

COMPUTER SCIENCE PROJECT

ONLINE TELEPHONE BILLING
SYSTEM

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XII-D

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CERTIFICATE

This is to certify that Shaurya Srinet of class XII-D, Navy Children School has successfully completed the Computer Science Project titled “Online Telephone Billing System” under my guidance and supervision for the fulfillment of curriculum of CBSE Senior Secondary Examination for the year 2020-21.

Ms. Dimple Soni

ACKNOWLEDGEMENT

I wish to express my deep gratitude and sincere thanks to my Computer Science teacher, Ms Dimple Soni for her invaluable guidance, constant encouragement, constructive comments, sympathetic attitude and immense motivation, which has sustained my efforts at all stages of the project work.

I take special pleasure in acknowledging her for her willingness in providing me with necessary motivation and providing constant support without which this project could not be completed.

Shaurya Srinet

SYNOPSIS

The purpose of this project is to help the customers to use the Computerization of Telephone Billing System. It does almost every work which is related to automatic telephone billing connection system via new connection, customer registration, viewing customer details, modifications to customer details and all works related to rate of bills, in addition to bill calculation and bill generation.

Telephone Billing System is developed as per seeing the increasing requirement to speed up the work and incorporate a new work culture. Thus a new program has been proposed to reduce manual work, improving work efficiency, saving time and to provide greater flexibility and user friendliness.

SOURCE CODE

```
import mysql.connector as mq
```

```
def menu():
```

```
print("\t\t\t ONLINE TELEPHONE BILLING SYSTEM")
```

```
print("\t\t\t
```

```
=====\\n")
```

```
print("\t\t\t\t MAIN MENU")
```

```
print("\t\t\t\t\t =====\n")
```

```
print("\t\t1. Register User \t 2. Search customer \n")
```

```
print("\t\t3. Update Customer \t 4. Generate Bill \n")
```

```
print("\t\t5. Delete Customer \t 6. Display records \n")
```

```
print("\t\t7. Help          \t 8. Exit \n")
```

```
def register():
```

```
print("\n\t\t\tNew Customer Registration.....")
```

```
print("\t\t\t=====\\n")
```

```
print("Details of the customer are phone_no, name,  
address, aadhar_no respectively:")
```

```
ph=input("Enter your Phone number:")
```

```
n=input("Enter your Name:")
```

```
add=input("Enter your Address:")
```

```
adh=input("Enter your 12-digit Aadhar Card number:")
```

```
con=mq.connect(host="localhost",user="root",password="Calvin@0203",database="telephone")
```

```
cur=con.cursor()
```

```
query="insert into
customer(Phno,name,address,aadhar_no,ftp)values({},'{'
}','{}','{}','{}')".format(ph,n,add,adh,0)
```

```
cur.execute(query)
```

con.commit()

```
print("\nSuccessfully Registered the user.....")
```

```
con.close()
```

```
def search():
```

```
print("\n\t\t\tSearch Customer.....")
```

```
print("\t\t\t=====\\n")
```

```
print("Details of the customer are phone_no, name,  
address, aadhar_no, bill,status(paid or unpaid), first time  
payer(yes:0/no:1) respectively:")
```

```
ph=input("\nEnter your phone number:")
```

```
con=mq.connect(host="localhost",user="root",password="Calvin@0203",database="telephone")
```

```
cur=con.cursor()
```

```

    query="select * from customer where
Phno={}".format(ph)
    cur.execute(query)
    res=cur.fetchall()
    if res==[]:
        print("Customer does not exist.....")
    else:
        print(res)
    con.close()

```

```

def modify():
    print("\n\t\t\tUpdate Customer Data.....")
    print("\t\t\t=====\\n")
    ph=input("\nEnter your phone number:")

```

```

con=mq.connect(host="localhost",user="root",password
="Calvin@0203",database="telephone")
    cur=con.cursor()
    query="select * from customer where
Phno={}".format(ph)
    cur.execute(query)
    res=cur.fetchall()
    if res==[]:
        print("Customer does not exist.....")

```



```

else:
    print("1. Name\n2. Address\n3. Aadhar_no")
    ch=int(input("Enter choice to update:"))
    if ch==1:
        n=input("Enter new name:")
        query="update customer set name='{}' where
phno={} ".format(n,ph)
        cur.execute(query)
        con.commit()
        print("Successfully updated name.....")
    elif ch==2:
        add=input("Enter new address:")
        query="update customer set address='{}' where
phno={} ".format(add,ph)
        cur.execute(query)
        con.commit()
        print("Successfully updated address.....")
    elif ch==3:
        adr=input("Enter new aadhar_no:")
        query="update customer set aadhar_no='{}'
where phno={} ".format(adr,ph)
        cur.execute(query)
        con.commit()
        print("Successfully updated aadhar_no.....")

