customer and react that answer provide by customer.
3. Application can read text file and overwrite or write new text file. In this program, I used bill.txt file for store a data and read and overwrite on it.

4. Similarly, Application create a unique invoice in text file format and its naming from current device date and time.

Chapter – 2 Invoice Application

This simple Invoice application project is written in Python. The project file contains a python script (amazonmart.py). This is a simple GUI based application which is very easy to understand and use. It uses Tkinter module for the GUI. Talking about the application, you can run the application by clicking the Amazon_Mart.exe (executable) the user just has to enter customer details and then can select among the kids, mens & women items, enter the quantity and click on the total button to view the total price. This simple application also displays the total prices of each item with taxes and extra charges.

The user can view the total receipt of their items which displays receipt number and number of the items purchased with the total amount. Here, the total bill of the customer includes tax and service charges too. The design is so simple that the user won't find any difficulties while working on it.

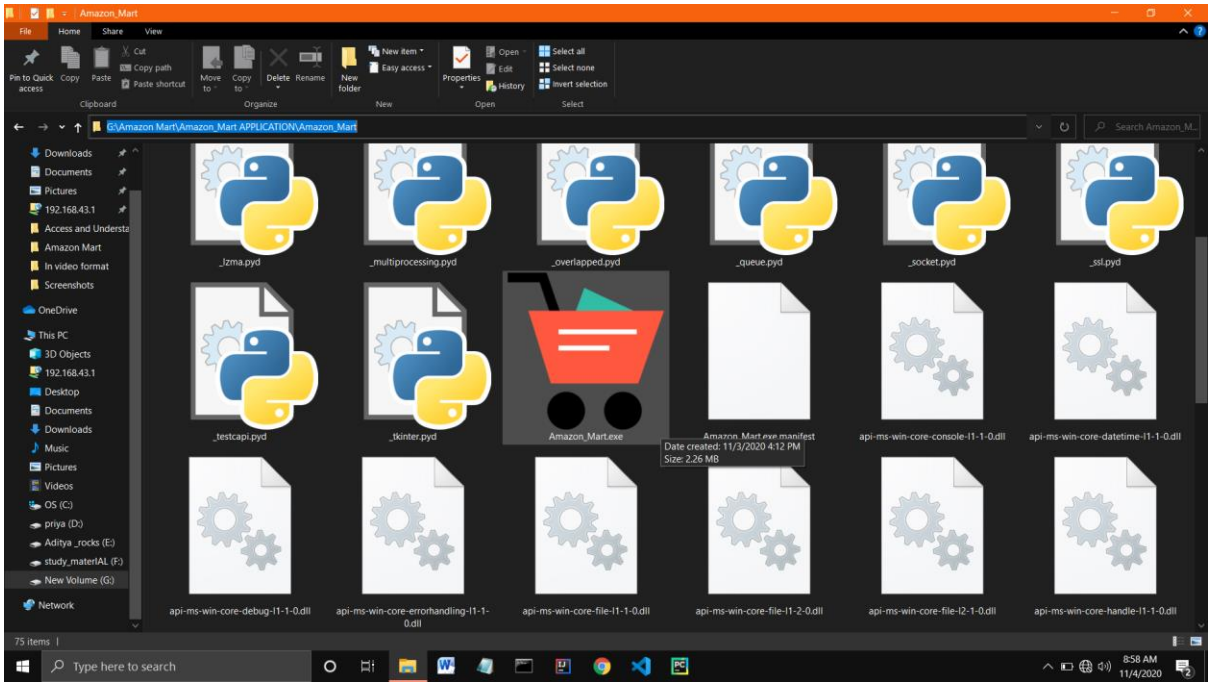


Fig – 1. Application started here

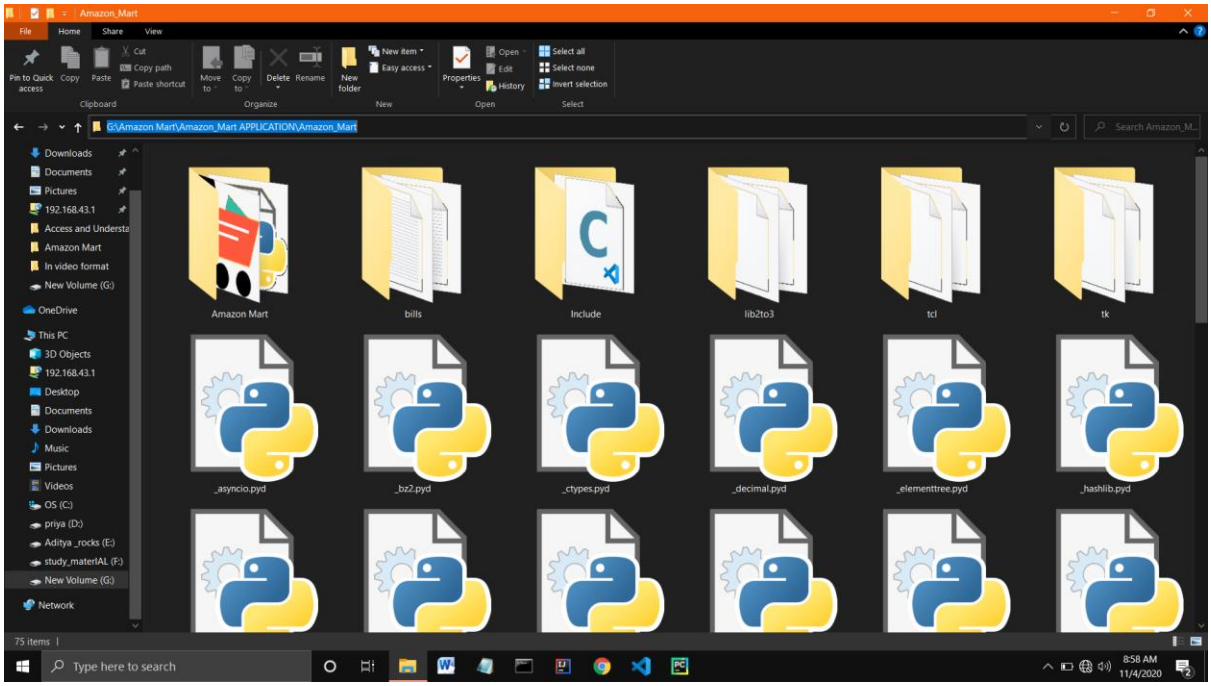


Fig – 2. Application bills saved here

Chapter – 3 Algorithm

3.1 - Stepwise Algorithm

- Step 1: Start
- Step 2: amazonmart.py file from given folder.
- Step 3: py file is displayed in the screen with user login page.
- Step 4: Enter correct user credentials and login into the application.
- Step 5: Now it displays all the products available.
- Step 6: Inputs customers name.
- Step 7: Inputs customers number.
- Step 8: Input quantity of the product.
- Step 9: If the input number of quantity is completed by customer.
- Step 10: Price of the product with total amount is displayed with tax.
- Step 11: Total bill is calculated and display updated amount.
- Step 12: Then the customer selects the generate bill option.
- Step 13: Invoice is printed with customer name, date and time purchase. Products details, Grand total and at last Thank You For Shopping With Us HAVE A GREAT DAY is displayed and is saved in the bills folder with billnumber.txt file.
- Step 14: If more customers are there to purchase item then one can just select clear option and then can continue the shopping.
- Step 15: Hit Exit to close the program.
- Step 16: End.

