Grocery Store Using python

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INDEX

CERTIFICATE

This is to certify that the project of creating a **UTILITY SOFTWARE** has been completed by

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The project has been made under the norms and conditions which fulfill all the requirements of the respective project. The students have exhibited commendable research skills, problem-solving abilities, and a thorough grasp of the subject matter. The project not only meets the academic requirements but also stands out as a testament to the student's passion for the field of computer science.

This certificate is awarded as a recognition of their outstanding performance in the project and serves as an acknowledgment of their potential in the field of computers.

Date of Issuance - 16 January, 2024

Signature of the Teacher

ACKNOWLEDGMENT

This is to acknowledge that our team **(Panav Gupta and Mohmmad Ayaan)** of class **11-A**
We extend my gratitude to my computer science teacher, **Mrs. Sujata Bhardwaj**, for guidance and support in completing my "Utility Software" project. Special thanks to my classmates for collaboration and insights. This project has been a valuable learning experience, and I appreciate everyone's contribution.

We would also like to acknowledge those with the bottom of our heart who have helped us in making this project, making us achieve the respective goal.

The project has also enhanced our ability and interest in the subject of computer science allowing us to explore in the great depths of vast codes and resources in python. Thereby, increasing our programming ability and giving us more and more insights.

INTRODUCTION

In this project we have created a **utility software** that would help in providing a user friendly experience for online websites or an app that can be used for selling groceries. The project uses python and its modules such as **tkinter, pillow,** etc.. The project enhances the visual appeal attracting more and more people for the sales. The program provides **ease of access** to the user for ordering groceries as the user can get the respective goods at his doorway with a few clicks of amazing website experience. Hence this **user friendly program** can help both the user and the seller by providing an **interface** which can be used for fulfilling their respective needs. The program involves the basic knowledge of various data type storages like dictionary, list, etc combined together with the used of functions and modules.

FUNCTIONING

Our python program includes the knowledge of basic python mutable and immutable **data type**, the code involves a **GUI** through which the user enters the amount of groceries he/she wants which is stored in a **dictionary** that is dependent on the item selected. First we imported various modules necessary for GUI, in this we have created various buttons like add/subtract options for the quantities which are carried out using functions and modules. We have used different functions for different widgets such as the canvas, screens, buttons, images, etc.. At the end according to the items present in the dictionary the price is calculated by multiplying the price of each item by its amount, all of the above is done by using functions and modules like tkinter. We have tried to simplify the code in order to increase the **readability of the code.**