```

else:

print("Please choose the correct choice.....")

con.close()

def billing():

print("\t\t\tBilling.....")

print("\t\t\t=====\\n")

ph=input("\\nEnter your phone number:")

con=mq.connect(host="localhost",user="root",password
="Calvin@0203",database="telephone")

cur=con.cursor()

query="select * from customer where
phno={}".format(ph)

cur.execute(query)

res=cur.fetchall()

if res==[]:

print("Customer does not exist.....")

else:

calls=int(input("Enter number of calls:"))

bill=0

finalbill=0

ftime=0

next50to100_=0

```
next100to150_=0
over150_=0
if res[0][6]==0:
    ftime=0
    if calls>150:
        bill=bill+(calls-150)*3 + 50*2 + 50*1
        next50to100_=50
        next100to150_=100
        over150_=(calls-150)*3

    elif 100<calls<=150:
        bill=bill+(calls-100)*2 + 50*1
        next100to150_=(calls-100)*2
        next50to100_=50

    elif 50<calls<100:
        bill=bill+(calls-50)*1
        next50to100_=(calls-50)*1

elif res[0][6]==1:
    ftime=1
    if calls>150:
        bill=bill+(calls)*3
```

```
over150_=calls*3
```

```
elif 100<calls<150:
```

```
    bill=bill+(calls)*2
```

```
    next100to150_=calls*2
```

```
elif calls<100:
```

```
    bill=bill+(calls)*1
```

```
    next50to100_=calls*1
```

```
print("\t\t\tBilling.....")
```

```
print("\t\t\t=====\\n")
```

```
old_bill=res[0][4]
```

```
if res[0][5]!="Paid":
```

```
    print("\\n\\t\\tPending bill amount:",old_bill)
```

```
    if ftime==0:
```

```
        print("\\n\\t\\tFirst 50 free calls:",0)
```

```
        print("\\n\\t\\tNext 51-100  
calls@1.0Rs/call:",next50to100_)
```

```
        print("\\n\\t\\tNext 100-150  
calls@2.0Rs/call:",next100to150_)
```

```
        print("\\n\\t\\tNext over 150  
calls@3.0Rs/call:",over150_)
```

```
    else:
```

```
print("\n\t\tTotal calls",calls)
if calls>150:
    print("\n\t\tover 150 calls is Rs3.0/call
=",over150_)
elif 100<calls<150:
    print("\n\t\tbetween 150-100 calls is
Rs2.0/call =",next100to150_)
else:
    print("\n\t\tbelow 100 calls is Rs1.0/call
=",next50to100_)
```

```
print("\n\t\tNew bill amount:  ",bill)
print("\n\t\t=====")
finalbill=old_bill+bill
print("\t\tTotal amount to pay: ",finalbill)
```

```
else:
    print("\n\t\tLast paid bill amount",old_bill)
    print("\n\t\tTotal calls",calls)
    if calls>150:
        print("\n\t\tover 150 calls is Rs3.0/call
=",over150_)
    elif 100<calls<150:
```

```
        print("\n\t\tbetween 150-100 calls is Rs2.0/call  
=",next100to150_)
```

```
    else:
```

```
        print("\n\t\tbelow 100 calls is Rs1.0/call  
=",next50to100_)
```

```
    print("\n\t\tNew bill amount:  ",bill)
```

```
    print("\n\t\t=====")
```

```
    finalbill=bill
```

```
    print("\t\tTotal bill amount:  ",finalbill)
```

```
    print("\t\t=====")
```

```
    ch=input("\nPress Y to pay the bill now or any other  
key to pay later:")
```

```
    if ch in ['Y','y','yes','Yes']:
```

```
        if ftime==0:
```

```
            query="update customer set  
bill='{ }',status='Paid',ftp=1 where  
phno={ }".format(finalbill,ph)
```

```
        else:
```

```
            query="update customer set  
bill='{ }',status='Paid' where phno={ }".format(finalbill,ph)
```

```
            cur.execute(query)
```

```
            con.commit()
```

```
print("Successfully paid the bill.....")
```

```
else:
```

```
    query="update customer set  
bill='{}',status='Unpaid',ftp=1 where  
phno={}".format(finalbill,ph)
```

```
    cur.execute(query)
```

```
    con.commit()
```

```
    print("Please make payment as soon as  
possible.....")
```

```
    con.close()
```

```
def remove():
```

```
    ph=input("\nEnter your phone number:")
```

```
con=mq.connect(host="localhost",user="root",password  
="Calvin@0203",database="telephone")
```

```
cur=con.cursor()
```

```
query="select * from customer where  
phno={}".format(ph)
```

```
cur.execute(query)
```

```
res=cur.fetchall()
```

```
if res==[]:
```

```
    print("Customer does not exist.....")
```

```

else:
    ch=input("Are you sure to delete the
customer.....Yes/No:")
    if ch in ['Y', 'y','yes', 'Yes']:
        query="delete from customer where
Phno={}".format(ph)
        cur.execute(query)
        con.commit()
        print("Successfully deleted from database.....")
    else:
        print("No changes made in the databse")
con.close()
def display():

con=mq.connect(host="localhost",user="root",password
="Calvin@0203",database="telephone")
cur=con.cursor()
query="select * from customer"
cur.execute(query)
res=cur.fetchall()
con.commit()
fh=open('tele_file.txt','w+')
for eachrecord in res:
    strformat=str(eachrecord)

