Α

Project Report

on

"Bill management System"

Submitted

In partial fulfillment

For the award of the Degree of

Bachelor of science (information technology)



Submitted to- Mr. Arjan singh

Submitted by- Arun faujdar

Department of Computer Application

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2021



CERTIFICATE

This certifies that the project entitled

"Bill management system"

Is submitted by

Arun Faujdar(CA13401812929)

Bsc(IT) in the year 2021 in partial fulfilment of Degree in Bachelor of Science(Information Technology).

Suresh Gyan Vihar University, Jaipur

Date: 14/04/2021

Candidate's Declaration

I, Arun Faujdar hereby declare that the work presented in this projected entitled "Bill management system" in partial fulfillment of the requirements for the award of Degree of Bachelor of Science (Information Technology), submitted in the Department of Computer Application at Suresh Gyan Vihar University, Jaipur.

I express my deep sense of gratitude to my project guide <u>Mr Arjan singh</u> for his expert guidance throughout the period of this project.

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Arun Faujdar

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Preface

Project stage is must for each and every student and especially for technical students for successive completion of their studies. The study remains incomplete without having the practical knowledge of what we have gone through theory. It is rather important for every student to be practical along with his theoretical knowledge. Today there is a need of more perspective and systematic alignment of a student along with his knowledge.

Without having any lagging effect of a student should have admirable knowledge of the practical field. Enclosures regarding this field should be made with every respect and viewpoint.

So I conclude that Practical knowledge is most important for each and every student along with theoretical knowledge.

Abstract

This is a simple bill management software which is developed in python, It has a single UI and easy to use functionalities. By just filling out the blanks we can easily generate the bill. this software is made for small shopping marts.

Bill man	agement system
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INTRODUCTION ABOUT THE PROJECT

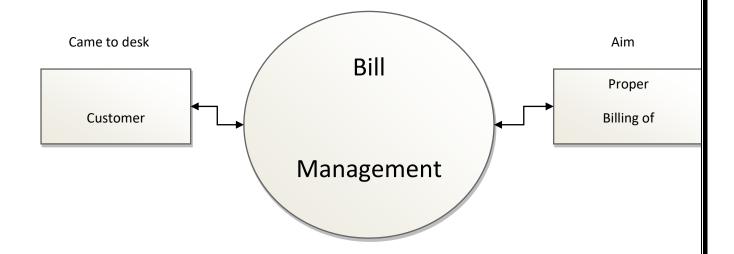
The aim of this project is to design, build and test a Bill Management System. This will be a simple software development project. The project is well organised. We have used Tiknter (TK UI toolkit) library in it, to Make a friendly UI for the user.

Project management is a key factor of this task to ensure the strict deadlines are adhered to. It is also of paramount importance that tried and tested practices and techniques from the field are adhered to ensure that no common development project mistakes are reproduced.

SYSTEM DESIGN

2.1 Data Flow Diagram

Context flow diagram



Language Used:-

Python

Python is a popular programming language. It was created by Guido van Rossum, and released in 1991.

It is used for:

- web development (server-side),
- software development,
- mathematics,
- system scripting.

What can Python do?

- Python can be used on a server to create web applications.
- Python can be used alongside software to create workflows.
- Python can connect to database systems. It can also read and modify files.
- Python can be used to handle big data and perform complex mathematics.
- Python can be used for rapid prototyping, or for production-ready software development.

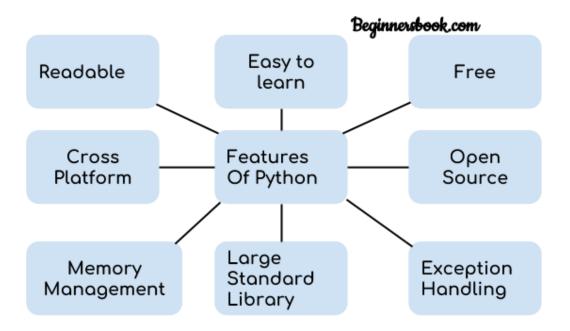
Why Python?

