COMPUTER SCIENCE

INVESTIGATORY PROJECT

ON

Super Market Management System



Submitted By:

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Class XII -A

CERTIFICATE

This is to certify that Bhavesh L of class XII – A has successfully completed the Investigatory Project on the topic "Supermarket Management System" under the guidance of Mr. Vibin V, PGT(Computer Science) during the academic year 2021-22.

Signature (Subject Teacher)

Signature (Student)

Signature (Principal)

Signature (Examiner)

ACKNOWLEDGEMENT

I wish to express my deep gratitude and sincere thanks to my Computer Science teacher Mr. Vibin V and C A Malarvizhi, principal Kendriya Vidyalaya CISF RTC(A), Thakkolam, who gave me the golden opportunity to do this wonderful project on the topic "Supermarket Management System".

I take this opportunity to express my gratitude to my Computer Teacher for his invaluable guidance, constant motivation and encouragement. I am really thankful to you.

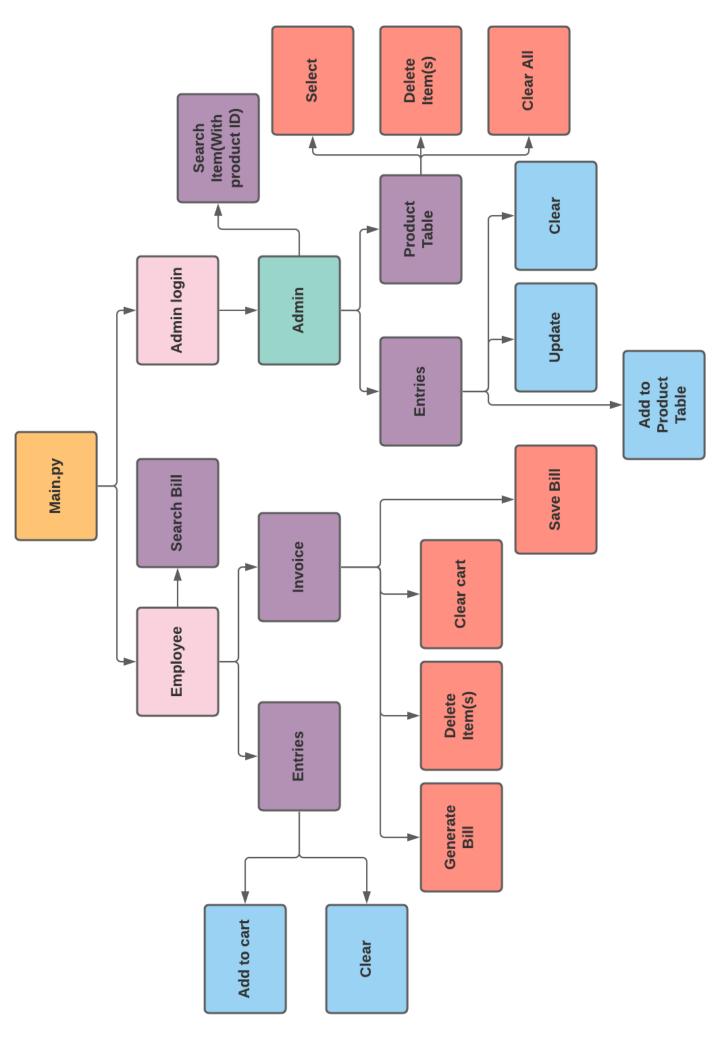
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INTRODUCTION

This is supermarket management system developed on the basis to manage items, invoice etc. The aim of this project is to develop a Supermarket Management system that is available for the grocery shops. In India, there are many Supermarkets which are accessible to this system. They just need a person to operate this system. This systems reduces work of human by managing all the datas by itself with less number of errors, whereas a human could confuse and could not handle all the datas. Our aim is to offer user-friendly and easy to use system.

SYSTEM DESIGN



SYSTEM REQUIREMENTS

HARDWARE

- PROCESSOR: Intel Core Duo 2.4 Ghz or above
- RAM: 2 GB or higher

SOFTWARE:

- OPERATING SYSTEM: Windows 7 or above.
- INTERPRETER: Python 3.6 (or later version)
- DBMS: Mysql 5.5

BUILT-IN MODULES:

> OS

This module is used to perform os operations like creating and deleting files.

MYSQLITE3

This module is extensively used to provide mysql-python connectivity and to perform insertion and deletion in database.

> DATETIME

This module is used to get date and time when the respected functions are called.

PROJECT MODULES:

> TKINTER

This module is used to give GUI to our program.

> TKINTER.TTK

This module is used to create table called treeview table inside the GUI. Even though this a part of Tkinter module, it should be imported separately.

> TKINTER.MESSAGEBOX

This module is used to create pop up messages, errors etc. Even though this a part of Tkinter module, it should be imported separately.

> TKINTER.FONT

This module is used to get and use various fonts inside the GUI. Even though this is a part of Tkinter module, it should be imported separately.

Main.py

This is the main module which begins execution of the project.

This module consists of two buttons with commands given in different modules that are explained below.

- 1. Employee.py
- 2. Admin_login.py

Employee.py

This module is used to do activities related to invoice. It is subdivided into two parts those are Entries and Invoice. As the name suggests the entries are the normal user entries that are used to do some activities like adding them to cart. Invoice is a table to which the items are being added through entries. The operations which can be done on invoice are listed below.

- 1. Generate bill It generates the bill with total, customer name and customer contact which are taken through another set of entries.
- 2. Delete Item(s) It is used to delete the selected item(s).
- 3. Clear cart It is used to clear the cart.
- 4. Save Bill It saves the bill to a text file which can be accessed anytime only with customer number. The concept of file handling is used here.

Admin_login.py

This module is a simple login page which are displayed to the user when clicked on Admin button in Main.py. This page takes two entries these includes Username and Password. If the user enters correct username and password then Admin page will be displayed and when user enters incorrect username and password, appropriate message will be shown to the user.

Admin.py

This module consists an Admin page which is also subdivided into two parts. Those are, Entries and Product table. These entries also have same definition of those entries in Employee.py, the extra here is that we can also update the items in the product table. Product table is a table consist of all the products available in the market with category and rates corresponding to them. The operations that can be performed on product table are listed below.

- 1. Select This grabs the data of the selected item in the table and auto enters it in the entries so as to update the item.
- 2. Delete Item(s) It is used to delete the selected item(s).
- 3. Clear All It clears all the items available in the market. Think before using it.

DATABASE TABLES:

Database: RSgroceries

<u>Tables</u>:

- 1. category: This consist of only one column that is category which as all the categories available in the market with category column itself as a primary key.
- 2. products: This consist of 4 columns those are product_id, product_name, category and product_rate. Product_id is the primary key and category is the foreign key of this table

SOURCE CODE



(Scan the above QR code to access the code)

