ARMY PUBLIC SCHOOL, KOLKATA

ELECTRICITY BILL ING MANAGEMENT

For AISSCE 2020-21 Examination

ELECTRICITY BILLING MANAGEMENT SYSTEM

NAME : **Ayush Saha, Dhruva Shaw, Smyan Kotkar**

CLASS : **12-SC-1**

SESSION : **2020-2021**

AISSCE ROLL NO :

CERTIFICATE

This is to certify that the following students of

CLASS 12-SC-I have prepared the report on the project

ELECTRICITY BILLING MANAGEMENT SYSTEM

The report is the result of their efforts & endeavours. The report is found worthy of acceptance as final project report for the subject Computer Science of Class XII.

They have prepared the report under my guidance.

Ayush Saha	XII / Science-I	
Dhruva Shaw	XII / Science-I	
Smyan Kotkar	XII / Science-I	

(Mrs. Yamini Azhaguvel)

PGT (Computer Science)

ACKNOWLEDGEMENT

We would like to express a deep sense of thanks & gratitude to my project guide Mrs Yamini Azhaguvel, for guiding me immensely through the course of the project.

She always evinced keen interest in my work. Her constructive advice & constant motivation has been responsible for the successful completion of this project.

We also thank our parents for their motivation & support. I also take this opportunity to thank our classmates and team members for their timely help & support in compilation of this project.

Lastly, I would like to thank all those who had helped directly or indirectly towards the completion of this project.

With Thanks,

- ***DHRUVA SHAW***
- ***AYUSH SAHA***
- ***SMYAN KOTKAR***

CONTENT

MODULES USED

I. Inbuilt modules :

- **sys** : The system module is used to close the interpreter programmatically using sys.exit()

- **mysql-connector** : This module is used to perform the backend operations with the MySQL database.

- **os** : This module is imported in the program clear the terminal screen programatically, get the current working directory and make the program Operating System independent.

- **json** : This module is used to import data from .json files to the program.

- **math** : From this module the ceil function is imported to roundoff the generated value for the electric bill.

- **smtplib** : This module is imported to send the electric bills to respective customer.

- **email** : This module is imported to work accordance with smtplib module and ease the template making of the emails.

- **datetime** : This module is imported to get the current time.

- **csv** : This module is imported to read and write the csv files.

- **hashlib** : This module is imported to hash the password using the md5 hash algorithm and return the hash in a hexadecimal number

- **time** : From this module sleep function is imported to suspend execution of the calling thread for the given number of seconds

- **cProfile** : This module is to provide a deterministic profiling of the python program
- **re** : From the regular expression module compile function imported and is used to compile a regular expression pattern into a regular expression object
- **pyinstaller** : This is used to convert the python file to exe file.

2. Custom (user made) Modules

- **adminBillGen** : This contains function for the Admin Homepage.

- **clearscreen** : This contains the function for the clearscreen based on the operating system.

- **customerView** : This contains the function for the billing the view bill and this is accessible to customer only.

- **billEmail** : This contains the function for the emailing the bill to respective customer.

- **billGen** : This contains the function for to generat the bill for the corresponding month.

- **login** : This function to logged into the user in correct department.

- **logout** : This contains the function to logout the user.