- Python works on different platforms (Windows, Mac, Linux, Raspberry Pi, etc).
- Python has a simple syntax similar to the English language.
- Python has syntax that allows developers to write programs with fewer lines than some other programming languages.
- Python runs on an interpreter system, meaning that code can be executed as soon as it is written. This means that prototyping can be very quick.
- Python can be treated in a procedural way, an objectoriented way or a functional way.

Good to know

The most recent major version of Python is Python 3, which we shall be using in this tutorial. However, Python 2, although not being updated with anything other than security updates, is still quite popular.

 In this tutorial Python will be written in a text editor. It is possible to write Python in an Integrated Development Environment, such as Thonny, Pycharm, Netbeans or Eclipse which are particularly useful when managing larger collections of Python files.



SOFTWARE ENVIRONMENT

5.1 SOFTWARE AND HARDWARE SPECIFICATION

5.1.1 Hardware Specification

Processor : Pentium IV/AMD /Intel

RAM : 512 MB

Hard disk : 200 MB

Monitor : Yes

Mouse : Yes

CD Drive : Optional

Keyboard : Yes

5.1.2 Software Specification

Operating System : Windows XP / Windows 7 / Windows 8

or Above

Language : Python

SAMPLE CODE

```
###########################CREATED BY ARUN
from tkinter import *
import random
class Bill_App:
 def __init__(self,root):
   self.root = root
   self.root.geometry("1300x700+0+0")
   self.root.maxsize(width = 1280,height = 700)
   self.root.minsize(width = 1280,height = 700)
   self.root.title("Billing Software")
   #===================#
   self.cus_name = StringVar()
   self.c_phone = StringVar()
   #For Generating Random Bill Numbers
   x = random.randint(1000,9999)
   self.c_bill_no = StringVar()
   #Seting Value to variable
   self.c_bill_no.set(str(x))
```

```
self.bath_soap = IntVar()
self.face_cream = IntVar()
self.face_wash = IntVar()
self.hair_spray = IntVar()
self.body_lotion = IntVar()
self.rice = IntVar()
self.daal = IntVar()
self.food_oil = IntVar()
self.wheat = IntVar()
self.sugar = IntVar()
self.maza = IntVar()
self.coke = IntVar()
self.frooti = IntVar()
self.nimko = IntVar()
self.biscuits = IntVar()
self.total_cosmetics = StringVar()
self.total_grocery = StringVar()
self.total_other = StringVar()
self.tax_cos = StringVar()
self.tax_groc = StringVar()
self.tax_other = StringVar()
```

```
bg_color = "#074463"
   fg color = "white"
   lbl_color = 'white'
   #Title of App
   title = Label(self.root,text = "Billing Software",bd = 12,relief = GROOVE,fg =
fg_color,bg = bg_color,font=("times new roman",30,"bold"),pady = 3).pack(fill = X)
   #======Customers Frame======#
   F1 = LabelFrame(text = "Customer Details",font = ("time new
roman",12,"bold"),fg = "gold",bg = bg_color,relief = GROOVE,bd = 10)
   F1.place(x = 0,y = 80,relwidth = 1)
   #=========#
   cname_lbl = Label(F1,text="Customer Name",bg = bg_color,fg =
fg_color,font=("times new roman",15,"bold")).grid(row = 0,column = 0,padx =
10,pady = 5)
   cname en = Entry(F1,bd = 8,relief = GROOVE,textvariable = self.cus name)
   cname_en.grid(row = 0,column = 1,ipady = 4,ipadx = 30,pady = 5)
   #========#
   cphon_lbl = Label(F1,text = "Phone No",bg = bg_color,fg = fg_color,font = ("times
new roman",15,"bold")).grid(row = 0,column = 2,padx = 20)
   cphon_en = Entry(F1,bd = 8,relief = GROOVE,textvariable = self.c_phone)
   cphon_en.grid(row = 0,column = 3,ipady = 4,ipadx = 30,pady = 5)
```

```
#============#
