

A Project Report On

“Cable TV Management System “
of
Std –XII Informatics Practices(Code-065)

Submitted by

Mr. Abhijeet Ramesh Nair (Roll No - _____)

in partial fulfilment of curriculum of
CBSE during the academic year 2023-24.

Under the guidance

Mrs. Ashwini S. Shah



Shree Krishna International School, Vapi

CBSE/AFF/430194



Shree Krishna International School, Vapi

CBSE/AFF/430194

This is to certify that the Project Title

“Cable TV Management System “

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Submitted by

Mr. Abhijeet Ramesh Nair (Roll No - _____)

has been successfully completed in partial fulfilment of curriculum of
CBSE during the academic year 2023-24.

Preparing Students for the Universe

Date of Submission : _____

**Signature
Sub-Teacher**

**Signature
Principal**

**Signature
External Examiner**

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Date :

Abhijeet Nair

XII-Science

INTRODUCTION

The Informatics Practices Project based on Cable TV Management System is a comprehensive undertaking aimed at modernizing and streamlining the management and operations of cable television services. In an era of rapidly evolving technology and an ever-increasing demand for high-quality entertainment, this project holds significant importance. It focuses on utilizing information technology to enhance the efficiency, accessibility, and user experience of cable TV services.

To store the record MySQL server 8.0.34 is used by connecting MySQL with Python through PyMySQL connector.

For the Data Handling Pandas is used and for Graphical Representation Matplotlib interface Pyplot is used.

This project is about a software for Cable TV Managers and it seeks to address various aspects of Cable TV Management, including subscriber management, content distribution, billing and payment systems, network monitoring, and customer support. By integrating cutting-edge informatic practices, it aims to create a robust and user-friendly ecosystem for both service providers and consumers. Besides this, it displays a graph of new connections of each month.

This project's significance lies in its potential to revolutionize the cable TV industry, making it more responsive to customer needs, cost-effective for providers, and technologically advanced. By using Informatic practices, it aims to create a harmonious and efficient ecosystem that benefits all stakeholders in the cable television domain.

OBJECTIVES OF THE PROJECT

The objective of this project is to let the students apply the programming knowledge into a real- world situation/problem and exposed the students how programming skills helps in developing a good software.

1. Write programs utilizing modern software tools.
2. Apply object oriented programming principles effectively when developing small to medium sized projects.
3. Write effective procedural code to solve small to medium sized problems.
4. Students will demonstrate a breadth of knowledge in Informatics Practices, as exemplified in the areas of systems, theory and software development.
5. Students will demonstrate ability to conduct a research or applied Informatics practices project, requiring writing and presentation skills which exemplify scholarly style in Informatics Practices.

CONCEPT OF SOFTWARE USE TO WRITING APPLICATION

Python Programming Language : (Frontend)

Introduction to Python :

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together.

Why we consider writing Software Application in Python :

Python is one of the top 10 popular programming languages. Python is a general purpose and high level programming language. You can use Python for developing desktop GUI applications, websites and web applications. Also, Python, as a high level programming language, allows you to focus on core functionality of the application by taking care of common programming tasks.

1) Readable and Maintainable Code

While writing a software application, you must focus on the quality of its source code to simplify maintenance and updates. The syntax rules of Python allow you to express concepts without writing additional code. At the same time, Python, unlike other programming languages, emphasizes on code readability, and allows you to use English keywords instead of punctuations. Hence, you can use Python to build custom applications without writing additional code. The readable and clean code base will help you to maintain and update the software without putting extra time and effort.

2) Multiple Programming Paradigms :

Like other modern programming languages, Python also supports several programming paradigm. It supports object oriented and structured programming fully. Also, its language features support various concepts in functional and aspect-oriented programming.

3) Compatible with Major Platforms and Systems :

At present, Python is supports many operating systems. You can even use Python interpreters to run the code on specific platforms and tools. Also, Python is an interpreted programming language. It allows you to you to run the same code on

multiple platforms without recompilation. The feature makes it easier for you to make changes to the code without increasing development time.

4) Robust Standard Library :

Its large and robust standard library makes Python score over other programming languages. The standard library allows you to choose from a wide range of modules according to your precise needs. Each module further enables you to add functionality to the Python application without writing additional code.

5) Many Open Source Frameworks and Tools : As an open source programming language, Python helps you to curtail software development cost significantly. You can even use several open source Python frameworks, libraries and development tools to curtail development time without increasing development cost. You even have option to choose from a wide range of open source Python frameworks and development tools according to your precise needs. For instance, you can simplify and speedup web application development by using robust Python web frameworks like Django, Flask, Pyramid, Bottle and CherryPy. Likewise, you can accelerate desktop GUI application development using Python GUI frameworks and toolkits like PyQt, PyJs, PyGUI, Kivy, PyGTK and WxPython.

6) Simplify Complex Software Development :

Python is a general purpose programming language. Hence, you can use the programming language for developing both desktop and web applications. Also, you can use Python for developing complex scientific and numeric applications. Python is designed with features to facilitate data analysis and visualization. You can take advantage of the data analysis features of Python to create custom big data solutions without putting extra time and effort

7) Adopt Test Driven Development :

You can use Python to create prototype of the software application rapidly. Also, you can build the software application directly from the prototype simply by refactoring the Python code. Python even makes it easier for you to perform coding and testing simultaneously by adopting test driven development (TDD) approach.

