**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. Renjana 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.

Mahi Dawre

[Roll No.

Class XII

**CERTIFICATE**

This is to certify that the project on ‘Sales And Inventory Management System’ is a work done by Mahi Dawre fulfilment of CBSE’S AISSCE EXAMINATION 2020¢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:

Mahi Dawre [Roll No.

………………….

Signature of Teacher / Guide

Name: Mr. Amit Udiwal

Designation:

………………. ….………………

**REFERENCE**

The order to work on this project on ‘Sales And Inventory Management 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**

TheBilling System project in Python provides an exacting way for controlling the simplest to most complicated circumstances in which billing amounts and dates do not align with the dates when products and services are actually rendered.

A billing system, in its most basic form, is the mechanism through which a company bills and invoices its customers. Payment software, which automates the process of collecting payments, sending out periodic invoices, expense tracking, and invoice tracking, is frequently included in billing systems.

The goal of the project is to develop an application that will give service to users, gather user usage records, generate bills for each credit expiration, collect payments, and change customer balances.

**Objective and**

**Scope of The Project**

Billing system project in Python focuses mainly on dealing with customer’s billing with their purchase quantity, and discount. At first, the system allows inserting the customer’s name, then the user can simply enter the item’s name and quantity he/she wants. After selecting all the product items, the system calculates the total payable bill with the expected discount percentage. At last, the system automatically creates an invoice receipt in a .txt format which includes the name of the customer, date, time of purchase, product item with quantity, unit price, and a total of each, discountable amount, and payable amount. All these sold product’s quantity is also deducted from the system which is system maintains it under products.txt file.

***Functions:***

* Invoice Receipt (.txt format)
* Items deductions
* Discount system

**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("Deepak Codespeedy project")

#====================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.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 = "Deepak 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)

#===============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)

#====================Bill Search Button===============#

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)

#==================Cosmetics Frame=====================#

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

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

#===================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 = "Deepak 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\_lbl = Label(F4,font = ("times new roman",15,"bold"),fg = lbl\_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 Deepak 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()} {self.rice.get() \* 80}")

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.txt.insert(END,f"\nNimko {self.nimko.get()} {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.total\_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()

#Function To Clear All Fields

root = Tk()

object = Bill\_App(root)

root.mainloop()