CODE

```
#importing tkinter
import tkinter as tk
from tkinter import ttk
from PIL import ImageTk, Image
import random

#creating window
root = tk.Tk()
root.title('')
root.geometry('1920x1060')
root.grid_anchor('center')
root.resizable(False,False)
cenx=1920/2
ceny=1080/2
style = ttk.Style()
style.theme_use('default')
style.configure('TButton', background='#db500b')
money=0
bh,bw=33,33
#canvas
def createCanvas():
    global canvas
    canvas = tk.Canvas(root, width = '1920', height = '1080', highlightthickness = 0)
    canvas.place(x = 0, y = 0)
    canvas['background']= '#232328'
    canvas.create_rectangle(0,0,1920, 220, fill='#0e1342')
    canvas.photos = []

createCanvas()


#functions

def image(file,x,y,rw,rh):
    image = Image.open(file)
    resizeImage = image.resize((rw,rh))
    img = ImageTk.PhotoImage(resizeImage)
    canvas.photos.append(img)
    canvas.create_image(x,y, image= img)


def text(text, x, y, col = 'white', size = 15, font = 'Consolas', anchor = tk.CENTER):
    font =(font,size)

    text_ = canvas.create_text(x, y, text = text, fill = col, font = font,   anchor = anchor)
    return text_

def dropDown(text, opt, x, y, col = 'white', bg_col = '#232328'):
    menu = tk.StringVar()
    menu.set(text)
    drop = tk.OptionMenu(canvas, menu,*opt)
    drop.config(bg = bg_col, fg=col, width = 30)
    drop['highlightthickness']=0
    drop['menu'].config(bg = bg_col, fg=col,activebackground=bg_col)
    drop.place(x=x,y=y)

def button(text, x, y,h,w,command, col = 'white', bg_col = '#232328',font='Consolas'):
        pixel = tk.PhotoImage(width=1, height=1)
```

```
        canvas.photos.append(pixel)
        button = tk.Button(canvas, text = text,command = command,image=pixel,compound='c')
        button.config(background = bg_col, fg = col, font=font,height=h,width=w)
        buttonWindow = canvas.create_window(x, y,  window=button,anchor=tk.NW)


def imgButton(buttonImage,x,y,command):
        button = tk.Button(canvas, image=buttonImage,command = command)
        button['background'] = '#0e1342'
        buttonWindow = canvas.create_window(x, y, anchor=tk.NW, window=button)

def inputBox(x, y, w,s,col = 'white', bg_col = '#232328', val='',font='Consolas'):
    font = (font,s)
    entry = tk.Entry( borderwidth=1,bg = bg_col, fg = col, justify='center',width=w,font=font)
    entry.insert(0,str(val))
    entryWindow = canvas.create_window(x, y,  window=entry,anchor=tk.NW)
    return entry

def notif(text):
    nlabel = tk.Label(text=text)
    nlabel.configure(font=('Consolas', 18),bg='#000000',fg='white')
    notif_window = canvas.create_window(cenx, 865, window= nlabel, anchor= tk.CENTER)
    root.after(3000, lambda: nlabel.destroy())


#logic
menu = {"Apples":[random.randint(50,150),150.00], "Banana":[random.randint(50,150), 40.00], "Mango":
[random.randint(50,150),160.00], "Tomato": [random.randint(50,150),25], "Watermelon": [random.randint(50,150),45.00],
"Guava":[random.randint(50,150),45.00], "Potato": [random.randint(50,150),20.00],  "Onion":[random.randint(50,150),23.00
],"Broccoli":[random.randint(50,150),55.00], "Spinach":[random.randint(50,150),45.00], "Cauliflower":[random.randint(50,150),25.00],
"Okra":[random.randint(50,150),50.00] }
user_selections = {}
def addCart(item, quantity):
    if quantity.isdigit() and int(quantity) > 0:
        if int(quantity)<= menu[item][0]:

            user_selections[item] = int(quantity)
            notif(str(quantity) + ' kg of ' + str(item)+' added to the cart.')
        else:
            notif("Sorry, the requested amount exceeds the stock, the available stock is " + str(menu[item][0]))

    else:
        notif("Please enter a valid quantity!")


def removeCart(item):
    user_selections.pop(item)
    notif(item+ 'removed from cart.')
    cartScreen()
def calc():
    total_price = 0
    for item,quantity in user_selections.items():

                price = menu[item][1] * quantity
                total_price += price
    notif('The total price is: ₹'+str(total_price))
    return (str(total_price))
def add(entryWidget):
    n = entryWidget.get()
    entryWidget.delete(0,len(n))
    entryWidget.insert(0,str(int(n)+1))
```

```
def sub(entryWidget):
    n = entryWidget.get()
    entryWidget.delete(0,len(n))
    entryWidget.insert(0,str(int(n)-1))
#components
def itemBox(boxText,x,y):