```



```
fh.write(strformat)
fh.write('\n')
fh.flush()
fh.close
```

```
fh=open('tele_file.txt','r')
readr=fh.read()
print(readr)
fh.close()
con.close()
```

```
def helping():
    print("\t\t\tHelp")
    print("\t\t\t====")
    print("First 50 calls are free")
    print("51-100 calls are 1.0 Rs per call")
    print("101-150 calls are 2.0 Rs per call")
    print("Above 150 calls are 3.0 Rs per call")
```

```
while True:
    menu()
    ch=int(input("Enter your choice:"))
    if ch==1:
```

```
        register()
elif ch==2:
    search()
elif ch==3:
    modify()
elif ch==4:
    billing()
elif ch==5:
    remove()
elif ch==6:
    display()
elif ch==7:
    helping()
elif ch==8:
    exit()
else:
    print("Please choose the correct choice and try
again")

ch=input("\n\nPress y to continue and any other key
to exit:")
if ch not in ["Y","y","yes","Yes"]:
    break
```

OUTPUT

#registering customer

ONLINE TELEPHONE BILLING SYSTEM

MAIN MENU

1. Register User
2. Search customer
3. Update Customer
4. Generate Bill
5. Delete Customer
6. Display records
7. Help
8. Exit

Enter your choice:1

New Customer Registration.....

Details of the customer are phone_no, name, address, aadhar_no respectively:

Enter your Phone number:9798623217

Enter your Name:Anjali Vaish

Enter your Address:Goa

Enter your 12-digit Aadhar Card number:678924351278

Successfully Registered the user.....

Press y to continue and any other key to exit:y

MySQL 8.0 Command Line Client

```
mysql> select * from customer;
```

phno	name	address	aadhar_no	bill	status	ftp
9999847323	Shaurya Srinet	Delhi	123456781234	0	N.A.	0
9757301623	Madhav Gautam	Bangalore	123412345678	0	N.A.	0
9999071623	Arnav Neil	Noida	567812345678	0	N.A.	0
9831200841	Surabhi Tiwari	Hyderabad	567842316753	0	N.A.	0
9798623217	Anjali Vaish	Goa	678924351278	0	N.A.	0

5 rows in set (0.00 sec)

```
mysql> _
```

#searching customer

ONLINE TELEPHONE BILLING SYSTEM =====

MAIN MENU =====

- | | |
|--------------------|--------------------|
| 1. Register User | 2. Search customer |
| 3. Update Customer | 4. Generate Bill |
| 5. Delete Customer | 6. Display records |
| 7. Help | 8. Exit |

Enter your choice:2

Search Customer..... =====

Details of the customer are phone_no,name,address,aadhar_no,bill,status(paid or unpaid), first time payer(yes:0/no:1) respectively:

Enter your phone number:9757301623

[('9757301623', 'Madhav Gautam', 'Bangalore', '123412345678', 0, 'N.A.', 0)]

