Reliance Foundation School, Koparkhairane

Session 2020 – 2021

Computer science project (083)

Project Topic: warehouse management system using the concept pf python interface with SQL

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Class: 12 A

Board roll no. 15607192

INDEX

Contents

Reliance Foundation School, Koparkhairane

CERTIFICATE

This is to certify that _____ , of class XII A, Reliance Foundation School, Koparkhairane has successfully completed the **Computer Science Journal** in conformity with the prescribed CBSE syllabus for the academic session 2020- 2021.

Date:

Board Roll number:

Signature of Internal Examiner:

Signature of External Examiner:

Signature of Principal:

School Seal:

Acknowledgement

I would like to thank my project partner Sricharan Adapa without whom the project would've been an impossible task. I would also like to express my extreme gratitude to my Computer Science teacher Ms Bhanumathy Ganesh. I would also thank my parents and the school for providing excellent facilities for my academics.

Aim of the project:

The aim of our project is to use Python programming language, MySQL database and the concept of MySQL connector to make an interface to a database in python. This is a project for the warehouse management of electronic devices. Using this you should be able to buy a product, add another record, delete a particular record, display a particular record or exit the program. We can choose the product on basis of its special code.

Project outline

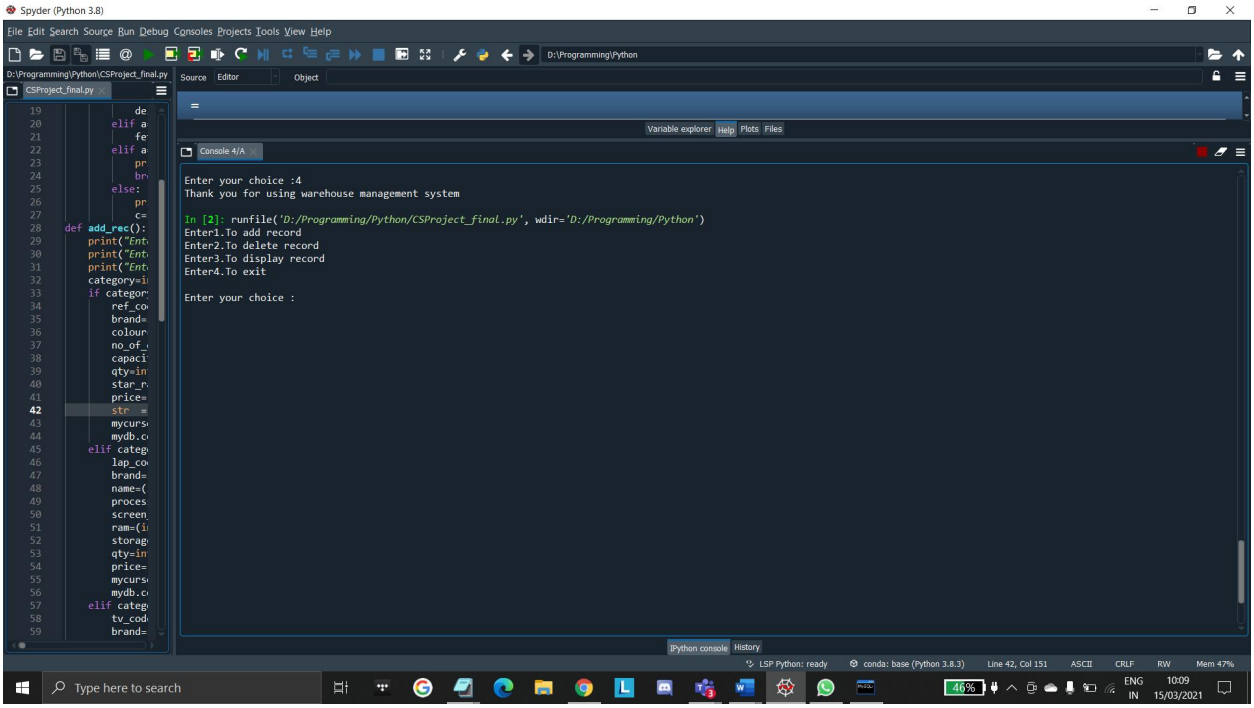
This project has been designed keeping in mind the needs of a warehouse management system, and user friendliness. This program helps us to maintain a database which is essential for any business.

Flow of execution

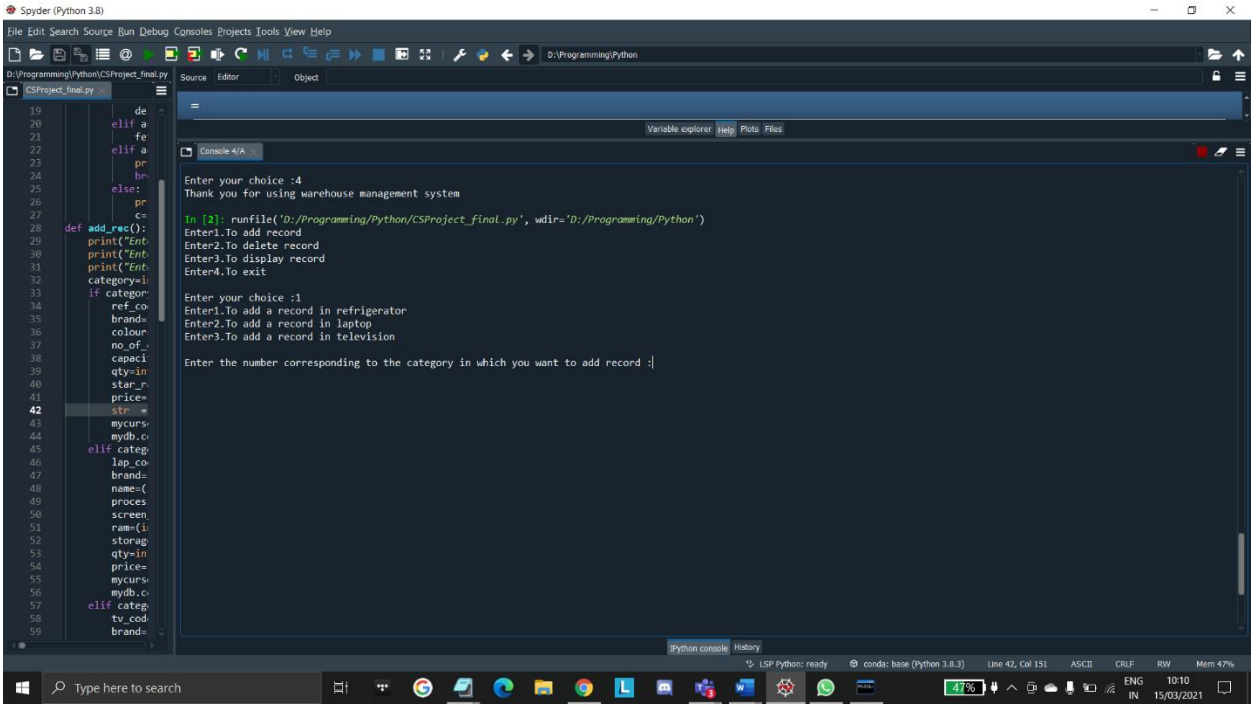
We have created 4 tables as given below: -

```
mysql> show tables;
+---------------------+
| Tables_in_csproject |
+---------------------+
| categories          |
| laptop              |
| refrigerator        |
| television          |
+---------------------+
4 rows in set (0.01 sec)
```

1) First the user will be asked which action he/she wants to perform as follows: -

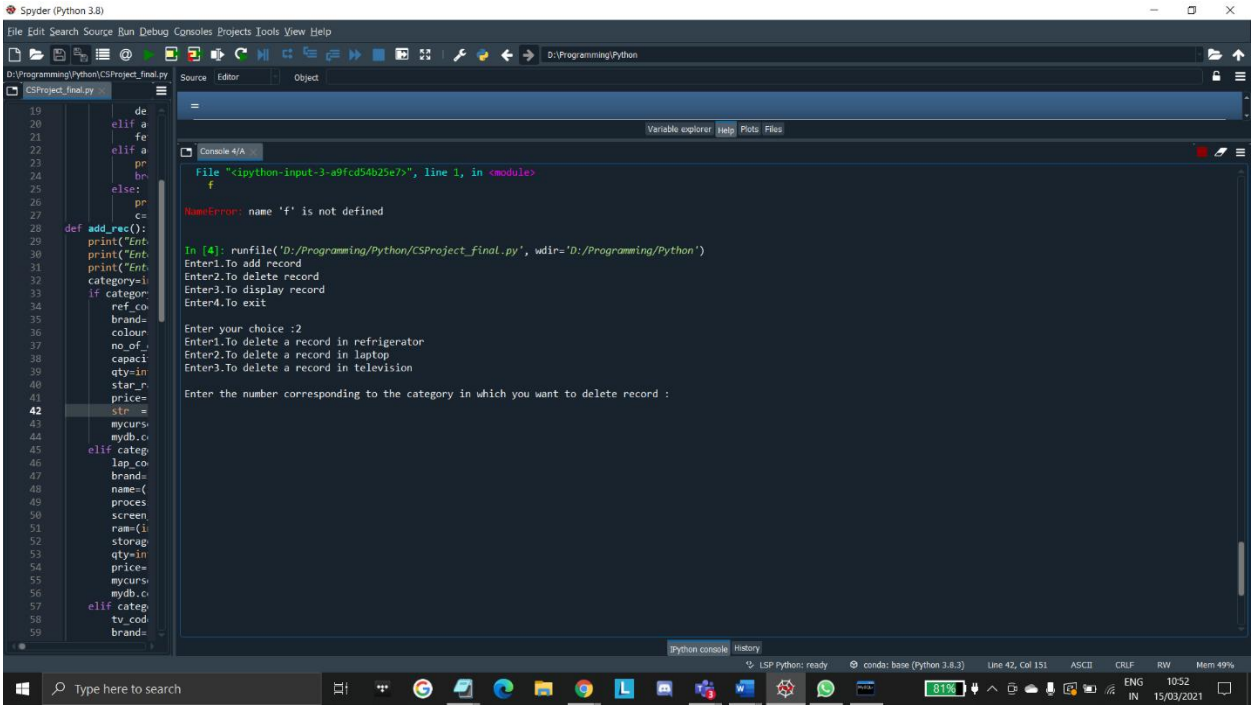


2) If the user chooses option 1 to add record, he/she will be asked to choose which category he/she wants to add a record into as follows: -