MySQL (RDBMS) :

Introduction and Concept of Database :

A database is an organized collection of structured information, or data, typically stored electronically in a computer system. A database is usually controlled by a Database Management System (DBMS). Together, the data and the DBMS, along with the applications that are associated with them, are referred to as a database system, often shortened to just database.

Data within the most common types of databases in operation today is typically modeled in rows and columns in a series of tables to make processing and data querying efficient. The data can then be easily accessed, managed, modified, updated, controlled, and organized. Most databases use structured query language (SQL) for writing and querying data.

An information system is nothing more than an organized collection of data if a DBMS is not organizing, controlling and classifying the data stored there. The ultimate objective of a DBMS is to ensure the data integrity by implementing controls and providing maintenance to data files.

Importance of a Database Management System

The use of a computer database is typically involved in efficient data management. A shared, integrated computer structure, a database stores the following:

- End-user data i.e. raw data relevant to the end user
- Metadata—the data about data, through which end-user data is integrated and managed

In case you weren't aware, metadata describes the characteristics of the data and the set of relationships linking the data present within the database. So, what is the role of a DBMS in all this? We discuss that next.

The Role of DBMS in Information Systems

A DBMS plays a crucial role in both the creation and management of data. Without a database management system, running and managing data effectively is not possible. Serving as the intermediary between the user and the database, a DBMS provides users access to files stored in a database. It provides the end user with a single, integrated view of the data, and translates all applications it receives into complex operations that

fulfil those requests. However, much of the internal complexity of the database is hidden from the users and application programs.

From enabling the sharing of data in the database among multiple applications or users to providing users with a single all-encompassing data repository, DBMS plays an important role in information systems.

What is My SQL?

MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation.

- MySQL is a database management system.
- MySQL databases are relational.
- MySQL software is Open Source.
- The MySQL Database Server is very fast, reliable, scalable, and easy to use.
- MySQL Server works in client/server or embedded systems.
- A large amount of contributed MySQL software is available

HARDWARE AND SOFTWARE REQUIREMENTS

- | | | |
|-----------------------------------|---|--|
| I. OPERATING SYSTEM | : | WINDOWS 10 AND ABOVE |
| II. PROCESSOR | : | INTEL® CORE (TM) i-3 7020U CPU DUAL CORE |
| III. MOTHERBOARD | : | DELL INC. 033HWX A00 |
| IV. RAM | : | 4GB+ |
| V. HARD DISK | : | SATA 40 GB OR ABOVE |
| VI. CD/DVD MULTI DRIVE COMBO | | (For back up) |
| VIII. MONITOR 14.1 or 15 -17 inch | | |
| IX. KEYBOARD AND MOUSE | | |
| X. PRINTER | | (For print – [Hard copy]) |




SOFTWARE REQUIREMENTS:

- I. Windows OS
- II. Python

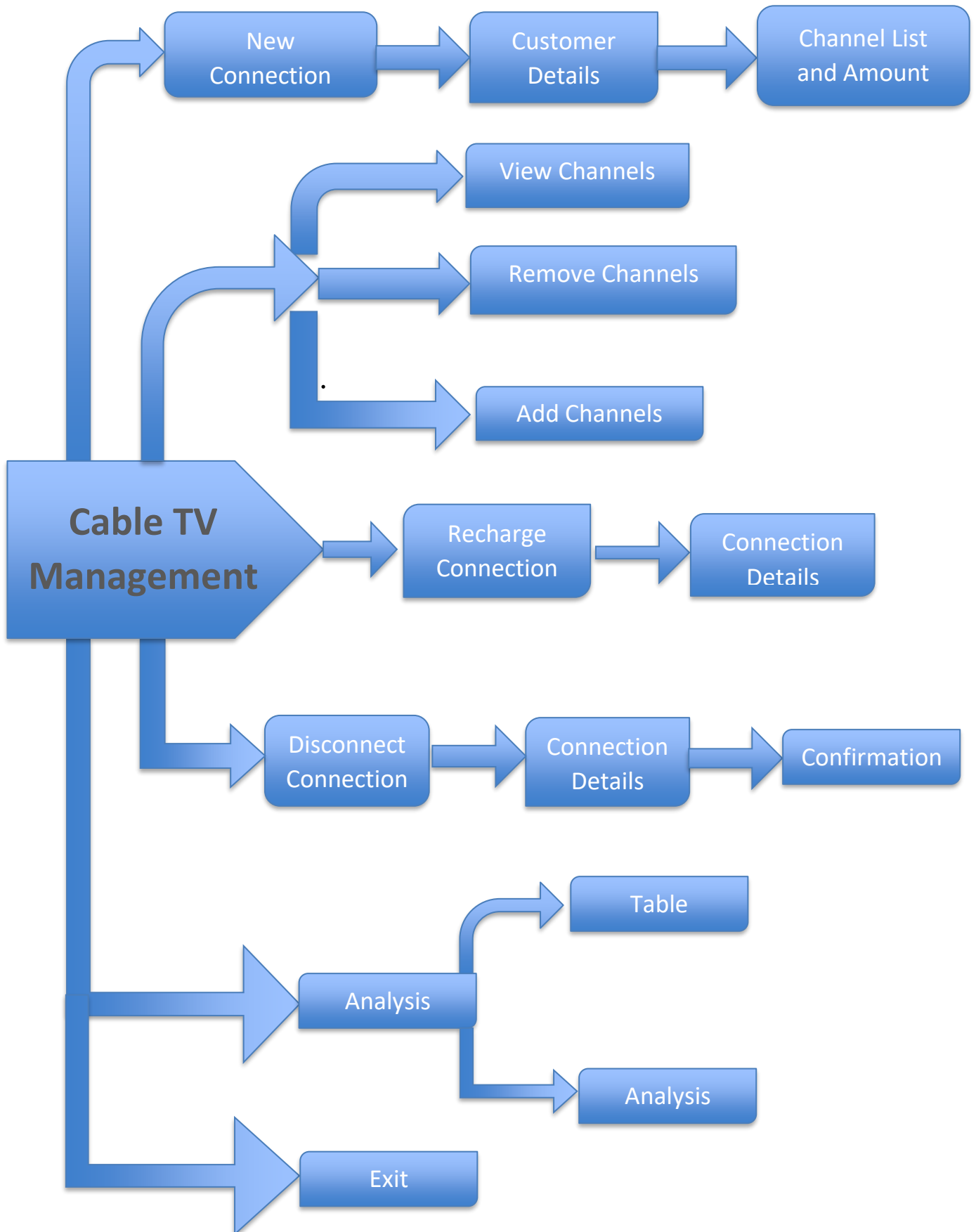
JOB PROFILE

Name: Abhijeet Nair
Roll No:
Project Name: Cable TV Management System
Job Ratio: 100%
Job Title: Roadmap, Introduction, Coding, Conclusion, etc

CODING EXECUTION PROCEDURE

-  Install python and mysql from the web.
-  Open mysql and create the database Cabletv
-  Then run the cabletv.py file

ROAD MAP



MYSQL TABLE STRUCTURE

1. Customer Table:

```
mysql> desc customers;
```

Field	Type	Null	Key	Default	Extra
Customer_ID	int	YES		NULL	
First_Name	varchar(50)	YES		NULL	
Last_Name	varchar(50)	YES		NULL	
Date	date	YES		NULL	
Phone_No	varchar(20)	YES		NULL	
Address	varchar(200)	YES		NULL	
Monthly_Charges	int	YES		NULL	

7 rows in set (0.89 sec)

2. Monthly Recharge Table:

```
mysql> desc customer_table;
```

Field	Type	Null	Key	Default	Extra
Customer_ID	int	YES		NULL	
Customer_Name	varchar(60)	YES		NULL	
Phone_No	varchar(20)	YES		NULL	
Amount_Payed	int	YES		NULL	

4 rows in set (0.00 sec)

IDLE Source Code

```

import pandas as pd
import mysql.connector as sql_db
conn = sql_db.connect(host="localhost",user="root",password="root")
if conn.is_connected():
    print("sucessfully connected")

crs=conn.cursor()
conn.cursor().execute("CREATE DATABASE if not exists CableTV")
print("Database Successfully Created")
conn.cursor().execute("USE CableTV")

conn.commit()
mycursor=conn.cursor()

while True:
    print("*****")
    print("*****Welcome To Cable TV Management System*****")
    print("1. New Connection")
    print("2. Update Channels")
    print("3. Recharge your Connection")
    print("4. Disconnect Connection")
    print("5. Analysis")
    print("6. Exit")

    print("-----")
    a_choice=int(input("Enter your choice: "))
    print("-----")

    if a_choice==1:
        print('*****')
        print("*****New Connection*****")
        print("")
        print("Activation charges to be payed for HD Connection is Rs 1500/- (includes Service and Setup Box Charges)")
        print("Press 1 to Confirm")
        print("-----")
        b_choice=int(input("Enter your Choice: "))
        print("-----")
        if b_choice==1:
            import numpy as np

```



```

print('*****')
print('Please Enter the Name and Address of the Customer for setting up the
system')
print("")
Firstname=input("Enter First Name (without space) of the Customer: ")
Lastname=input("Enter Last Name of the Customer: ")
address=input("Address of the Customer: ")
phone_no=input("Enter Customer's Phone Number: ")
tday=input("Enter today's date in YYYY-MM-DD format: ")
print("")
print('*****')
print("")
i=np.random.randint(10000,99999)
print("Your Connection_ID is: ",i)
Name=Firstname+str(i)
print("Here is the list of Channels which we are providing you with our Services")
print('*****')
qry02=('create table if not exists '+Name+' (CHANNEL_NO int(3),
CHANNEL_NAME varchar(50),PACKAGE varchar(50),LANGUAGE
varchar(50),CHANNEL_PRICE int(20))')
crs.execute(qry02)
crs.execute("INSERT INTO "+Name+" VALUES (1,'Star
Plus','Entertainment','Hindi',22)")
crs.execute("INSERT INTO "+Name+" VALUES (2,'Sony
SET','Entertainment','Hindi',22)")
crs.execute("INSERT INTO "+Name+" VALUES (3,'Colors
Infinity','Entertainment','English',11)")
crs.execute("INSERT INTO "+Name+" VALUES (4,'Surya
Cinema','Movies','Telugu',1)")
crs.execute("INSERT INTO "+Name+" VALUES (5,'Zee
Bollywood','Movies','Hindi',2)")
crs.execute("INSERT INTO "+Name+" VALUES (6,'HBO','Movies','English',13)")
crs.execute("INSERT INTO "+Name+" VALUES (7,'BBC
News','News','English',3)")
crs.execute("INSERT INTO "+Name+" VALUES (8,'Aaj Tak','News','Hindi',1)")
crs.execute("INSERT INTO "+Name+" VALUES (9,'ABP News','News','Hindi',0)")
crs.execute("INSERT INTO "+Name+" VALUES (10,'India
Today','News','English',1)")
crs.execute("INSERT INTO "+Name+" VALUES (11,'Star Sports
Network','Sports','Multi',65)")
crs.execute("INSERT INTO "+Name+" VALUES (12,'Sony Sports
Network','Sports','Multi',72)")
crs.execute("INSERT INTO "+Name+" VALUES

