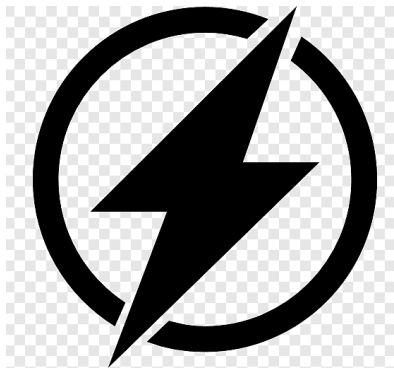


COMPUTER SCIENCE (083) PROJECT



SWET SINGH
XII A 37

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CERTIFICATE


This is to certify that Swet Singh of class XII-Science has successfully completed the project under the guidance of Ms. Susmita Basak (Computer Science teacher) during the academic year 2021-22 in practical fulfilment of Computer Science Practical Examination conducted by CBSE for AISSCE.



ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude to my teacher Ms. Susmita Basak as well as our principal Ms. Apalla Dutta who gave me the golden opportunity to do this wonderful project on the topic Electricity Billing System, which also helped me in doing a lot of Research and I came to know about so many new things I am really thankful to them.

Secondly, I would also like to thank my parents who helped me a lot in finalizing this project within the limited time frame.



PROJECT SYNOPSIS

INTRODUCTION

This project aims to formulate an electricity bill for the user and display the details month-wise for each customer. It also has provision for admins who can access the details of any customer and also enter new record or new customers into the database.


OBJECTIVES

The main objective of the project is to show Python-MySQL database connectivity to maintain electricity billing system for users.

Some aspects covered in the project are as follows:

- Formulate an electricity bill for users with each having unique customer ID.
- Identify between an admin and a user.
- Provide the bill for each month on the basis of consumption of electricity at a fixed rate.
- Let the admin enter new details for a specific user.

KEY FEATURES

- Easier to handle: Managing physical files could be tiring but managing them using a database is comparatively easy.
 - Time Saving: Finding a specific file of a customer requires some time but when the same work is performed using a database system, the same work could be done in just a few keystrokes.
- 