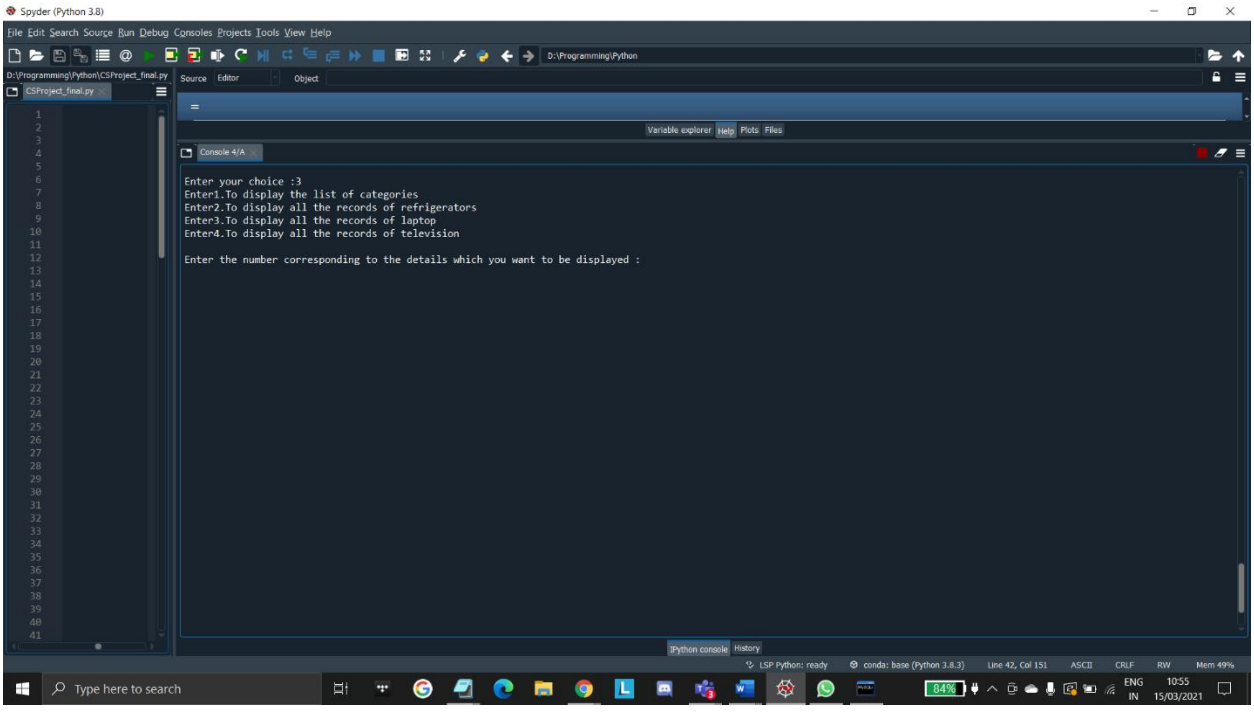


3) According to the options he/she chooses, the record will be inserted into the respective tables as follows according to the details inputted by the user

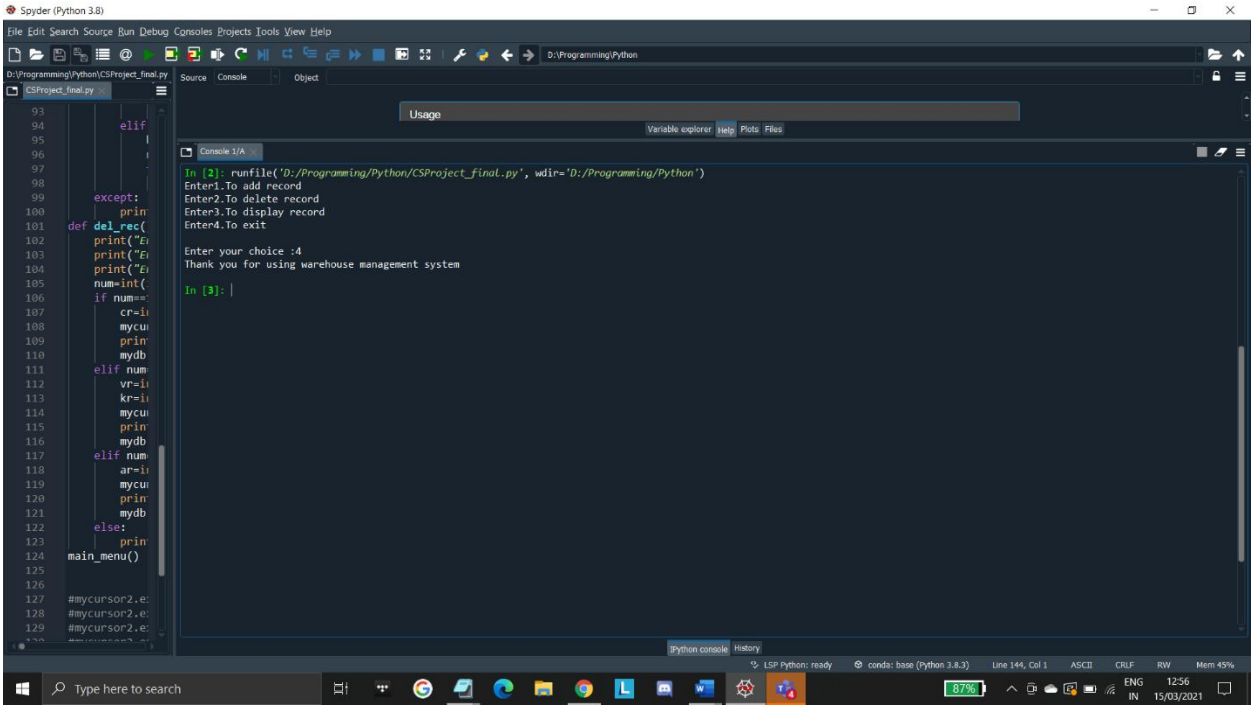
4) If the used chooses option 2 then he/she will be presented with the table names to choose from where the record will be deleted. The record will be deleted according to the conditions given by the user.



5) If the user chooses option 3 then he/she will be presented with options as follows, the records of the selected tables will be displayed



6) If the user chooses option 4 then the program will come to an end



Hardware and software specifications

Softwares used :

Computer operating software : Windows 10

Python with spyder IDE

MySQL database

Hardware specification :

Intel Core i5

4GB RAM

Source code

```
import mysql.connector
mydb=mysql.connector.connect(host="localhost",user="root",password="Admin
@2507")
#print(mydb)
mycursor=mydb.cursor()
mycursor.execute("use csproject;")
mycursor2=mydb.cursor()


def main_menu():
    c='y'
    while (c=='y'):
        print("Enter1.To add record")
        print("Enter2.To delete record")
        print("Enter3.To display record")
        print("Enter4.To exit")
        a=int(input("Enter your choice :"))
        if a==1:
            add_rec()
        elif a==2:
            del_rec()
        elif a==3:
            fetchdata()
        elif a==4:
            print("Thank you for using warehouse management system")
```

```
            break
        else:
            print("Please enter a valid choice")
            c=input("Do you want to continue? Type 'y' for yes and 'n' for no")
def add_rec():
    print("Enter1.To add a record in refrigerator")
    print("Enter2.To add a record in laptop")
    print("Enter3.To add a record in television")
    category=int(input("Enter the number corresponding to the category in which you want to add record :"))
    if category==1:
        ref_code=(input("Enter a reference code of your choice :"))
        brand=input("Enter the brand name which you want to add :")
        colour=input("Enter a colour :")
        no_of_doors=int(input("Enter the number of doors :"))
        capacity=(input("Enter the capacity of the refrigerator :"))
        qty=int(input("Enter the number of refrigerators that you want to add to the available products list :"))
        star_rating=int(input("Enter the rating of this brand :"))
        price=(input("Enter the cost of this product :"))
        str = "insert into refrigerator values('%s','%s','%s',%d,'%s',%d,%d,'%s')"%(ref_code,brand,colour,no_of_doors,capacity,qty,star_rating,price)
        mycursor.execute(str)
        mydb.commit()
    elif category==2:
```

```
        lap_code=(input("Enter a code of your choice :"))
        brand=input("Enter the brand name which you want to add :")
        name=(input("Enter the series of your device :"))
        processor=(input("Enter the type of processor :"))
        screen_size=(input("Enter the size of the screen :"))
        ram=(input("Enter the ram of the laptop :"))
        storage=(input("Enter the storage space available :"))
        qty=int(input("Enter the number of laptop devices that you want to add to the available products list :"))
        price=(input("Enter the cost of this product :"))
        mycursor2.execute("insert into laptop values('%s','%s','%s','%s','%s','%s','%s',%d,'%s')"%(lap_code,brand,name,processor,screen_size,ram,storage,qty,price))
        mydb.commit()
    elif category==3:
        tv_code=(input("Enter a code of your choice :"))
        brand=input("Enter the brand name which you want to add :")
        screen_size=(input("Enter the size of the screen :"))
        resolution=(input("Enter the resolution :"))
        qty=int(input("Enter the number of television sets that you want to add to the available products list :"))
        price=(input("Enter the cost of this product :"))
        mycursor2.execute("insert into television values('%s','%s','%s','%s',%d,'%s')"%(tv_code,brand,screen_size,resolution,qty,price))
        mydb.commit()
```