Main.py

```
# Supermarket management system
# Author - BHAVESH L and JOHNEY B
from tkinter import *
from tkinter.font import Font
import os
from tkinter import messagebox
Main_Interface = Tk()
import sqlite3
# Creating Mysql connection
dbconn = sqlite3.connect("./Database/RSgroceries.db")
# Create a cursor to give commands
cursor = dbconn.cursor()
# Create Tables
# category Table
cursor.execute("""CREATE TABLE if not exists category(
category varchar(100) NOT NULL primary key
  11111
dbconn.commit()
cursor.execute("""CREATE TABLE if not exists products(
  product_id int not null primary key,
  product_name varchar(100) not null,
  product rate int not null,
  category varchar(100) not null references category(category)
  innn
dbconn.commit()
products = [
  ['101', 'Maaza 1 litre', '65', 'Beverages'],
  ['102', 'Coco Cola 1 litre', '70', 'Beverages'],
  ['103', 'Fanta 1 litre', '66', 'Beverages'],
  ['104', 'Miranda 1 litre', '72', 'Beverages'],
  ['105', '7 UP 1 litre', '60', 'Beverages'],
  ['106', 'Bovanto 1/2 litre', '35', 'Beverages'],
  ['107', 'Frooti 1/2 litre', '40', 'Beverages'],
  ['108', 'Pepsi 1/2 litre', '30', 'Beverages'],
  ['109', 'Apple Juice 1/2 litre', '25', 'Beverages'],
```

```
['110', 'Sprite 1/2 litre', '35', 'Beverages'],
['111', 'Aavin Milk 1 litre', '50', 'Dairy'],
['112', 'Aavin Milk 1/2 litre', '26', 'Dairy'],
['113', 'Aavin Milk 250 ml', '12', 'Dairy'],
['114', 'Amul Butter 100 g', '46', 'Dairy'],
['115', 'Arokya Curd 1 litre', '55', 'Dairy'],
['116', 'Aavin Curd 1 litre', '54', 'Dairy'],
['117', 'Amul Ghee 500 g', '245', 'Dairy'],
['118', 'MM Paneer', '230', 'Dairy'],
['119', 'Bhav Cheese 500g', '75', 'Dairy'],
['120', 'Cond. Milk 250ml', '90', 'Dairy'],
['121', 'Chilli Sauce 500g', '118', 'Sauce'],
['122', 'Sweent&Chilli Sauce 500g', '108', 'Sauce'],
['123', 'Tomato Sauce 500g', '100', 'Sauce'],
['124', 'Soya Sauce 500g', '110', 'Sauce'],
['125', 'Hot Tomato Sauce 500g', '115', 'Sauce'],
['126', 'Salt Bread', '21', 'Bread'],
['127', 'Milk Bread', '22', 'Bread'],
['128', 'Wheat Bread', '20', 'Bread'],
['129', 'Chicken Wings 400g', '270', 'Meat'],
['130', 'Chicken Breast 250g', '240', 'Meat'],
['131', 'Pork 500g', '200', 'Meat'],
['132', 'Beaf 1Kg', '290', 'Meat'],
['133', 'Chicken Boneless 500g', '250', 'Meat'],
['134', 'Chicken Leg Pie 1Kg', '190', 'Meat'],
['135', 'Full Chicken ', '470', 'Meat'],
['136', '1Kg Basmati Rice', '200', 'Rice'],
['137', '1Kg Idli Rice ', '275', 'Rice'],
['138', '1Kg Tiffin Rice', '230', 'Rice'],
['139', '1Kg Basmati Rice', '200', 'Rice'],
['140', 'Ashir Atta 1Kg ', '45', 'Cereals'],
['141', 'RS Oats 500g ', '30', 'Cereals'],
['142', 'RS Frosted Flakes 500g ', '50', 'Cereals'],
['143', 'RS Oats 500g ', '30', 'Cereals'],
['144', 'RS Flakes 200g', '17', 'Cereals'],
['145', 'RS Oats 500g ', '30', 'Cereals'],
['146', 'RS Baking Soda 550g ', '235', 'Bakery'],
['147', 'RS Baking Powder 1Kg', '60', 'Bakery'],
['148', 'Cake 1Kg', '50', 'Bakery'],
['149', 'Choclate Cake 1piece', '15', 'Bakery'],
['150', 'Strawberry Pastries 1pie', '15', 'Bakery'],
['151', 'Cream Bun', '10', 'Bakery'],
['152', 'Butter Biscuits', '12', 'Bakery'],
['153', 'Natraj 10 Pencils ', '50', 'Stationary'],
['154', 'Natraj Ge. Box', '60', 'Stationary'],
```

```
['155', 'Natraj LS Scale', '10', 'Stationary'],
['156', 'Natraj SS Scalw', '5', 'Stationary'],
['157', 'DOMS ColourPencils 10', '20', 'Stationary'],
['158', 'DOMS Oil Pastels', '30', 'Stationary'],
['159', 'Natraj Sharpner', '3', 'Stationary'],
['160', 'FaberCastle M.pencil 0.7', '15', 'Stationary'],
['161', 'Apsara 0.7 led box ', '10', 'Stationary'],
['162', 'Lizol 500ml', '65', 'Hygiene'],
['163', 'Lizol I Litre', '120', 'Hygiene'],
['164', 'Harpic 500ml', '70', 'Hygiene'],
['165', 'Colgate Toothpaste BS', '25', 'Hygiene'],
['166', 'Pantanjli Toothpaste', '30', 'Hygiene'],
['167', 'Oral B Toothbrush', '15', 'Hygiene'],
['168', 'Close Up Toothpaste S', '20', 'Hygiene'],
['169', 'Colgate Toothbrush', '17', 'Hygiene'],
['170', 'MouthWasher 500ml', '50', 'Hygiene'],
['171', 'Sanitiser 500ml', '60', 'Hygiene'],
['172', 'Horlicks 350g', '49', 'Health'],
['173', 'Boost 500g', '100', 'Health'],
['174', 'Complan 500g', '45', 'Health'],
['175', 'Lays Blue S', '5', 'Snacks'],
['176', 'Lays Red S', '5', 'Snacks'],
['177', 'Lays Yellow S', '5', 'Snacks'],
['178', 'Lays Green S', '5', 'Snacks'],
['179', 'Lays Orange S', '5', 'Snacks'],
['180', 'Bingo Mad Angles S', '5', 'Snacks'],
['181', 'Bingo Mad Angles B', '10', 'Snacks'],
['182', 'Taka Tak B', '10', 'Snacks'],
['183', 'Lays Blue B', '10', 'Snacks'],
['184', 'Lays Blue B', '10', 'Snacks'],
['185', 'Lays Green B', '10', 'Snacks'],
['186', 'Lays Yellow B', '10', 'Snacks'],
['187', 'Lays Red B', '10', 'Snacks'],
['188', 'Lays Orange B', '10', 'Snacks'],
['189', 'Jim Jam S', '5', 'Snacks'],
['190', 'Jim Jam B', '10', 'Snacks'],
['191', 'Bourbon Bis ', '10', 'Snacks'],
['192', 'Cinnamon 50g ', '10', 'Seasonings'],
['193', 'Pepper 50g ', '10', 'Seasonings'],
['194', 'Fennugreek 50g', '5', 'Seasonings'],
['195', 'Chinese Sea. 50g ', '10', 'Seasonings'],
['196', 'FCB Chicken M.', '10', 'Masalas'],
['197', 'FCB Fish F M.', '10', 'Masalas'],
['198', 'FCB Mutton M.', '10', 'Masalas'],
['199', 'FCB Sambar M.', '10', 'Masalas'],
```

```
['200', 'Arun cupl.', '15', 'IceCreams'],
   ['201', 'Arun Conel. S', '17', 'IceCreams'],
   ['202', 'Arun Conel. M', '25', 'IceCreams'],
   ['203', 'Arun Conel. B', '35', 'IceCreams'],
  ['204', 'Jamai Kulfi.', '10', 'IceCreams'],
  ['205', 'Aman Family Pack I.', '80', 'IceCreams']]
# Add datas
for data in products:
  try:
     cursor.execute("INSERT INTO products VALUES(:product_id, :product_name,
:product_rate, :category)",
               "product_id": data[0],
              "product_name": data[1],
              "product_rate": data[2],
              "category": data[3]
     dbconn.commit()
  except sqlite3.IntegrityError:
     pass
# Category
category_values = [
  ['Bakery'],
  ['Beverages'],
  ['Bread'],
  ['Cereals'],
  ['Dairy'],
  ['Hygiene'],
  ['IceCreams'],
  ['Masalas'],
  ['Meat'],
  ['Rice'].
  ['Sauce'],
   ['Seasonings'],
  ['Snacks'],
  ['Stationary']]
for data_1 in category_values:
  try:
     cursor.execute("INSERT INTO category VALUES(:category)",
            {"category": data_1[0]}
```

```
dbconn.commit()
  except sqlite3.IntegrityError:
     pass
def Exit():
  sure = messagebox.askyesno("Exit", "Are you sure you want to exit?",
parent=Main_Interface)
  if sure == True:
    Main Interface.destroy()
Main Interface.protocol("WM DELETE WINDOW", Exit)
def admpg():
  Main_Interface.withdraw()
  os.system("python Admin_login.py")
  Main_Interface.deiconify()
def emp():
  Main_Interface.withdraw()
  os.system("python Employee.py")
  Main_Interface.deiconify()
# Fixing GUI Dimensions
Main_Interface.geometry("1150x650")
Main_Interface.resizable(0, 0)
# Fixing Title
Main_Interface.title("RS Groceries")
# Fixing GUI Background
Background = PhotoImage(file="./images/Bg_main.png")
Bg_label = Label(Main_Interface, image=Background)
Bg_label.place(x=0, y=0, relwidth=1, relheight=1)
#Fixing GUI Icon
Main_Interface.iconbitmap("./images/Logo.ico")
# Creating Button
font_1 = Font(family="Franklin Gothic Medium",size=15,weight="bold")
```

```
# Button 1
button1 =
Button(Main_Interface,text="EMPLOYEE",bg="#38b7fe",fg="black",padx=30,pady=1
0,width=20,font=font_1,activebackground="#38b7fe",activeforeground="black",comm
and=emp)
button1.configure(relief="flat")
button1.configure(overrelief="flat")
button1.configure(borderwidth="0")
button1.place(relx=0.32, rely=0.42, width=180, height=90,anchor=E)
# Button 2
button2 = Button(Main_Interface, text="ADMIN",bg="#38b7fe",
fg="black",padx=30,pady=10,width=20,font=font_1,activebackground="#38b7fe",acti
veforeground="black",command=admpg)
button2.configure(relief="flat")
button2.configure(overrelief="flat")
button2.configure(borderwidth="0")
button2.place(relx=0.70, rely=0.42, width=240, height=90, anchor=W)
dbconn.close()
```