Chapter – 4 Program Evidence

4.1 - Stepwise Program Evidence

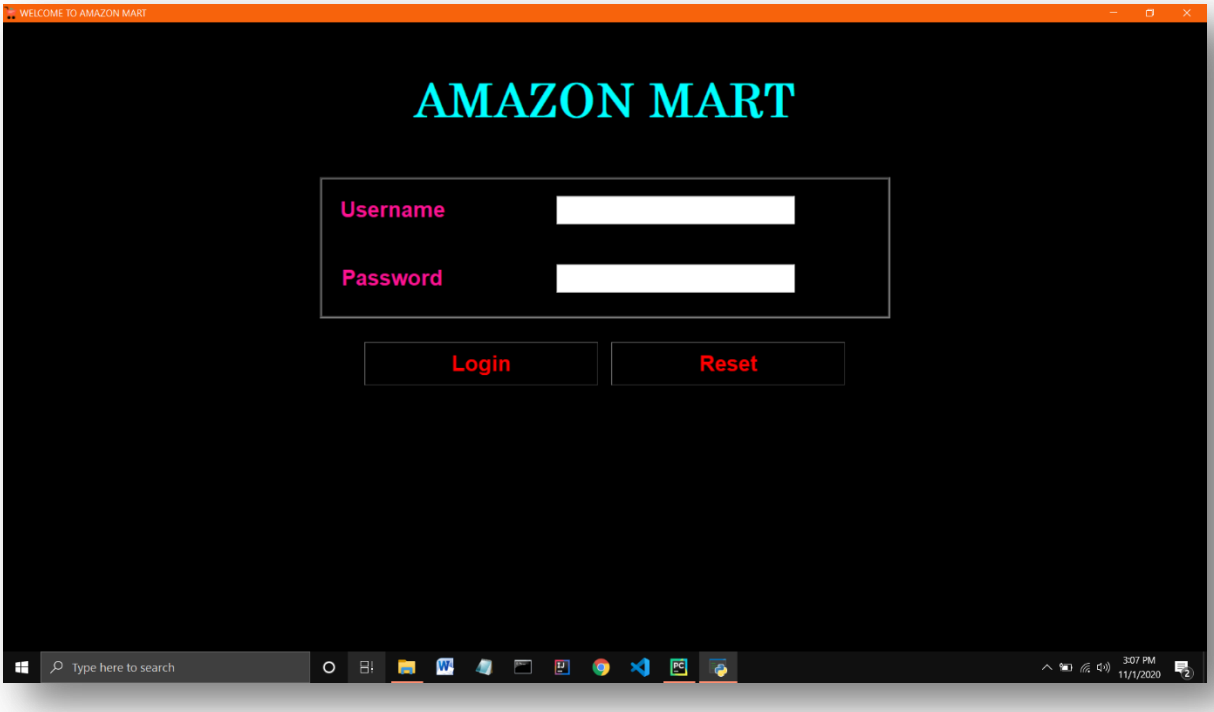


Fig – 3. Starting Interface

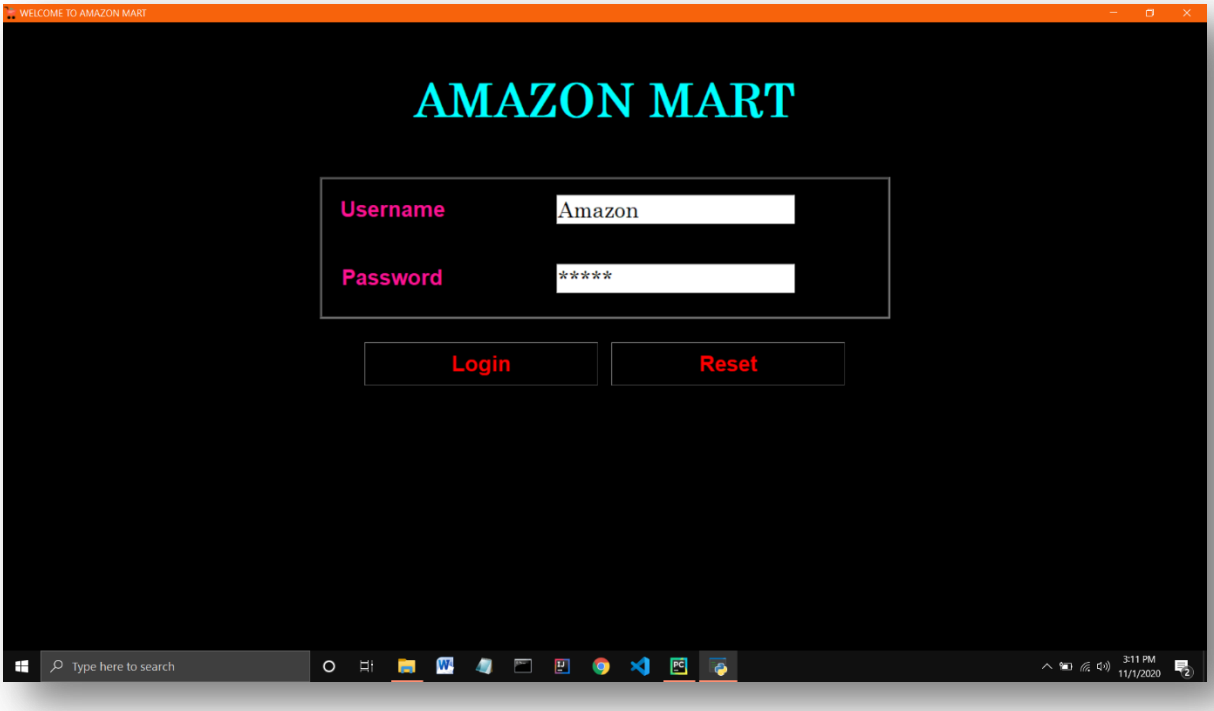


Fig – 4. Login using correct credentials

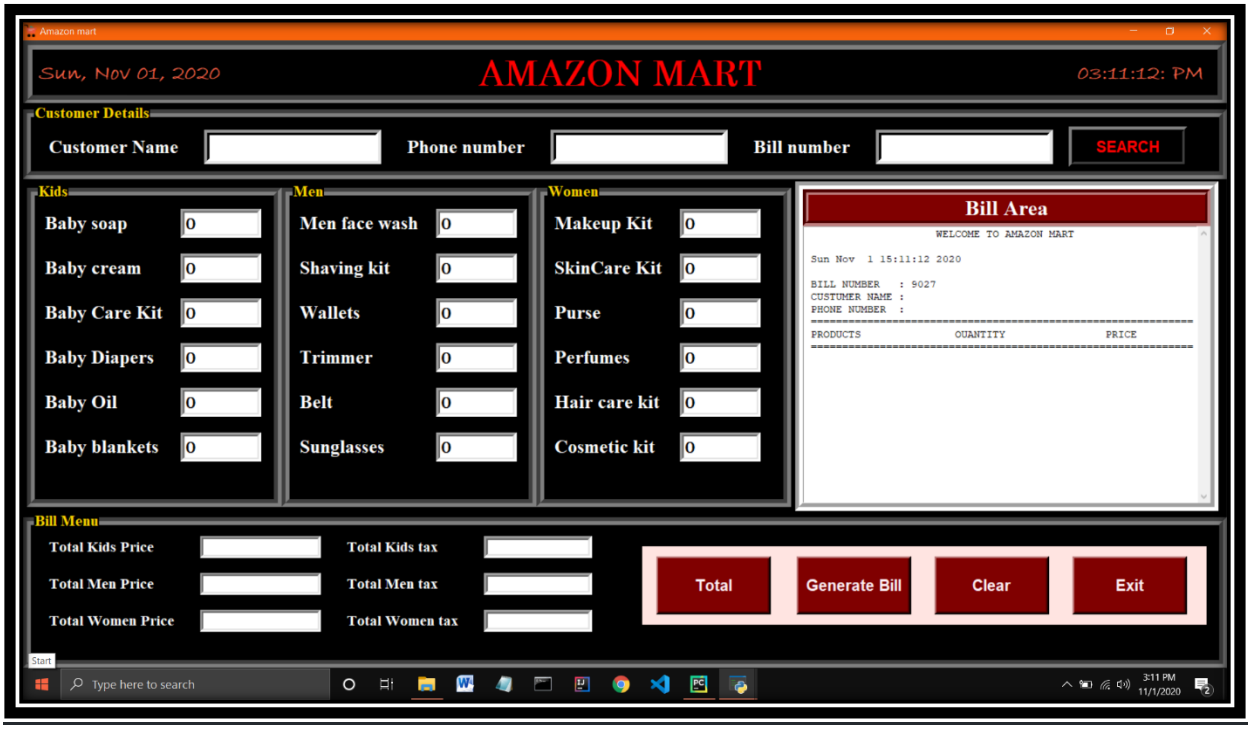


Fig – 5. After login into mart

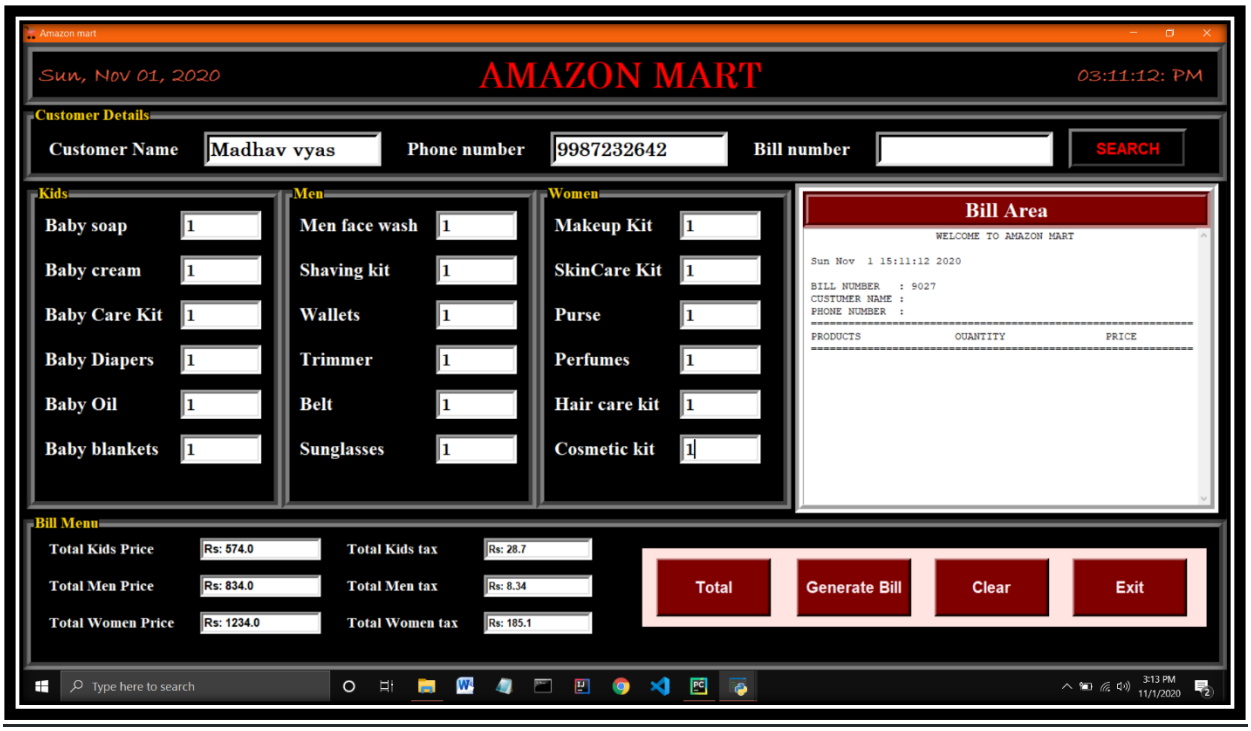


Fig – 6. Enter customer details and products

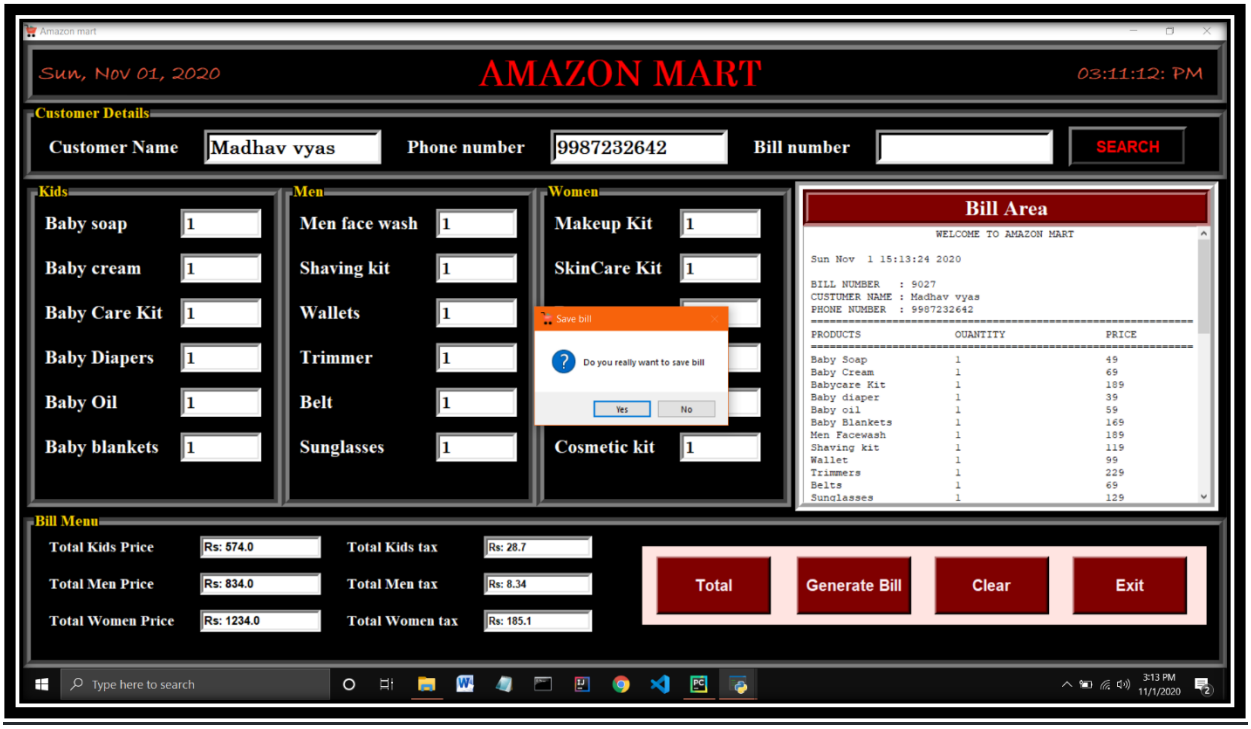


Fig. 7 – Generate Bill

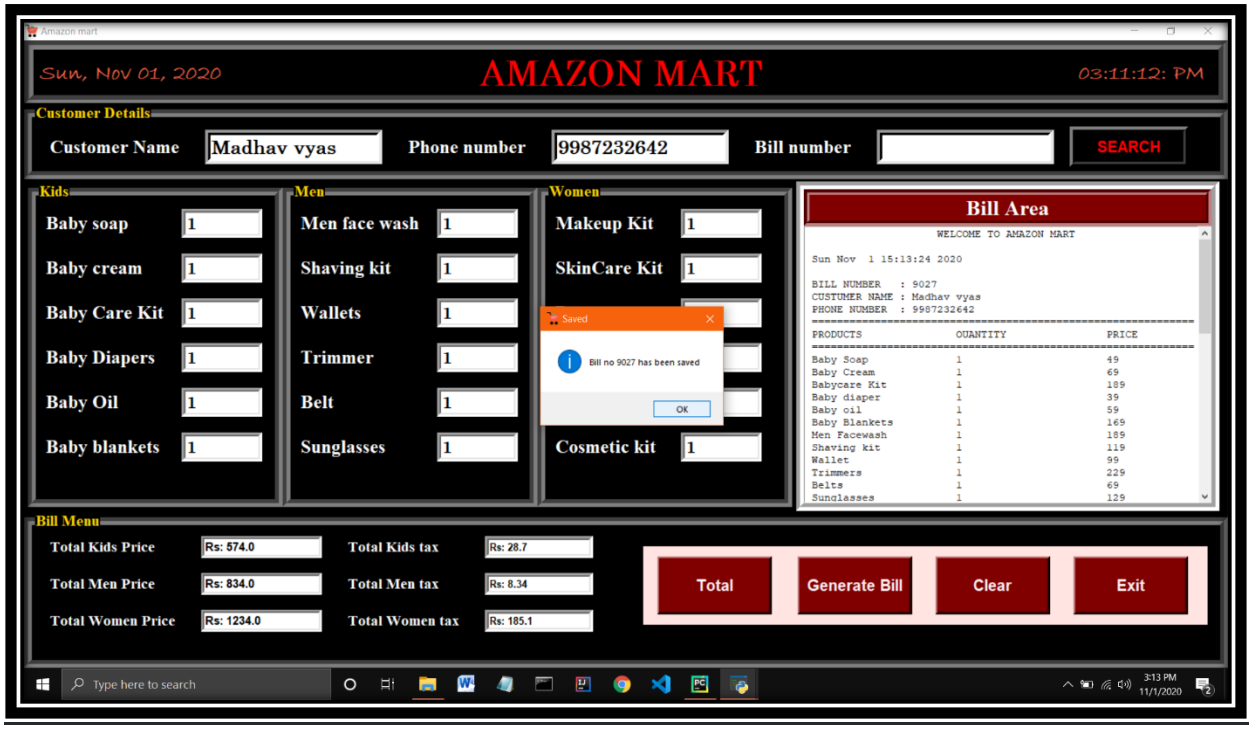


Fig – 8. Bill saved in Bills folder

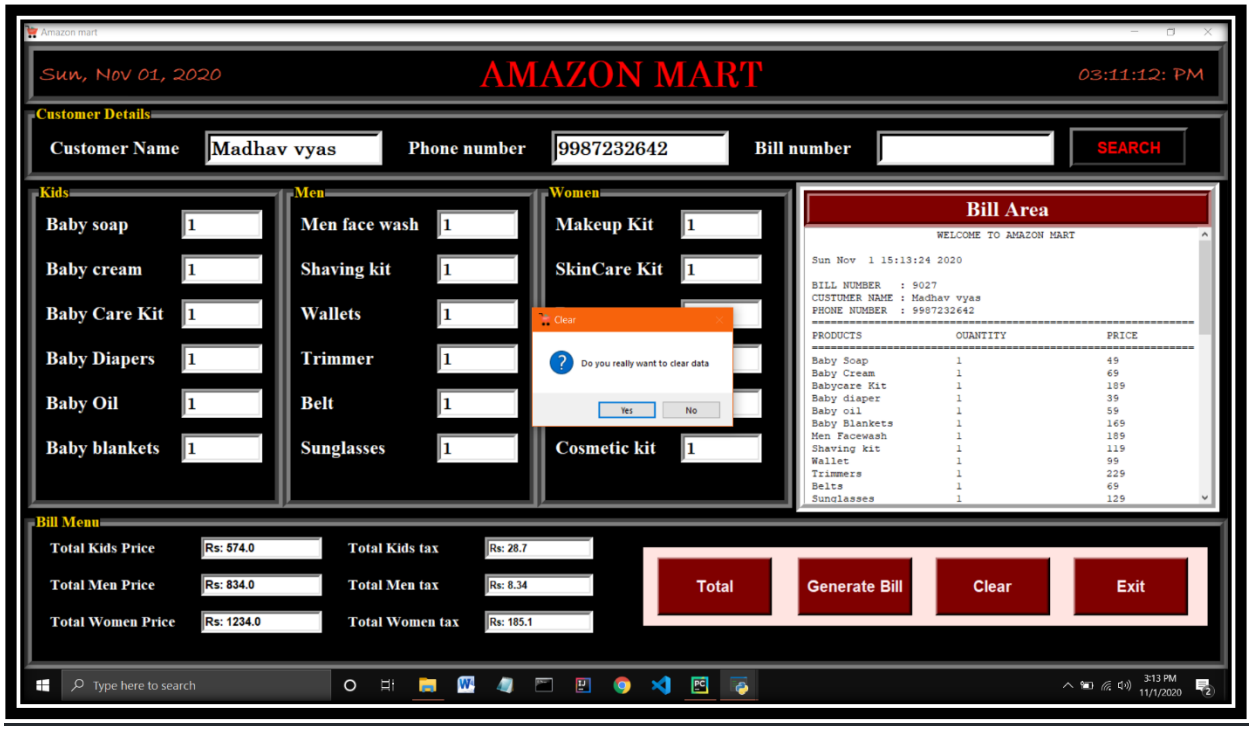


Fig – 9. For new customer we press clear

Fig – 10. Clear Window

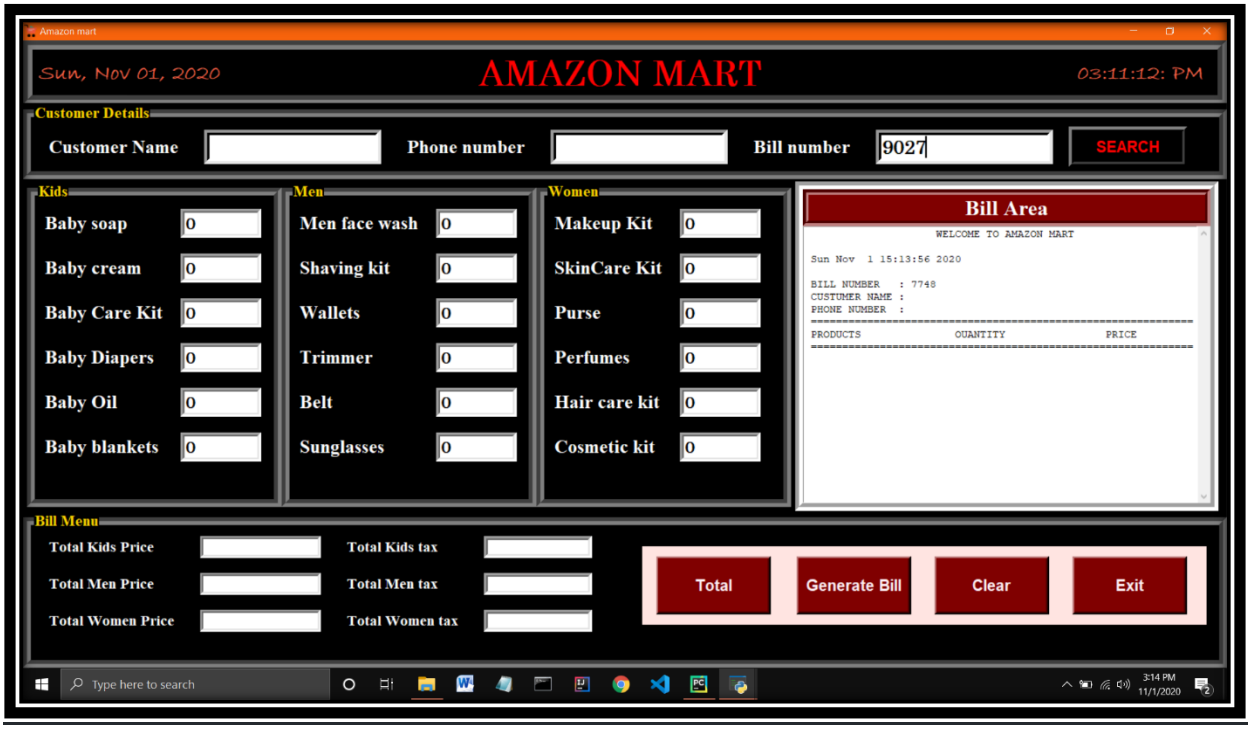


Fig – 11. After clear we got new bill

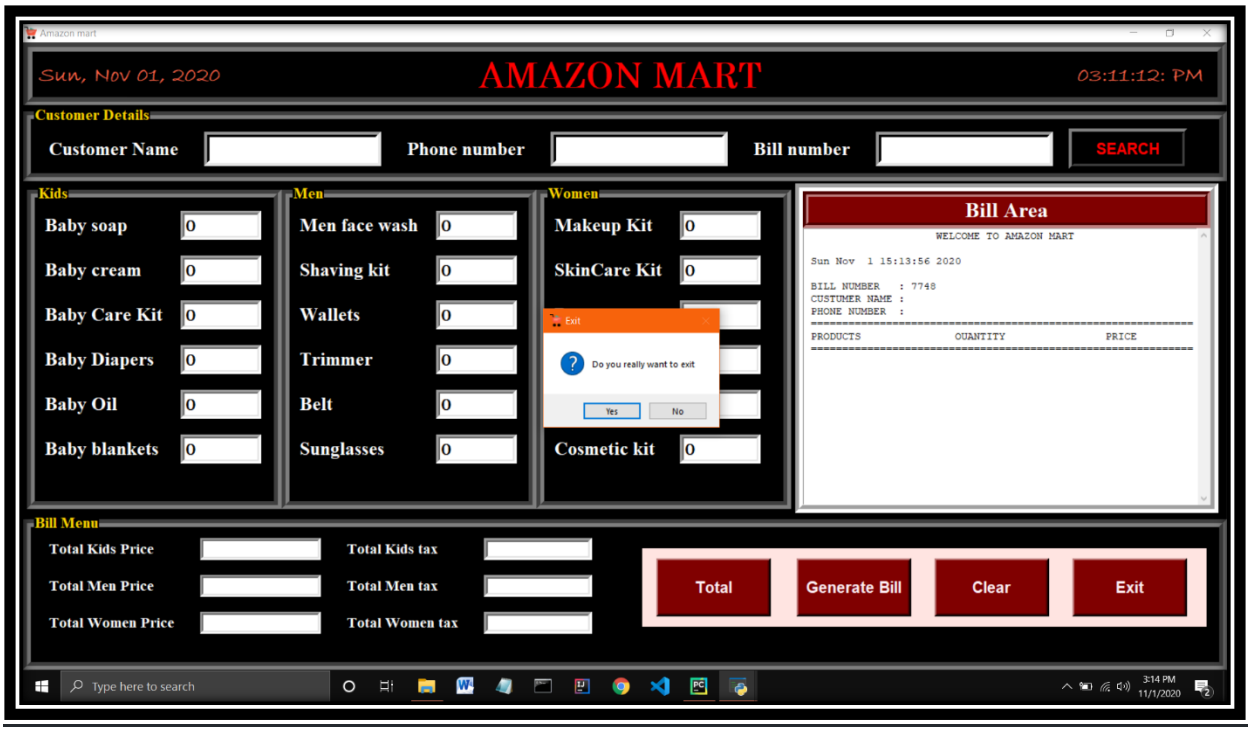


Fig – 12. To Exit

Fig – 13. If you want to search the bill search by its unique number

Fig -14. After pressing search button we get results

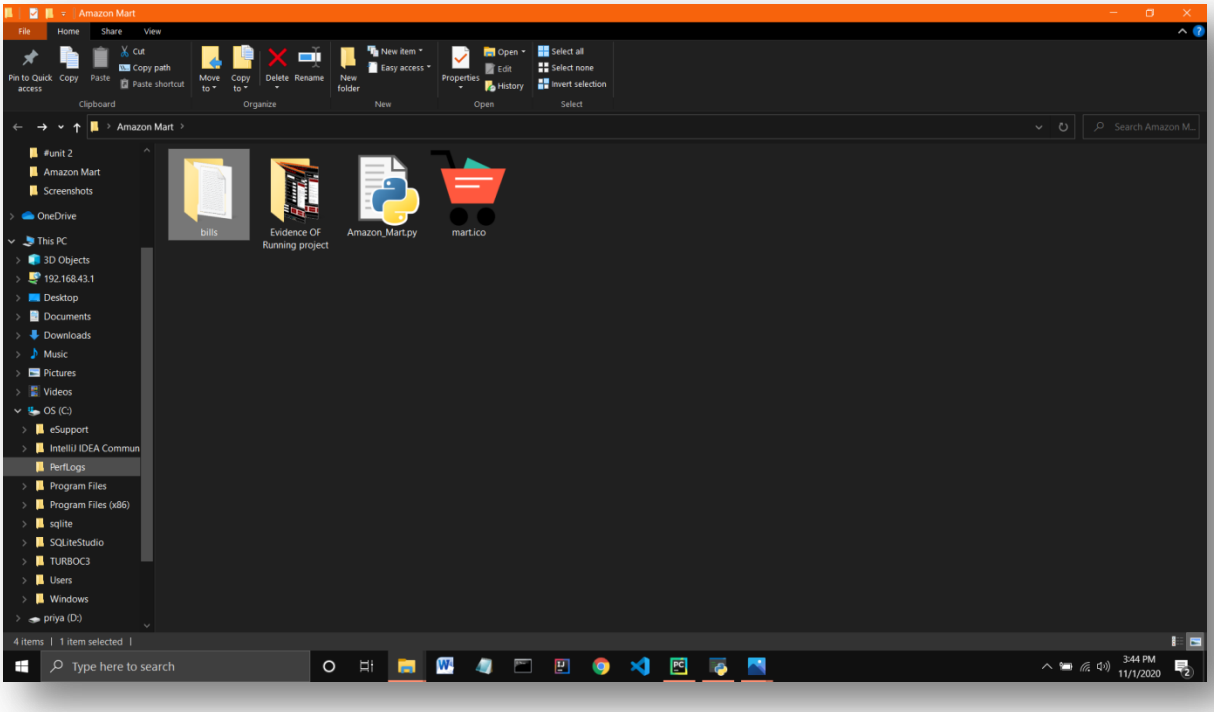


Fig – 15. Bills are saved here

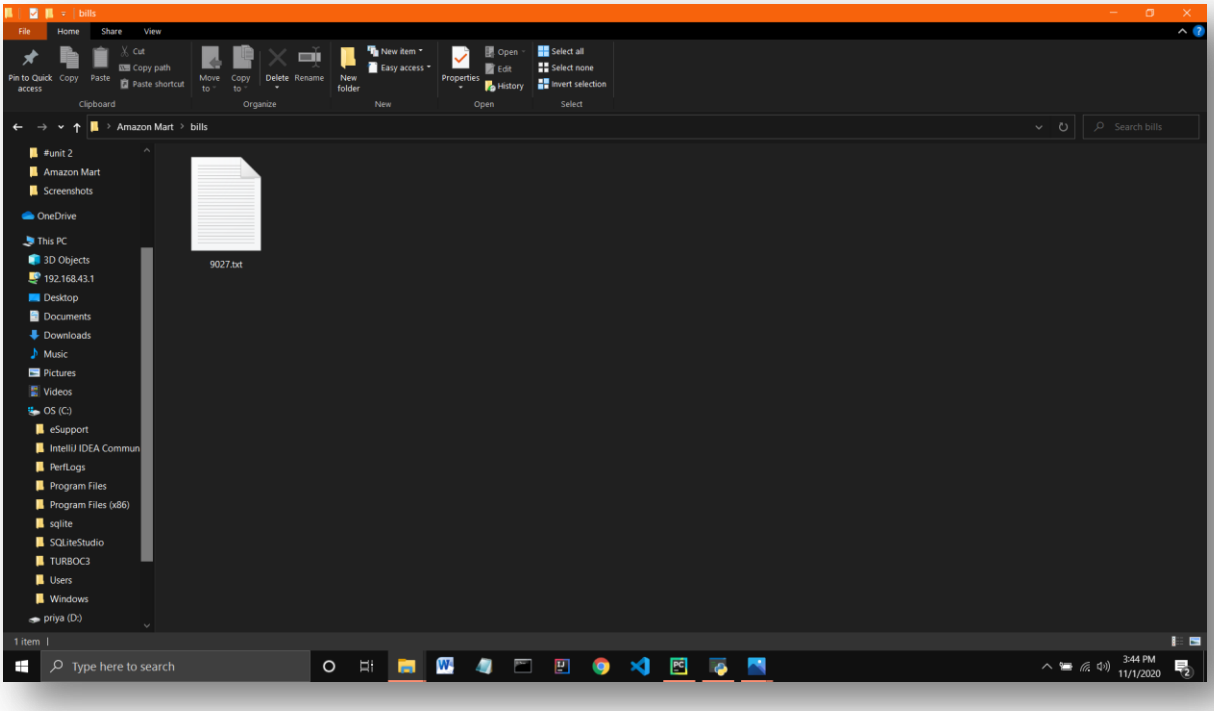


Fig – 16. Go to bills

Chapter – 5 Tkinter

5.1 - Python GUI – Tkinter