   cbill_lbl = Label(F1,text = "Bill No.",bg = bg_color,fg = fg_color,font = ("times new
roman",15,"bold"))
   cbill_lbl.grid(row = 0,column = 4,padx = 20)
   cbill en = Entry(F1,bd = 8,relief = GROOVE,textvariable = self.c bill no)
   cbill en.grid(row = 0,column = 5,ipadx = 30,ipady = 4,pady = 5)
   #========#
   bill btn = Button(F1,text = "Enter",bd = 7,relief = GROOVE,font = ("times new
roman",12,"bold"),bg = bg_color,fg = fg_color)
   bill btn.grid(row = 0,column = 6,ipady = 5,padx = 60,ipadx = 19,pady = 5)
   #==============#
   F2 = LabelFrame(self.root,text = 'Cosmetics',bd = 10,relief = GROOVE,bg =
bg color,fg = "gold",font = ("times new roman",13,"bold"))
   F2.place(x = 5,y = 180,width = 325,height = 380)
   #======Frame Content
   bath_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl_color,bg =
bg color,text = "Bath Soap")
   bath lbl.grid(row = 0,column = 0,padx = 10,pady = 20)
   bath_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.bath_soap)
   bath en.grid(row = 0,column = 1,ipady = 5,ipadx = 5)
   #=====Face Cream
   face Ibl = Label(F2,font = ("times new roman",15,"bold"),fg = Ibl color,bg =
```

```
bg color,text = "Face Cream")
    face_lbl.grid(row = 1,column = 0,padx = 10,pady = 20)
    face en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.face cream)
    face_en.grid(row = 1,column = 1,ipady = 5,ipadx = 5)
    #=====Face Wash
    wash_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl_color,bg =
bg color,text = "Face Wash")
    wash_lbl.grid(row = 2,column = 0,padx = 10,pady = 20)
    wash en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.face wash)
    wash en.grid(row = 2,column = 1,ipady = 5,ipadx = 5)
    #=====Hair Spray
    hair lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl color,bg =
bg_color,text = "Hair Spray")
    hair lbl.grid(row = 3,column = 0,padx = 10,pady = 20)
    hair en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.hair spray)
    hair en.grid(row = 3,column = 1,ipady = 5,ipadx = 5)
    #======Body Lotion
    lot_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl_color,bg =
bg_color,text = "Body Lotion")
    lot_lbl.grid(row = 4,column = 0,padx = 10,pady = 20)
    lot_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.body_lotion)
    lot en.grid(row = 4,column = 1,ipady = 5,ipadx = 5)
```

```
#=========#
    F2 = LabelFrame(self.root,text = 'Grocery',bd = 10,relief = GROOVE,bg =
bg_color,fg = "gold",font = ("times new roman",13,"bold"))
    F2.place(x = 330,y = 180,width = 325,height = 380)
    #======Frame Content
    rice lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl color,bg =
bg_color,text = "Rice")
    rice lbl.grid(row = 0,column = 0,padx = 10,pady = 20)
    rice en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.rice)
    rice_en.grid(row = 0,column = 1,ipady = 5,ipadx = 5)
    #======
    oil_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl_color,bg =
bg color,text = "Food Oil")
    oil_lbl.grid(row = 1,column = 0,padx = 10,pady = 20)
    oil_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.food_oil)
    oil_en.grid(row = 1,column = 1,ipady = 5,ipadx = 5)
    #======
    daal_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl_color,bg =
bg color,text = "Daal")
    daal_{lbl.grid}(row = 2, column = 0, padx = 10, pady = 20)
    daal_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.daal)
    daal en.grid(row = 2,column = 1,ipady = 5,ipadx = 5)
```

```
#======
    wheat Ibl = Label(F2,font = ("times new roman",15,"bold"),fg = Ibl color,bg =
bg_color,text = "Wheat")