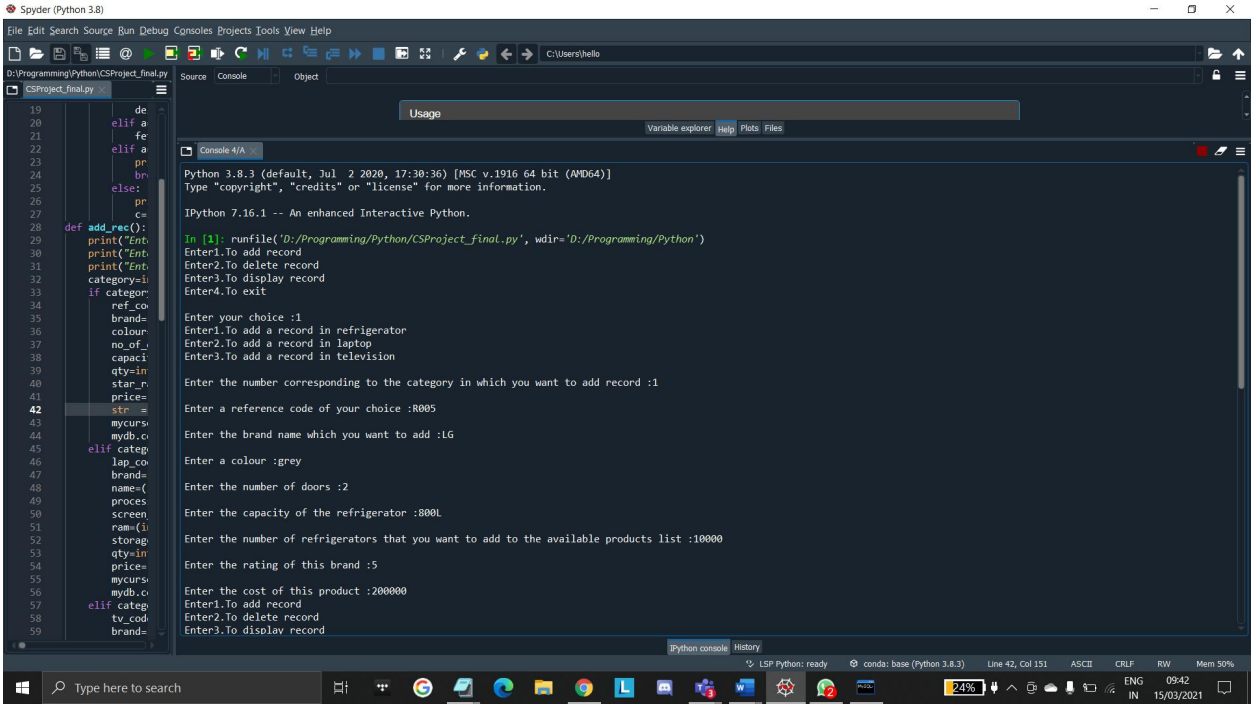
```
    else:
        print("This category is not present in our products")


def fetchdata():
    try:
        b=mydb.cursor()
        print("Enter1.To display the list of categories")
        print("Enter2.To display all the records of refrigerators")
        print("Enter3.To display all the records of laptop")
        print("Enter4.To display all the records of television")
        z=int(input("Enter the number corresponding to the details which you want to be displayed :"))
        if z==1:
            b.execute("select * from categories")
            results1=b.fetchall()
            #print(type(results1))
            #print((results1[0]))
            for x in results1:
                print(x)
        elif z==2:
            b.execute("select * from refrigerator")
            results2=b.fetchall()
            for x in results2:
                print((x))
        elif z==3:
```

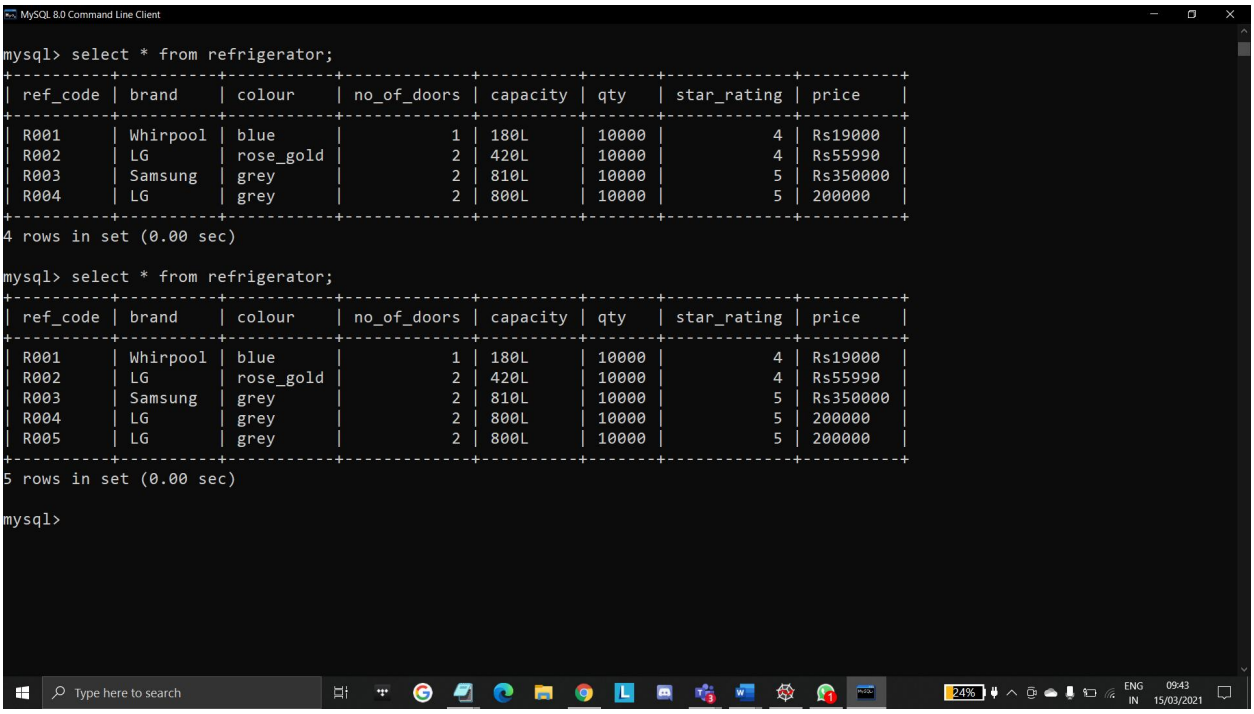
```
            b.execute("select * from laptop")
            results3=b.fetchall()
            for x in results3:
                print((x))
        elif z==4:
            b.execute("select * from television")
            results4=b.fetchall()
            for x in results4:
                print((x))
    except:
        print("Error:Unable to fetch data")
def del_rec():
    print("Enter1.To delete a record in refrigerator")
    print("Enter2.To delete a record in laptop")
    print("Enter3.To delete a record in television")
    num=int(input("Enter the number corresponding to the category in which you want to delete record :"))
    if num==1:
        cr=input("Enter the brand name whose record is to be deleted :")
        mycursor2.execute("delete from refrigerator where brand='%s'"%(cr))
        print("Deleted successfully")
        mydb.commit()
    elif num==2:
        vr=input("Enter the brand name whose record is to be deleted :")
```

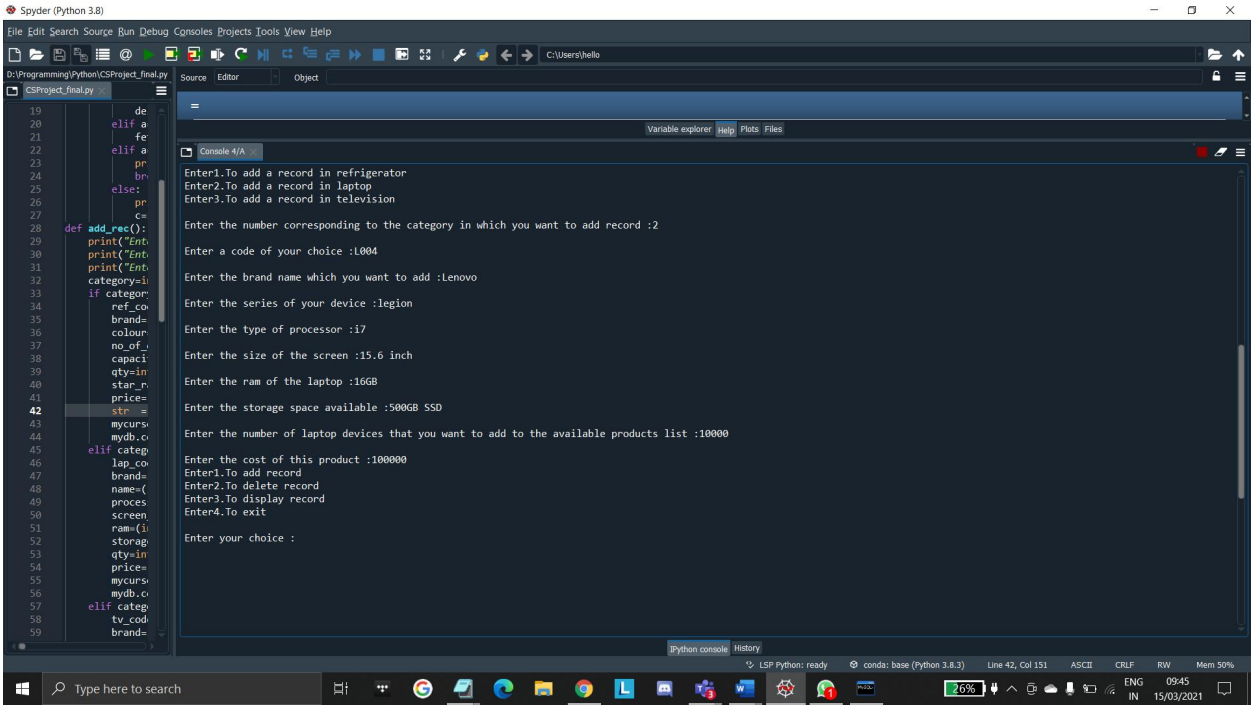
```
        kr=input("Enter the series name of the device whose record is to be deleted :")
        mycursor2.execute("delete from laptop where brand='%s' and name='%s'"%(vr,kr))
        print("Deleted successfully")
        mydb.commit()
    elif num==3:
        ar=input("Enter the brand name whose record is to be deleted :")
        mycursor2.execute("delete from television where brand='%s'"%(ar))
        print("Deleted successfuly")
        mydb.commit()
    else:
        print("This category is not present in our products")
main_menu()



#mycursor2.execute("create table categories (cat_code varchar(20) not null primary key,category varchar(35),location_code varchar(5));")
#mycursor2.execute("INSERT INTO categories(cat_code,category,location_code) VALUES(1001,'refrigerator',2001);")
#mycursor2.execute("insert into categories values(1002,'laptop',2002);")
#mycursor2.execute("insert into categories values(1003,'television',2003);")
#mycursor2.execute("create table refrigerator(ref_code varchar(10) not null primary key, brand varchar(20), colour varchar(20), no_of_doors int(1), capacity varchar(10), qty int(10), star_rating int(1), price varchar(10));")
```