Python offers multiple options for developing GUI (Graphical User Interface). Out of all the GUI methods, tkinter is the most commonly used method. It is a standard Python interface to the Tk GUI toolkit shipped with Python. Python with tkinter is the fastest and easiest way to create the GUI applications. Creating a GUI using tkinter is an easy task.

To create a tkinter app:

1. Importing the module – tkinter
2. Create the main window (container)
3. Add any number of widgets to the main window
4. Apply the event Trigger on the widgets.

There are two main methods used which the user needs to remember while creating the Python application with GUI.

1. **Tk(screenName=None, baseName=None, className='Tk', useTk=1):**

   To create a main window, tkinter offers a method 'Tk(screenName=None, baseName=None, className='Tk', use Tk=1)'. To change the name of the window, you can change the className to the desired one.

2. **mainloop():**

   There is a method known by the name mainloop() is used when your application is ready to run. mainloop() is an infinite loop used to run the application, wait for an event to occur and process the event as long as the window is not closed.

Tkinter also offers access to the geometric configuration of the widgets which can organize the widgets in the parent windows. There are mainly three geometry manager classes class.

1. **pack() method:**It organizes the widgets in blocks before placing in the parent widget.

2. **grid() method:**It organizes the widgets in grid (table-like structure) before placing in the parent widget.

3. **place() method:**It organizes the widgets by placing them on specific positions directed by the programmer.

5.2 - Button:

To add a button in your application, this widget is used.
master is the parameter used to represent the parent window.
There are number of options which are used to change the format of the Buttons. Number of options can be passed as parameters separated by commas. Some of them are listed below.

- **activebackground**: to set the background color when button is under the cursor.
- **activeforeground**: to set the foreground color when button is under the cursor.
- **bg**: to set he normal background color.
- **command**: to call a function.
- **font**: to set the font on the button label.
- **image**: to set the image on the button.
- **width**: to set the width of the button.
- **height**: to set the height of the button.

5.3 - CheckButton:

To select any number of options by displaying a number of options to a user as toggle buttons.
There are number of options which are used to change the format of this widget. Number of options can be passed as parameters separated by commas. Some of them are listed below.