```

```

(13,'Sports18','Sports','English',14)")
crs.execute("INSERT INTO "+Name+" VALUES (14,'Disney
Channel','Kids','Multi',9)")
crs.execute("INSERT INTO "+Name+" VALUES (15,'Hungama
Channel','Kids','Multi',7)")
crs.execute("INSERT INTO "+Name+" VALUES (16,'Cartoon
Network','Kids','Multi',5)")
crs.execute("INSERT INTO "+Name+" VALUES (17,'B4U
Music','Music','Hindi',0)")
crs.execute("INSERT INTO "+Name+" VALUES (18,'MTV
Beats','Music','Multi',1)")
crs.execute("INSERT INTO "+Name+" VALUES (19,'Star Vijay
Music','Music','Tamil',1)")
crs.execute("INSERT INTO "+Name+" VALUES (20,'Animal
Planet','Infotainment','Multi',2)")
crs.execute("INSERT INTO "+Name+" VALUES (21,'Discovery
Channel','Infotainment','Multi',5)")
crs.execute("INSERT INTO "+Name+" VALUES (22,'Nat Geo
Wild','Infotainment','Multi',1)")
crs.execute("INSERT INTO "+Name+" VALUES (23,'GOD
TV','Devotional','Multi',0)")
crs.execute("INSERT INTO "+Name+" VALUES (24,'Colors Bangla
Cinema','Movies','Bengali',1)")
crs.execute("INSERT INTO "+Name+" VALUES (25,'CNBC
Gujrati','News','Gujarati',1)")
crs.execute("INSERT INTO "+Name+" VALUES (26,'Sony
Marathi','Entertainment','Marathi',5)")
crs.execute("INSERT INTO "+Name+" VALUES (27,'9X
Tashan','Music','Punjab',0)")
crs.execute("INSERT INTO "+Name+" VALUES (28,'Sun TV','Movies','Tamil',22)")
crs.execute("INSERT INTO "+Name+" VALUES (29,'ETV
Cinema','Movies','Telugu',7)")
crs.execute("INSERT INTO "+Name+" VALUES (30,'Udaya
TV','Entertainment','Kannada',7)")
crs.execute("INSERT INTO "+Name+" VALUES (31,'Asianet
TV','Entertainment','Malayalam',22)")
qry50='select * from '+Name+';'
mfd=pd.read_sql(qry50,conn)
print(mfd)
print("*****")
qry54='select sum(CHANNEL_PRICE) from '+Name+';'
mfd1=pd.read_sql(qry54,conn)
charges=mfd1.iat[0,0]

```

```

print("Total Monthly charges including Fixed Charge of 100 Rs is ",charges+100)
print("Please Note that you can remove unwanted channels from Update
Channels option in Main Menu")
print("Enter 1 to confirm: ")
print("-----")
c_choice=int(input("Enter your choice: "))
print("-----")
if c_choice==1:
    print("")
    print("Thank You For Registering")
    print("")
    print("-----")
    print("CONFIRMATION...")
    print("Name: ",Firstname,Lastname)
    print("Your Connection ID: ",i)
    print("Your Registered Phone Number: ",phone_no)
    print("Address: ",address)
    print("Activation Charges: 1500/-")
    print("Registration Date: ",tday)
    print("-----")
    print("")
    print("We Will Message You Shortly Regarding the Setup Details")
else:
    print("You have entered an Invalid Input. Please Try Again")

else:
    print("You have Entered an Invalid Input.")
    print("Please Try Again")

Name2=Firstname,Lastname
qry90=('create table if not exists customers(Customer_ID int(10),First_Name
varchar(50),Last_Name varchar(50),Date date,Phone_No varchar(20),Address
varchar(200), Monthly_Charges int(10))')
crs.execute(qry90)
crs.execute("Insert into customers values
('"+str(i)+"','"+Firstname+"','"+Lastname+"','"+str(tday)+"','"+str(phone_no)+"',
 '"+address+"','"+str(charges)+"');")
conn.commit()

elif a_choice==2:
    print('*****')
    print('*****Update/Remove Channels*****')

```

```

print("1. View Channels and Updated Monthly Charges")
print("2. Remove Channels")
print("3. Add Channels")
b_choice=int(input("Enter your Choice: "))
import mysql.connector as msc