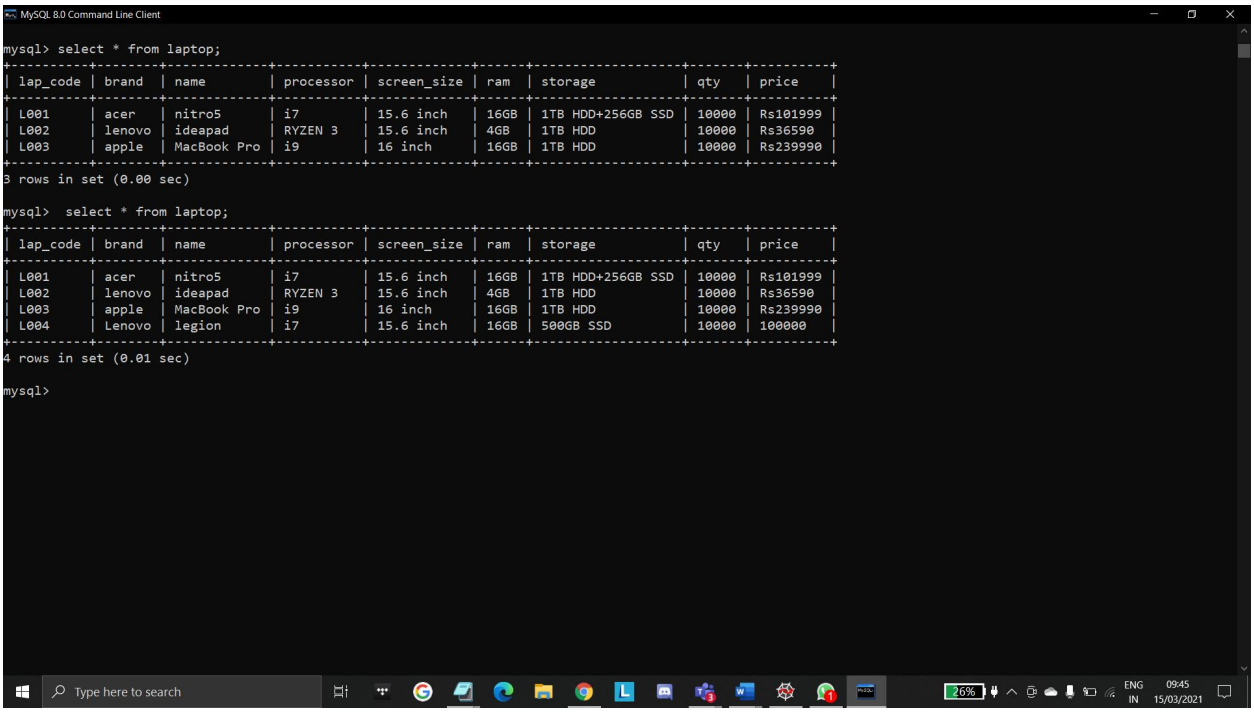
```
#mycursor2.execute("insert into refrigerator values('R001','Whirpool','blue',1,'180L',10000,4,'Rs19000');")

#mycursor2.execute("insert into refrigerator values('R002','LG','rose_gold',2,'420L',10000,4,'Rs55990');")

#mycursor2.execute("insert into refrigerator values('R003','Samsung','grey',2,'810L',10000,5,'Rs350000');")

#mycursor2.execute("create table laptop (lap_code varchar(10) not null primary key, brand varchar(20), name varchar(50), processor varchar(10), screen_size varchar(15), ram varchar(4), storage varchar(30), qty int(10), price varchar(10));")

#mycursor2.execute("insert into laptop values('L001','acer','nitro5','i7','15.6 inch','16GB','1TB HDD+256GB SSD',10000,'Rs101999');")

#mycursor2.execute("insert into laptop values('L002','lenovo','ideapad','RYZEN 3','15.6 inch','4GB','1TB HDD',10000,'Rs36590');")

#mycursor2.execute("insert into laptop values('L003','apple','MacBook Pro','i9','16 inch','16GB','1TB HDD',10000,'Rs239990');")

#mycursor2.execute("create table television(tv_code varchar(10) not null primary key, brand varchar(20), screen_size varchar(20), resolution varchar(5), qty int(10), price varchar(15));")

#mycursor2.execute("insert into television values('T001','sony','50 inches','1080p',10000,'Rs79990');")

#mycursor2.execute("insert into television values('T002','sony','65 inches','4k',10000,'Rs264900');")

#mycursor2.execute("insert into television values('T003','sony','97.6 inches','8k',10000,'59999.99 USD');")

#mydb.commit()
```

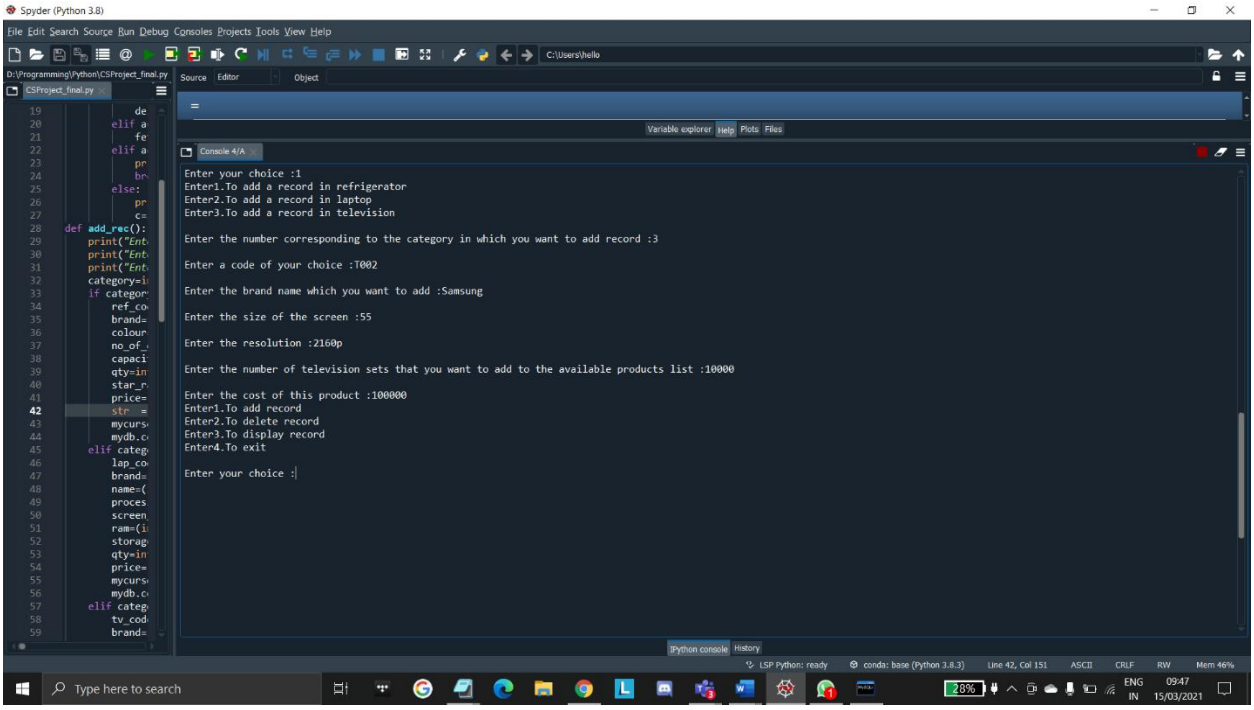
Output :

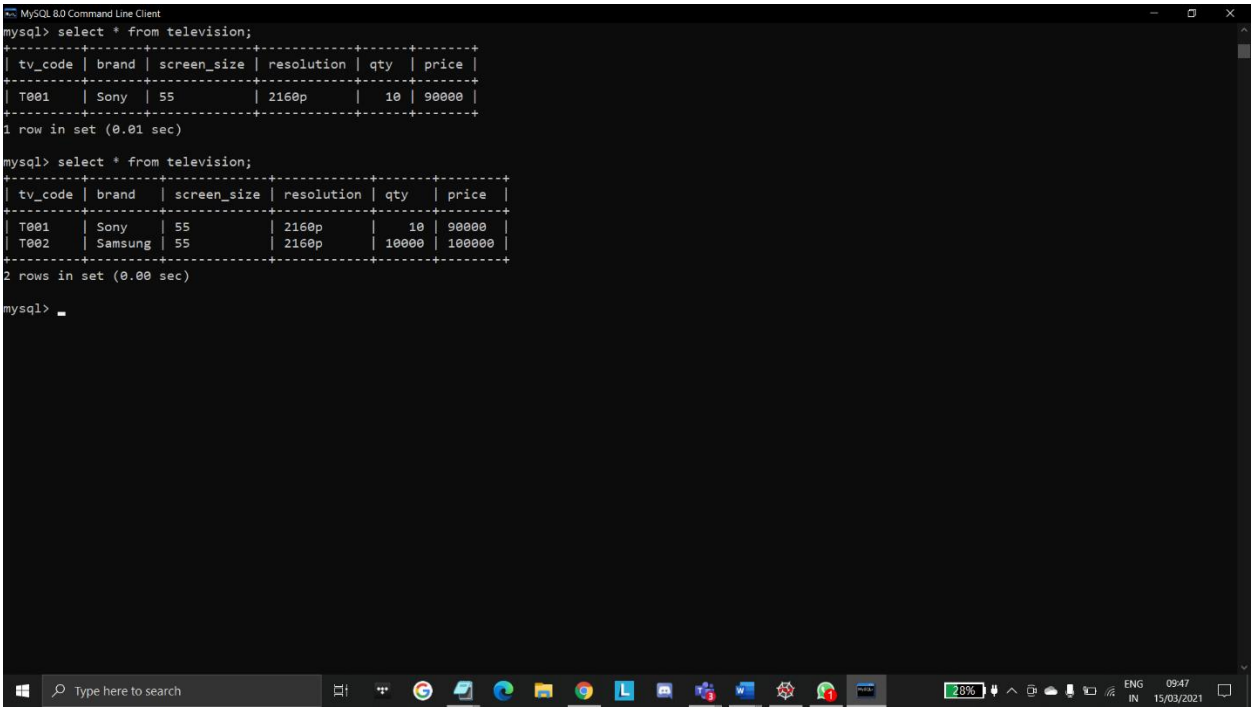

Spyder (Python 3.8)
File Edit Search Source Run Debug Consoles Projects Tools View Help
Usage
Variable explorer Help Plots Files
Console 4/A
Python 3.8.3 (default, Jul 2 2020, 17:30:36) [MSC v.1916 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.
IPython 7.16.1 -- An enhanced Interactive Python.
In [1]: runfile('D:/Programming/Python/CSProject_final.py', wdir='D:/Programming/Python')
Enter1.To add record
Enter2.To delete record
Enter3.To display record
Enter4.To exit
Enter your choice :1
Enter1.To add a record in refrigerator
Enter2.To add a record in laptop
Enter3.To add a record in television
Enter the number corresponding to the category in which you want to add record :1
Enter a reference code of your choice :R005
Enter the brand name which you want to add :LG
Enter a colour :grey
Enter the number of doors :2
Enter the capacity of the refrigerator :800L
Enter the number of refrigerators that you want to add to the available products list :10000
Enter the rating of this brand :5
Enter the cost of this product :200000
Enter1.To add record
Enter2.To delete record
Enter3.To display record
IPython console History
Type here to search

