**System Implementations**

**Recommended System Requirements**

Processors: Intel® Core™ i3 processor 4300M at 2.60 GHz.

Disk space: 4 to 8 GB.

Operating systems: Windows® 10, MACOS, and UBUNTU.

Python Versions: 3.X.X or Higher.

**Minimum System Requirements**

Processors: Intel Atom® processor or Intel® Core™ i3 processor.

Disk space: 1 GB.

Operating systems: Windows 7 or later, MACOS, and UBUNTU.

Python Versions: 2.7.X, 3.9.X.

**ACKNOWLEDGEMENT**TTT

First and foremost, praises and thanks to the God, the Almighty, for His showers of blessings throughout my research work to complete the research successfully.

We would like to express my deep and sincere gratitude to my subject teacher, **Mr. Amit Udiwal**, for giving me the opportunity to do research and providing invaluable guidance throughout this research. His dynamism, vision, sincerity and motivation have deeply inspired me. He has taught me the methodology to carry out the research and to present the research works as clearly as and honour to work and study under his guidance. We are very much thankful to our **Sr. Jasmin** for giving valuable time and moral support to develop this software. We would like to take opportunity to extend my sincere thanks and gratitude to our parents for being a source of inspiration and providing time and freedom to develop this software project. We also feel indebted to my friends for the valuable suggestions during the project work.

Akshat Soni

[Roll No.

Class XII

**CERTIFICATE**

This is to certify that the project on ‘Grocery Billing System’ is a work done by Akshat Soni fulfilment of CBSE’S AISSCE EXAMINATION 2022-23 and has been carried out under my direct supervision and guidance. This report or a similar report on the topic has not been submitted for any other examination and does not form any other examination and does not form any other course undergone by the candidate.

Name: Akshat Soni [Roll No.

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Signature of Teacher / Guide

Name: Mr. Amit Udiwal

Designation:

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**REFERENCE**

The order to work on this project on ‘Grocery Billing System’ the following books & literature are referred by me during the various phrases of department of the project.

• http://www.python.org/.

• http://www.itsourcecode.org/.

• http://www.wikipedia.org/.

• Informatics Practices for Class XII

- By Sumita Arora

• Together with informatics practices.

Other than the above mentioned books, the suggestions and supervision of my teacher and my class experience also helped me to develop this software project.

**Introduction**

Grocery Billing System is created using Python to easily manage all Grocery related functions by a single user. As a terminal application, the users are able to perform basic operations of their Grocery

such as additional items, view items, clear items/stocks, purchase items, search for specific products in the stocks and edit any items/products placed in the system record. Grocery Management System also facilitates users to add new products in their stocks as a sale. This function includes adding items with their name, quantity(along with validation), and price of the item. Users can also see all the items stores in the system. The program shows the number of items along with their name, quantity, and price.

**Objective and**

**Scope of The Project**

The main objective of the Python Project on Grocery Billing System is to manage the details of Inventory. Stocks, Medical Shop. It manages all the information about Company. Sells, Grocery Shop, Company. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Company, Medicines, Sells, Inventory. It tracks all the details about the Inventory, Stocks, Grocery Shop

**Grocery Billing System**

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("Grocery Billing System")

#====================Variables========================#

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.bread = IntVar()

self.candy = IntVar()

self.hamburger = IntVar()

self.hotdog = IntVar()

self.sandwich = IntVar()

self.rice = IntVar()

self.salt = IntVar()

self.food\_oil = IntVar()

self.wheat = IntVar()

self.sugar = IntVar()

self.gatorade = IntVar()

self.coke = IntVar()

self.juice = IntVar()

self.waffer = IntVar()

self.biscuits = IntVar()

self.total\_food = StringVar()

self.total\_grocery = StringVar()

self.total\_other = StringVar()

self.tax\_cos = StringVar()

self.tax\_groc = StringVar()

self.tax\_other = StringVar()

#===================================

bg\_color = "green"

fg\_color = "white"

lbl\_color = 'white'

#Title of App

title = Label(self.root,text = "Grocery Billing System",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)

#===============Customer Name===========#

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)

#=================Customer Phone==============#

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)

#====================Customer Bill No==================#

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)

#==================Food Frame=====================#

F2 = LabelFrame(self.root,text = 'Food',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 = "Bread")

bath\_lbl.grid(row = 0,column = 0,padx = 10,pady = 20)

bath\_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.bread)

bath\_en.grid(row = 0,column = 1,ipady = 5,ipadx = 5)

#=======Candy

face\_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl\_color,bg = bg\_color,text = "Candy")

face\_lbl.grid(row = 1,column = 0,padx = 10,pady = 20)

face\_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.candy)

face\_en.grid(row = 1,column = 1,ipady = 5,ipadx = 5)

#========Hamburger

wash\_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl\_color,bg = bg\_color,text = "Hamburger")

wash\_lbl.grid(row = 2,column = 0,padx = 10,pady = 20)

wash\_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.hamburger)

wash\_en.grid(row = 2,column = 1,ipady = 5,ipadx = 5)

#========Hotdog

hair\_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl\_color,bg = bg\_color,text = "Hotdog")

hair\_lbl.grid(row = 3,column = 0,padx = 10,pady = 20)

hair\_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.hotdog)

hair\_en.grid(row = 3,column = 1,ipady = 5,ipadx = 5)

#============Sandwich

lot\_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl\_color,bg = bg\_color,text = "Sandwich")

lot\_lbl.grid(row = 4,column = 0,padx = 10,pady = 20)

lot\_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.sandwich)

lot\_en.grid(row = 4,column = 1,ipady = 5,ipadx = 5)