```

```

mydb=msc.connect(host='localhost',user='root',passwd='root',database='Cabletv')
crs=mydb.cursor()
mydb.autocommit=True
crs.execute("use Cabletv")
firstname=input("Enter your First Name: ")
c_id=input("Please Enter your Connection ID: ")
name=firstname+c_id
if b_choice==1:
    print("*****")
    qry55='select * from '+name+';'
    view=pd.read_sql(qry55,conn)
    print(view)

elif b_choice==2:
    print("*****")
    qry70='select * from '+name+';'
    dis=pd.read_sql(qry70,conn)
    print(dis)
    print("*****")
    s=int(input("Select the Number of Channels to remove: "))

    a=[]
    for i in range(s):
        remno=int(input("Enter the CHANNEL_NO of the channel to be removed:
        "))
        a.append(i)
        crs.execute('DELETE FROM '+name+' WHERE
        CHANNEL_NO=(%s)',(remno,))
    print("")
    print("Your selected Channels are Removed")

elif b_choice==3:
    d=int(input("Enter new Channel's ID: "))
    f=input("Enter Channel Name: ")
    h=input("Enter the Category of Channel: ")
    j=input("Enter the Language of Channel: ")
    k=int(input("Enter the Price of Channel: "))

```

```
crs.execute("insert into "+name+"
values('"+str(d)+"','"+f+"','"+h+"','"+j+"','"+str(k)+"");")
print("Successfully added")
```

else:

```
print("You have Entered an Invalid Input.")
print("Please Try Again")
```

```
print("-----")
qry54='select sum(CHANNEL_PRICE) from '+name+';'
mfd1=pd.read_sql(qry54,conn)
charges=mfd1.iat[0,0]
mtcrgr=charges+100
print("Total Monthly charges including Fixed Charge of 100 Rs: ",mtcrgr)
print("-----")
crs.execute('update customers set Monthly_Charges='+str(mtcrg)+' where
Customer_ID='+c_id+';')
conn.commit()
```

elif a_choice==3:

```
print("*****Recharge a Connection*****")
cust_id=int(input("Enter your Customer ID: "))
f_name=str(input("Enter the First Name of the Customer: "))
price=int(input("Enter the Amount to be paid: "))
phone_no=int(input("Enter Customer phone no : "))
conn.cursor().execute('create table if not exists customer_table(Customer_ID
int(10),Customer_Name varchar(60),Phone_No varchar(20),Amount_Payed int(10)
)')
SQL_insert="insert into customer_table
values('"+str(cust_id)+"','"+f_name+"','"+str(phone_no)+"','"+str(price)+"");"
crs.execute(SQL_insert)
conn.commit()
print("You have Successfully Paid your Bill")
print("Bill Recorded")
```

elif a_choice==4:

```
print("*****Disconnect Connection*****")
import mysql.connector as msc
mydb=msc.connect(host='localhost',user='root',passwd='root',database='Cabletv')
crs=mydb.cursor()
mydb.autocommit=True
crs.execute("use Cabletv")
```

```

nam=input("Enter Your First Name: ")
di=int(input("Enter Your Connection ID: "))
p=nam+str(di)
s=input("Are you sure you want to Disconnect the Connection (YES/NO): ")
a=[]
for i in s:
    a.append(i)

if len(s)==3:
    crs.execute('DELETE FROM customers WHERE CUSTOMER_ID=(%s) or
    First_Name=(%s)',(di,nam,))
    crs.execute('drop table '+p+';')

else:
    print("Connection NOT Disconnected")

print("")
print("Your Connection is Disconnected")

elif a_choice==5:
    print("*****Analysis*****")
    import matplotlib.pyplot as plt
    print("1. Table")
    print("2. Graph")
    print("")
    print("-----")
    g_choice=int(input("Enter your choice: "))
    print("-----")
    if g_choice==1:
        print("1. Customer Table")
        print("2. Monthly Recharge Table")
        print("-----")
        h_choice=int(input("Enter your Choice: "))
        print("-----")
        if h_choice==1:

            print("*****")
            qry22='select * from customers;'
            mdd=pd.read_sql(qry22,conn)
            pd.set_option('display.width',None)
            print(mdd)
            print("*****")
        elif h_choice==2:

```

```

        print("*****")
        qry23='select * from customer_table;'
        mdu=pd.read_sql(qry23,conn)
        print(mdu)
        print("*****")
    else:
        print("You have Entered an Invalid Input.")
        print("Please Try Again")

elif g_choice==2:
    print("1. Monthly New Connections Graph")
    print("-----")
    j_choice=int(input("Enter your Choice: "))
    print("-----")
    if j_choice==1:
        qry24="select count(*) from customers where Date>'2023-07-01' and
        Date<'2023-07-31';"
        crs.execute(qry24)
        u=crs.fetchone()
        l=list(u)
        qry25="select count(*) from customers where Date>'2023-08-01' and
        Date<'2023-08-31';"
        crs.execute(qry25)
        v=crs.fetchone()
        l2=list(v)
        qry26="select count(*) from customers where Date>'2023-09-01' and
        Date<'2023-09-30';"
        crs.execute(qry26)
        w=crs.fetchone()
        l3=list(w)
        qry27="select count(*) from customers where Date>'2023-10-01' and
        Date<'2023-10-31';"
        crs.execute(qry27)
        x=crs.fetchone()
        l4=list(x)
        lst=l+l2+l3+l4
        n=['July','August','September','October']
        plt.bar(n,lst,width=0.50,color=['red','b','g','cyan'])
        plt.xlabel("Months")
        plt.ylabel("No of New Connections")
        plt.show()

    else:

```

```
print("You have Entered an Invalid Input.")  
print("Please Try Again")
```

```
else:
```

```
    print("You have Entered an Invalid Input.")  
    print("Please Try Again")
```

```
elif a_choice==6:
```

```
    print("End")  
    break
```

```
else:
```

```
    print("*****")  
    print("You have Entered an Invalid Input.")  
    print("Please Try Again")
```


IDLE Output Screens:

1. New Connection

```

*****
*****Welcome To Cable TV Management System*****
1. New Connection
2. Update Channels
3. Recharge your Connection
4. Disconnect Connection
5. Analysis
6. Exit
-----
Enter your choice: 1
-----
*****
*****New Connection*****

Activation amount to be payed for HD Connection is Rs 3500/- (includes Service and Setup Box Charges)
Press 1 to Confirm
-----
Enter your Choice: 1
-----
*****
Please Enter the Name and Address of the Customer for setting up the system

Enter First Name (without space) of the Customer: Abhinav
Enter Last Name of the Customer: Nair
Address of the Customer: 1100,Skybuliders,Kochi
Enter Customer's Phone Number: 8788867890
Enter today's date in YYYY-MM-DD format: 2023-10-22

*****

Your Connection_ID is: 47921
Here is the list of Channels which we are providing you with our Services
*****
  CHANNEL_NO      CHANNEL_NAME      PACKAGE      LANGUAGE      CHANNEL_PRICE
0             1             Star Plus      Entertainment      Hindi           22
1             2             Sony SET      Entertainment      Hindi           22
2             3             Colors Infinity Entertainment      English          11
3             4             Surya Cinema      Movies           Telugu            1
4             5             Zee Bollywood      Movies           Hindi             2
5             6             HBO             Movies           English          13
6             7             BBC News        News            English            3
7             8             Aaj Tak         News            Hindi              1
8             9             ABP News        News            Hindi              0
9            10             India Today     News            English            1
10           11             Star Sports Network Sports           Multi            65
11           12             Sony Sports Network Sports           Multi            72
12           13             Sports18        Sports           English           14
13           14             Disney Channel      Kids            Multi              9
14           15             Hungama Channel      Kids            Multi              7
15           16             Cartoon Network      Kids            Multi              5
16           17             B4U Music        Music           Hindi              0
17           18             MTV Beats        Music           Multi              1
18           19             Star Vijay Music      Music           Tamil              1
19           20             Animal Planet     Infotainment     Multi              2
20           21             Discovery Channel   Infotainment     Multi              5
21           22             Nat Geo Wild      Infotainment     Multi              1
22           23             GOD TV           Devotional       Multi              0
23           24             Colors Bangla Cinema Movies           Bengali           1
24           25             CNBC Gujrati      News            Gujarati           1
25           26             Sony Marathi      Entertainment     Marathi           5
26           27             9X Tashan         Music            Punjab            0
27           28             Sun TV            Movies           Tamil             22
28           29             ETV Cinema        Movies           Telugu             7
29           30             Udaya TV          Entertainment     Kannada            7
30           31             Asianet TV        Entertainment     Malayalam          22
*****
Total Monthly charges including Fixed Charge of 100 Rs is 423.0
Please Note that You can remove unwanted channels from Update Channels option in Main Menu
Please enter 1 to confirm:
-----
Enter your choice: 1
-----

```

Thank You For Registering

CONFIRMATION...

Name: Abhinav Nair
Your Connection ID: 47921
Your Registered Phone Number: 8788867890
Address: 1100,Skybuliders,Kochi
Registration Date: 2023-10-22

We Will Message You Shortly Regarding the Setup Details
.....