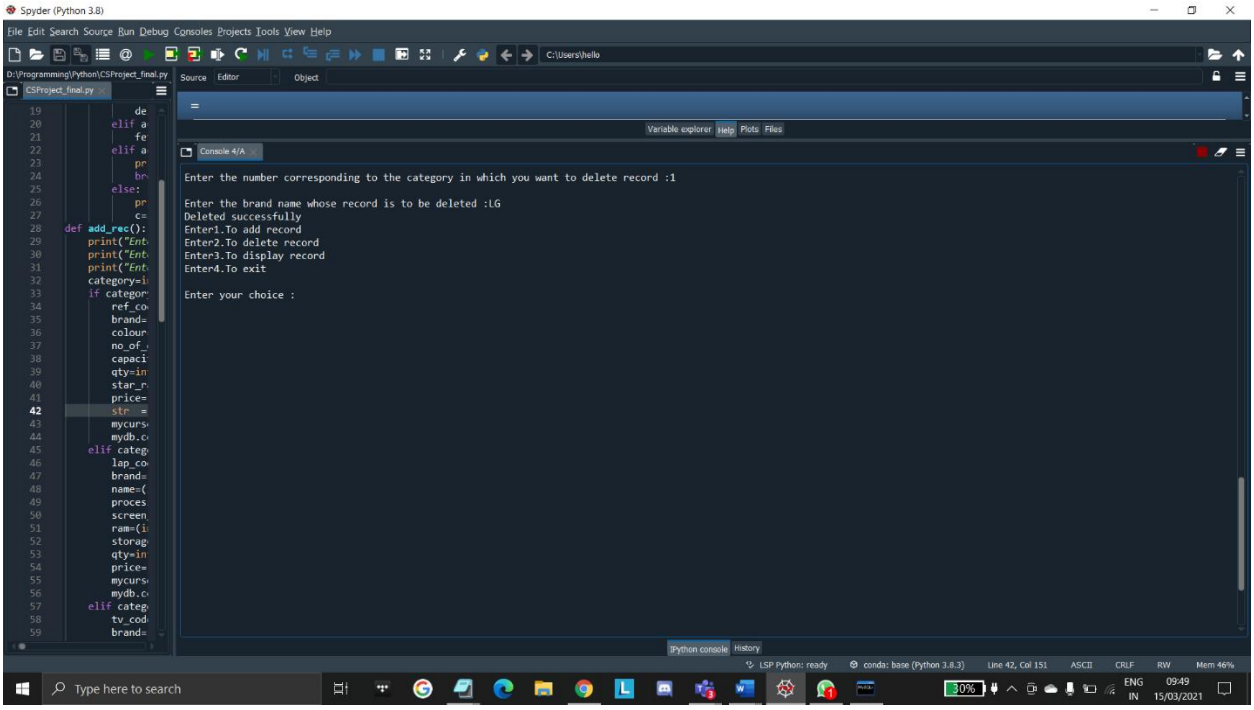

MySQL 8.0 Command Line Client
mysql> select * from refrigerator;
ref_code	brand	colour	no_of_doors	capacity	qty	star_rating	price
R001	Whirpool	blue	1	180L	10000	4	Rs19000
R002	LG	rose_gold	2	420L	10000	4	Rs55990
R003	Samsung	grey	2	810L	10000	5	Rs350000
R004	LG	grey	2	800L	10000	5	200000
4 rows in set (0.00 sec)
mysql> select * from refrigerator;
ref_code	brand	colour	no_of_doors	capacity	qty	star_rating	price
R001	Whirpool	blue	1	180L	10000	4	Rs19000
R002	LG	rose_gold	2	420L	10000	4	Rs55990
R003	Samsung	grey	2	810L	10000	5	Rs350000
R004	LG	grey	2	800L	10000	5	200000
R005	LG	grey	2	800L	10000	5	200000
5 rows in set (0.00 sec)
mysql>
Type here to search

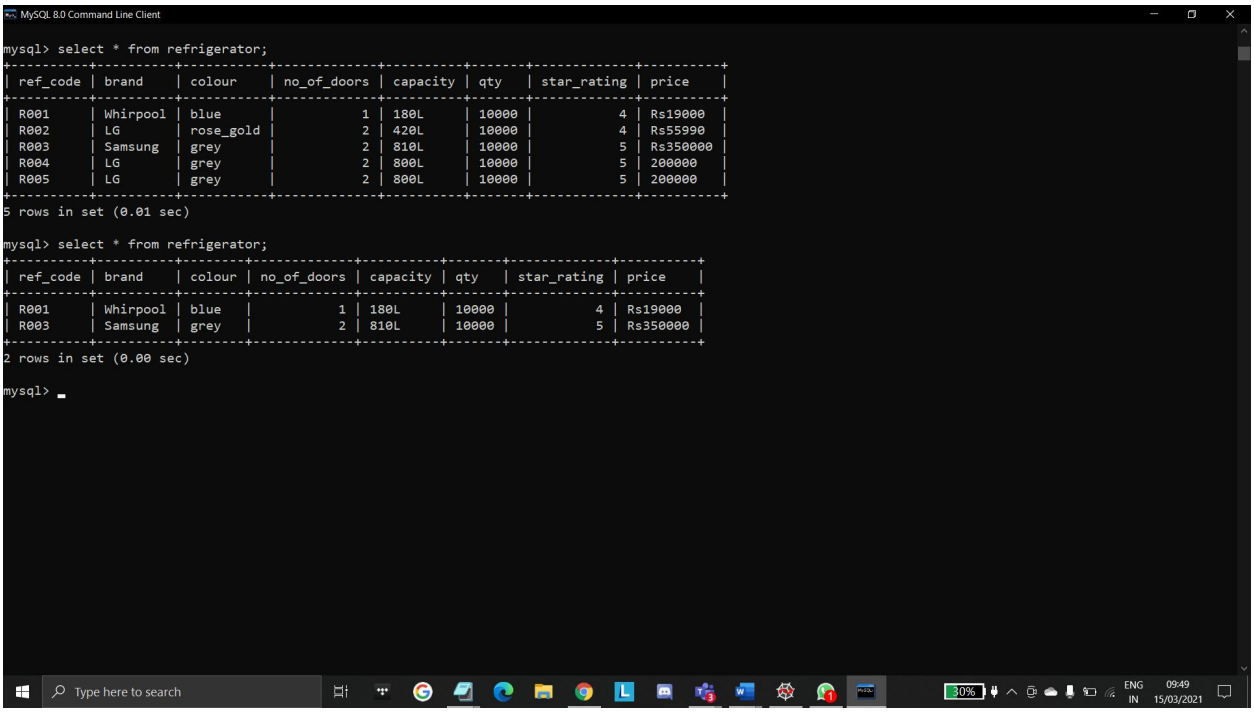

Spyder (Python 3.8)
Enter1.To add a record in refrigerator
Enter2.To add a record in laptop
Enter3.To add a record in television
Enter the number corresponding to the category in which you want to add record :2
Enter a code of your choice :L004
Enter the brand name which you want to add :Lenovo
Enter the series of your device :legion
Enter the type of processor :i7
Enter the size of the screen :15.6 inch
Enter the ram of the laptop :16GB
Enter the storage space available :500GB SSD
Enter the number of laptop devices that you want to add to the available products list :10000
Enter the cost of this product :100000
Enter1.To add record
Enter2.To delete record
Enter3.To display record
Enter4.To exit
Enter your choice :