Press y to continue and any other key to exit:y

#updating customer

```

                                MAIN MENU
                                =====

        1. Register User          2. Search customer
        3. Update Customer        4. Generate Bill
        5. Delete Customer        6. Display records
        7. Help                   8. Exit

Enter your choice:3

                                Update Customer Data.....
                                =====

Enter your phone number:9831200841
1. Name
2. Address
3. Aadhar_no
Enter choice to update:2
Enter new address:Gurugram
Successfully updated address.....

Press y to continue and any other key to exit:y
```

 MySQL 8.0 Command Line Client

```
mysql> select * from customer;
+-----+-----+-----+-----+-----+-----+-----+
| phno   | name       | address | aadhar_no | bill | status | ftp |
+-----+-----+-----+-----+-----+-----+-----+
| 9999847323 | Shaurya Srinet | Delhi   | 123456781234 | 0 | N.A. | 0 |
| 9757301623 | Madhav Gautam  | Bangalore | 123412345678 | 0 | N.A. | 0 |
| 9999071623 | Arnav Neil     | Noida    | 567812345678 | 0 | N.A. | 0 |
| 9831200841 | Surabhi Tiwari | Gurugram | 567842316753 | 0 | N.A. | 0 |
| 9798623217 | Anjali Vaish   | Goa      | 678924351278 | 0 | N.A. | 0 |
+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

#generating bill for a first time payer(1st 50 calls free offer applicable)

```
Enter your choice:4
                        Billing.....
                        =====

Enter your phone number:9999847323
Enter number of calls:213
                        Billing.....
                        =====

                        Pending bill amount: 0

                        First 50 free calls: 0

                        Next 51-100 calls@1.0Rs/call: 50

                        Next 100-150 calls@2.0Rs/call: 100

                        Next over 150 calls@3.0Rs/call: 189

                        New bill amount:      339

                        =====
                        Total amount to pay:   339
                        =====

Press Y to pay the bill now or any other key to pay later:y
Successfully paid the bill.....

Press y to continue and any other key to exit:y
```

```
mysql> select * from customer;
```

phno	name	address	aadhar_no	bill	status	ftp
9999847323	Shaurya Srinet	Delhi	123456781234	339	Paid	1
9757301623	Madhav Gautam	Bangalore	123412345678	0	N.A.	0
9999071623	Arnav Neil	Noida	567812345678	0	N.A.	0
9831200841	Surabhi Tiwari	Gurugram	567842316753	0	N.A.	0
9798623217	Anjali Vaish	Goa	678924351278	0	N.A.	0

```
5 rows in set (0.00 sec)
```

#generating bill for same customer again(1st 50calls free offer NOT applicable)

Enter your choice:4

Billing.....
=====

Enter your phone number:9999847323

Enter number of calls:32

Billing.....
=====

Last paid bill amount 339

Total calls 32

below 100 calls is Rs1.0/call = 32

New bill amount: 32

=====

Total bill amount: 32

=====

Press Y to pay the bill now or any other key to pay later:y
Successfully paid the bill.....

Press y to continue and any other key to exit:y

```
mysql> select * from customer;
```

phno	name	address	aadhar_no	bill	status	ftp
9999847323	Shaurya Srinet	Delhi	123456781234	32	Paid	1
9757301623	Madhav Gautam	Bangalore	123412345678	0	N.A.	0
9999071623	Arnav Neil	Noida	567812345678	0	N.A.	0
9831200841	Surabhi Tiwari	Gurugram	567842316753	0	N.A.	0
9798623217	Anjali Vaish	Goa	678924351278	0	N.A.	0

5 rows in set (0.00 sec)

#refusing to pay bill generated for first time payer

Enter your choice:4

Billing.....
=====

Enter your phone number:9757301623

Enter number of calls:189

Billing.....
=====

Pending bill amount: 0

First 50 free calls: 0

Next 51-100 calls@1.0Rs/call: 50

Next 100-150 calls@2.0Rs/call: 100

Next over 150 calls@3.0Rs/call: 117

New bill amount: 267

=====
Total amount to pay: 267
=====

Press Y to pay the bill now or any other key to pay later:n
Please make payment as soon as possible.....

Press y to continue and any other key to exit:y