Main_Interface.mainloop()

Employee.py

```
from tkinter import *
from tkinter import messagebox
from tkinter.font import Font
from tkinter import ttk
import datetime
# import mysql.connector as mysql
import sqlite3
# Creating Mysql connection
dbconn = sqlite3.connect("./Database/RSgroceries.db")
# Create a cursor to give commands
cursor = dbconn.cursor()
# Create Tables
# category Table
cursor.execute("""CREATE TABLE if not exists category(
category varchar(100) NOT NULL primary key
  inn
dbconn.commit()
cursor.execute("""CREATE TABLE if not exists products(
  product_id int not null primary key,
  product_name varchar(100) not null,
  product_rate int not null,
  category varchar(100) not null references category(category)
  """)
dbconn.commit()
cursor.execute("""
Select * From category
Category_1 = cursor.fetchall()
# Creating TKinter Window
billing = Tk()
billing.geometry("1330x750")
billing.resizable(0, 0)
billing.iconbitmap("./images/Logo.ico")
billing.title("Employee")
font_1 = Font(family="Calibri",size=15,weight="bold")
```

```
# Fixing GUI Background
Background = PhotoImage(file="./images/Employee_bg.png")
Bg_label = Label(billing, image=Background)
Bg label.place(x=0, y=0, relwidth=1, relheight=1)
# Logout command
def Exit():
  sure = messagebox.askyesno("Exit", "Are you sure you want to exit?", parent=billing
  if sure == True:
     billing.destroy()
# Creating logout button
logout_img = PhotoImage(file="./images/logout.png")
logout_button = Button(billing, image=logout_img,
borderwidth=0,relief="flat",overrelief="flat", command=Exit)
logout_button.place(relx=0.0155, rely=0.038,width=39,height=31)
# Creating invoice
invoice = ttk.Treeview(billing)
invoice["columns"] = ("Product Name", "Qty", "Rate", "Cost")
invoice.column("#0", width=0,stretch=NO)
invoice.column("#1", width=301,anchor="center")
invoice.column("#2", width=80,anchor="center")
invoice.column("#3",width=120,anchor="center")
invoice.column("#4",width=120,anchor="center")
invoice.heading("#0",text="")
invoice.heading("#1",text="Product Name")
invoice.heading("#2",text="Qty")
invoice.heading("#3",text="Rate")
invoice.heading("#4",text="Cost")
invoice.place(relx=0.5032,rely=0.4517,height=245)
Scroll_invoice = Scrollbar(orient="vertical",command=invoice.yview)
invoice.configure(yscroll=Scroll_invoice.set)
Scroll_invoice.place(relx=0.9593,rely=0.4537, height=275)
# Creating all the entry fields
# Creating Entry for name and contact
# Name
Name entry = Entry(billing,font=font 1,relief="flat",bq="#0089fe")
Name entry.bind("")
```

```
Name_entry.place(relx=0.619,rely=0.124,width=140,height=30)
# Contact
contact_entry = Entry(billing,font=font_1,relief="flat",bg="#0089fe")
contact entry.place(relx=0.869,rely=0.124,width=140,height=30)
# Creating entry for product and quantity
# List of categories
category = ["Choose the Category"]
for cat_n in Category_1:
  category.append(cat_n[0])
# defining required functions
global Rate
global Final_prod
Rate = []
Final_prod = ["Choose product"]
def sel_cat(n):
  global Rate
  global Final_prod
  if Items.get() == "" or Items.get() == "Choose the Category":
     Items_1.configure(values=Final_prod)
     ltems_1.current(0)
  cursor.execute("SELECT product name, product rate FROM products WHERE
category='{}'".format(Items.get()))
  prod_and_rate = cursor.fetchall()
  prods = ["Choose product"]
  rates = []
  for i in prod_and_rate:
    prods.append(i[0])
    rates.append(i[1])
  Final_prod=prods
  Rate=rates
  Items_1.configure(value=Final_prod)
  ltems_1.current(0)
# Items category Drop Down
ltems = ttk.Combobox(billing,values=category,font=font_1)
Items.current(0)
Items.place(relx=0.049,rely=0.355,width=428,height=53)
# Bind Items
ltems.bind("<<ComboboxSelected>>", sel_cat)
```

```
# Product drop down
ltems_1 = ttk.Combobox(billing, values=["Choose product"],font=font_1)
Items_1.current(0)
Items_1.place(relx=0.049,rely=0.536,width=430,height=53)
# Creating entry box for quantity
quantity_entry = Entry(billing,font=font_1,relief="flat")
quantity_entry.place(relx=0.050,rely=0.730,width=423,height=48)
# Defining Funtions
# Non billing commands
# Add to Cart
def add to cart():
  global Final_prod
  global Rate
  if (quantity_entry.get().isdigit()) or (quantity_entry.get()== ""):
     if (Items_1.get()!="" and quantity_entry.get()!="" and
ltems.get().lower()!="choose the category" and ltems_1.get()!="Choose product"):
       n = Final_prod.index(Items_1.get())
       rate n = Rate[n - 1]
       if Items.get() in category:
invoice.insert("",index="end",values=(Items_1.get(),quantity_entry.get(),rate_n,int(qu
antity entry.get())*rate n))
          Items.current(0)
          quantity_entry.delete(0,END)
          Items_1.current(0)
          # Rate = []
          # Final_prod = ["Choose product"]
       else:
          messagebox.showerror("Error","Item not in the cart!")
     else:
       messagebox.showerror("Error", "Please fill the details")
  else:
     messagebox.showerror("Error", "Please Enter Correct Quantity!")
# Clear
def clear():
  Items.current(0)
  quantity_entry.delete(0, END)
  Items 1.current(0)
# Billing commands
font_3 = Font(family="Calibri",size=11,weight="bold")
```

```
global cust_name
global cust_contact
global date_time
global cust no
global Total_n
global dummy
cust_name = ""
cust_contact = ""
date_time = ""
cust_no = ""
Total n = ""
dummy = 0
def generate_bill():
  all_rec = invoice.get_children()
  Rows = []
  for rec in all rec:
     values = invoice.item(rec).get("values")
     Rows.append(values)
  confirm_1 = messagebox.askyesno("Generate Bill", "Do you want to generate
bill?")
  if confirm_1 == 1:
     if Name_entry.get() != "" and contact_entry.get() != "":
       if Rows!=[]:
          costs n = []
          if len(contact_entry.get()) == 10:
            Delete btn.configure(state="disabled")
            global cust_name
            global cust_contact
            global date_time
            global cust_no
            global Total_n
            global dummy
            dummy = 1
            all_rec = invoice.get_children()
            for rec in all_rec:
               values = invoice.item(rec).get("values")
               costs_n.append(values[3])
            Total_n = sum(costs_n)
            # Customer number reading and writing from/to(respectively) a file
            cust_no_read = open("Customer_number_counter.txt", "r")
            count = cust_no_read.read()
            cust no read.close()
            cust no = count
            cust_no_write = open("Customer_number_counter.txt", "w")