- **Title**: To set the title of the widget.
- **activebackground**: to set the background color when widget is under the cursor.
- **activeforeground**: to set the foreground color when widget is under the cursor.
- **bg**: to set he normal backgrouSteganography
  Break

  Secret Code:

  Attach a File:nd color.
- **command**: to call a function.
- **font**: to set the font on the button label.
- **image**: to set the image on the widget.
-

5.4 - Entry:

It is used to input the single line text entry from the user.. For multi-line text input, Text widget is used.
master is the parameter used to represent the parent window.
There are number of options which are used to change the format of the widget. Number of options can be passed as parameters separated by commas. Some of them are listed below.

- **bd**: to set the border width in pixels.
- **bg**: to set the normal background color.
- **cursor**: to set the cursor used.
- **command**: to call a function.
- **highlightcolor**: to set the color shown in the focus highlight.
- **width**: to set the width of the button.
- **height**: to set the height of the button.

5.5 - Frame:

It acts as a container to hold the widgets. It is used for grouping and organizing the widgets.
There are number of options which are used to change the format of the widget. Number of options can be passed as parameters separated by commas. Some of them are listed below.

- **highlightcolor**: To set the color of the focus highlight when widget has to be focused.
- **bd**: to set the border width in pixels.
- **bg**: to set the normal background color.
- **cursor**: to set the cursor used.
- **width**: to set the width of the widget.
- **height**: to set the height of the widget.

5.6 - Label:

It refers to the display box where you can put any text or image which can be updated any time as per the code.
There are number of options which are used to change the format of the widget. Number of options can be passed as parameters separated by commas. Some of them are listed below.

- **bg**: to set he normal background color.
- **bg** to set he normal background color.
- **command**: to call a function.
- **font**: to set the font on the button label.
- **image**: to set the image on the button.
- **width**: to set the width of the button.
- **height**" to set the height of the button.

5.7 - Message:

It refers to the multi-line and non-editable text. It works same as that of Label.