```
mysql> select * from customer;
```

phno	name	address	aadhar_no	bill	status	ftp
9999847323	Shaurya Srinet	Delhi	123456781234	32	Paid	1
9757301623	Madhav Gautam	Bangalore	123412345678	267	Unpaid	1
9999071623	Arnav Neil	Noida	567812345678	0	N.A.	0
9831200841	Surabhi Tiwari	Gurugram	567842316753	0	N.A.	0
9798623217	Anjali Vaish	Goa	678924351278	0	N.A.	0

5 rows in set (0.00 sec)

#finally paying total bill for customer who refused to pay before

Enter your choice:4

Billing.....
=====

Enter your phone number:9757301623

Enter number of calls:43

Billing.....
=====

Pending bill amount: 267

Total calls 43

below 100 calls is Rs1.0/call = 43

New bill amount: 43

=====
Total amount to pay: 310
=====

Press Y to pay the bill now or any other key to pay later:y
Successfully paid the bill.....

Press y to continue and any other key to exit:y

```
mysql> select * from customer;
```

phno	name	address	aadhar_no	bill	status	ftp
9999847323	Shaurya Srinet	Delhi	123456781234	32	Paid	1
9757301623	Madhav Gautam	Bangalore	123412345678	310	Paid	1
9999071623	Arnav Neil	Noida	567812345678	0	N.A.	0
9831200841	Surabhi Tiwari	Gurugram	567842316753	0	N.A.	0
9798623217	Anjali Vaish	Goa	678924351278	0	N.A.	0

5 rows in set (0.00 sec)

#deleting customer

```

                                     ONLINE TELEPHONE BILLING SYSTEM
                                     =====

                                     MAIN MENU
                                     =====

                                1. Register User           2. Search customer
                                3. Update Customer        4. Generate Bill
                                5. Delete Customer        6. Display records
                                7. Help                   8. Exit

Enter your choice:5

Enter your phone number:9999071623
Are you sure to delete the customer.....Yes/No:y
Successfully deleted from database.....

Press y to continue and any other key to exit:y
```

```
mysql> select * from customer;
```

phno	name	address	aadhar_no	bill	status	ftp
9999847323	Shaurya Srinet	Delhi	123456781234	32	Paid	1
9757301623	Madhav Gautam	Bangalore	123412345678	310	Paid	1
9831200841	Surabhi Tiwari	Gurugram	567842316753	0	N.A.	0
9798623217	Anjali Vaish	Goa	678924351278	0	N.A.	0

4 rows in set (0.00 sec)

#displaying records from file

ONLINE TELEPHONE BILLING SYSTEM

=====

MAIN MENU

=====

- | | |
|--------------------|--------------------|
| 1. Register User | 2. Search customer |
| 3. Update Customer | 4. Generate Bill |
| 5. Delete Customer | 6. Display records |
| 7. Help | 8. Exit |

Enter your choice:6

```
('9999847323', 'Shaurya Srinet', 'Delhi', '123456781234', 32, 'Paid', 1)
('9757301623', 'Madhav Gautam', 'Bangalore', '123412345678', 310, 'Paid', 1)
('9831200841', 'Surabhi Tiwari', 'Gurugram', '567842316753', 0, 'N.A.', 0)
('9798623217', 'Anjali Vaish', 'Goa', '678924351278', 0, 'N.A.', 0)
```

Press y to continue and any other key to exit:y

MySQL 8.0 Command Line Client

```
mysql> select * from customer;
```

phno	name	address	aadhar_no	bill	status	ftp
9999847323	Shaurya Srinet	Delhi	123456781234	32	Paid	1
9757301623	Madhav Gautam	Bangalore	123412345678	310	Paid	1
9831200841	Surabhi Tiwari	Gurugram	567842316753	0	N.A.	0
9798623217	Anjali Vaish	Goa	678924351278	0	N.A.	0

4 rows in set (0.00 sec)

```
mysql> _
```

#help

ONLINE TELEPHONE BILLING SYSTEM

=====

MAIN MENU

=====

- | | |
|--------------------|--------------------|
| 1. Register User | 2. Search customer |
| 3. Update Customer | 4. Generate Bill |
| 5. Delete Customer | 6. Display records |
| 7. Help | 8. Exit |

Enter your choice:7

Help

====

First 50 calls are free

51-100 calls are 1.0 Rs per call

101-150 calls are 2.0 Rs per call

Above 150 calls are 3.0 Rs per call

Press y to continue and any other key to exit:y

exit

ONLINE TELEPHONE BILLING SYSTEM

=====

MAIN MENU

=====

- | | |
|--------------------|--------------------|
| 1. Register User | 2. Search customer |
| 3. Update Customer | 4. Generate Bill |
| 5. Delete Customer | 6. Display records |
| 7. Help | 8. Exit |

Enter your choice:8

>>> |

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