            count_inc = str(int(count) + 1)
            cust_no_write.write(count_inc)
```

```
cust_no_write.close()
            # Other labels
            cust name=Name entry.get()
            cust contact=contact entry.get()
            date time = datetime.datetime.now()
            # Adding customer name
            label_1 = Label(billing, text=cust_name, font=font_3, bg="#dae2f2",
anchor="w")
            label_1.place(relx=0.602, rely=0.368, width=250, height=40)
            # Adding customer number
            label_2 = Label(billing, text=cust_no, font=font_3, bg="#dae2f2",
anchor="w")
            label_2.place(relx=0.593, rely=0.423, width=70, height=15)
            # Adding customer contact
            label_3 = Label(billing, text=cust_contact, font=font_3,bg="#dae2f2",
anchor="w")
            label_3.place(relx=0.899,rely=0.368, width=80, height=40)
            # Adding date and time
            label_4 = Label(billing, text=date_time, font=font_3, bg="#dae2f2",
anchor="w")
            label_4.place(relx=0.886, rely=0.423, width=104, height=15)
            # Total
            font_4 = Font(family="Calibri", size=18, weight="bold")
            label_5 = Label(billing, text="Total = {}".format(Total_n), font=font_4,
bg="#ffffff", anchor="e")
            label 5.place(relx=0.800, rely=0.780, width=200, height=31)
            Name_entry.delete(0,END)
            contact entry.delete(0,END)
          else:
            messagebox.showerror("Error", "Please enter correct contact number")
       else:
         messagebox.showerror("Error", "Cart is empty")
     else:
       messagebox.showerror("Error", "Fill the details of the customer")
  else:
     pass
# Clear function definition
def clear_all():
  Delete_btn.configure(state="active")
```

```
for rec in all rec:
     values = invoice.item(rec).get("values")
     Rows.append(values)
  if Rows == []:
     messagebox.showerror("Error", "Cart is already empty")
  else:
     # Overwriting customer name
     label_1 = Label(billing, text="", font=font_3, bg="#dae2f2", anchor="w")
     label_1.place(relx=0.602, rely=0.368, width=250, height=40)
     # Overwriting customer number
     label_2 = Label(billing, text="", font=font_3, bg="#dae2f2", anchor="w")
     label_2.place(relx=0.593, rely=0.423, width=70, height=15)
     # Overwriting customer contact
     label_3 = Label(billing, text="", font=font_3, bg="#dae2f2", anchor="w")
     label_3.place(relx=0.899, rely=0.368, width=80, height=40)
     # Overwriting date and time
     label_4 = Label(billing, text="", font=font_3, bg="#dae2f2", anchor="w")
     label 4.place(relx=0.886, rely=0.423, width=104, height=15)
     # Overwriting
     font_4 = Font(family="Calibri", size=18, weight="bold")
     label_5 = Label(billing, text="", font=font_4, bg="#ffffff", anchor="e")
     label 5.place(relx=0.800, rely=0.780, width=200, height=31)
     for rows in invoice.get_children():
       invoice.delete(rows)
     Save_btn.configure(state="active")
     Generate_btn.configure(state="active")
     Delete btn.configure(state="active")
def delete_many():
  items_n = invoice.selection()
  if items_n == ():
     messagebox.showerror("Error","No Item(s) selected")
  else:
     for rows n in items n:
       invoice.delete(rows n)
def save bill():
  global cust_name
  global cust_contact
  global date_time
  global cust_no
  global Total_n
```

```
global dummy
  all_rec = invoice.get_children()
  if dummy == 0:
     messagebox.showerror("Error", "Please Generate the bill first")
  else:
     yes_no = messagebox.askyesno("Save Bill", "Are you sure you want to Save
Bill?")
     if yes_no == 1:
       Delete_btn.configure(state="active")
       bill_n = open("./All_bills/zBill_{}.txt".format(cust_no), "w")
       cust det = [cust name, cust contact, cust no, date time, Total n]
       for i in cust_det:
          bill_n.write(str(i) + "`")
       bill_n.write("\n")
       all_rec = invoice.get_children()
       for rec in all rec:
          values = invoice.item(rec).get("values")
          for j in values:
            bill_n.write(str(j) + "`")
          bill_n.write("\n")
       cust_name = ""
       cust_contact = ""
       date_time = ""
       cust_no = ""
       Total n = ""
       clear_all()
       dummy = 0
     else:
       pass
# Creating main button widgets
# ***** Non billing widgets *****
# Add to invoice
Add_btn_1 = Button(billing,text="Add to
cart",bg="#ff1616",fg="black",font=font_1,command=add_to_cart)
Add_btn_1.configure(activebackground="#ff1616")
Add_btn_1.configure(activeforeground="black")
Add_btn_1.configure(relief="flat")
Add_btn_1.configure(borderwidth="0")
Add_btn_1.place(relx=0.064,rely=0.882,width=135,height=43)
# Clear
Clear btn 1 =
Button(billing,text="Clear",bg="#ff1616",fg="black",font=font_1,command=clear)
Clear_btn_1.configure(activebackground="#ff1616")
Clear_btn_1.configure(activeforeground="black")
```

```
Clear_btn_1.configure(borderwidth="0")
Clear_btn_1.place(relx=0.256,rely=0.882,width=135,height=43)
# ***** Billing widgets *****
font_2 = Font(family="Calibri",size=13,weight="bold")
# Save bill
Save_btn = Button(billing, text="Save Bill", bg="#ff1616",fg="black",font=font_2,
command=save bill)
Save_btn.configure(activebackground="#ff1616")
Save_btn.configure(activeforeground="black")
Save_btn.configure(relief="flat")
Save_btn.configure(borderwidth="0")
Save_btn.place(relx=0.861,rely=0.887,width=135,height=43)
# Generate Bill
Generate_btn=Button(billing,text="Generate
Invoice",bg="#ff1616",fg="black",font=font_2,command=generate_bill)
Generate_btn.configure(activebackground="#ff1616")
Generate_btn.configure(activeforeground="black")
Generate_btn.configure(relief="flat")
Generate_btn.configure(borderwidth="0")
Generate_btn.place(relx=0.5165,rely=0.887,width=135,height=43)
# Delete Item
Delete_btn=Button(billing,text="Delete Item(s)",bg="#ff1616",fg="black",font=font_2,
command=delete_many)
Delete_btn.configure(activebackground="#ff1616")
Delete_btn.configure(activeforeground="black")
Delete_btn.configure(relief="flat")
Delete_btn.configure(borderwidth="0")
Delete_btn.place(relx=0.631,rely=0.887,width=135,height=43)
# Clear Items
Clear_btn_2=Button(billing,text="Clear",bg="#ff1616",fg="black",font=font_2,
command=clear all)
Clear_btn_2.configure(activebackground="#ff1616")
Clear_btn_2.configure(activeforeground="black")
Clear_btn_2.configure(relief="flat")
Clear_btn_2.configure(borderwidth="0")
Clear_btn_2.place(relx=0.745,rely=0.887,width=135,height=43)
```