WORKING DESCRIPTION

- **FILES GENERATED:**

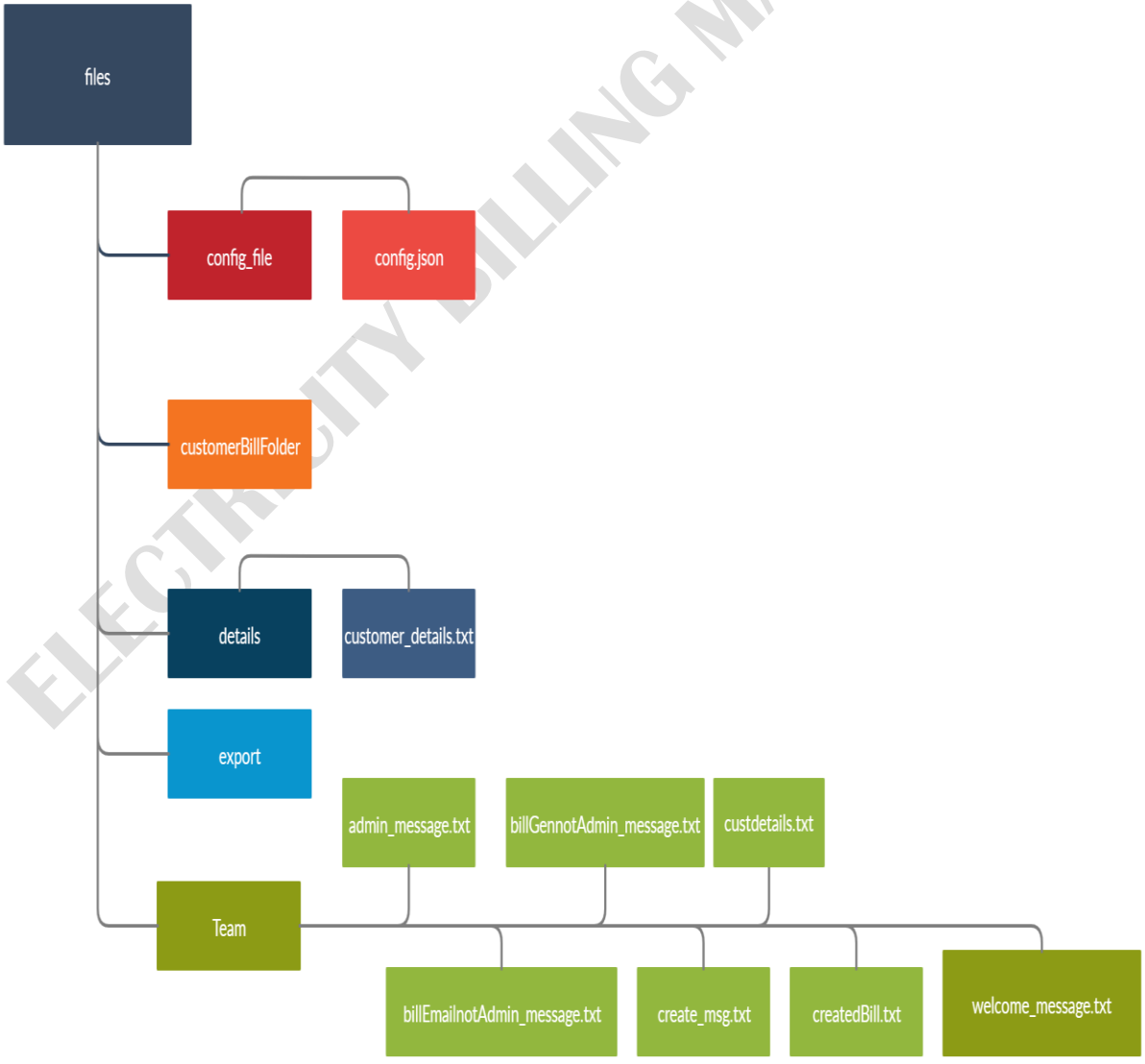
  config.json, customer_details.csv, employee_details.csv, admin_message.txt, billEmailnotAdmin_message.txt, billGennotAdmin_message.txt, create_msg.txt, createdBill.txt, custdetails.txt, welcome_message.txt
  An exe file is generated for distribution.

- **DIRECTORY STRUCTURE :**

  The master folder contains a folder named 'files'.

  Then the files folder contains the following 5 folder.

  config_file'', 'customerBillfolder', 'details', 'export', 'messages'



The program has been designed to be operated in 4 ways:

1. Admin
2. Bill Generation
3. Bill Delivery
4. Customer View Bill

Admin : It part has the privileges of a super user. It has a power to create, delete and edit, etc.

Bill Generation : This has a privilege to generate electricity bills only.

Bill Delivery : This can just email the bill to respective customers address.

Customer View Bill : This portal is only of the consumer to view the bill for the current month.

This is a all in one program where electricity department can enter the data through the MySQL database, where a consumer can view its own bill just by using this program.

Features:

It has a a Admin Panel which the super user can access to enter the data of the consumer to database given by the electricity meter department in form of a csv file. It has a login system where the password are hashed using md5 hash alogoritm then the hash are converted to the hexadecimal units. The super user can also add the details of a new operator or delete its details.

It also a configurable json file, and configure the contents of a program.

This program is also Operating System independent.

It also has a portal for the Bill Generation and Bill Delivery Department where the respective operator can generate the electricity bill with help of a just only one command and also deliver the bill to customers using their emails.