    wheat lbl.grid(row = 3,column = 0,padx = 10,pady = 20)
    wheat en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.wheat)
    wheat_en.grid(row = 3,column = 1,ipady = 5,ipadx = 5)
    #=======
    sugar lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl color,bg =
bg color,text = "Sugar")
    sugar_lbl.grid(row = 4,column = 0,padx = 10,pady = 20)
    sugar en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.sugar)
    sugar_en.grid(row = 4,column = 1,ipady = 5,ipadx = 5)
    #=========#
    F2 = LabelFrame(self.root,text = 'Others',bd = 10,relief = GROOVE,bg =
bg_color,fg = "gold",font = ("times new roman",13,"bold"))
    F2.place(x = 655,y = 180,width = 325,height = 380)
    #======Frame Content
    maza_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl_color,bg =
bg_color,text = "Maza")
    maza_lbl.grid(row = 0,column = 0,padx = 10,pady = 20)
    maza en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.maza)
```

```
maza en.grid(row = 0,column = 1,ipady = 5,ipadx = 5)
    #======
    cock_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl_color,bg =
bg color,text = "Coke")
    cock\ lbl.grid(row = 1, column = 0, padx = 10, pady = 20)
    cock_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.coke)
    cock en.grid(row = 1,column = 1,ipady = 5,ipadx = 5)
    #======
    frooti | Ibl = Label(F2,font = ("times new roman",15,"bold"),fg = Ibl color,bg =
bg_color,text = "Frooti")
    frooti lbl.grid(row = 2,column = 0,padx = 10,pady = 20)
    frooti_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.frooti)
    frooti_en.grid(row = 2,column = 1,ipady = 5,ipadx = 5)
    #======
    cold lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl color,bg =
bg_color,text = "Nimkos")
    cold_lbl.grid(row = 3,column = 0,padx = 10,pady = 20)
    cold en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.nimko)
    cold_en.grid(row = 3,column = 1,ipady = 5,ipadx = 5)
    #=======
    bis lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl color,bg =
bg_color,text = "Biscuits")
```

```
bis lbl.grid(row = 4,column = 0,padx = 10,pady = 20)
    bis_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.biscuits)
    bis en.grid(row = 4,column = 1,ipady = 5,ipadx = 5)
    #========#
    F3 = Label(self.root,bd = 10,relief = GROOVE)
    F3.place(x = 960,y = 180,width = 325,height = 380)
    #=======
    bill_title = Label(F3,text = "Bill Area",font = ("Lucida",13,"bold"),bd= 7,relief =
GROOVE)
    bill title.pack(fill = X)
    #=======
    scroll_y = Scrollbar(F3,orient = VERTICAL)
    self.txt = Text(F3,yscrollcommand = scroll y.set)
    scroll_y.pack(side = RIGHT,fill = Y)
    scroll_y.config(command = self.txt.yview)
    self.txt.pack(fill = BOTH,expand = 1)
    #======Buttons Frame======#
    F4 = LabelFrame(self.root,text = 'Bill Menu',bd = 10,relief = GROOVE,bg =
bg_color,fg = "gold",font = ("times new roman",13,"bold"))
    F4.place(x = 0,y = 560,relwidth = 1,height = 145)
    #=========
```

```
cosm | Ibl = Label(F4,font = ("times new roman",15,"bold"),fg = Ibl color,bg =
bg_color,text = "Total Cosmetics")
    cosm_lbl.grid(row = 0,column = 0,padx = 10,pady = 0)
    cosm_en = Entry(F4,bd = 8,relief = GROOVE,textvariable = self.total_cosmetics)
    cosm en.grid(row = 0,column = 1,ipady = 2,ipadx = 5)
    #=========
    gro lbl = Label(F4,font = ("times new roman",15,"bold"),fg = lbl color,bg =
bg_color,text = "Total Grocery")
    gro lbl.grid(row = 1,column = 0,padx = 10,pady = 5)
    gro en = Entry(F4,bd = 8,relief = GROOVE,textvariable = self.total grocery)