There are number of options which are used to change the format of the widget. Number of options can be passed as parameters separated by commas. Some of them are listed below.

- **bd**: to set the border around the indicator.
- **bg**: to set he normal background color.
- **font**: to set the font on the button label.
- **image**: to set the image on the widget.
- **width**: to set the width of the widget.
- **height**: to set the height of the widget.

5.8 - Scrollbar:

It refers to the slide controller which will be used to implement listed widgets.
There are number of options which are used to change the format of the widget. Number of options can be passed as parameters separated by commas. Some of them are listed below.

- **width**: to set the width of the widget.
- **activebackground**: To set the background when mouse is over the widget.
- **bg**: to set he normal background color.
- **bd**: to set the size of border around the indicator.
- **cursor**: To appear the cursor when the mouse over the menubutton.

5.9 - Text:

To edit a multi-line text and format the way it has to be displayed.
There are number of options which are used to change the format of the text. Number of options can be passed as parameters separated by commas. Some of them are listed below.

- **highlightcolor**: To set the color of the focus highlight when widget has to be focused.
- **insertbackground**: To set the background of the widget.
- **bg**: to set he normal background color.
- **font**: to set the font on the button label.
- **image**: to set the image on the widget.
- **width**: to set the width of the widget.
- **height**: to set the height of the widget.

5.10 - TopLevel:

This widget is directly controlled by the window manager. It don't need any parent window to work on. There are number of options which are used to change the format of the widget. Number of options can be passed as parameters separated by commas. Some of them are listed below.

- **bg**: to set he normal background color.
- **bd**: to set the size of border around the indicator.
- **cursor**: To appear the cursor when the mouse over the menubutton.
- **width**: to set the width of the widget.
- **height**: to set the height of the widget.

Chapter – 6 File Handling

Python too supports file handling and allows users to handle files i.e., to read and write files, along with many other file handling options, to operate on files. The concept of file handling has stretched over various other languages, but the implementation is either complicated or lengthy, but alike other concepts of Python, this concept here is also easy and short. Python treats file differently as text or binary and this is important. Each line of code includes a sequence of characters and they form text file. Each line of a file is terminated with a special character, called the EOL or End of Line characters like comma {,} or newline character. It ends the current line and tells the interpreter a new one has begun. Let's start with Reading and Writing files.

Working of open() function

We use **open ()** function in Python to open a file in read or write mode. As explained above, open ( ) will return a file object. To return a file object we use **open()** function along with two arguments, that accepts file name and the mode, whether to read or write. So, the syntax being: **open(filename, mode)**. There are three kinds of mode, that Python provides and how files can be opened:

- " **r** ", for reading.
- " **w** ", for writing.
- " **a** ", for appending.
- " **r+** ", for both reading and writin

Chapter – 7 Pseudocode

7.1 - Program

This python program creating an invoice after every purchase an it can update every bill after each purchase. In the time when we were doing this program, many problems were created but after continuity of research and with help of our module leader and instructor, that problems were done as a solution. This is a modular programming method. This programming is done by creating a different module into functions and files. This helps to understand the program and easy to accessible.

AmazonMart.py

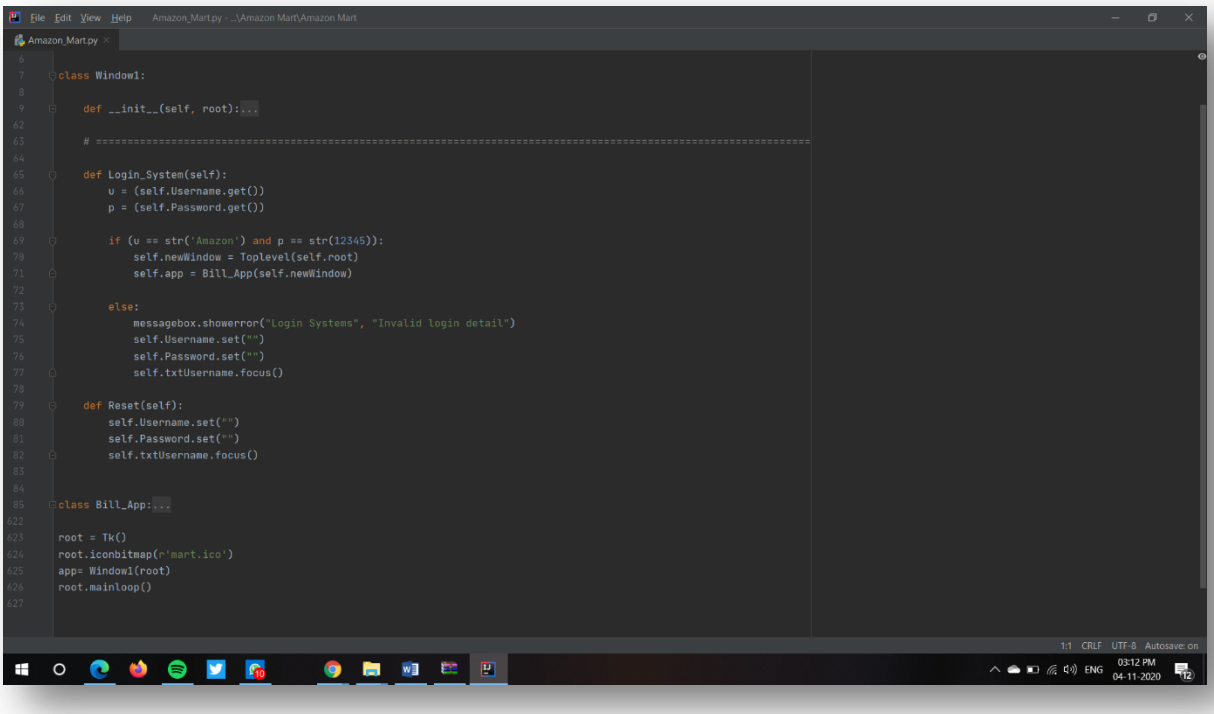


Fig – 17. Pseudocode

Chapter – 8 Conclusion

Conclusion

This coursework has helped me to explore more in python programming language. I learnt that python programming is a great degree valuable apparatuses to manufacture and create many projects and programming. The stock administration framework is valuable as it keeps the record of the item in the departmental store and in addition it causes client to screen their buy.