It has also portals for the customers where a consumer can enter its consumer no and get the bill details for the current month.

Cons :

A constant Internet Connection is required.

The database of the consumer has to be constantly updated by the admin every month through csv files.

And in the customers or consumer portal in case of any emergency or help requiring situation one cannot contact any authority.

CODING

#mainRun.py

```
from datetime import datetime

from os import system

from login import welcome_message

from clearscreen import clear

import mysql.connector as c


connection = c.connect(host='localhost', database='electricity_bill', user='root', password='')

db = connection.cursor()


#__main__

#Checks if the user is already logged in

clear()


db.execute(f'UPDATE login SET session_out="{datetime.now()}" WHERE session_out="0000%"')

connection.commit()

welcome_message()
```

#login.py

```
import hashlib

import json

import sys

import time

from datetime import datetime

from os import path


import mysql.connector as c


from adminBillGen import adminHome

from billGen import bilGenHome

from clearscreen import clear

from billEmail import bilEmailHome

from customerView import consumerDetails


connection = c.connect(host='localhost', database='electricity_bill', user='root', password='')

db = connection.cursor()



#Opening of config.json file

THIS_FOLDER = path.dirname(path.abspath(__file__))

my_file = path.join(THIS_FOLDER,'files','config_file', 'config.json')


with open(my_file, 'r') as c:

    params = json.load(c)["params"]
```

```
#Welcome message
def welcome_message():
    '''The first welcome message'''
    clear()

    #The welcome message
welcome_message =open('files/messages/welcome_message.txt','r').read()
print(welcome_message.format(params['company_name']))

#Calling the login_deptno function
    login_deptno()

#Login system
######################################################################
# The function 1 and 2 are related to each other
# The first function catches exception and the second function is for validation

# (1) Makes the user to get logged in into the correct deptno
def login_deptno(message=''):
    '''Makes the user to get logged in into the correct deptno'''
    while True:
        print(message)
        try:
```

```
            deptno_in = int(input('Please enter the department no.\n'))
            if deptno_in == 15675812:
                consumerDetails()
            else:
                logincheck(deptno_in)
            break
        except ValueError:
            print()
            print('Please Enter a number not alphabets')


# (2) Checks the login (Validation)
def logincheck(deptno):
    '''This is a function to check if the user exists and gets him logged in'''

    #Department No dictionary
    db.execute('SELECT dept_no FROM dept')
    sqlquery = db.fetchall()
    deptno_dict = (i for i in sqlquery)

    #Check if the department no entered is correct
    newline='\n'
    if (deptno,) not in deptno_dict:
        login_deptno(f'{deptno} Department No is not valid {newline} Please enter a valid department no !')
    else:
```

```
    login_user(deptno)


##########################################################################################
#########################################

# Similarly here the function 3 and 4 are realated to each other

# the 3rd function is used to logged the user anser in and 4th function is used for creatting a session and

# then give the user out the appropriate page



#  (3) Make user logged in

def login_user(deptno):

   '''This is the login screen'''

   clear()


   print()

   print('Now please enter your login credentials')

   print('---------------------------------------')

   userid=input('Please enter your USERID\n')

   print('---------------------------------------')

   password=input('Please enter your password\n')

   hashpass = hashlib.md5(password.encode())


   db.execute(f'SELECT * FROM user WHERE password="{hashpass.hexdigest()}" AND dept_no="{deptno}" AND useradmin_id="{userid}";')

   query = db.fetchall()
```

```
    if query==None or query==[]:
        print('The given credentials where wrong')
        print('Please wait for 2 sec!')
        time.sleep(2)
        welcome_message()
    else:
        login_user_in(userid,hashpass.hexdigest(),deptno)



#  (4) Checks the logged in user branch and gives out the appropriate page
def login_user_in(userid,hashpass,deptno,work=None):
    '''Checks the logged in user branch and gives out the appropriate page'''
    logintime = datetime.now()   #Creating session

    db.execute(f'SELECT branch FROM user WHERE useradmin_id="{userid}"')
    branch=db.fetchall()

    if work==None:
        db.execute(f'INSERT INTO login(userid,branch,session_in,dept_no) VALUES("{userid}","{branch[0][0]}","{logintime}","{deptno}")')
        connection.commit()
    else:
        db.execute(f'UPDATE login set session={datetime.now()} WHERE userid="{userid} AND session_out="0000%"')

    branchget = userid.split("#")
    print('Please wait you being redirected there! in 3 sec.....')
```

```
    time.sleep(3)


    #Validation
    branch = str(branchget[1])
    if branch=='ADMIN':
        adminHome(userid,logintime)
    elif branch=='BILL GENERATION':
        bilGenHome(userid,logintime)
    elif branch=='BILL DELIVERY':
        bilEmailHome(userid,logintime)
##############################################################################
```

