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Computer Science Project

Shape

Description automatically generated with low confidence

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certificate

This is to certify that "Jyotin Singh Thakur" student of class 12th G has successfully completed their Computer Science project on "Cybermart" under the guidance of "Miss Kiran Bala".

Miss Kiran Bala External Examiner

ACKNOWLEDGEMENT



I would like to express my gratitude to my computer sciences teacher, Miss Kiran Bala who gave me this golden opportunity to work on this wonderful project, which encouraged me to research and analyse real-world problems. I am thankful that I was able to present a useful solution for difficult times like the covid pandemic, where online shopping has become so prevalent.

Secondly, I would also like to thank my group members, Diva Pandey and Kashish Adhlakha who have equally contributed in completing this project within the given time frame.

hardware and software requirement



Operating System : MacOS/Windows 10

Platform : Python IDLE/Thonny

Language : Python

Processor : Dual -Core Intel Core i5

RAM : 8 GB 1600 MHz DDR3

MAIN.PY



import EditandAppend

import RandD

import ErrorDetect

import CustomerData

import csv

print('Welcome!')

User=input("Are you a customer or employee ('0' for customer and '1' for employee): ")

#Asking User whether they are a customer

if User not in ['0','1']:

User=ErrorDetect.err(User,['0','1'],"Enter '0' for customer and '1' for employee")

#Customer interface

if User=='0':

DWBM='1'

while DWBM=='1':

RandD.RandD("AISLES.csv")

Aisle=input("Enter the corresponding number for the aisle you want to browse: ")

if Aisle not in [str(i) for i in range(1,6)]:

Aisle=ErrorDetect.err(Aisle,[str(i) for i in range(1,6)],"Put values from 1 to 5")

if Aisle == '1':

RandD.RandD("FruitsAndVeggies.csv")

CustomerData.CustData("FruitsAndVeggies.csv")

elif Aisle == '2':

RandD.RandD("Dairy.csv")

CustomerData.CustData("Dairy.csv")

elif Aisle == '3':

RandD.RandD("PULSES AND STAPLES.csv")

CustomerData.CustData("PULSES AND STAPLES.csv")

elif Aisle == '4':

RandD.RandD("Packed Foods.csv")

CustomerData.CustData("Packed Foods.csv")

else:

RandD.RandD("Beverages and Desserts.csv")

CustomerData.CustData("Beverages and Desserts.csv")

DWBM=input("Do you want to browse more ('1' for yes, '0' for no): ")

if DWBM not in ['0','1']:

DWBM=ErrorDetect.err(DWBM,['0','1'],"Enter '0' for no and '1' for yes")

RandD.RandD("CustData.csv")

CustomerData.CustSum()

CustomerData.CustDump()

print('Thank you for your purchase')

#Employee Interface

else:

DWTE='1'

count=0

#Acessing fields

with open('LoginID.csv') as myfile:

f=csv.reader(myfile)

Name=[k for k in f]

IDlst=[i[0] for i in Name]

#Login Attempt

while count!=3:

ID=input("Enter 6 digit login id: ")

if ID in IDlst:

break

else:

count+=1

#Alert if incorrect

else:



x=0

while x!=1:

print("Alert!")

for i in Name:

if i[0]==ID:

print(f"Welcome {i[1]}")

while DWTE=='1':

RandD.RandD("AISLES.csv")

Aisle=input("Enter the corresponding number for the aisle you want to edit: ")

if Aisle not in [str(i) for i in range(1,6)]:

Aisle=ErrorDetect.err(Aisle,[str(i) for i in range(1,6)],"Put values from 1 to 5")

if Aisle == '1':

RandD.RandD("FruitsAndVeggies.csv")

response=input("Do you want to edit(Press 0) or append(Press 1)? ")

response=ErrorDetect.err(response,['0','1'], "Press 0 to edit or 1 to append.")

if response=='1':

EditandAppend.Append("FruitsAndVeggies.csv")

else:

EditandAppend.Edit("FruitsAndVeggies.csv")

elif Aisle == '2':

RandD.RandD("Dairy.csv")

response=input("Do you want to edit(Press 0) or append(Press 1)? ")

response=ErrorDetect.err(response,['0','1'], "Press 0 to edit or 1 to append.")

if response=='1':

EditandAppend.Append("Dairy.csv")

else:

EditandAppend.Edit("Dairy.csv")

elif Aisle == '3':

RandD.RandD("Pulses and Staples.csv")

response=input("Do you want to edit(Press 0) or append(Press 1)? ")

response=ErrorDetect.err(response,['0','1'], "Press 0 to edit or 1 to append.")

if response=='1':

EditandAppend.Append("Pulses and Staples.csv")

else:

EditandAppend.Edit("Pulses and Staples.csv")

elif Aisle == '4':

RandD.RandD("Packed Foods.csv")

response=input("Do you want to edit(Press 0) or append(Press 1)? ")

response=ErrorDetect.err(response,['0','1'], "Press 0 to edit or 1 to append.")

if response=='1':

EditandAppend.Append("Packed Foods.csv")

else:

EditandAppend.Edit("Packed Foods.csv")

else:

RandD.RandD("Beverages and Desserts.csv")

response=input("Do you want to edit(Press 0) or append(Press 1)? ")

response=ErrorDetect.err(response,['0','1'], "Press 0 to edit or 1 to append.")

if response=='1':

EditandAppend.Append("Beverages and Desserts.csv")

else:

EditandAppend.Edit("Beverages and Desserts.csv")

DWTE=input("Do you want to edit more ('1' for yes, '0' for no): ")

if DWTE not in ['0','1']:

DWTE=ErrorDetect.err(DWTE,['0','1'],"Enter '0' for no and '1' for yes")

Randd.py



def RandD(file):

#Importing modules

import csv

#Opening target file

open\_file= open(file,'r',newline='')

read\_file= csv.reader(open\_file)

#Initial Variables

long\_1=long\_2=long\_3=long\_4=long\_5=' '

s='\*'

#Finding longest strings in each column

if file=="AISLES.csv":

for i in read\_file:

if len(long\_1)<len(i[0]):

long\_1=i[0]

if len(long\_2)<len(i[1]):

long\_2=i[1]

open\_file.seek(0)

#Printing rows

for l in read\_file:

print(l[0],' '\*(len(long\_1)-len(l[0])),s, end=' ')

print(l[1],' '\*(len(long\_2)-len(l[1])), s,end=' ')

print()

#Closing file

open\_file.close()

elif file=="CustData.csv":

for i in read\_file:

if len(long\_1)<len(i[0]):

long\_1=i[0]

if len(long\_2)<len(i[1]):

long\_2=i[1]

if len(long\_3)<len(i[2]):

long\_3=i[2]

if len(long\_4)<len(i[3]):

long\_4=i[3]

open\_file.seek(0)

#Printing rows

for l in read\_file:

print(l[0],' '\*(len(long\_1)-len(l[0])),s, end=' ')

print(l[1],' '\*(len(long\_2)-len(l[1])), s,end=' ')

print(l[2],' '\*(len(long\_3)-len(l[2])), s,end=' ')

print(l[3],' '\*(len(long\_4)-len(l[3])), s,end=' ')

print()

#Closing file

open\_file.close()

else:

for i in read\_file:

if len(long\_1)<len(i[0]):

long\_1=i[0]

if len(long\_2)<len(i[1]):

long\_2=i[1]

if len(long\_3)<len(i[2]):

long\_3=i[2]

if len(long\_4)<len(i[3]):

long\_4=i[3]

if len(long\_5)<len(i[4]):

long\_5=i[4]

open\_file.seek(0)