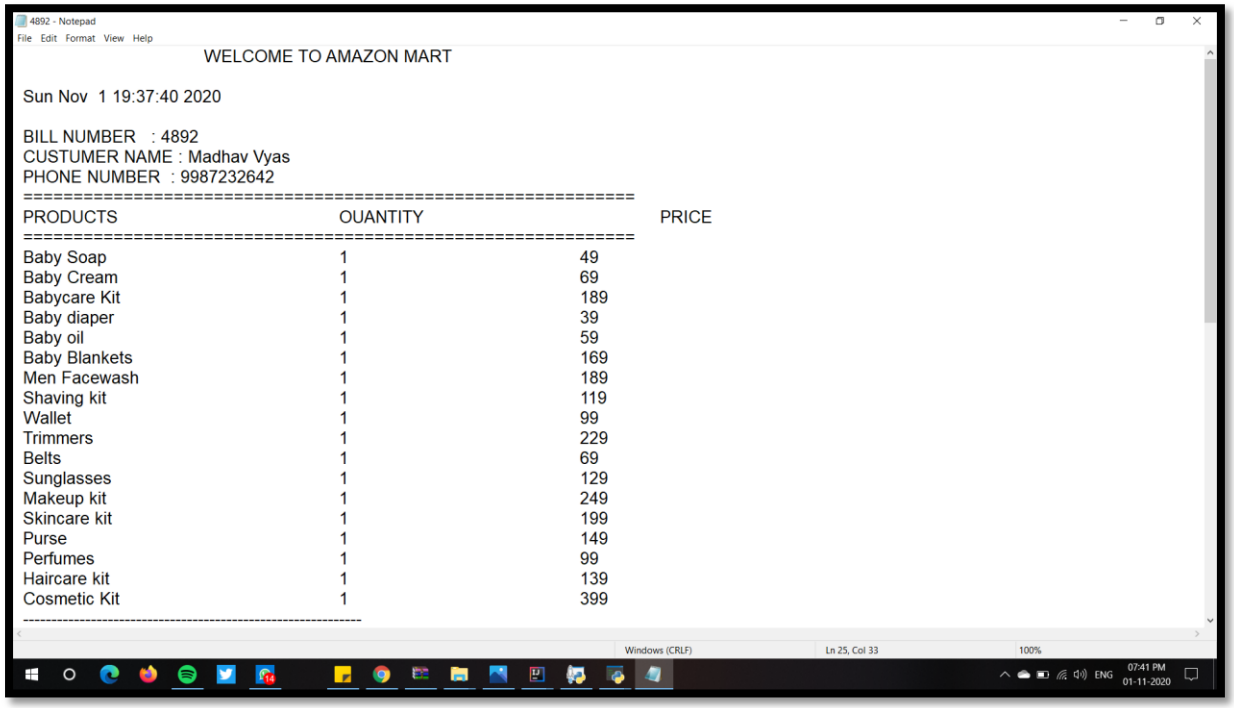
Similarly, it has helped me to achieve the new level of the imagination and have given me the certainty to grow more projects and to improve my programming abilities and skills as well as to improve my programming understanding level. After a great deal of diligent work and research, at long last calculation and flowchart were made which would give the peruse a basic perception of the program, clear comprehension of the code and how the program is running. After the consummation of the coursework it was important to guarantee that it was bug and mistake free, such a significant number of test were done which affirmed that the projects were prepared to use in the genuine situation and can be refreshed if necessary in future.

From the overall coursework, it gives us a knowledge about python programming language and Tkinter module. This coursework is quite tough then I expect, In the first week of this coursework I feel it is easy to create a program as a requirement. But, this is hard to finish. Finally, it happens good and program is also done with the help of teachers as well as classmates.

Hence indisputably, the coursework has been an amazing help to learn and get the more information about the python programming language. Moreover, it has helped me in additionally creating distinctive different ability and educated numerous things which will help in my profession life in future. This undertaking has still got spaces for the change. At long last, I foresee accomplishing more undertakings in coming future.

Chapter – 9 Bill Evidence

9.1 - Picture Evidence

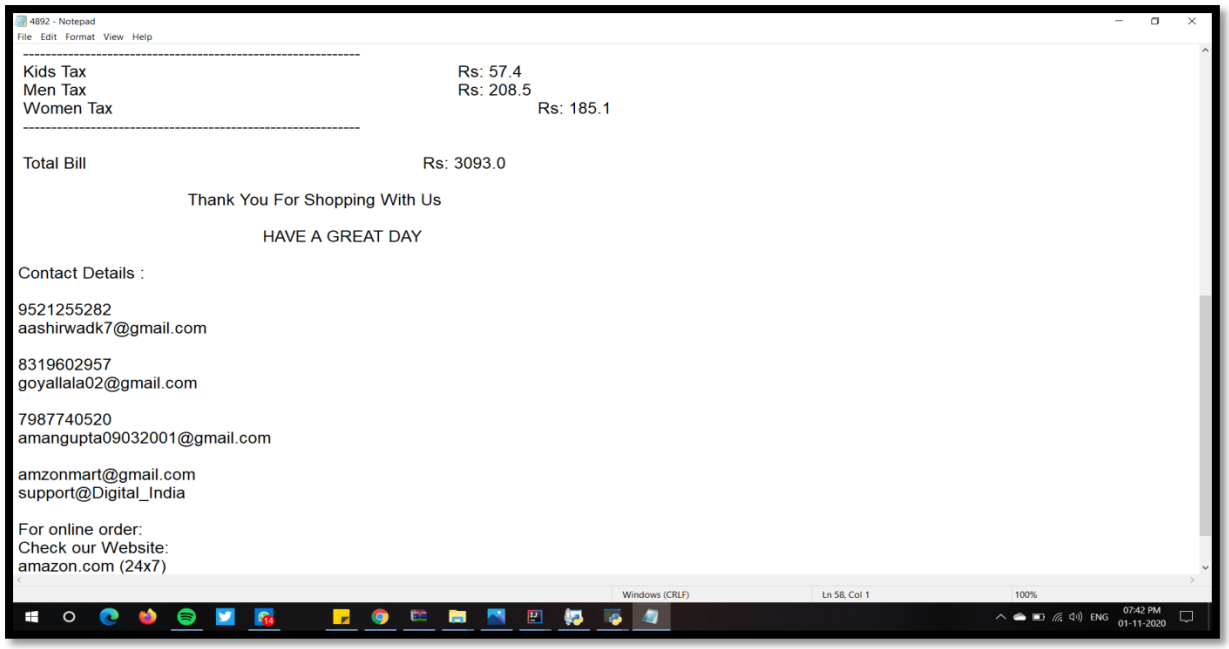


```
4892 - Notepad
File  Edit  Format  View  Help
                    WELCOME TO AMAZON MART

Sun Nov  1 19:37:40 2020

BILL NUMBER   : 4892
CUSTUMER NAME : Madhav Vyas
PHONE NUMBER  : 9987232642
================================================================
PRODUCTS                    OUANTITY                    PRICE
================================================================
Baby Soap                   1                           49
Baby Cream                  1                           69
Babycare Kit                1                           189
Baby diaper                 1                           39
Baby oil                    1                           59
Baby Blankets               1                           169
Men Facewash                1                           189
Shaving kit                 1                           119
Wallet                      1                           99
Trimmers                    1                           229
Belts                       1                           69
Sunglasses                  1                           129
Makeup kit                  1                           249
Skincare kit                1                           199
Purse                       1                           149
Perfumes                    1                           99
Haircare kit                1                           139
Cosmetic Kit                1                           399
----------------------------------------------------------------
```

Fig – 18. Bill part (1)



```
4892 - Notepad
File  Edit  Format  View  Help
----------------------------------------------------------------
Kids Tax                                    Rs: 57.4
Men Tax                                     Rs: 208.5
Women Tax                                   Rs: 185.1
----------------------------------------------------------------

Total Bill                                  Rs: 3093.0

                Thank You For Shopping With Us

                        HAVE A GREAT DAY

Contact Details :

9521255282
aashirwadk7@gmail.com

8319602957
goyallala02@gmail.com

7987740520
amangupta09032001@gmail.com

amzonmart@gmail.com
support@Digital_India

For online order:
Check our Website:
amazon.com (24x7)
```

Fig – 19. Bill part (2)

Chapter – 10 References

10.1 - Reference:

1. http://geeksforgeeks.org/file-handling-python/

2. https://www.programiz.com/python-programming/datetime

3. https://docs.python.org/3/library/tkinter.html

4. http://geeksforgeeks.org/python-gui-tkinter/

5. https://www.geeksforgeeks.org/convert-python-script-to-exe-file/


Thank you