#logout.py

```
import sys
import time
from datetime import datetime
import mysql.connector as c
from clearscreen import clear


connection = c.connect(host='localhost', database='electricity_bill', user='root', password='')
db = connection.cursor()


#Logout function
def logout(userid):
    db.execute(f'UPDATE login SET session_out="{datetime.now()}" WHERE userid="{userid}" AND session_out="0000%"')
```

```
    connection.commit()


    clear()


    print(f'You have been logged out!!! {userid}')
    print('The window is closing the 2 sec')
    time.sleep(2)


    clear()
    sys.exit()
```

#clearscreen.py

```
from os import name, system


# define our clear function
def clear():
    # for windows
    if name == 'nt':
        _ = system('cls')
    # for mac and linux(here, os.name is 'posix')
    else:
        _ = system('clear')
```

#customerView.py

```
import mysql.connector as c
import datetime
```

```
from os import path
import json
import sys
import time
from clearscreen import clear


connection = c.connect(host='localhost', database='electricity_bill', user='root', password='')
db = connection.cursor()


#Opening of config.json file
THIS_FOLDER = path.dirname(path.abspath(__file__))
my_file = path.join(THIS_FOLDER,'files','config_file', 'config.json')


with open(my_file, 'r') as c:
    params = json.load(c)["params"]



def consumerDetails():
    '''This function is the view page for the customers bill generation'''


    clear()


    db.execute('SELECT consumerno from customer')
    detailsconsumerno = db.fetchall()


    mydate = datetime.datetime.now()
```

```
    while True:
        try:
            consumerno = int(input('Please enter your consumer no.\n'))
        except ValueError:
            print()
            print("Please enter a valid consumer no")

        if (consumerno,) not in detailsconsumerno:
            print()
            print('The consumer no does not exists!! \nPlease enter a valid consumer no')
        else:
            break

    db.execute(f'SELECT * from customer where consumerno={consumerno} AND month="{mydate.strftime("%B")}"')
    custdetails = db.fetchall()[0]

    if custdetails[-1]==0:
        print('No bill is not generated for this month!')
    else:
        my_file1 = path.join(THIS_FOLDER,'files','messages', 'custdetails.txt')
        with open(my_file1, 'r') as c1:
            fileread = c1.read()

print(fileread.format(params['company_name'],custdetails[3],custdetails[1],custdetails[2],custdetails[4],custdetails[5],custdetails[-1],custdetails[8],custdetails[9]))
```

```
    print()
    print('Press anything the exit!!!')
    input()
    print(f"Thank you for using the {params['company_name']} ELECTRICITY CUSTOMER DEPARTMENT SERVICES")
    time.sleep(2)
    sys.exit()
```