#Printing rows

for l in read\_file:

print(l[0],' '\*(len(long\_1)-len(l[0])),s, end=' ')

print(l[1],' '\*(len(long\_2)-len(l[1])), s,end=' ')

print(l[2],' '\*(len(long\_3)-len(l[2])), s,end=' ')



print(l[3],' '\*(len(long\_4)-len(l[3])), s,end=' ')

print(l[4],' '\*(len(long\_5)-len(l[4])), s,end=' ')

print()

#Closing file

open\_file.close()

Editandappend.py



#Defining function to perform edits

def Edit(file\_name):

from ErrorDetect import err

import csv

open\_file=open(file\_name,'r',newline='')

read\_file=csv.DictReader(open\_file)

reply='1'

edits={}

Items=[r['SNo.'].lower() for r in read\_file]

Columns=['sno.','product','price','quantity per purchase','stock']

while reply.lower() in ['y','yes','1']:

#Asking the user for edits

try:

select=input('Enter Serial number of grocery you want to edit in this aisle:')

except:

select=err(select,Items,f'Enter value from {Items[0]} to {Items[-1]}')

#Error detection

if select.lower() not in Items:

select=err(select,Items,f'Enter value from {Items[0]} to {Items[-1]}')

column=input("Enter columns you want to edit (Seperate columns by comma): ")

column= column.lower().split(',')

#Error detection

for i in column:

if i not in Columns:

column=err(column,Columns,"Column not in table OR Columns not seperated by comma")

#Creating dictionary to store edits

edits\_column={}

for i in column:

value=input(f"Enter revised value of {i}: ")

edits\_column[i.title()]=value

edits[select]=edits\_column

reply=input("Do you want to edit more in this Aisle (Yes--1/No--0):")

open\_file.close()

#Opening target file and recording old data

with open(file\_name,'r', newline='') as open\_file:

read\_file=csv.DictReader(open\_file)

ndata=[{'SNo.':'SNo.','Product':'Product','Price':'Price','Quantity Per Purchase':'Quantity Per Purchase','Stock':'Stock'}]

for i in read\_file:

ndata.append(i)

#Performing edits

for rows in ndata:

if rows['SNo.'] in edits:

for j in edits[rows['SNo.']]:

rows[j]=edits[rows['SNo.']][j]

#Overwriting new data

with open(file\_name,'w') as open\_file:

write\_file=csv.DictWriter(open\_file,['SNo.','Product','Price','Quantity Per Purchase','Stock'])

write\_file.writerows(ndata)

#Defining function to perform appends

def Append(file\_name):

#Importing files

from ErrorDetect import err

import csv

#Creating list with all Serial Numbers

open\_file=open(file\_name,'r', newline='')

read\_file=csv.reader(open\_file)

Items=[r[0] for r in read\_file]



open\_file.close()

#Appending data to the file

#Opening files

open\_file=open(file\_name,'a+', newline='')

read\_file=csv.reader(open\_file)

write\_file=csv.writer(open\_file)

#Defining Variables

reply='1'

n=len(Items)

#Asking for row values

while reply.lower() in ['y','yes','1']:

column=['product','price','quantity per purchase','stock']

row=[n]

for i in column:

field=input(f'Enter {i}: ')

row.append(field)

write\_file.writerow(row)

reply=input("Do you want to add more in this aisle ('1' for yes, '0' for no): ")

if reply not in ['0','1']:

reply=err(reply,['0','1'],"Enter '0' for yes and '1' for no")

n+=1

open\_file.close()

Errordetect.py



def err(input\_var,paralist,reason):

#Initial variables

x=0

#Defining conditions for various data types to be used

#String

if type(input\_var)== str:

while input\_var not in paralist:

input\_var=input(f'Enter appropiate value ({reason}): ')

#List

elif type(input\_var)== list:

while x==0:

input\_var=input(f'Enter appropiate value ({reason}): ')

input\_var= input\_var.lower().split(',')

for i in input\_var:

x=1

if i not in paralist:

x=0

break

#Integer

else:

while input\_var not in paralist:

input\_var=int(input(f'Enter appropiate value ({reason}): '))

#Returning value

return input\_var

cUSTOMERdata.py



import ErrorDetect

import csv

def CustDataInner(ReadFile):