2. Update Channels

2.1 View Channels

*****Welcome To Cable TV Management System*****

1. New Connection
2. Update Channels
3. Recharge your Connection
4. Disconnect Connection
5. Analysis
6. Exit

Enter your choice: 2

*****Update/Remove Channels*****

*****Update/Remove Channels*****

1. View Channels and Updated Monthly Charges
2. Remove Channels
3. Add Channels

Enter your Choice: 1

Enter your First Name: Abhinav

Please Enter your Connection ID: 47921

	CHANNEL_NO	CHANNEL_NAME	PACKAGE	LANGUAGE	CHANNEL_PRICE
0	1	Star Plus	Entertainment	Hindi	22
1	2	Sony SET	Entertainment	Hindi	22
2	3	Colors Infinity	Entertainment	English	11
3	4	Surya Cinema	Movies	Telugu	1
4	5	Zee Bollywood	Movies	Hindi	2
5	6	HBO	Movies	English	13
6	7	BBC News	News	English	3
7	8	Aaj Tak	News	Hindi	1
8	9	ABP News	News	Hindi	0
9	10	India Today	News	English	1
10	11	Star Sports Network	Sports	Multi	65
11	12	Sony Sports Network	Sports	Multi	72
12	13	Sports18	Sports	English	14
13	14	Disney Channel	Kids	Multi	9
14	15	Hungama Channel	Kids	Multi	7
15	16	Cartoon Network	Kids	Multi	5
16	17	B4U Music	Music	Hindi	0
17	18	MTV Beats	Music	Multi	1
18	19	Star Vijay Music	Music	Tamil	1
19	20	Animal Planet	Infotainment	Multi	2
20	21	Discovery Channel	Infotainment	Multi	5
21	22	Nat Geo Wild	Infotainment	Multi	1
22	23	GOD TV	Devotional	Multi	0
23	24	Colors Bangla Cinema	Movies	Bengali	1
24	25	CNBC Gujrati	News	Gujarati	1
25	26	Sony Marathi	Entertainment	Marathi	5
26	27	9X Tashan	Music	Punjab	0
27	28	Sun TV	Movies	Tamil	22
28	29	ETV Cinema	Movies	Telugu	7
29	30	Udaya TV	Entertainment	Kannada	7
30	31	Asianet TV	Entertainment	Malayalam	22

Total Monthly charges including Fixed Charge of 100 Rs: 423.0

2.2 Remove a channel

1. View Channels and Updated Monthly Charges

2. Remove Channels

3. Add Channels

Enter your Choice: 2

Enter your First Name: Abhinav

Please Enter your Connection ID: 47921

	CHANNEL_NO	CHANNEL_NAME	PACKAGE	LANGUAGE	CHANNEL_PRICE
0	1	Star Plus	Entertainment	Hindi	22
1	2	Sony SET	Entertainment	Hindi	22
2	3	Colors Infinity	Entertainment	English	11
3	4	Surya Cinema	Movies	Telugu	1
4	5	Zee Bollywood	Movies	Hindi	2
5	6	HBO	Movies	English	13
6	7	BBC News	News	English	3
7	8	Aaj Tak	News	Hindi	1
8	9	ABP News	News	Hindi	0
9	10	India Today	News	English	1
10	11	Star Sports Network	Sports	Multi	65
11	12	Sony Sports Network	Sports	Multi	72
12	13	Sports18	Sports	English	14
13	14	Disney Channel	Kids	Multi	9
14	15	Hungama Channel	Kids	Multi	7
15	16	Cartoon Network	Kids	Multi	5
16	17	B4U Music	Music	Hindi	0
17	18	MTV Beats	Music	Multi	1
18	19	Star Vijay Music	Music	Tamil	1
19	20	Animal Planet	Infotainment	Multi	2
20	21	Discovery Channel	Infotainment	Multi	5
21	22	Nat Geo Wild	Infotainment	Multi	1
22	23	GOD TV	Devotional	Multi	0
23	24	Colors Bangla Cinema	Movies	Bengali	1
24	25	CNBC Gujrati	News	Gujarati	1
25	26	Sony Marathi	Entertainment	Marathi	5
26	27	9X Tashan	Music	Punjab	0
27	28	Sun TV	Movies	Tamil	22
28	29	ETV Cinema	Movies	Telugu	7
29	30	Udaya TV	Entertainment	Kannada	7
30	31	Asianet TV	Entertainment	Malayalam	22

Select the Number of Channels to remove: 2

Enter the CHANNEL_NO of the channel to be removed: 28

Enter the CHANNEL_NO of the channel to be removed: 19

Your selected Channels are Removed

Total Monthly charges including Fixed Charge of 100 Rs: 423.0

2.3 Add new Channels

*****Update/Remove Channels*****

1. View Channels and Updated Monthly Charges

2. Remove Channels

3. Add Channels

Enter your Choice: 3

Enter your First Name: Abhinav

Please Enter your Connection ID: 47921

Enter new Channel's ID: 32

Enter Channel Name: UTV Cinema

Enter the Category of Channel: Movies

Enter the Language of Channel: Hindi

Enter the Price of Channel: 3

Successfully added

Total Monthly charges including Fixed Charge of 100 Rs: 403.0

3. Recharge a Connection

```

*****
*****Welcome To Cable TV Management System*****
1. New Connection
2. Update Channels
3. Recharge your Connection
4. Disconnect Connection
5. Analysis
6. Exit
-----
Enter your choice: 3
-----
*****Recharge a Connection*****
Enter your Customer ID: 47921
Enter the First Name of the Customer: Abhinav
Enter the Amount to be paid: 400
Enter Customer phone no : 8788867890
You have Successfully Paid your Bill
Bill Recorded
*****

```

4. Disconnect a Connection

```

*****
*****Welcome To Cable TV Management System*****
1. New Connection
2. Update Channels
3. Recharge your Connection
4. Disconnect Connection
5. Analysis
6. Exit
-----
Enter your choice: 4
-----
*****Disconnect a Connection*****
Enter Your First Name: Abhinav
Enter Your Connection ID: 47921
Are you sure you want to Disconnect the Connection (YES/NO): YES

Your Connection is Disconnected