    gro_en.grid(row = 1,column = 1,ipady = 2,ipadx = 5)
    #========
    oth_lbl = Label(F4,font = ("times new roman",15,"bold"),fg = lbl_color,bg =
bg color,text = "Others Total")
    oth_lbl.grid(row = 2,column = 0,padx = 10,pady = 5)
    oth_en = Entry(F4,bd = 8,relief = GROOVE,textvariable = self.total_other)
    oth_en.grid(row = 2,column = 1,ipady = 2,ipadx = 5)
    #========
    cosmt_lbl = Label(F4,font = ("times new roman",15,"bold"),fg = lbl_color,bg =
bg color,text = "Cosmetics Tax")
    cosmt_lbl.grid(row = 0,column = 2,padx = 30,pady = 0)
    cosmt_en = Entry(F4,bd = 8,relief = GROOVE,textvariable = self.tax_cos)
    cosmt en.grid(row = 0,column = 3,ipady = 2,ipadx = 5)
```

```
#=========
    grot lbl = Label(F4,font = ("times new roman",15,"bold"),fg = lbl color,bg =
bg_color,text = "Grocery Tax")
    grot lbl.grid(row = 1,column = 2,padx = 30,pady = 5)
    grot en = Entry(F4,bd = 8,relief = GROOVE,textvariable = self.tax groc)
    grot_en.grid(row = 1,column = 3,ipady = 2,ipadx = 5)
    #=========
    otht lbl = Label(F4,font = ("times new roman",15,"bold"),fg = lbl color,bg =
bg color,text = "Others Tax")
    otht_lbl.grid(row = 2,column = 2,padx = 10,pady = 5)
    otht en = Entry(F4,bd = 8,relief = GROOVE,textvariable = self.tax other)
    otht_en.grid(row = 2,column = 3,ipady = 2,ipadx = 5)
    #==========
    total btn = Button(F4,text = "Total",bg = bg color,fg =
fg_color,font=("lucida",12,"bold"),bd = 7,relief = GROOVE,command = self.total)
    total_btn.grid(row = 1,column = 4,ipadx = 20,padx = 30)
    #===========
    genbill btn = Button(F4,text = "Generate Bill",bg = bg color,fg =
fg color,font=("lucida",12,"bold"),bd = 7,relief = GROOVE,command = self.bill area)
    genbill_btn.grid(row = 1,column = 5,ipadx = 20)
    #=========
```

```
clear btn = Button(F4,text = "Clear",bg = bg color,fg =
fg_color,font=("lucida",12,"bold"),bd = 7,relief = GROOVE,command = self.clear)
    clear_btn.grid(row = 1,column = 6,ipadx = 20,padx = 30)
    #==========
    exit_btn = Button(F4,text = "Exit",bg = bg_color,fg =
fg_color,font=("lucida",12,"bold"),bd = 7,relief = GROOVE,command = self.exit)
    exit_btn.grid(row = 1,column = 7,ipadx = 20)
#Function to get total prices
  def total(self):
    #=======Total Cosmetics Prices
    self.total cosmetics prices = (
      (self.bath_soap.get() * 40)+
      (self.face_cream.get() * 140)+
      (self.face wash.get() * 240)+
      (self.hair_spray.get() * 340)+
      (self.body_lotion.get() * 260)
    self.total_cosmetics.set("Rs. "+str(self.total_cosmetics_prices))
    self.tax_cos.set("Rs. "+str(round(self.total_cosmetics_prices*0.05)))
    #======Total Grocery Prices
    self.total grocery prices = (
      (self.wheat.get()*100)+
      (self.food_oil.get() * 180)+
```

```
(self.daal.get() * 80)+
      (self.rice.get() *80)+
      (self.sugar.get() * 170)
    self.total_grocery.set("Rs. "+str(self.total_grocery_prices))
    self.tax_groc.set("Rs. "+str(round(self.total_grocery_prices*0.05)))
    #======Total Other Prices
    self.total_other_prices = (
      (self.maza.get() * 20)+
      (self.frooti.get() * 50)+
      (self.coke.get() * 60)+
      (self.nimko.get() * 20)+
      (self.biscuits.get() * 20)
    self.total_other.set("Rs. "+str(self.total_other_prices))
    self.tax_other.set("Rs. "+str(round(self.total_other_prices*0.05)))
#Function For Text Area
  def welcome_soft(self):
    self.txt.delete('1.0',END)
    self.txt.insert(END," Welcome To Hanan's Retail\n")
    self.txt.insert(END,f"\nBill No. : {str(self.c_bill_no.get())}")
```