#billGen.py

```
import json
import time
from datetime import datetime
from math import ceil
from os import getcwd, path
import mysql.connector as c

from clearscreen import clear
from logout import logout

connection = c.connect(host='localhost', database='electricity_bill', user='root', password='')
db = connection.cursor()

#Opening of config.json file
THIS_FOLDER = path.dirname(path.abspath(__file__))
my_file = path.join(THIS_FOLDER,'files','config_file', 'config.json')
```

```
with open(my_file, 'r') as c:
    params = json.load(c)["params"]


def bilGenHome(userid,logintime):
    '''This is the bill generation department homepage function'''


    mydate = datetime.now()
    clear()


    #The bill generation welcome message
    billGenAdmin_message = open('files/messages/billGennotAdmin_message.txt','r').read()
    funcAdminTuple = ('01#02','00#01')



print(billGenAdmin_message.format(params['company_name'],userid,logintime,datetime.n
ow(),mydate.strftime("%B")))
    userinput = input()



    if userinput not in funcAdminTuple:
        clear()
        bilGenHome(userid,logintime)


    else:
        if userinput=='01#02':
            generateBill(userid,logintime)
```

```
    elif userinput=='00#01':
        logout(userid)



def generateBill(userid,logintime):
    mydate= datetime.now()
    month = mydate.strftime("%B")

    db.execute(f'SELECT unit_consumed,consumerno FROM customer WHERE month="{month}" AND amountgen=0.00000')
    consumerno = db.fetchall()

    #Now checking the database if the meter department has given the data
    if consumerno==[] or consumerno==None:
        print()
        print('No data for this month were provided by the Meter Department!')
        print('OR')
        print('The data was was generated already for this month!')
        print('Please contact your Meter Department!')
        time.sleep(2)
        bilGenHome(userid,logintime)

    db.execute(f'SELECT unit_consumed,consumerno FROM customer WHERE month="{month}"')
    consumerno = db.fetchall()
```

```
    #Getting the prevous reading and current reading
    counter=0
    for x,y in consumerno:
        db.execute(f'SELECT * From customer WHERE unit_consumed={x} AND consumerno={y}')
        custdetails = db.fetchall()[0]

        amountgen,rebate,aduj = Bill_Calc1(x)
        db.execute(f'UPDATE customer SET amountgen={amountgen} WHERE consumerno={y}')
        connection.commit()
        print(f'THE BILL FOR THE CONSUMER NO {y} IS GENERATED Rs.{amountgen}')
        print()

        counter+=1

        with open(path.join(getcwd(),'files','messages','createdBill.txt'),'r') as fileCreated:
            fileReadCreated = fileCreated.read()

            with open(path.join(getcwd(),'files','customerBillFolder',f'{x}{y}.txt'),'w+') as fileBillCreated:
fileBillCreated.write(fileReadCreated.format(params['company_name'],custdetails[3],custdetails[1],custdetails[2],custdetails[4],custdetails[5],rebate,aduj,amountgen,custdetails[8],custdetails[9]))
            # UPDATE `customer` SET `amountgen` = '925.60001' WHERE `customer`.`id` = 1

    print(counter, " bills generated.")
```

```
    input('Press anything to continue')
    time.sleep(2)
    bilGenHome(userid,logintime)


def Bill_Calc1(unit):
    meter = 10              #Meter Rent
    MVCA = 60               # Metre Load charge
    fixedChrge = 100        #This is the fixed charge
    untstr = str(unit)[-1]   #This is the Adjustment Chrges


    if((unit>=1)and(unit<=50)):#between 1 - 50 units
        return (ceil(unit*4.89)+meter+MVCA+fixedChrge+int(untstr)-1,1,untstr) #At the end the price deducted is rebate


    elif((unit>50)and(unit<=150)):#between 50 - 150 units


        return                  (ceil((50*4.89)+(unit-50)*5.4)+meter+MVCA+fixedChrge+int(untstr)-1.4,1.4,untstr) #At the end the price deducted is rebate


    elif((unit>150)and(unit<=250)):#between 150 -  250 units
        return                                          (ceil((50*4.89)+((150-50)*5.4)+(unit-150)*6.41)+meter+MVCA+fixedChrge+int(untstr)-1.5,1.5,untstr) #At the end the price deducted is rebate


    elif(unit>250):         #above 250 units
        return                                  (ceil((50*4.89)+((150-50)*5.4)+((250-150)*6.41)+(unit-250)*7.16)+meter+MVCA+fixedChrge+int(untstr)-1.6 ,1.6,untstr) #At the end the price deducted is rebate
```

```
    else:
        return (0,0,0)
        #amount=0;
```