SYSTEM DESCRIPTION



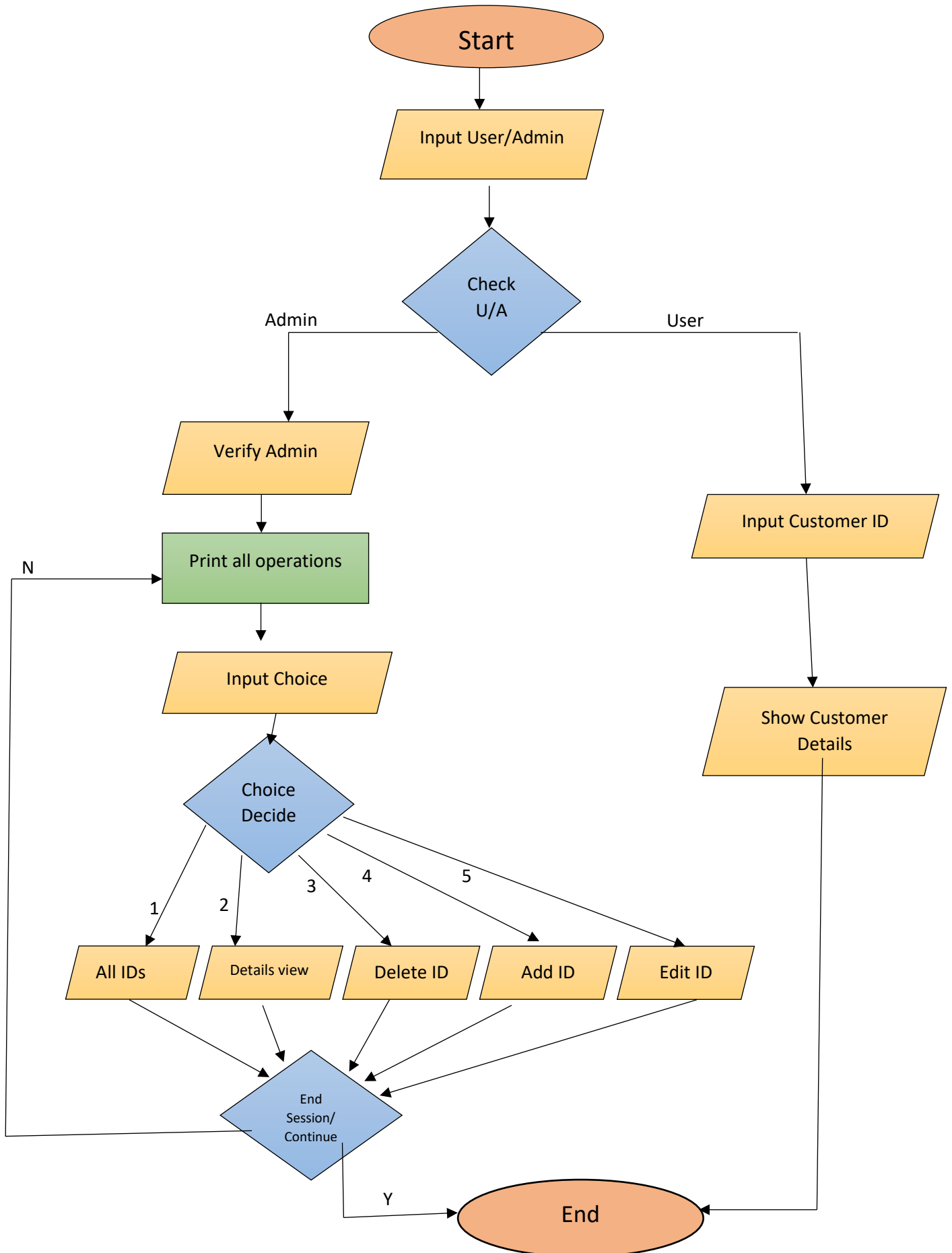
HARDWARE AND SOFTWARE INFORMATION

➤ Operating System	➤ Windows 8 and Above
➤ Processor	➤ Intel i3 10th Gen
➤ Motherboard	➤ 915,995 for Pentium
➤ RAM	➤ 4GB and Above
➤ Hard Disk	➤ 256GB and Above
➤ SSD	➤ 256GB and Above
➤ Monitor	➤ 13 inch
➤ Graphics Card	➤ Not required

SOFTWARE REQUIREMENTS

- Windows OS/ Linux/ Mac OS
 - Python 3.7
 - MySQL
 - MS Office
 - Google Chrome, Brave Browser
- 

FLOW OF PROGRAM



SOURCE CODE

```
def useradmin():                                #Selection Admin/User
    name=input("Enter whether user or admin: ")
    name=name.lower()
    if name in ["user","admin","Admin","User"]:
        return name
    else:
        print("Wrong input")
        useradmin()
def adminverify(dict):                          #Verfiy if admin or not
    User=input("Enter your username: ")
    pin=int(input("Enter the pin: "))
    if User not in dict:
        print("Wrong username or PIN")
        adminverify(dict)
    elif dict[User]==pin:
        return True
    else:
        print("Wrong username or PIN")
        adminverify(dict)
def wish():                                    #Internal while loop(FOR ADMIN)
    wish=input("Do you wish to end the session(Y/N): ")
    if wish=="Y":
        return True
    elif wish=="N":
        return False
    else:
        print("Wrong input")
        wish()
#pass mycursor as argument

def show_tables(abc,l):                       # show tables (FOR ADMIN)
    abc.execute("show tables;")
    for x in abc:
        for j in x:
            if j not in l:
                l.append(j)
def select_table(abc,name):                   #display contents of table (for
USER and ADMIN)
    word="select * from "+name+";"
    abc.execute(word)
    print("Name    Street_name    Pin_code    Month    Phone    Consume
Bill")
    for i in abc:
        print(i)
```



```

detail1="(Name char(50),Street_name char(50),Pin_code int,Month
varchar(5),Phone int,Consume int,bill int);"
detail2="(Name ,Street_name ,Pin_code ,Month ,Phone ,Consume ,bill)"
rate=50

```

```

def entry(abc,customer):                                #Entering new records FOR
ADMIN
    global rate
    global detail2
    name=input("Enter the name:")
    street=input("Enter the street name:")
    pin=int(input("Enter the PIN code:"))
    month=input("Enter the month:")
    phone=int(input("Enter the phone number:"))
    consume=int(input("Enter electricity consumed:"))
    bill=rate*consume
    value="('"+name+"','"+street+"',"+str(pin)+", '"+s
tr(month)+'"',"+str(phone)+", "+str(consume)+", "+str(bill)+')'
    word="insert into "+str(customer)+detail2+" values "+value+";"
    abc.execute(word)

```

```

def create_table(abc):                                #New table creation (FOR ADMIN)
    global detail1
    name=input("Enter customer ID:")
    word="create table "+name+" "+detail1
    word=str(word)
    abc.execute(word)

```

```

def del_table(abc):                                    #Deleting a table (For ADMIN)
    name=input("Enter the customer ID to be deleted: ")
    word="drop table "+name+";"
    abc.execute(word)

```

```

from pack import datastr

```

```

from pack import show

```

```

from pack import usad

```

```

import mysql.connector

```

```

admin={"Tarun":2255,"Karan":1616}

```

```

mydb=mysql.connector.connect(host="localhost",user="root",passwd="My
SQL123!")