#Importing modules and creating variables

open\_file=open(ReadFile,'r',newline='')

open\_temp\_file=open('temp.csv','w+')

read\_file=csv.DictReader(open\_file)

write\_file\_temp=csv.DictWriter(open\_temp\_file, ['SNo.','Product','Price','Quantity Per Purchase','Stock'])

SNoList=[int(i["SNo."]) for i in read\_file]

SNo=None

try:

SNo=int(input("Enter SNo. of item you want to select: "))

except:

SNo=ErrorDetect.err(SNo,SNoList,f'Enter value from {SNoList[0]} to {SNoList[-1]}')

if SNo not in SNoList:

SNo=ErrorDetect.err(SNo,SNoList,f'Enter value from {SNoList[0]} to {SNoList[-1]}')

open\_file.seek(0)

for i in read\_file:

if i["SNo."]=='SNo.':

continue

if int(i["SNo."])==SNo:

global x

x=int(i["Stock"])

Stock=None

try:

Stock=int(input("Enter quantity you want "))

except:

Stock=ErrorDetect.err(Stock,list(range(x+1)),f'Enter value from 0 to {x}')

if Stock not in list(range(x+1)):

Stock=ErrorDetect.err(Stock,list(range(x+1)),f'Enter value from 0 to {x}')

open\_file.seek(0)

#Writing data to list object after reduction in stock value

#Customer would buy certain items hence their stock needs to be changed

new\_data=[{'SNo.':'SNo.','Product':'Product','Price':'Price','Quantity Per Purchase':'Quantity Per

Purchase','Stock':'Stock'}]

for i in read\_file:

if i["SNo."]==str(SNo):

i['Stock']=int(i['Stock'])-Stock

new\_data.append(i)

#Closing files

open\_file.close()

#Opening target file from where customer has selected groceries and Customer Billing file

open\_file1=open(ReadFile, 'w')

open\_file2=open("CustData.csv", 'a',newline='')

write\_file1=csv. DictWriter(open\_file1,['SNo.','Product','Price','Quantity Per Purchase','Stock'])

write\_file2=csv.writer(open\_file2)

#Writing data in list object to target file

for i in new\_data:

write\_file1.writerow(i)

#Writing purchase to customer billing file

for i in new\_data:

if i['SNo.']==str(SNo):

y=[]

lst=list(i.values())

for j in lst[1:4]:

y.append(j)



y.append(Stock)

write\_file2.writerow(y)

#Closing file

open\_file1.close()

open\_file2.close()

def CustData(ReadFile):

response=1

while response == 1:

CustDataInner(ReadFile)

response=’None’

try:

response=int(input("Do you want to select more products from this Aisle (0--no, 1--yes):

"))

except:

response=ErrorDetect.err(response,[0,1],"Enter '0' for no and '1' for yes")

if response not in [0,1]:

response=ErrorDetect.err(response,[0,1],"Enter '0' for no and '1' for yes")

#Function to calculate total cost of purchase

def CustSum():

open\_file=open("CustData.csv",'r', newline='')

reader\_obj=csv.reader(open\_file)

total=0

open\_file.seek(0)

for i in reader\_obj:

if i[0]=="Product":

continue

else:

total+=int(i[1])\*int(i[3])

print("Your bill total is ",total)

#Function to delete previous purchase data

def CustDump():

open\_file=open("CustData.csv", 'w')

write\_file=csv.writer(open\_file)

write\_file.writerow(['Product','Price','Quantity Per Purchase','Amount Purchased'])

output



Customer interface

A picture containing table

Description automatically generatedText

Description automatically generated with low confidence

Text

Description automatically generated with medium confidence



Employee Interface

(Incorrect Login Attempt)

Text, letter

Description automatically generated

(Correct Login Attempt)



A picture containing text

Description automatically generated

A picture containing table

Description automatically generated



A picture containing text, receipt

Description automatically generated

Table

Description automatically generated