```

5. Analysis

5.1 Table

```

*****
*****Welcome To Cable TV Management System*****
1. New Connection
2. Update Channels
3. Recharge your Connection
4. Disconnect Connection
5. Analysis
6. Exit
-----
Enter your choice: 5
-----
*****Analysis*****
1. Table
2. Graph
-----
Enter your choice: 1
-----
1. Customer Table
2. Monthly Recharge Table
-----
Enter your Choice: 2
-----
*****
Customer_ID Customer_Name Phone_No Amount_Payed
0      53008      Abhijeet  9898883722      400
1      55096      Ramesh   9825119522      250
2      40830      Shivani Nair 9099002589      200
3      45674      Arvind   9456786790      300
4      12345      Nikhil   9456565790      297
5      55667      Sara     8140857389      300
6      67458      Vimal    9898245678      150
7      89076      Nidhi    9898563456      350
8      53479      Ravi     7069368483      500
9      81756      Kabir    9656567865      270
10     28775      Hemalatha 846938836      420
11     88149      Aniket   9898676743      300
12     47921      Abhinav  8788867890      400
*****

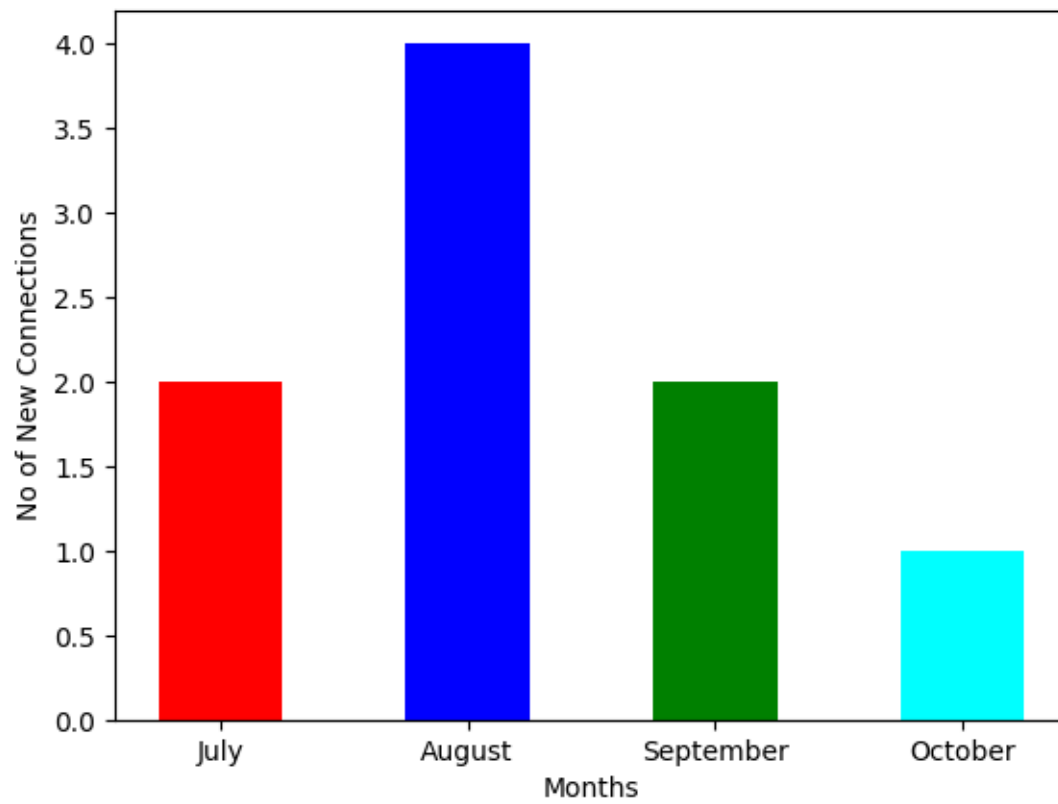
```

5.2 Graphical representation

```

*****
*****Welcome To Cable TV Management System*****
1. New Connection
2. Update Channels
3. Recharge your Connection
4. Disconnect Connection
5. Analysis
6. Exit
-----
Enter your choice: 5
-----
*****Analysis*****
1. Table
2. Graph
-----
Enter your choice: 2
-----
1. Monthly New Connections Graph
-----
Enter your Choice: 1
-----

```



CONCLUSION

In conclusion, my Informatics Practices project on cable TV management has provided valuable insights into the complexities and challenges of managing a cable TV system. We have successfully designed and implemented a system that addresses several critical aspects of the cable TV industry, including customer management, channel management, subscriptions, and payments.

Throughout the project, we learned how to use Python for application development and integrate it with a MySQL database. This practical experience has equipped us with essential skills that can be applied to real-world scenarios in the information technology and telecommunications sectors.

My project underscores the importance of efficient customer management, ensuring customer satisfaction and loyalty. Additionally, channel management, subscriptions, and payments play a pivotal role in revenue generation and financial sustainability. It demonstrates the potential for data analytics and automation to enhance cable TV management practices. By analyzing customer data and subscription patterns, cable TV providers can personalize offerings and improve customer experiences.

This project not only provides a practical application of informatics practices but also highlights the growing significance of information technology in the cable TV industry. With ongoing advancements in technology and data analysis, cable TV management will continue to evolve, and my project serves as a stepping stone towards more efficient and customer-centric practices in this dynamic field.

REFERENCES

1. [www.google.com/Python project](http://www.google.com/Python%20project)
2. www.wikipedia.com/Python and Pandas projects
3. Class Notes.