Clear_btn_1.configure(relief="flat")

```
# Search Bills
# Defining funciton for searching bill
def search_bill():
  for rows in invoice.get children():
     invoice.delete(rows)
  bill no 2 = Cust no entry.get()
  try:
     # Getting and adding other details
     bill = open("./All_bills/zBill_{}.txt".format(bill_no_2),"r")
     other_details = bill.readline().split("`")
     customer name = other details[0]
     customer_contact = other_details[1]
     customer id = bill no 2
     date_time_n = other_details[3]
     Total bill = other_details[4]
     # writing customer name
     label_1 = Label(billing, text=customer_name, font=font_3, bg="#dae2f2",
anchor="w")
     label_1.place(relx=0.602, rely=0.368, width=250, height=40)
     # writing customer number
     label 2 = Label(billing, text=customer_id, font=font_3, bg="#dae2f2",
anchor="w")
     label 2.place(relx=0.593, rely=0.423, width=70, height=15)
     # writing customer contact
     label_3 = Label(billing, text=customer_contact, font=font_3, bg="#dae2f2",
anchor="w")
     label 3.place(relx=0.899, rely=0.368, width=80, height=40)
     # writing date and time
     label_4 = Label(billing, text=date_time_n, font=font_3, bg="#dae2f2",
anchor="w")
     label 4.place(relx=0.886, rely=0.423, width=104, height=15)
     # writing Total
     font_4 = Font(family="Calibri", size=18, weight="bold")
     label_5 = Label(billing, text="Total = {}".format(Total_bill), font=font_4,
bg="#ffffff", anchor="e")
     label_5.place(relx=0.800, rely=0.780, width=200, height=31)
# Reading records
     records = bill.readlines()
     for i in records:
       splitted = i.split("`")
       invoice.insert("", index="end",
```

Admin_login.py

```
from tkinter import *
from tkinter import messagebox
import os
from tkinter.font import Font
adm = Tk()
adm.geometry("500x715")
adm.resizable(0, 0)
adm.iconbitmap("./images/Logo.ico")
adm.title("Login Page")
user = StringVar()
password = StringVar()
# Admin page
def admpage():
  adm.withdraw()
  os.system("python Admin.py")
  adm.deiconify()
# Fixing GUI Background
Background = PhotoImage(file="./images/Admin_login.png")
Bg_label = Label(adm, image=Background)
Bg_label.place(x=0, y=0, relwidth=1, relheight=1)
# Username Entry
font_1 = Font(family="Comic Sans MS",size=15,weight="bold")
entry1 = Entry(adm)
entry1.place(relx=0.225, rely=0.272, width=315, height=26)
entry1.configure(font=font_1)
entry1.configure(relief="flat")
entry1.configure(textvariable=user)
# Password Entry
entry2 = Entry(adm)
entry2.place(relx=0.225, rely=0.405, width=315, height=26)
entry2.configure(font=font_1)
entry2.configure(relief="flat")
entry2.configure(show="•")
entry2.configure(textvariable=password)
```

```
def admlog_op():
  Username = user.get()
  Password = password.get()
  if Username == "ADMIN":
    if Password == "1234":
       messagebox.showinfo("Login Page", "The login is successful.")
       entry1.delete(0, END)
       entry2.delete(0, END)
       adm.withdraw()
       admpage()
    else:
       messagebox.showerror("Oops!!", "You are not an admin.")
  else:
    messagebox.showerror("Error", "Incorrect username or password.")
# Confirm Button
font_2 = Font(family="Franklin Gothic Medium", size=15, weight="bold")
button1 = Button(adm)
button1.place(relx=0.230, rely=0.755, width=280, height=43)
button1.configure(relief="flat")
button1.configure(overrelief="flat")
button1.configure(activebackground="#D2463E")
button1.configure(foreground="#ffffff")
button1.configure(background="#D2463E")
button1.configure(font=font_2)
button1.configure(borderwidth="0")
button1.configure(text="""LOGIN""")
button1.configure(command=admlog_op)
# Exit
def Exit():
  adm.destroy()
adm.protocol("WM DELETE WINDOW", Exit)
adm.mainloop()
```

Admin.py

```
from tkinter import *
from tkinter import messagebox
from tkinter.font import Font
from tkinter import ttk
# import mysql.connector as mysql
import sqlite3
# Creating Tkinter Window
Admin = Tk()
Admin.geometry("1330x750")
Admin.resizable(0, 0)
Admin.iconbitmap("./images/Logo.ico")
Admin.title("Admin")
# Creating Mysql connection
dbconn = sqlite3.connect("./Database/RSgroceries.db")
# Create a cursor to give commands
cursor = dbconn.cursor()
# Create Tables
# category Table
cursor.execute("""CREATE TABLE if not exists category(
category varchar(100) NOT NULL primary key
  11111
dbconn.commit()
cursor.execute("""CREATE TABLE if not exists products(
  product_id int not null primary key,
  product_name varchar(100) not null,
  product rate int not null,
  category varchar(100) not null references category(category)
  """)
dbconn.commit()
cursor.execute("SELECT * FROM products")
prod_1 = cursor.fetchall()
# print(prod_1)
dbconn.commit()
# Fixing GUI Background
Background = PhotoImage(file="./images/Admin_bg.png")
Bg_label = Label(Admin, image=Background)
Bg_label.place(x=0, y=0, relwidth=1, relheight=1)
```

```
# Creating invoice
table = ttk.Treeview(Admin)
table["columns"] = ("ID", "Product Name", "Category", "Rate")
table.column("#0", width=0,stretch=NO)
table.column("#1", width=50,anchor="center")
table.column("#2", width=230,anchor="center")
table.column("#3",width=230,anchor="center")
table.column("#4",width=120,anchor="center")
table.heading("#0",text="")
table.heading("#1",text="ID")
table.heading("#2",text="Product Name")
table.heading("#3",text="Category")
table.heading("#4",text="Rate")
table.place(relx=0.50,rely=0.1139,height=528.8, width=630)
Scroll_invoice = Scrollbar(orient="vertical",command=table.yview)
table.configure(yscroll=Scroll_invoice.set)
Scroll_invoice.place(relx=0.961,rely=0.1140, height=527.3)
for row in prod 1:
  table.insert("",index="end",values=(row[0],row[1],row[3],row[2]))
# Defining Exit function
def Exit():
  sure = messagebox.askyesno("Exit", "Are you sure you want to exit?",
parent=Admin)
  if sure == True:
     Admin.destroy()
     # adm.destroy()
# Creating logout button
logout_img = PhotoImage(file="./images/logout.png")
logout_button = Button(Admin, image=logout_img,
borderwidth=0,relief="flat",overrelief="flat", command=Exit)
logout_button.place(relx=0.0155, rely=0.038,width=39,height=31)
# Creating all the required widgets
# Creating text variables
cat = StringVar()
pro_name = StringVar()
pro_rate = StringVar()
font_1 = Font(family="Calibri",size=15,weight="bold")
```

```
# All Entry widgets
# Product Category Widget
Entry_1 = Entry(Admin,font=font_1,relief="flat",bg="#fefffe")
Entry 1.place(relx=0.043,rely=0.622,width=423,height=50)
# Product Rate Widget
Entry_2 = Entry(Admin, font=font_1,relief="flat",bg="#fefffe")
Entry_2.place(relx=0.043,rely=0.780,width=423,height=50)
# Product Name Widget
Entry_3 = Entry(Admin,font=font_1,relief="flat",bg="#fefffe")
Entry_3.place(relx=0.043,rely=0.463,width=423,height=50)
# Product Id Widget
Entry_4 = Entry(Admin,font=font_1,relief="flat",bg="#fefffe")
Entry_4.place(relx=0.043,rely=0.3205,width=423,height=50)
# Search code Entry Widget
Entry_5 = Entry(Admin, font=font_1,relief="flat",bg="#fefafa")
Entry_5.place(relx=0.161,rely=0.115,width=255,height=40)
# Defining all the required functions
# CREATING FUNCTION TO REMOVE UNWANTED CATEGORY
def unwanted_cat():
  category_delete_1 = table.get_children()
  categories_avail = []
  for rec in category_delete_1:
     values = table.item(rec).get("values")[2]
     categories_avail.append(values)
  cursor.execute("SELECT category FROM category")
  cat_t = cursor.fetchall()
  all cat = []
  for i in cat t:
     all_cat.append(i[0])
  available_category = []
  for fin in all cat:
     if fin in categories_avail:
       available_category.append(fin)
     else:
       pass
  cursor.execute("DROP TABLE category")
  dbconn.commit()
  # Creating table product if not exist
  cursor.execute("""CREATE TABLE if not exists category(
    category varchar(100) NOT NULL primary key
```

```
dbconn.commit()
  for last in available_category:
     try:
       cursor.execute("INSERT INTO category VALUES('{}')".format(last))
       dbconn.commit()
     except sqlite3.IntegrityError:
       pass
# Add to cart
def add_to_cart():
  # Creating table product if not exist
  cursor.execute("""CREATE TABLE if not exists category(
  category varchar(100) NOT NULL primary key
     cursor.execute("""CREATE TABLE if not exists products(
     product_id int not null primary key,
     product_name varchar(100) not null,
     product_rate int not null,
     category varchar(100) not null references category(category)
     ,
,
,
,
  dbconn.commit()
  all_rec = table.get_children()
  ids = []
  for rec in all_rec:
     values = table.item(rec).get("values")[0]
     ids.append(values)
  if (Entry_2.get().isdigit() or Entry_2.get()==""):
       if Entry_1.get() != "" and Entry_2.get() != "" and Entry_3.get() != "" and
Entry 4.get() != "":
          n = messagebox.askyesno("Add to Market", "Are you sure you want to add
it to the Market?")
          if n == 1:
            cursor.execute("SELECT product_id FROM products")
            id_check = cursor.fetchall()
            id_check_fin = []
             dbconn.commit()
            if (int(Entry_4.get()),) in id_check:
               messagebox.showerror("Error", "Product id already in the market")
            else:
               table.insert("", index="end", values=(Entry_4.get(), Entry_3.get(),
Entry_1.get(), Entry_2.get()))
```

```
cursor.execute("INSERT INTO products VALUES(:product_id,
:product_name, product_rate, :category)",
                           "product id": Entry 4.get(),
                           "product_name": Entry_3.get(),
                           "product_rate": Entry_2.get(),
                           "category": Entry_1.get()
               cursor.execute("SELECT category FROM category")
               categories db = cursor.fetchall()
               categories = []
               for i in categories_db:
                 categories.append(i[0])
               if Entry_1.get() not in categories:
                 cursor.execute("INSERT INTO category VALUES(:category)",
                          {"category": Entry_1.get()})
                 dbconn.commit()
               else:
                 pass
               dbconn.commit()
               Entry_1.delete(0, END)
               Entry_2.delete(0, END)
               Entry_3.delete(0, END)
               Entry_4.delete(0, END)
               unwanted cat()
          else:
            pass
       else:
          messagebox.showerror("Error", "Please fill the details")
     except ValueError:
       messagebox.showerror("Error", "Please enter correct product ID!")
  else:
     Entry 2.delete(0, END)
     messagebox.showerror("Error", "Please enter correct quantity!")
# Update
def update():
  # Creating table product if not exist
  cursor.execute("""CREATE TABLE if not exists category(
     category varchar(100) NOT NULL primary key
       . . . . . .
  cursor.execute("""CREATE TABLE if not exists products(
```

```
product_id int not null primary key,
     product_name varchar(100) not null,
     product_rate int not null,
     category varchar(100) not null references category(category)
     """)
  dbconn.commit()
  Button_1.configure(state="active")
  if Entry_1.get() != "" and Entry_2.get() != "" and Entry_3.get() != "" and
Entry 4.get() != "":
     cursor.execute("SELECT product_id FROM products")
     id_check = cursor.fetchall()
     dbconn.commit()
     if (int(Entry_4.get()),) in id_check:
       all_rows = table.get_children()
       k = []
       for i in all_rows:
          if table.item(i).get("values")[0] == int(Entry_4.get()):
            k.append(i)
          else:
            pass
       table.item(k[0], text="", values=(int(Entry_4.get()), Entry_3.get(),
Entry_1.get(), Entry_2.get()))
       cursor.execute("""
       UPDATE products SET product_name = '{}', category = '{}', product_rate = {}
WHERE product_id = {}"""
                 .format(Entry_3.get(), Entry_1.get(), Entry_2.get(),
int(Entry_4.get())))
       dbconn.commit()
       cursor.execute("SELECT category FROM category")
       categories_db = cursor.fetchall()
       categories = []
       for i in categories_db:
          categories.append(i[0])
       if Entry_1.get() not in categories:
          cursor.execute("INSERT INTO category VALUES(:category)",
                   {"category": Entry_1.get()})
          dbconn.commit()
       Entry_1.delete(0, END)
       Entry_2.delete(0, END)
       Entry_3.delete(0, END)
       Entry_4.delete(0, END)
       unwanted_cat()
```