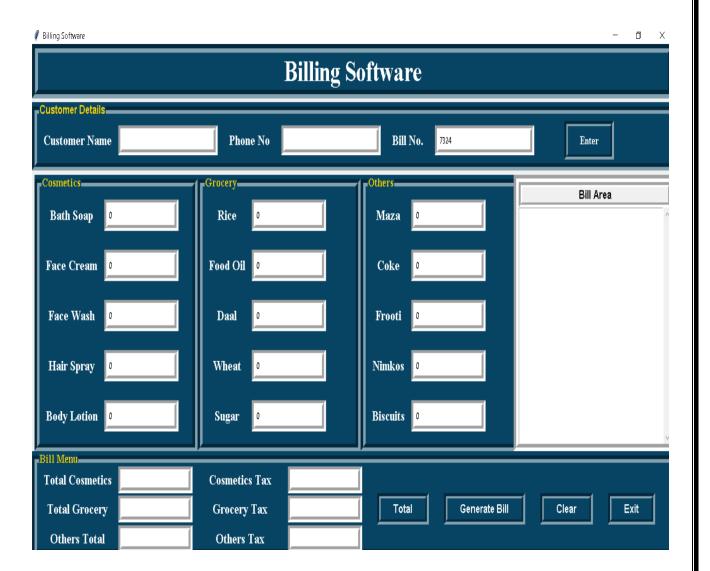
```
self.txt.insert(END,f"\nCustomer Name : {str(self.cus name.get())}")
    self.txt.insert(END,f"\nPhone No. : {str(self.c_phone.get())}")
    self.txt.insert(END,"\n========"")
    self.txt.insert(END,"\nProduct Qty
                                             Price")
    self.txt.insert(END,"\n========"")
#Function to clear the bill area
  def clear(self):
    self.txt.delete('1.0',END)
#Add Product name, qty and price to bill area
  def bill area(self):
    self.welcome soft()
    if self.bath_soap.get() != 0:
      self.txt.insert(END,f"\nBath Soap {self.bath soap.get()}
{self.bath_soap.get() * 40}")
    if self.face cream.get() != 0:
      self.txt.insert(END,f"\nFace Cream {self.face cream.get()}
{self.face cream.get() * 140}")
    if self.face wash.get() != 0:
      self.txt.insert(END,f"\nFace Wash {self.face_wash.get()}
{self.face_wash.get() * 240}")
    if self.hair_spray.get() != 0:
      self.txt.insert(END,f"\nHair Spray {self.hair_spray.get()}
{self.hair_spray.get() * 340}")
    if self.body lotion.get() != 0 :
```

```
self.txt.insert(END,f"\nBody Lotion
                                               {self.body lotion.get()}
{self.body_lotion.get() * 260}")
    if self.wheat.get() != 0:
      self.txt.insert(END,f"\nWheat
                                             {self.wheat.get()}
                                                                      {self.wheat.get() *
100}")
    if self.food oil.get() != 0:
       self.txt.insert(END,f"\nFood Oil
                                             {self.food oil.get()}
{self.food_oil.get() * 180}")
    if self.daal.get() != 0:
       self.txt.insert(END,f"\nDaal
                                            {self.daal.get()}
                                                                  {self.daal.get() * 80}")
    if self.rice.get() != 0:
       self.txt.insert(END,f"\nRice
                                                                 {self.rice.get() * 80}")
                                           {self.rice.get()}
    if self.sugar.get() != 0:
      self.txt.insert(END,f"\nSugar
                                            {self.sugar.get()}
                                                                    {self.sugar.get() *
170}")
    if self.maza.get() != 0:
      self.txt.insert(END,f"\nMaza
                                                                    {self.maza.get() *
                                            {self.maza.get()}
20}")
    if self.frooti.get() != 0:
       self.txt.insert(END,f"\nFrooti
                                            {self.frooti.get()}
                                                                    {self.frooti.get() *
50}")
    if self.coke.get() != 0:
      self.txt.insert(END,f"\nCoke
                                            {self.coke.get()}
                                                                   {self.coke.get() *
60}")
    if self.nimko.get() != 0:
                                                                      {self.nimko.get() *
      self.txt.insert(END,f"\nNimko
                                             {self.nimko.get()}
20}")
```

```
if self.biscuits.get() != 0:
     self.txt.insert(END,f"\nBiscuits {self.biscuits.get()}
                                                          {self.biscuits.get()
* 20}")
   self.txt.insert(END,"\n========"")
   self.txt.insert(END,f"\n
                                  Total:
{self.total_cosmetics_prices+self.total_grocery_prices+self.total_other_prices+self.to
tal_cosmetics_prices * 0.05+self.total_grocery_prices * 0.05+self.total_other_prices
* 0.05}")
 #Function to exit
 def exit(self):
   self.root.destroy()
root = Tk()
object = Bill_App(root)
root.mainloop()
################################CREATED BY ARUN
```