```

```

mycursor=mydb.cursor()

```

```

mycursor.execute("use elecbill")

```

```

l_customer=list()

```

```

name=usad.useradmin()

```

```

if name=="user":

```

```

ID=input("Enter your customer ID: ")
show.select_table(mycursor,ID)
elif name=="admin":
    usad.adminverify(admin)
    while True:
        print("Enter 1 to see all customer IDs")
        print("Enter 2 to see customer's bill")
        print("Enter 3 to delete a customer ID")
        print("Enter 4 to create new customer ID")
        print("Enter 5 to enter new record(s) in a customer
account")

        choice=int(input("Enter choice: "))

        if choice==1:
            show.show_tables(mycursor,l_customer)
            print(l_customer)

        elif choice==2:
            ID=input("Enter the customer ID: ")
            show.select_table(mycursor,ID)

        elif choice==3:
            datastr.del_table(mycursor)
            mydb.commit()

        elif choice==4:
            datastr.create_table(mycursor)
            mydb.commit()

        elif choice==5:
            customer=input("Enter the customer ID: ")
            c="Y"
            while c=="Y":
                datastr.entry(mycursor,customer)
                c=input("Do you wish to enter more records(Y/N) : ")
            mydb.commit()

        else:
            print("Wrong input")
            cont=usad.wish()
            if cont==True:
                break
            elif cont==False:
                pass

```

OUTPUT SCREENSHOTS

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

```
PS D:\Py Programs> & E:/Apps/Python/python.exe "d:/Py Programs/sql/sql1.py"
Enter whether user or admin: admin
Enter your username: Karan
Enter the pin: 1527
Wrong username or PIN
Enter your username: Karan
Enter the pin: 1616
Enter 1 to see all customer IDs
Enter 2 to see customer's bill
Enter 3 to delete a customer ID
Enter 4 to create new customer ID
Enter 5 to enter new record(s) in a customer account
Enter choice: 1
['an22', 'sa22']
Do you wish to end the session(Y/N): N
Enter 1 to see all customer IDs
Enter 2 to see customer's bill
Enter 3 to delete a customer ID
Enter 4 to create new customer ID
Enter 5 to enter new record(s) in a customer account
Enter choice: 4
Enter customer ID:kl22
Do you wish to end the session(Y/N): N
Enter 1 to see all customer IDs
Enter 2 to see customer's bill
Enter 3 to delete a customer ID
Enter 4 to create new customer ID
Enter 5 to enter new record(s) in a customer account
Enter choice: 5
Enter the customer ID: kl22
Enter the name:Kalpesh
Enter the street name:Blair Avenue
Enter the PIN code:700049
Enter the month:Nov21
Enter the phone number:98316672
Enter electricity consumed:105
Do you wish to enter more records(Y/N) : Y
Enter the name:Kalpesh
Enter the street name:Blair Avenue
Enter the PIN code:700049
Enter the month:Dec21
Enter the phone number:98316672
Enter electricity consumed:120
Do you wish to enter more records(Y/N) : Y
Enter the name:Kalpesh
```

```

Do you wish to enter more records(Y/N) : Y
Enter the name:Kalpesh
Enter the street name:Blair Avenue
Enter the PIN code:700049
Enter the month:Jan22
Enter the phone number:98316672
Enter electricity consumed:85
Do you wish to enter more records(Y/N) : N
Do you wish to end the session(Y/N): N
Enter 1 to see all customer IDs
Enter 2 to see customer's bill
Enter 3 to delete a customer ID
Enter 4 to create new customer ID
Enter 5 to enter new record(s) in a customer account
Enter choice: 1
['an22', 'sa22', 'kl22']
Do you wish to end the session(Y/N): N
Enter 1 to see all customer IDs
Enter 2 to see customer's bill
Enter 3 to delete a customer ID
Enter 4 to create new customer ID
Enter 5 to enter new record(s) in a customer account
Enter choice: 2
Enter the customer ID: kl22
Name   Street_name   Pin_code   Month   Phone   Consume   Bill
('Kalpesh', 'Blair Avenue', 700049, 'Nov21', 98316672, 105, 5250)
('Kalpesh', 'Blair Avenue', 700049, 'Dec21', 98316672, 120, 6000)
('Kalpesh', 'Blair Avenue', 700049, 'Jan22', 98316672, 85, 4250)
Do you wish to end the session(Y/N): Y
PS D:\Py Programs> 

```

3.8.5 32-bit 0 0

```

PS D:\Py Programs> & E:/Apps/Python/python.exe "d:/Py Programs/sql/sql1.py"
Enter whether user or admin: user
Enter your customer ID: kl22
Name   Street_name   Pin_code   Month   Phone   Consume   Bill
('Kalpesh', 'Blair Avenue', 700049, 'Nov21', 98316672, 105, 5250)
('Kalpesh', 'Blair Avenue', 700049, 'Dec21', 98316672, 120, 6000)
('Kalpesh', 'Blair Avenue', 700049, 'Jan22', 98316672, 85, 4250)
PS D:\Py Programs> 

```

3.8.5 32-bit 0 0

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