else:

```
else:
     messagebox.showerror("Error", "Fill all the details")
# Clear
def clear():
  # Creating table product if not exist
  cursor.execute("""CREATE TABLE if not exists category(
     category varchar(100) NOT NULL primary key
  cursor.execute("""CREATE TABLE if not exists products(
     product_id int not null primary key,
     product_name varchar(100) not null,
     product_rate int not null,
     category varchar(100) not null references category(category)
     ,
""")
  dbconn.commit()
  Entry_1.delete(0, END)
  Entry_2.delete(0, END)
  Entry_3.delete(0, END)
  Entry_4.delete(0, END)
  Button_1.configure(state="active")
  unwanted cat()
# Select Item
def select_item():
  # Creating table product if not exist
  cursor.execute("""CREATE TABLE if not exists category(
     category varchar(100) NOT NULL primary key
       )
       111111
  cursor.execute("""CREATE TABLE if not exists products(
     product_id int not null primary key,
     product_name varchar(100) not null,
     product rate int not null,
     category varchar(100) not null references category(category)
     í IIII)
  dbconn.commit()
  items_n = table.selection()
  if len(items_n)>1:
     messagebox.showerror("Error", "Two or more items are selected")
  else:
```

```
if items_n == ():
       messagebox.showerror("Error", "No Item(s) selected")
     else:
       sel item = []
       for i in items_n:
          k = table.item(i, "values")
          for i in k:
            sel_item.append(j)
       Entry_4.insert(0, sel_item[0])
       Entry_3.insert(0, sel_item[1])
       Entry_2.insert(0, sel_item[3])
       Entry_1.insert(0, sel_item[2])
       unwanted_cat()
       Button_1.configure(state="disabled")
# Delete item(s)
def delete_many():
  # Creating table product if not exist
  cursor.execute("""CREATE TABLE if not exists category(
     category varchar(100) NOT NULL primary key
       ,
,,,,
  cursor.execute("""CREATE TABLE if not exists products(
     product id int not null primary key,
     product_name varchar(100) not null,
     product_rate int not null,
     category varchar(100) not null references category(category)
     """)
  dbconn.commit()
  items_n = table.selection()
  if items n == ():
     messagebox.showerror("Error", "No Item(s) selected")
  else:
     n = messagebox.askyesno("Delete item(s)", "Are you sure you want to delete
the selected item(s)?")
     if n == 1:
       pro_id = []
       for i in items n:
          k = table.item(i, "values")
          pro_id.append(k[0])
       for rows_n in items_n:
          table.delete(rows_n)
```

```
for row in pro_id:
          cursor.execute("DELETE FROM products WHERE
product_id={}".format(row))
          dbconn.commit()
       unwanted_cat()
     else:
       pass
# Clear All
def clear_all():
  # Creating table product if not exist
  cursor.execute("""CREATE TABLE if not exists category(
    category varchar(100) NOT NULL primary key
       )
      шшл
  cursor.execute("""CREATE TABLE if not exists products(
     product_id int not null primary key,
     product_name varchar(100) not null,
     product_rate int not null,
     category varchar(100) not null references category(category)
     ,
""")
  dbconn.commit()
  if table.get_children() == ():
     messagebox.showerror("Error", "No Items in the Market")
  else:
     n = messagebox.askyesno("Clear All", "Are you sure you want to clear all the
items?")
     if n == 1:
       for rows in table.get_children():
         table.delete(rows)
       cursor.execute("DROP TABLE products")
       dbconn.commit()
       unwanted_cat()
     else:
       pass
def search_id():
  if Entry_5.get() == "":
     messagebox.showerror("Error", "Enter ID to search")
  else:
    id = int(Entry_5.get())
     cursor.execute("SELECT product_id FROM products")
     id_check = cursor.fetchall()
     dbconn.commit()
```