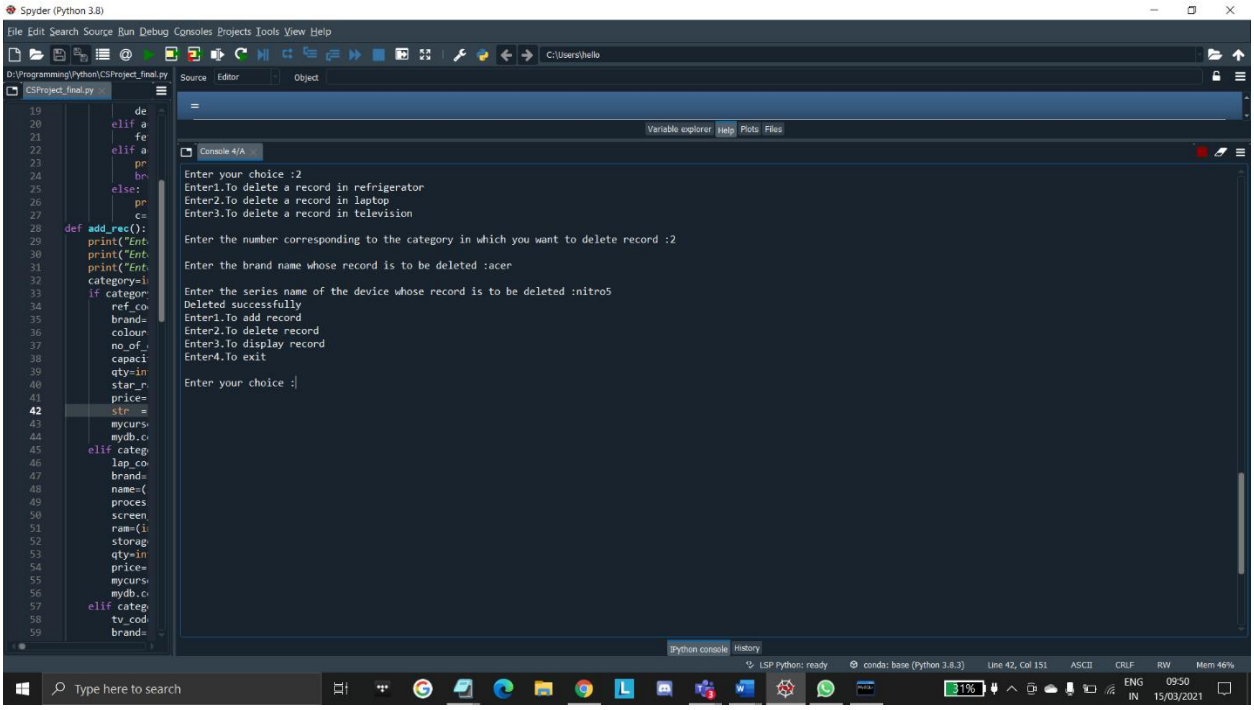

MySQL 8.0 Command Line Client
mysql> select * from laptop;
lap_code	brand	name	processor	screen_size	ram	storage	qty	price
L001	acer	nitro5	i7	15.6 inch	16GB	1TB HDD+256GB SSD	10000	Rs101999
L002	lenovo	ideapad	RYZEN 3	15.6 inch	4GB	1TB HDD	10000	Rs36590
L003	apple	MacBook Pro	i9	16 inch	16GB	1TB HDD	10000	Rs239990
3 rows in set (0.00 sec)
mysql> select * from laptop;
L001	acer	nitro5	i7	15.6 inch	16GB	1TB HDD+256GB SSD	10000	Rs101999
L002	lenovo	ideapad	RYZEN 3	15.6 inch	4GB	1TB HDD	10000	Rs36590
L003	apple	MacBook Pro	i9	16 inch	16GB	1TB HDD	10000	Rs239990
L004	Lenovo	legion	i7	15.6 inch	16GB	500GB SSD	10000	100000
4 rows in set (0.01 sec)
mysql>

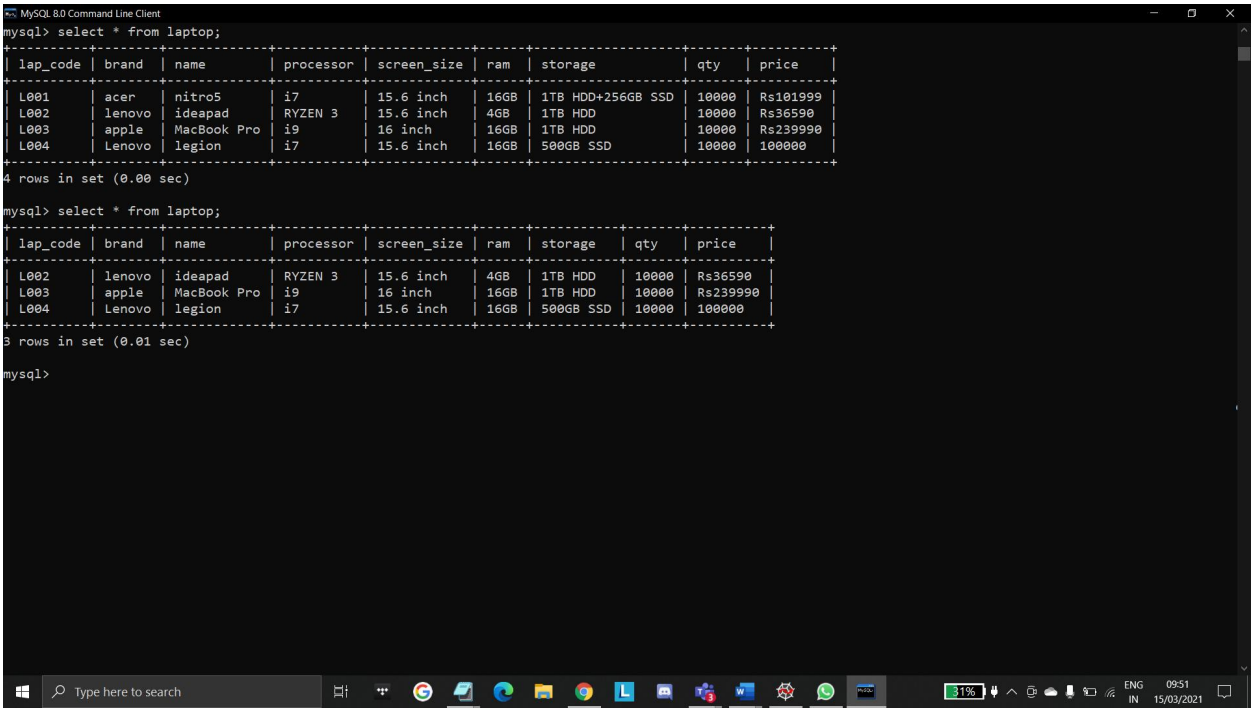

Spyder (Python 3.8)
File Edit Search Source Run Debug Consoles Projects Tools View Help
Enter your choice :1
Enter1.To add a record in refrigerator
Enter2.To add a record in laptop
Enter3.To add a record in television
Enter the number corresponding to the category in which you want to add record :3
Enter a code of your choice :T002
Enter the brand name which you want to add :Samsung
Enter the size of the screen :55
Enter the resolution :2160p
Enter the number of television sets that you want to add to the available products list :10000
Enter the cost of this product :100000
Enter1.To add record
Enter2.To delete record
Enter3.To display record
Enter4.To exit
Enter your choice :
Type here to search


MySQL 8.0 Command Line Client
mysql> select * from television;
| tv_code | brand | screen_size | resolution | qty | price |
| T001 | Sony | 55 | 2160p | 10 | 90000 |
1 row in set (0.01 sec)
mysql> select * from television;
tv_code	brand	screen_size	resolution	qty	price
T001	Sony	55	2160p	10	90000
T002	Samsung	55	2160p	10000	100000
2 rows in set (0.00 sec)
mysql>
Type here to search


Spyder (Python 3.8)
Enter the number corresponding to the category in which you want to delete record :1
Enter the brand name whose record is to be deleted :LG
Deleted successfully
Enter1.To add record
Enter2.To delete record
Enter3.To display record
Enter4.To exit
Enter your choice :

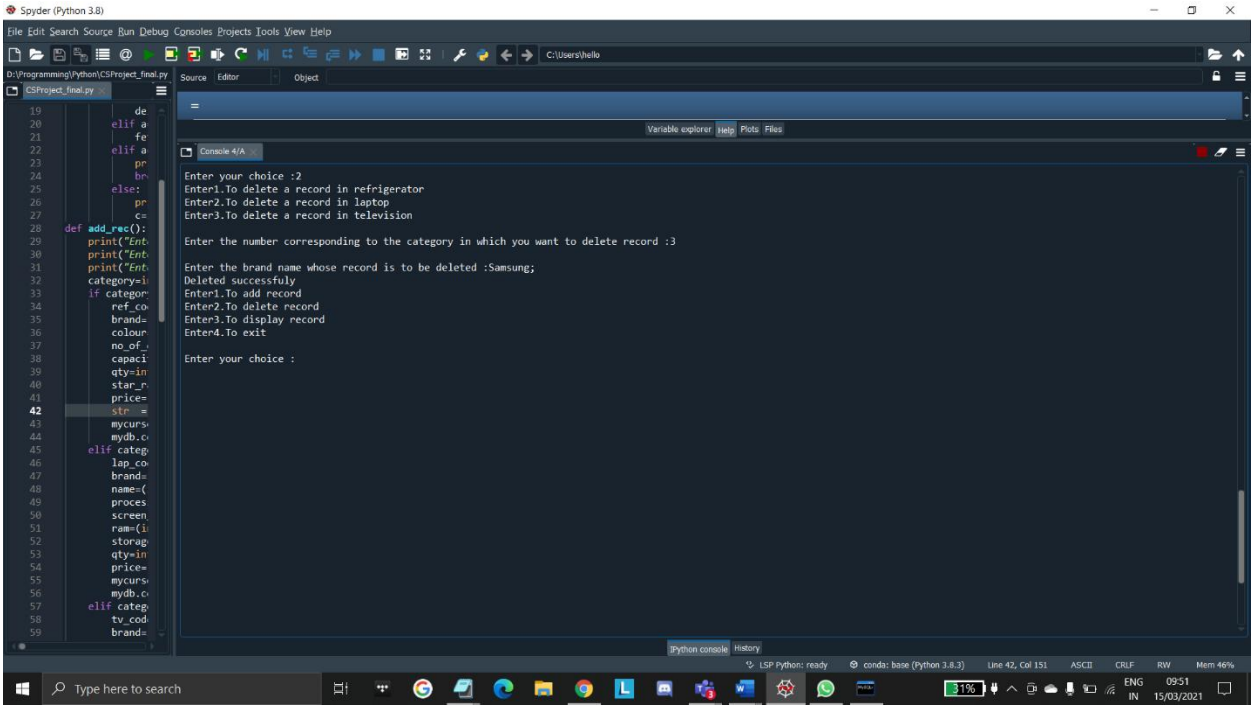

MySQL 8.0 Command Line Client
mysql> select * from refrigerator;
5 rows in set (0.01 sec)
mysql> select * from refrigerator;
2 rows in set (0.00 sec)
mysql>