#billEmail.py

```
import json
import os
import smtplib
from email.mime.multipart import MIMEMultipart
from email.mime.text import MIMEText
from datetime import datetime
from os import path, getcwd
import time

import mysql.connector as c

from clearscreen import clear
from logout import logout

connection = c.connect(host='localhost', database='electricity_bill', user='root', password='')
db = connection.cursor()

#Opening of config.json file
THIS_FOLDER = path.dirname(path.abspath(__file__))
my_file = path.join(THIS_FOLDER,'files','config_file', 'config.json')
```

```
with open(my_file, 'r') as c:
    params = json.load(c)["params"]


def bilEmailHome(userid,logintime):
    '''This is the bill generation department homepage function'''


    mydate = datetime.now()
    clear() #Clear the screen


    billGenAdmin_message = open('files/messages/billEmailnotAdmin_message.txt','r').read()
    funcAdminTuple = ('01#02','00#01')



print(billGenAdmin_message.format(params['company_name'],userid,logintime,datetime.now(),mydate.strftime("%B")))
    userinput = input()



    if userinput not in funcAdminTuple:
        clear() #Clear the screen
        bilEmailHome(userid,logintime)


    else:
        if userinput=='01#02':
            sendmailtocustomers(userid,logintime)
        elif userinput=='00#01':
            logout(userid)
```

```
def sendmailtocustomers(userid,logintime):
    port, smtp_server = 465, 'smtp.gmail.com'
    login, password = params['email'], params['password_email']

    mydate = datetime.now()

    db.execute(f'SELECT email,consumername, consumerno FROM customer WHERE month="{mydate.strftime("%B")}"')
    data = db.fetchall()

    message = MIMEMultipart()
    message["from"] = login

    error,emailno = 0,0
    for x,y,z in data:
        message["subject"] = f"Your electricity bill has been generated for the month {mydate.strftime('%B')} ({y})"

        db.execute(f'SELECT unit_consumed FROM customer WHERE month="{mydate.strftime("%B")}" AND consumerno="{z}"')
        unitsConsumed = db.fetchall()[0][0]
        try:
            with open(path.join(getcwd(),'files','customerBillFolder',f'{unitsConsumed}{z}.txt'),'r') as bill:
                body = bill.read()
```

```
            with smtplib.SMTP(smtp_server, port) as server:
                server.login(login, password)
                server.sendmail(message["from"], x, body)
                print(f"Email (BILL) sent to {y}")
                print()
                emailno+=1
        except:
            print('There was some error!')
            print()
            error+=1

print(emailno, " Email sent!")
print("With ",error," errors!")
print()
print("Now please wait for two seconds!")
time.sleep(2)
bilEmailHome(userid,logintime)
```