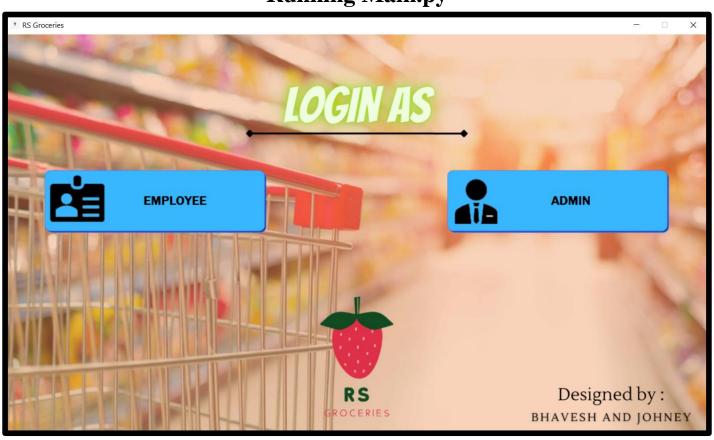
```
for i in all rows:
       if table.item(i).get("values")[0] == id:
          row.append(i)
     if row == []:
       messagebox.showerror("Error", "No product with ID {}".format(id))
     else:
       Button_1.configure(state="disabled")
       for i in row:
          values = table.item(j).get("values")
          Entry_4.insert(0, values[0])
          Entry_3.insert(0, values[1])
          Entry 2.insert(0, values[3])
          Entry 1.insert(0, values[2])
     Entry 5.delete(0, END)
     unwanted cat()
# All Button Widgets
# Non-Table widgets
# Add to Market
Button 1 = Button(Admin, text="Add to market", relief="flat",
bg="#fe1716",fg="black",borderwidth=0,font=font_1,command=add_to_cart)
Button_1.configure(activebackground="#fe1716")
Button_1.place(relx=0.04325,rely=0.878,width=135,height=43)
# Modify
Button_2 = Button(Admin, text="Update", relief="flat", bg="#fe1716", fg="black",
borderwidth=0, font=font 1, command=update)
Button_2.configure(activebackground="#fe1716")
Button 2.place(relx=0.161, rely=0.878, width=135, height=43)
# Clear
Button_3 = Button(Admin, text="Clear", relief="flat", bg="#fe1716", fg="black",
borderwidth=0, font=font_1,command=clear)
Button 3.configure(activebackground="#fe1716")
Button_3.place(relx=0.278, rely=0.878, width=135, height=43)
# Search
search_img = PhotoImage(file="./images/search.png")
search button = Button(Admin, image=search img,
borderwidth=0,relief="flat",overrelief="flat", command=search_id)
search_button.place(relx=0.3713, rely=0.1175)
```

```
# Table widgets
# Select
Button_4 = Button(Admin, text="Select", relief="flat", bg="#fe1716", fg="black",
borderwidth=0, font=font 1,command=select item)
Button_4.configure(activebackground="#fe1716")
Button 4.place(relx=0.512, rely=0.8855, width=135, height=43)
# Delete item(s)
Button_5 = Button(Admin, text="Delete item(s)", relief="flat",
bg="#fe1716",fg="black",borderwidth=0,font=font_1, command=delete_many)
Button 5.configure(activebackground="#fe1716")
Button_5.place(relx=0.686,rely=0.8855,width=135,height=43)
# Clear All
Button_6 = Button(Admin, text="Clear All", relief="flat", bg="#fe1716", fg="black",
borderwidth=0, font=font_1, command=clear_all)
Button_6.configure(activebackground="#fe1716")
Button_6.place(relx=0.862, rely=0.8855, width=135, height=43)
Admin.protocol("WM_DELETE_WINDOW", Exit)
```

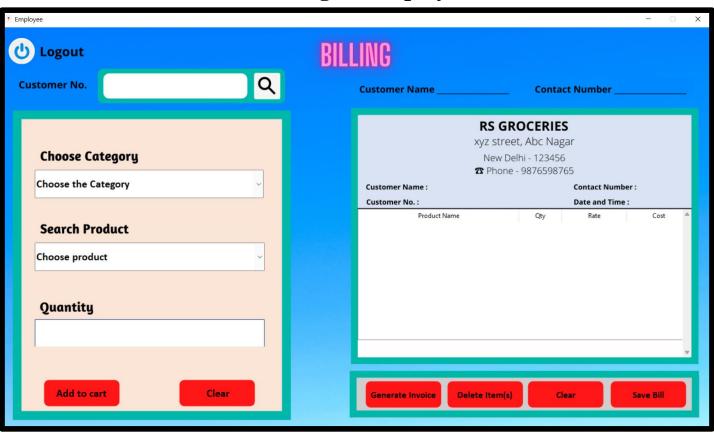
Admin.mainloop()

SNAP SHOTS

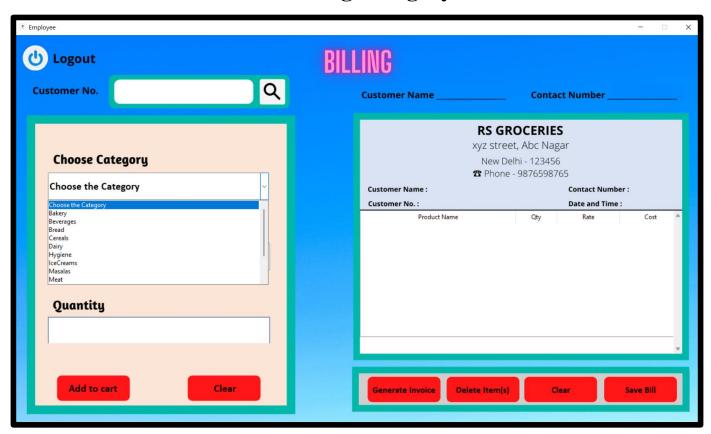
Running Main.py



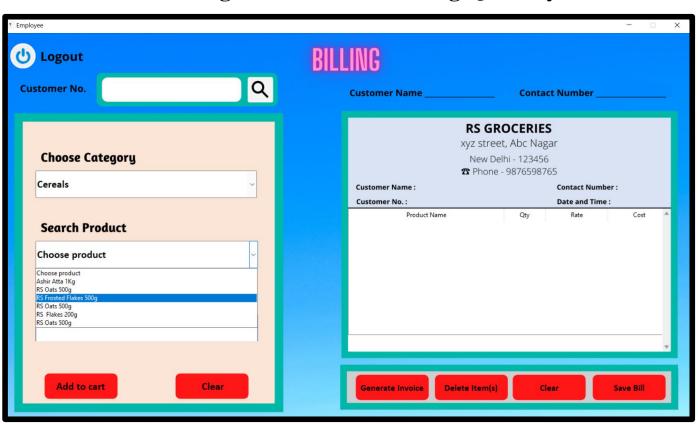
Clicking on Employee



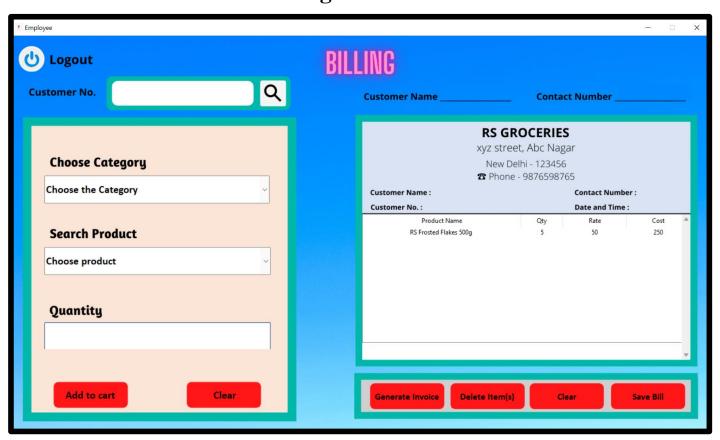
Selecting Category



Selecting Product and Entering Quantity



Adding it to the cart



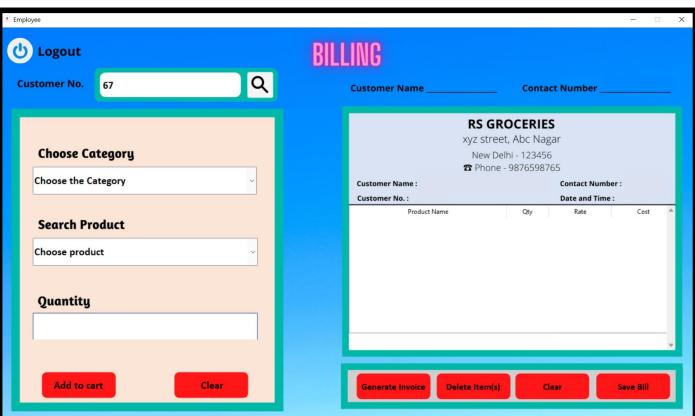
Entering Customer Name and Contact Number