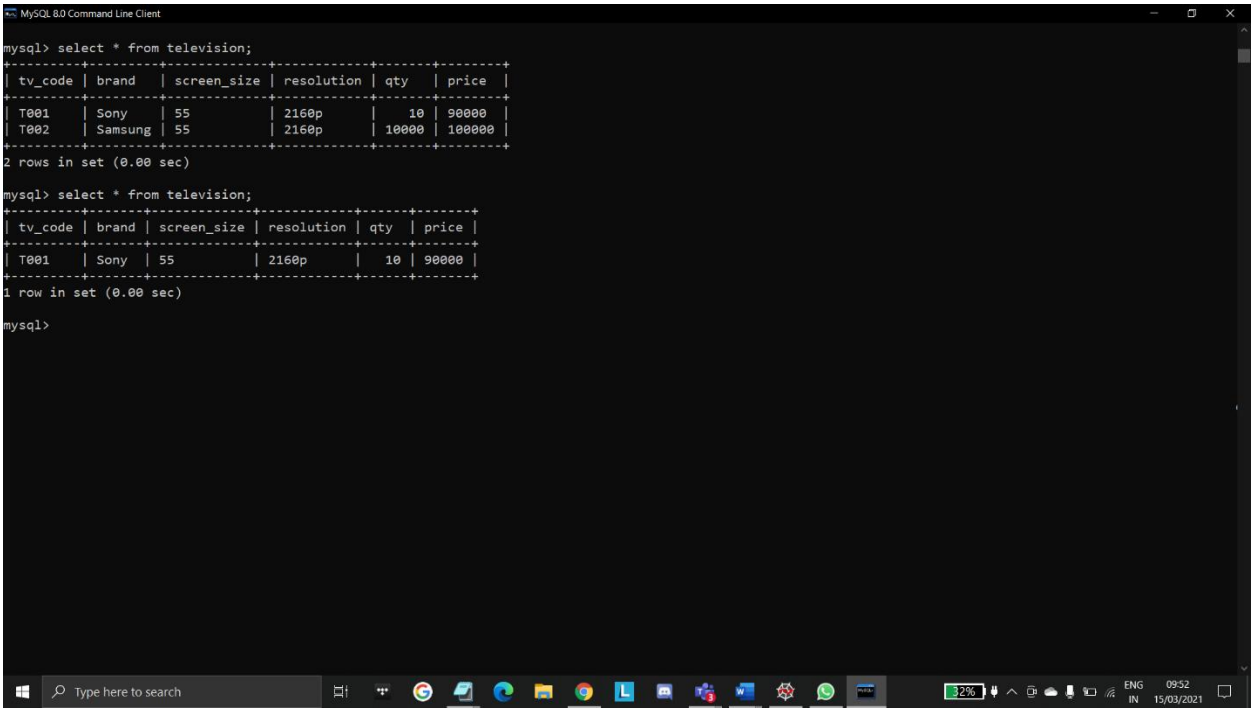


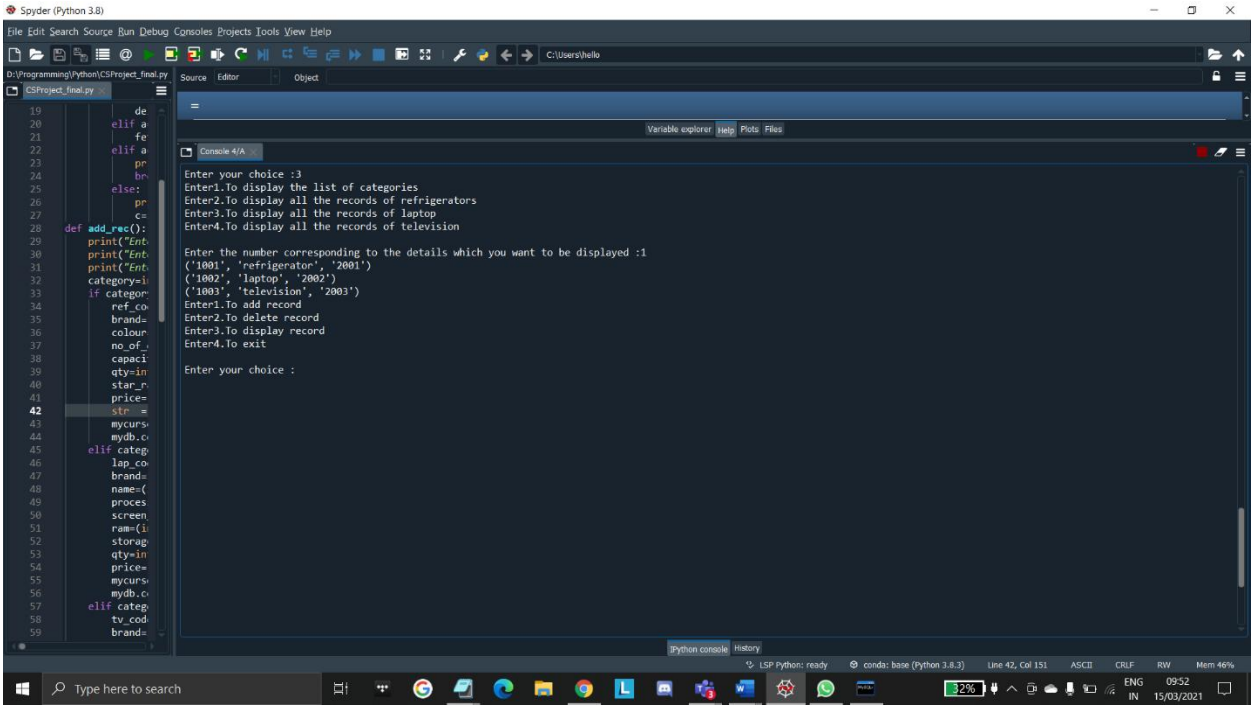


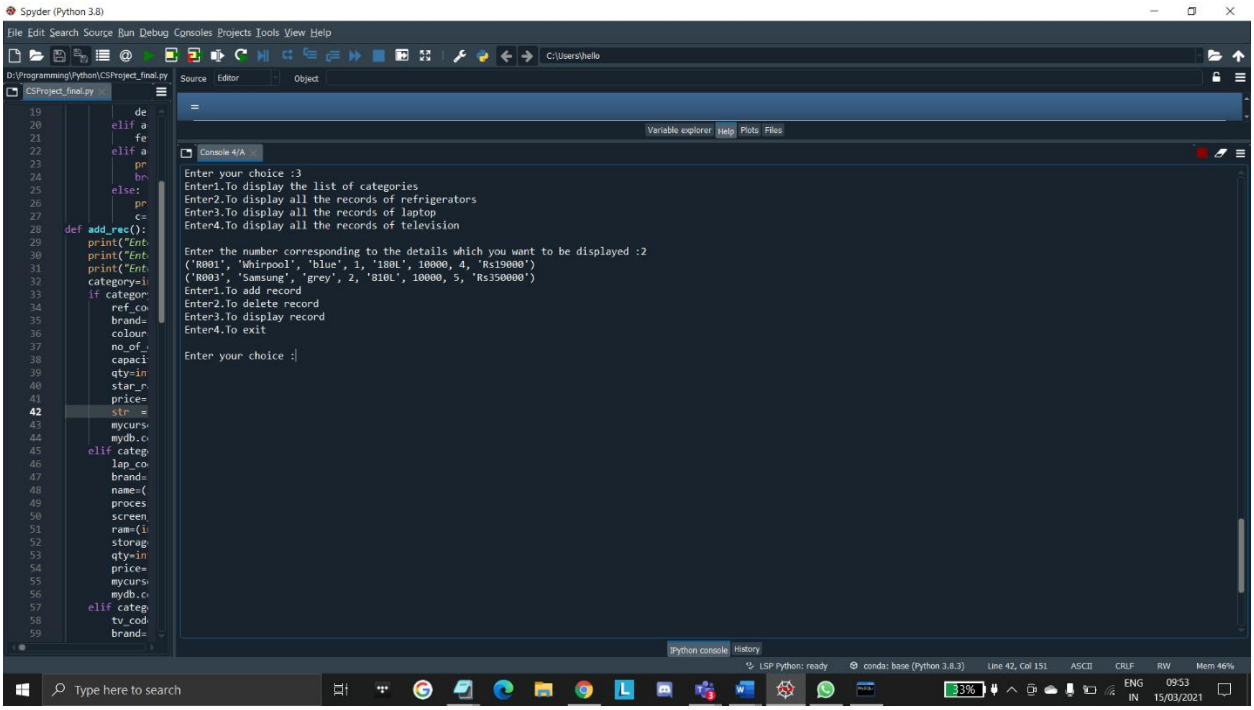
lap_code	brand	name	processor	screen_size	ram	storage	qty	price
L001	acer	nitro5	i7	15.6 inch	16GB	1TB HDD+256GB SSD	10000	Rs101999
L002	lenovo	ideapad	RYZEN 3	15.6 inch	4GB	1TB HDD	10000	Rs36590
L003	apple	MacBook Pro	i9	16 inch	16GB	1TB HDD	10000	Rs239990
L004	Lenovo	legion	i7	15.6 inch	16GB	500GB SSD	10000	100000

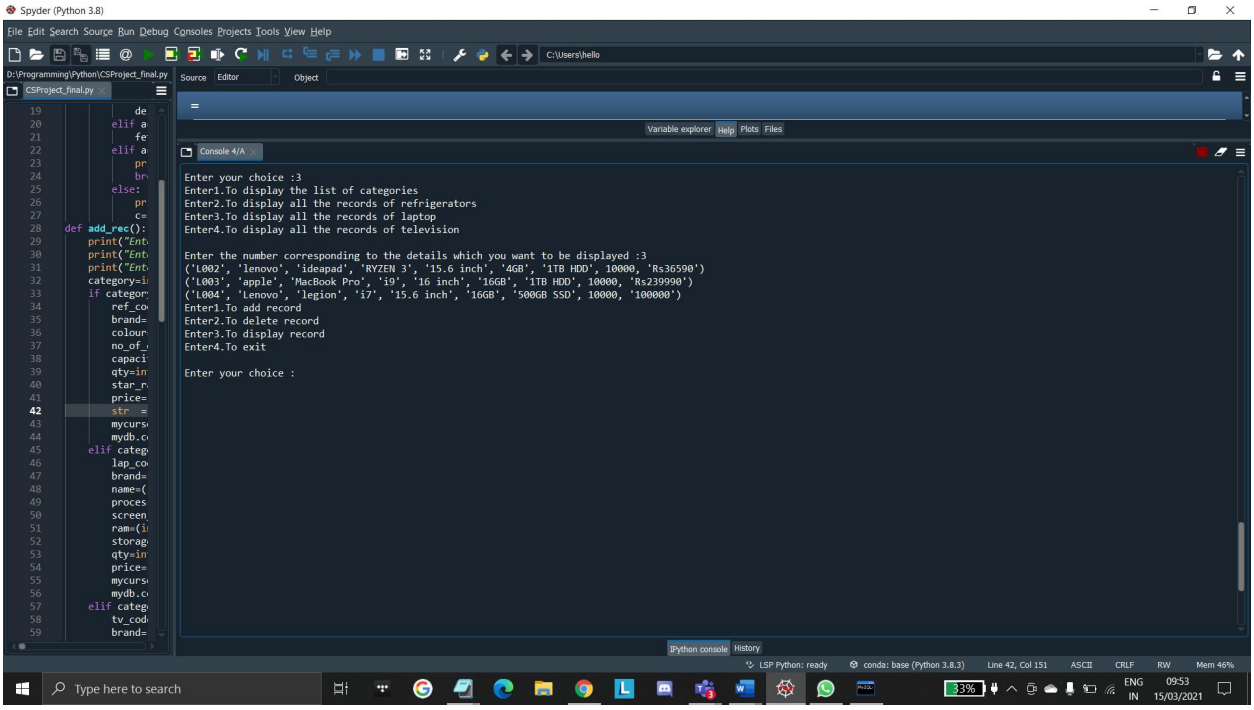
lap_code	brand	name	processor	screen_size	ram	storage	qty	price
L002	lenovo	ideapad	RYZEN 3	15.6 inch	4GB	1TB HDD	10000	Rs36590
L003	apple	MacBook Pro	i9	16 inch	16GB	1TB HDD	10000	Rs239990
L004	Lenovo	legion	i7	15.6 inch	16GB	500GB SSD	10000	100000