6. SCREEN SHOTS

1. Starting Screen

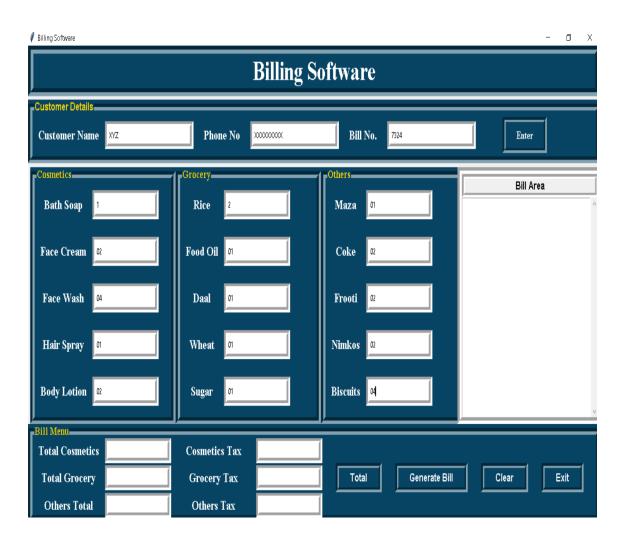


2. Adding customer name and contact.



Bill management system

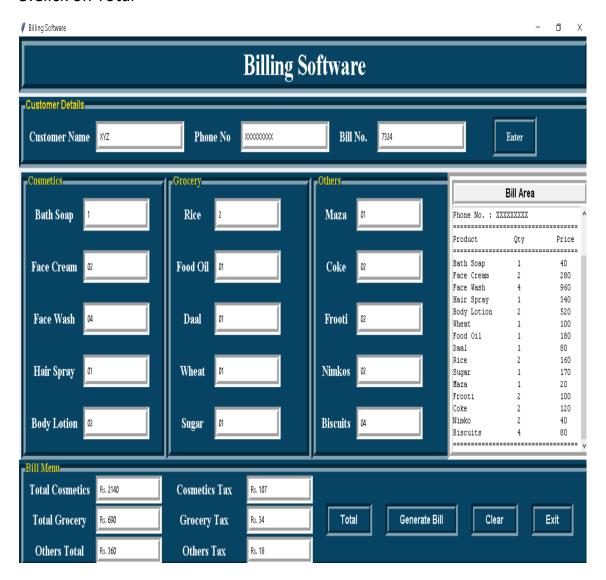
3. Put values of items purchased.



4.Generate bill.



5.Click on Total



Bill Generated in just 5 easy steps!!!

Scope for Future Enhancement

In future we can add more modules in this project. In the proposed system the user is provided with a single screen. Data entry errors can be minimized through validity checks. We will connect it through database. The software can be developed further to include a lot of modules because the proposed system is developed on the view of future, for example we will develop the system as a database independent using JDBC so we can connect it to any other database. Now the proposed system is based on PC and intranet but in the future we will convert it into internet

THANK YOU!