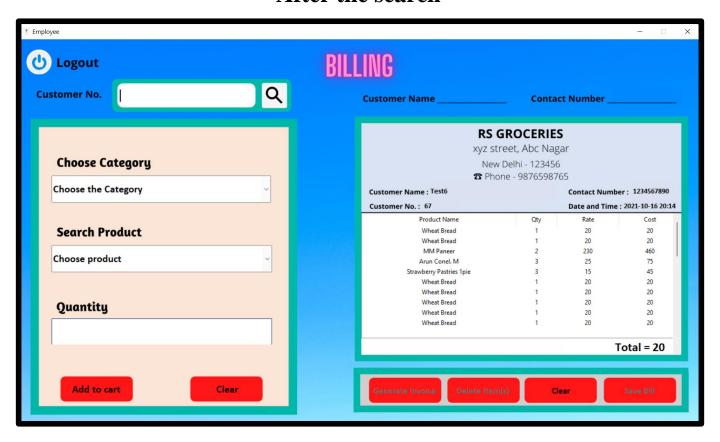
Generating Invoice



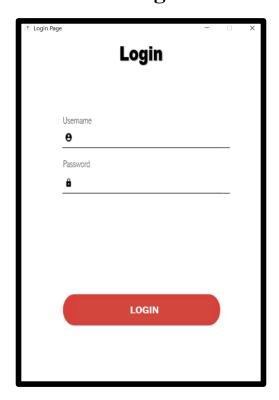
Searching the old bill



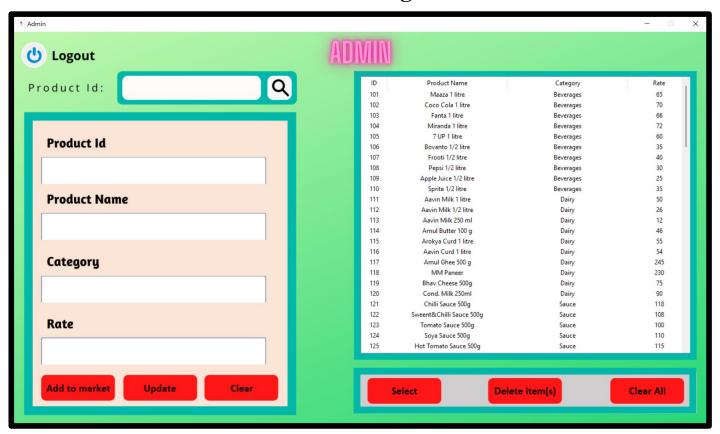
After the search



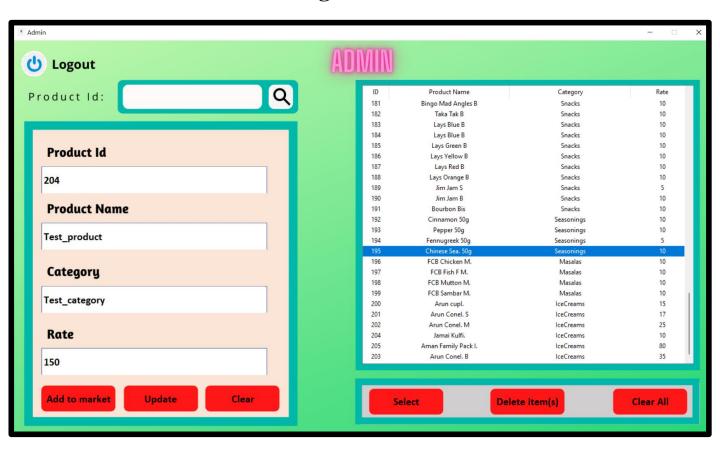
On Clicking Admin



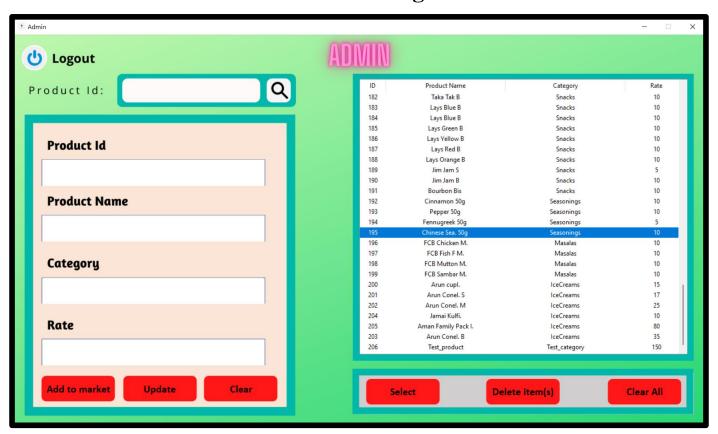
Admin Page



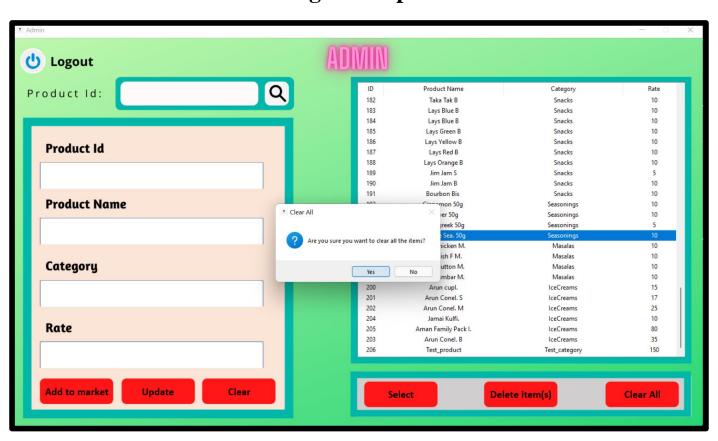
Entering all the Entries



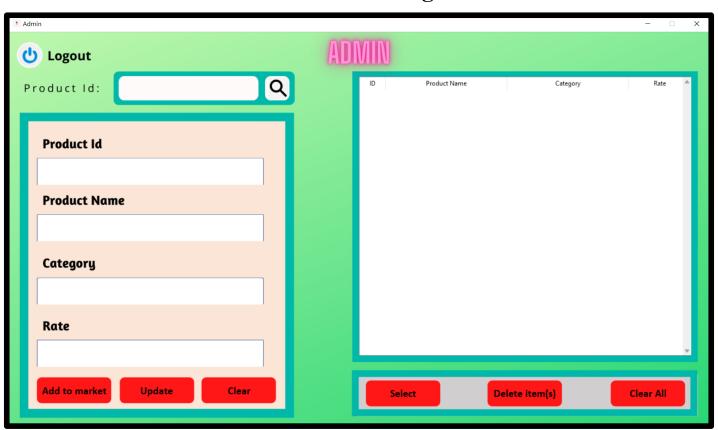
After adding



Clearing all the products



After Clearing



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 (Course).
- https://youtube.com/playlist?list=PLu0W_9III9ajLcqRcj4PoEihkukF_OTzA (Course).
- https://imagecolorpicker.com/ Used this to get the hex color code.
- https://www.canva.com/ Used this to design the backgrounds
- https://www.lucidchart.com/ Used this to make flow chart

THANK YOU