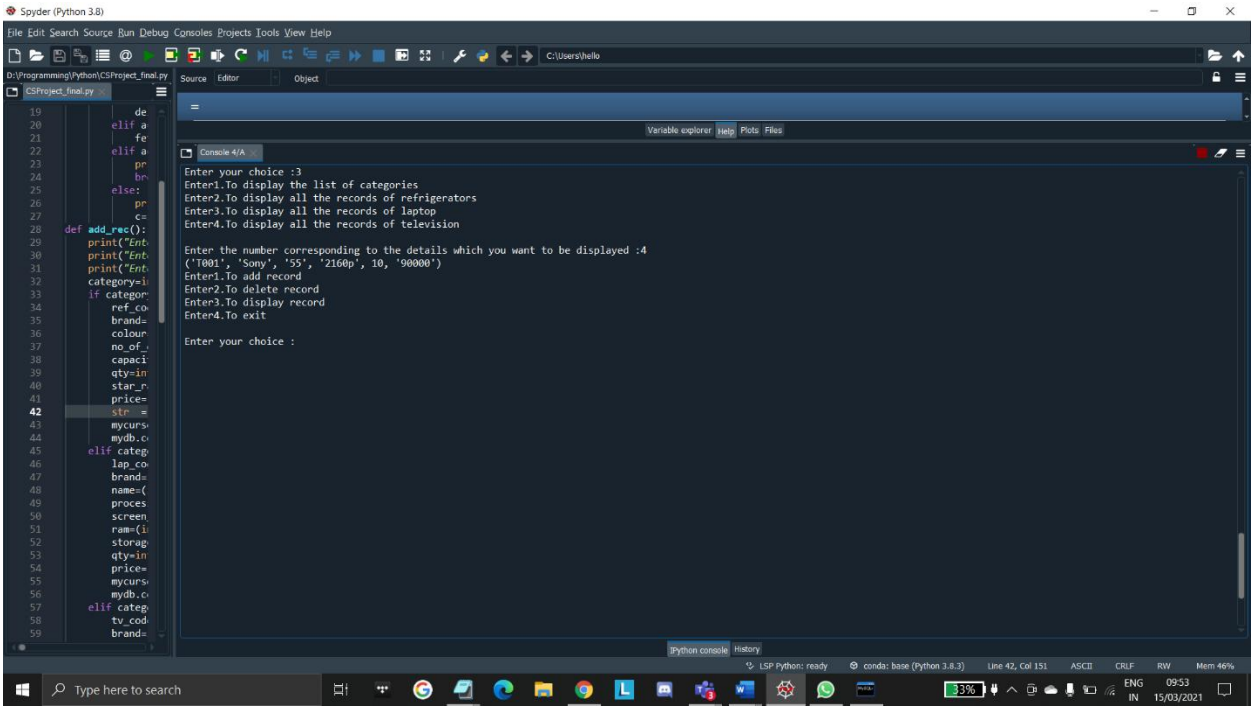

Spyder (Python 3.8)
File Edit Search Source Run Debug Consoles Projects Tools View Help
Enter your choice :2
Enter1.To delete a record in refrigerator
Enter2.To delete a record in laptop
Enter3.To delete a record in television
Enter the number corresponding to the category in which you want to delete record :3
Enter the brand name whose record is to be deleted :Samsung;
Deleted successfuly
Enter1.To add record
Enter2.To delete record
Enter3.To display record
Enter4.To exit
Enter your choice :
Type here to search

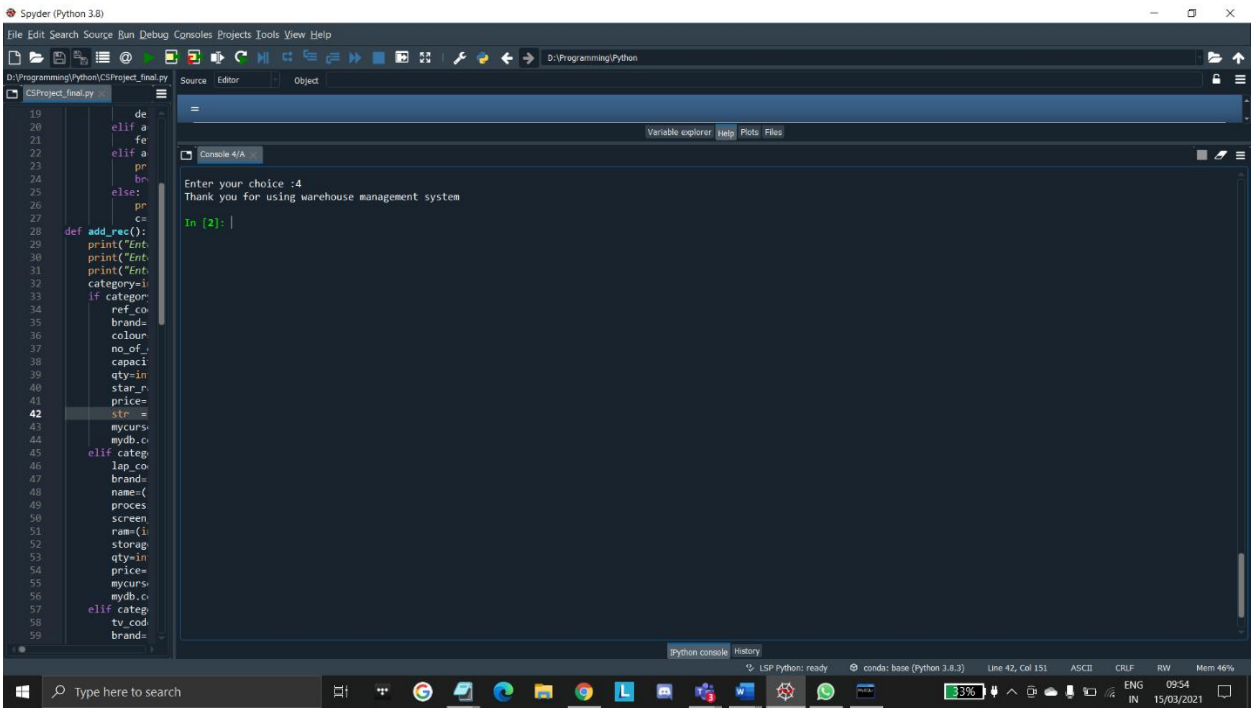

MySQL 8.0 Command Line Client
mysql> select * from television;
+---------+---------+-------------+------------+-------+--------+
| tv_code | brand | screen_size | resolution | qty | price |
+---------+---------+-------------+------------+-------+--------+
| T001 | Sony | 55 | 2160p | 10 | 90000 |
| T002 | Samsung | 55 | 2160p | 10000 | 100000 |
+---------+---------+-------------+------------+-------+--------+
2 rows in set (0.00 sec)
mysql> select * from television;
+---------+-------+-------------+------------+------+-------+
| tv_code | brand | screen_size | resolution | qty | price |
+---------+-------+-------------+------------+------+-------+
| T001 | Sony | 55 | 2160p | 10 | 90000 |
+---------+-------+-------------+------------+------+-------+
1 row in set (0.00 sec)
mysql>
Type here to search


Spyder (Python 3.8)
Enter your choice :3
Enter1.To display the list of categories
Enter2.To display all the records of refrigerators
Enter3.To display all the records of laptop
Enter4.To display all the records of television
Enter the number corresponding to the details which you want to be displayed :1
('1001', 'refrigerator', '2001')
('1002', 'laptop', '2002')
('1003', 'television', '2003')
Enter1.To add record
Enter2.To delete record
Enter3.To display record
Enter4.To exit
Enter your choice :


Spyder (Python 3.8)
Enter your choice :3
Enter1.To display the list of categories
Enter2.To display all the records of refrigerators
Enter3.To display all the records of laptop
Enter4.To display all the records of television
Enter the number corresponding to the details which you want to be displayed :2
('R001', 'Whirpool', 'blue', 1, '180L', 10000, 4, 'Rs19000')
('R003', 'Samsung', 'grey', 2, '810L', 10000, 5, 'Rs350000')
Enter1.To add record
Enter2.To delete record
Enter3.To display record
Enter4.To exit
Enter your choice :


Spyder (Python 3.8)
File Edit Search Source Run Debug Consoles Projects Tools View Help
Enter your choice :3
Enter1.To display the list of categories
Enter2.To display all the records of refrigerators
Enter3.To display all the records of laptop
Enter4.To display all the records of television
Enter the number corresponding to the details which you want to be displayed :3
('L002', 'lenovo', 'ideapad', 'RYZEN 3', '15.6 inch', '4GB', '1TB HDD', 10000, 'Rs36590')
('L003', 'apple', 'MacBook Pro', 'i9', '16 inch', '16GB', '1TB HDD', 10000, 'Rs239990')
('L004', 'Lenovo', 'legion', 'i7', '15.6 inch', '16GB', '500GB SSD', 10000, '100000')
Enter1.To add record
Enter2.To delete record
Enter3.To display record
Enter4.To exit
Enter your choice :
Type here to search


Spyder (Python 3.8)
File Edit Search Source Run Debug Consoles Projects Tools View Help
Enter your choice :3
Enter1.To display the list of categories
Enter2.To display all the records of refrigerators
Enter3.To display all the records of laptop
Enter4.To display all the records of television
Enter the number corresponding to the details which you want to be displayed :4
('T001', 'Sony', '55', '2160p', 10, '90000')
Enter1.To add record
Enter2.To delete record
Enter3.To display record
Enter4.To exit
Enter your choice :
Type here to search


Spyder (Python 3.8)
File Edit Search Source Run Debug Consoles Projects Tools View Help
Enter your choice :4
Thank you for using warehouse management system
In [2]:
Type here to search

Bibliography

The source used for this project is our prescribed computer science textbook, Computer science with python for class 12 by Sumita Arora

Issues faced while doing the project were solved using stackoverflow.com