#adminBillGen.py

```
import csv

import hashlib

import json

import os

import sys

import time

from datetime import datetime

from os import path, system


import mysql.connector as c

from mysql.connector import Error


from billEmail import bilEmailHome

from billGen import bilGenHome

from clearscreen import clear

from logout import logout


connection = c.connect(host='localhost', database='electricity_bill', user='root', password='')

db = connection.cursor()


#Opening of config.json file


THIS_FOLDER = path.dirname(path.abspath(__file__))

my_file = path.join(THIS_FOLDER,'files','config_file', 'config.json')
```

```
with open(my_file, 'r') as c:
    params = json.load(c)["params"]



#Admin

################################################################################
################################################################################
################################################################################
###########



def adminHome(userid,logintime):
    #Here userinput is for the functioncode coming from the other function
    '''This the admin homepage'''


    clear() #Clear the screen


    #The admin welcome message
    admin_message = open('files/messages/admin_message.txt','r').read()

print(admin_message.format(params['company_name'],userid,logintime,datetime.now()))


    userinput=input()


    funcAdminTuple = ('01#01','05#02','06#03','04#01','00#01','02#01','07#44','03#01')


    if userinput not in funcAdminTuple:
```

```
        clear() #Clear the screen
        adminHome(userid,logintime)

    else:
        if userinput=='01#01':
            create_user(userid,logintime)
        elif userinput=='05#02':
            delete_user(userid,logintime)

        elif userinput=='06#03':
            dumpdata('customer',userid,logintime)
        elif userinput=='07#44':
            dumpdata('user',userid,logintime)

        elif userinput=='03#01':
            exportdatatoTable(userid,logintime)

        elif userinput=='02#01':
            bilGenHome(userid, logintime)
        elif userinput=='04#01':
            bilEmailHome(userid, logintime)

        #For the Logout
        elif userinput=='00#01':
            logout(userid)
```

```
################################################################################
##############################################
```

```
################################################################################
##############################################
```

```
def create_user(userid23,logintime23):
    '''This function is used to create a user of the software'''
    clear() #Clear the screen
    db.execute('SELECT dept_no, deptname from dept')
    dept = db.fetchall()

    #Printing the department no
    print('    Department No      |          Department name')
    print('-------------------------------------------------------')
    for i,j in dept:
        print(f'     {i}                    {j}   ')
    print('Following are the department no')
    print()

    #Department No dictionary
    db.execute('SELECT dept_no FROM dept')
    sqlquery = db.fetchall()

    #Asking to enter the department no
```

```
    while True:
        try:
            deptno1 = int(input('Enter the department no\n'))


            if (deptno1,) in sqlquery:
                break
            else:
                print(f'{deptno1} Department No is not valid \n Please enter a valid department no
!')
        except:
            print('Enter no not characters!')


    #Asking to enter the name
    name1 = input('Please enter the name\n')
    name=''
    for i in name1:
        if i.isalpha(): name+=i


    while True:
        #ENTERING THE PASSWORD
        password1 = input('Please enter a password\n')
        password2 = input('Please retype the password\n')
        if password1==password2:
            break
        else:
            clear()
```

```
        print('Enter again the two password dosen\'t match!')


    hashpass1 = hashlib.md5(password1.encode())
    db.execute(f'SELECT deptname FROM dept WHERE dept_no={deptno1}')
    #Getting the branch name
    branch = db.fetchall()[0][0]


    # generating the useradminid
    db.execute(f'select username from user where username="{name}"')
    occurence = len(db.fetchall())
    useradminid = f'{deptno1}{occurence+1}{name[:2]}#{branch}'


    #Inserting the data into database
    db.execute(f'INSERT INTO user
VALUES(NULL,"{name}","{hashpass1.hexdigest()}","{branch}",{deptno1},"{useradminid}")')
    connection.commit()


    #The admin welcome message
    clear()
    created_message = open('files/messages/create_msg.txt','r').read()
    print(created_message.format(name,password1,branch,deptno1,useradminid))
    print()
    input('Press any key to continue')
    adminHome(userid23,logintime23)
##########################################################################
##########################################
```

```
################################################################################
##########################################

def delete_user(userid,logintime):
    clear()
    #Department No dictionary
    db.execute('SELECT useradmin_id FROM user')
    sqlquery = db.fetchall()
    #Asking to enter the department no
    while True:
        UserAdminId = input('Enter the UserAdminId \n')

        if (UserAdminId,) in sqlquery:
            break
        else:
            print(f'{UserAdminId} UserAdminId is not valid \n Please enter a valid UserAdminId !')

    db.execute(f'DELETE FROM user WHERE useradmin_id="{UserAdminId}"')
    connection.commit()
    print('The user succesfully deleted')
    time.sleep(1)
    adminHome(userid,logintime)

################################################################################
##########################################
```

```
##########################################################################################
#############################################

def dumpdata(tablename,userid,logintime):
    '''This Function is used to dump all the data from tables to a csv files'''
    QUERY = f'SELECT * FROM {tablename}'
    db.execute(QUERY)
    result=db.fetchall()
    connection.commit()

    if tablename=='user':
        filename = 'employee_details'
    else:
        filename = 'customer_details'
    BASE_DIR = os.getcwd()

    c1 = csv.writer(open(os.path.join(BASE_DIR,'files','details',f'{filename}.csv'),
'w',newline=''))
    for x in result:
        c1.writerow(x)

    print('The the data has been successfully dumped')
    print('The path of the file is:')
    print(os.path.join(BASE_DIR, 'files', 'details', f'{filename}.csv'))

    time.sleep(2)
```

```
    adminHome(userid,logintime)


################################################################################
##############################################

################################################################################
##############################################

def exportdatatoTable(userid,logintime):
    print()


    BASE_DIR = os.getcwd()


    print('YOU NEED TO WRITE THE DATA IN A CSV FILE')
    print()
    print('AND PLACE IT IN THE FOLWWING PATH:')
    print(os.path.join(BASE_DIR, 'files', 'export'))
    print()


    filename = input('Please you filename that you put in that directory \n(no need of putting
the .csv after the filename)\n')
    n=0
    csv_data = csv.reader(open(os.path.join(BASE_DIR, 'files', 'export',f'{filename}.csv'),'r'))
    for row in csv_data:
        try:
            db.execute(f'INSERT INTO customer
VALUES({row[0]},{row[1]},{row[2]},"{row[3]}","{row[4]}",{row[5]},"{row[6]}","{row[7]}","{ro
w[8]}","{row[9]}",{row[10]},{row[11]})')
```

```
            connection.commit()
        except Error: n+=1

    print(n,'number of duplicate values detected!!')
    time.sleep(2)
    adminHome(userid,logintime)
```

#config.json

```
{
    "params": {
        "company_name": "ABC",
        "email": "dhruvashaw@gmail.com",
        "password_email": "cube12345?"
    }
}
```

#admin_message.txt

```
_____
_____

                    WELCOME TO ADMIN HOMEPAGE OF {} ELECTRICIY
DEPPARTMENT

_____
_____

USERID : {}

LOGIN TIME: {}
```

CURRENT TIME: {}

WHAT YOU WANT TO DO?