    canvas.create_rectangle(x,y,x+315,y+385,outline='#a1a1a1',width='3')
    text(boxText,x+157.5,y+288.75,size=30)
    text('₹'+str(int(menu[boxText][1]))+' per kg',x+157.5,y+315,size=10)
    fileName = 'Assets\\'+boxText+'.jpg'
    image(fileName,x+157.5,y+136.5,306,262)
    canvas.create_rectangle(x+5.25,y+264.25,x+313.25,y+267.5,outline='#4a4a4a',fill='#4a4a4a')
    boxQuantity = inputBox(x+52.5,y+341.25,2,24,val=0)
    button('+',x+14,y+341.25,bh,bw,lambda: add(boxQuantity),bg_col='#0e1342', font='Consolas 16 bold')
    button('-',x+91,y+341.25,bh,bw,lambda: sub(boxQuantity),bg_col='#0e1342', font='Consolas 16 bold')
    button('Add to Cart',x+185,y+341,bh,115,lambda: addCart(boxText,boxQuantity.get()),bg_col="#0e1342",font = 'Consolas 11 bold')

def cartBox(item,y):
    fileName = 'Assets\\'+item+'.jpg'
    price = int(menu[item][1]* user_selections[item])
    image(fileName,196.5,y+85.5,193,169)
    canvas.create_rectangle(100,y,1820,y+172.5,outline='#a1a1a1',width='4')
    text(item, 310, y+5, size=30, anchor=tk.NW)
    text('Quantity:', 310,y+80,size=14,anchor=tk.NW)
    price = text('₹'+str(price),1800,y+20,size=25,anchor=tk.NE)
    boxQuantity = inputBox(359,y+115,2,24,val=user_selections[item])
    def addr():
        global money, total_price
        add(boxQuantity)
        if boxQuantity.get().isdigit() and int(boxQuantity.get()) > 0:
            user_selections[item] = int(boxQuantity.get())
            notif('1 more kg of ' + str(item)+' added to the cart.')
        else:
            notif("Please enter a valid quantity!")
        canvas.itemconfig(price, text = '₹'+str(int(menu[item][1]* user_selections[item])))
        canvas.itemconfig(money, text='Total price: ₹'+str(total_price))
    def subr():
        sub(boxQuantity)
        if boxQuantity.get().isdigit() and int(boxQuantity.get()) > 0:
            user_selections[item] = int(boxQuantity.get())
            notif('1 kg of ' + str(item)+' removed from the cart.')
        else:
            notif("Please enter a valid quantity!")

        canvas.itemconfig(price, text = '₹'+str(int(menu[item][1]* user_selections[item])))

    button('+',316,y+115,35,35,addr,bg_col='#0e1342', font='Consolas 16 bold')
    button('-',400,y+115,35,35,subr,bg_col='#0e1342', font='Consolas 16 bold')
    button('Remove from cart', 1650,y+115,35,130, lambda: removeCart(item),bg_col='red', font='Consolas 10 bold',col='white')

#pages

def homeScreen():

    text("Groceries", cenx, 55, '#dbbe7b', 75, font='Lucida Handwriting')
    text("Fresh fruits and veggies at your doorstep!", cenx, 140, size = '25',font='Lucida Sans')
    cartImage = Image.open('Assets\Cart.png')
    resizeCartImage = cartImage.resize((100,100))
    img = ImageTk.PhotoImage(resizeCartImage)
    canvas.photos.append(img)
    imgButton(img,1750,50,cartScreen)
```

```
    boxx=15
    boxy=230
    count = 0
    for key in menu:
        itemBox(key,boxx,boxy)
        boxx+=315
        count+=1
        if count==6:
            boxx=15
            boxy+=420
def delivScreen():
    createCanvas()
    text("Delivery", cenx, 55, '#dbbe7b', 75, font='Lucida Handwriting')
    m=calc()
    text("Total price is "+ m,cenx,250,size=30)
    text("Please enter your address below: ", cenx,290,size=30)
    bomb_tower = inputBox(cenx-450,340,50,25)
    def deliver():
        if bomb_tower.get() != "" :
            time = str(random.randint(10,30))
            notif('Your order will be delivered in '+time+' minutes. Thank you!')
        else:
            notif("Please enter a valid address.")
    button('Place Order',cenx-150,390,30, 250,bg_col='green',col='white',command=deliver)
def cartScreen():
    createCanvas()

    text("Your Cart", cenx, 55, '#dbbe7b', 75, font='Lucida Handwriting')
    boxy=230
    count = 0
    bar=ttk.Scrollbar(root,command=canvas.yview, orient=tk.VERTICAL)
    bar.pack(side=tk.RIGHT, fill=tk.Y)
    canvas.configure(yscrollcommand=bar.set)

    for key in user_selections:
        cartBox(key,boxy)
        boxy+=230



    button('Calculate Bill',100,boxy+50,bg_col='green',col='white',h=40,w=130,command=calc)
    button('Click to order',100,boxy+120,bg_col='cyan',col='white',h=40,w=130,command=delivScreen)
    text('',6,boxy+200)
    canvas.configure(scrollregion=canvas.bbox("all"))


homeScreen()
root.mainloop()
```

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Thanks !!