#==================Grocery Frame=====================#

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 = "Salt")

daal\_lbl.grid(row = 2,column = 0,padx = 10,pady = 20)

daal\_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.salt)

daal\_en.grid(row = 2,column = 1,ipady = 5,ipadx = 5)

#========

wheat\_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl\_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)

#==================Other Stuff=====================#

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 = "Gatorade")

maza\_lbl.grid(row = 0,column = 0,padx = 10,pady = 20)

maza\_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.gatorade)

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\_lbl = Label(F2,font = ("times new roman",15,"bold"),fg = lbl\_color,bg = bg\_color,text = "Juice")

frooti\_lbl.grid(row = 2,column = 0,padx = 10,pady = 20)

frooti\_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.juice)

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 = "Waffer")

cold\_lbl.grid(row = 3,column = 0,padx = 10,pady = 20)

cold\_en = Entry(F2,bd = 8,relief = GROOVE,textvariable = self.waffer)

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)

#===================Bill Aera================#

F3 = Label(self.root,bd = 10,relief = GROOVE)

F3.place(x = 960,y = 180,width = 325,height = 380)

#===========

bill\_title = Label(F3,text = "Bill List",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\_lbl = Label(F4,font = ("times new roman",15,"bold"),fg = lbl\_color,bg = bg\_color,text = "Total Food")

cosm\_lbl.grid(row = 0,column = 0,padx = 10,pady = 0)

cosm\_en = Entry(F4,bd = 8,relief = GROOVE,textvariable = self.total\_food)

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 = "Food 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 Food Prices

self.total\_food\_prices = (

(self.bread.get() \* 1)+

(self.candy.get() \* 3)+

(self.hamburger.get() \* 8)+

(self.hotdog.get() \* 6)+

(self.sandwich.get() \* 4)

)

self.total\_food.set("$"+str(self.total\_food\_prices))

self.tax\_cos.set("$"+str(round(self.total\_food\_prices\*0.05)))

#====================Total Grocery Prices

self.total\_grocery\_prices = (

(self.wheat.get()\*1)+

(self.food\_oil.get() \* 5)+

(self.salt.get() \* 1)+

(self.rice.get() \*3)+

(self.sugar.get() \* 2)

)

self.total\_grocery.set("$"+str(self.total\_grocery\_prices))

self.tax\_groc.set("$"+str(round(self.total\_grocery\_prices\*0.05)))

#======================Total Other Prices

self.total\_other\_prices = (

(self.gatorade.get() \* 4)+

(self.juice.get() \* 2)+

(self.coke.get() \* 2)+

(self.waffer.get() \* 2)+

(self.biscuits.get() \* 2)

)

self.total\_other.set("$"+str(self.total\_other\_prices))

self.tax\_other.set("$"+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 Store'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.bread.get() != 0:

self.txt.insert(END,f"\nBread {self.bread.get()} {self.bread.get() \* 1}")

if self.candy.get() != 0:

self.txt.insert(END,f"\nCandy {self.candy.get()} {self.candy.get() \* 3}")

if self.hamburger.get() != 0:

self.txt.insert(END,f"\nHamburger {self.hamburger.get()} {self.hamburger.get() \* 8}")

if self.hotdog.get() != 0:

self.txt.insert(END,f"\nHotdog {self.hotdog.get()} {self.hotdog.get() \* 6}")

if self.sandwich.get() != 0 :

self.txt.insert(END,f"\nSandwich {self.sandwich.get()} {self.sandwich.get() \* 4}")

if self.wheat.get() != 0:

self.txt.insert(END,f"\nWheat {self.wheat.get()} {self.wheat.get() \* 1}")

if self.food\_oil.get() != 0:

self.txt.insert(END,f"\nFood Oil {self.food\_oil.get()} {self.food\_oil.get() \* 5}")

if self.salt.get() != 0:

self.txt.insert(END,f"\nSalt {self.salt.get()} {self.salt.get() \* 1}")

if self.rice.get() != 0:

self.txt.insert(END,f"\nRice {self.rice.get()} {self.rice.get() \* 3}")

if self.sugar.get() != 0:

self.txt.insert(END,f"\nSugar {self.sugar.get()} {self.sugar.get() \* 2}")

if self.gatorade.get() != 0:

self.txt.insert(END,f"\nGatorade {self.gatorade.get()} {self.gatorade.get() \* 4}")

if self.juice.get() != 0:

self.txt.insert(END,f"\nJuice {self.juice.get()} {self.juice.get() \* 2}")

if self.coke.get() != 0:

self.txt.insert(END,f"\nCoke {self.coke.get()} {self.coke.get() \* 2}")

if self.waffer.get() != 0:

self.txt.insert(END,f"\nWaffer {self.waffer.get()} {self.waffer.get() \* 2}")

if self.biscuits.get() != 0:

self.txt.insert(END,f"\nBiscuits {self.biscuits.get()} {self.biscuits.get() \* 2}")

self.txt.insert(END,"\n===================================")

self.txt.insert(END,f"\n Total : ${self.total\_food\_prices+self.total\_grocery\_prices+self.total\_other\_prices+self.total\_food\_prices \* 0.05+self.total\_grocery\_prices \* 0.05+self.total\_other\_prices \* 0.05}")

def exit(self):

self.root.destroy()

root = Tk()

object = Bill\_App(root)

root.mainloop()