_____
_____

SL NO.	FUNCTIONS AVAILABLE	FUNCTIONS CODE
(1).	REGISTER OPERATOR	01#01
(2).	DELETE OPERATOR	05#02
(3).	CHECK ALL THE CUSTOMER DETAILS	06#03
(4).	CHECK THE BILL GENERATION DEPARTMENT	02#01
(5).	CHECK the OPERATOR DETAILS	07#44
(6).	INSERT NEW CUSTOMERS USING CSV FILES	03#01
(7).	CHECK THE BILL DELIVERY DEPARTMENT	04#01
(8).	LOGOUT	00#01

_____
_____

NOW PLEASE ENTER THE FOLLOWING FUNCTION NO IN ORDER TO EXECUTE A TASK.

#billEmailnotAdmin_message.txt

_____
_____

WELCOME TO BILL DELIVERY (EMAIL) DEPARTMENT GENERATION HOMEPAGE OF {} ELECTRICIY DEPPARTMENT

_____
_____

USERID : {}

LOGIN TIME: {}

CURRENT TIME: {}

CURRENT MONTH NAME : {}

WHAT YOU WANT TO DO?

_____
_____

SL NO.	FUNCTIONS AVAILABLE	FUNCTIONS CODE
(1).	SEND THE BILLS TO CUSTOMERS FOR THIS MONTH	01#02
(2).	LOGOUT	00#01

_____
_____

NOW PLEASE ENTER THE FOLLOWING FUNCTION NO IN ORDER TO EXECUTE A TASK.

billGennotAdmin_message.txt

_____
_____

WELCOME TO BILL GENERATION DEPARTMENT HOMEPAGE OF {} ELECTRICIY DEPPARTMENT

_____
_____

USERID : {}

LOGIN TIME: {}

CURRENT TIME: {}

CURRENT MONTH NAME : {}

WHAT YOU WANT TO DO?

_____
_____

SL NO.	FUNCTIONS AVAILABLE	FUNCTIONS CODE
(1).	GENERATE THE BILL FOR THIS MONTH	01#02
(2).	LOGOUT	00#01

-

NOW PLEASE ENTER THE FOLLOWING FUNCTION NO IN ORDER TO EXECUTE A TASK.

#create_msg.txt

The user is created with the follwoing credentials:

USERNAME : {}

PASSWORD : {}

BRANCH : {}

DEPARTMENT NO : {}

USERADMIN ID : {}

createdBill.txt

{} ELECTRICITY CUSTOMER BILL

Consumer Name : {}

Meter No : {}

Consumer No : {}

Meter Load : {}

Units Consumed : {}

Meter Rent : ₹10

MVCA : ₹60

Fixed Charge : ₹100

Rebate : ₹{}

Adujustment Charges : {}

Net Amount Payable : ₹ {}

Email : {}

Address : {}

custdetails.txt

{} ELECTRICITY CUSTOMER DEPARTMENT

Consumer Name : {}

Meter No : {}

Consumer No : {}

Meter Load : {}

Units Consumed : {}

Net Amount Payable : {}

Email : {}

Address : {}

welcome_message.txt

Welcome to the {} ELECTRICITY BILL MANAGEMENT

The following departments are available for the login.

SLNO.| DEPARTMENT NAME | DEPARTMENT NO.

_____

_____

(1). | ADMIN (SUPERUSER) | 156758

(2). | ELECTRICITY BILL GENERATOR | 145759

(3). | ELECTRICITY BILL DELIVERY | 145761

(4). | CUSTOMER VIEW BILL SERVICES (ONLY CONSUMERS) | 15675812

PLEASE ENTER THE RESPECTIVE DEPARTMENT NO. IN THE INPUT FIELD GIVEN BELOW

BIBLIO GRAPHY

- https://www.codewithharry.com/
- https://www.geeksforgeeks.org/
- https://www.python.org/doc/
- https://stackoverflow.com/