DELHI PUBLIC SCHOOL

KAMPTEE ROAD,NAGPUR

SUBMITTED BY	MARUVAPALLI MANOJ
CLASS	12TH 'A'
TOPIC	PYTHON INTERFACE WITH SQL DATABASES
SUBMITTED TO	MR CHANDRASHAKER UPRADE

CERTIFICATE

This is to certify that Maruvapalli Manoj, a student of class 12th 'A' has successfully completed the project on the topic of Python Interface with SQL databases under the guidance of Mr Chandrashaker Uprande during session 2019-20 at Delhi Public school,Kamptee Road,Nagpur

Signature of External Examiner

Signature of Computer Science Teacher

ACKNOWLEDGEMENT

I place my sincere thanks to my computer science teacher Mr Chandrashaker Uprade for his guidance and advices to complete my work succesfully.

I also thank our principal Mrs Ritu Sharma for providing me all the facilities to finish the project on time.

Last but not least I thank my parents for their encouragement and support in my humble venture.

INTRODUCTION

STOCK MANAGEMENT

Abstract

Stock management is the practice of ordering, storing, tracking, and controlling inventory.Stock management applies to every item a business uses to produce its products or services – from raw materials to finished goods. In other words, stock management covers every aspect of a business's inventory.

The project contains following modules:-

1. Product Management: This module is used to add, update and delete the products.

2. Purchase Management: This module is used to manage the purchase system.

3. Database setup: This module is used to setup the database in the system for the first time.

Technologies Used:

SOFTWARE SPECIFICATION:-

Operating System	:	Windows 7
Platform	:	Python IDLE 2.7
Database	:	MySQL
Languages	:	Python

HARDWARE SPECIFICATION:-

Processor	:	Dual Core and above
Hard Disk	:	40GB
Ram	:	1024 MB

Note: For Python-MySQL connectivity, following data have been used:-

Host- localhost, user- root, password- claw, database- stock

CODING:

```
import mysql.connector
import datetime
now = datetime.datetime.now()




def product_mgmt( ):
    while True :
        print("\t\t\t 1. Add New Product")
        print("\t\t\t 2. List Product")
        print("\t\t\t 3. Update Product")
        print("\t\t\t 4. Delete Product")
        print("\t\t\t 5. Back (Main Menu)")
        p=int (input("\t\tEnter Your Choice :"))
        if p==1:
            add_product()
        if p==2:
            search_product()
        if p==3:
            update_product()
        if p==4:
            delete_product()
        if p== 5 :
            break
```

```
def add_product():#

        mydb=mysql.connector.connect(host="localhost",user="root",passwd="claw",
        database="stock")

        mycursor=mydb.cursor()

        sql="INSERT INTO product(pcode,pname,pprice,pqty,pcat) values   (%s,%s,
%s,%s,%s)"

        code=int(input("\t\tEnter product code :"))

        search="SELECT count(*) FROM product WHERE pcode=%s;"

        val=(code,)

        mycursor.execute(search,val)

        for x in mycursor:

                cnt=x[0]

        if cnt==0:

                name=input("\t\tEnter product name :")

                qty=int(input("\t\tEnter product quantity :"))

                price=float(input("\t\tEnter product unit price :"))

                cat=input("\t\tEnter Product category :")

                val=(code,name,price,qty,cat)

                mycursor.execute(sql,val)

                mydb.commit()

        else:

                print("\t\t Product already exist")
```

```
def search_product():
        while True :
        print("\t\t\t 1. List all product")
        print("\t\t\t 2. List product code wise")
         print("\t\t\t 3. List product categoty wise")
         print("\t\t\t 4. Back (Main Menu)")
         s=int (input("\t\tEnter Your Choice :"))
         if s==1 :
                    list_product()
         if s==2 :
                    code=int(input(" Enter product code :"))
                    list_prcode(code)

          if s==3 :
                    cat=input("Enter category :")
                    list_prcat(cat)

           if s== 4 :
                    break
```

```
def list_product():
        mydb=mysql.connector.connect(host="localhost",user="root",passwd="claw",
        database="stock")
        mycursor=mydb.cursor()
        sql="SELECT * from product"
        mycursor.execute(sql)
        print("\t\t\t\t PRODUCT DETAILS")
        print("\t\t","-"*105)

        print("\t\t code    name                              price          quantity
category")
        print("\t\t","-"*105)

        for i in mycursor:
                print("\t\t",i[0],"\t",i[1],"\t\t\t",i[2],"\t    ",i[3],"\t\t",i[4])
        print("\t\t","-"*105)




        def list_prcode(code):

mydb=mysql.connector.connect(host="localhost",user="root",passwd="claw",databa
se="stock")
        mycursor=mydb.cursor()
        sql="SELECT * from product WHERE pcode=%s"
        val=(code,)
        mycursor.execute(sql,val)
        print("\t\t\t\t PRODUCT DETAILS")
        print("\t\t","-"*105)
```

```
        print("\t\t code     name                              price              quantity
category")
        print("\t\t","-"*105)


        for i in mycursor:
                print("\t\t",i[0],"\t",i[1],"\t\t\t",i[2],"\t    ",i[3],"\t\t",i[4])
        print("\t\t","-"*105)



def list_prcat(cat):

        mydb=mysql.connector.connect(host="localhost",user="root",passwd="claw",
        database="stock")
        mycursor=mydb.cursor()


        print (cat)
        sql="SELECT * from product WHERE pcat =%s"
        val=(cat,)
        mycursor.execute(sql,val)
        clrscr()
        print("\t\t\t\t PRODUCT DETAILS")
        print("\t\t","-"*105)
        print("\t\t code     name                              price              quantity
category")
        print("\t\t","-"*105)
        for i in mycursor:
                print("\t\t",i[0],"\t\t\t",i[1],"\t",i[2],"\t    ",i[3],"\t\t",i[4])
        print("\t\t","-"*105)
```

```
def update_product():

    mydb=mysql.connector.connect(host="localhost",user="root",passwd="claw",
    database="stock")

    mycursor=mydb.cursor()

    code=int(input("Enter the product code :"))

    qty=int(input("Enter the quantity :"))

    sql="UPDATE product SET pqty=pqty+%s WHERE pcode=%s;"

    val=(qty,code)

    mycursor.execute(sql,val)

    mydb.commit()

    print("\t\t Product details updated")




def delete_product():

    mydb=mysql.connector.connect(host="localhost",user="root",passwd="claw",
    database="stock")

    mycursor=mydb.cursor()

    code=int(input("Enter the product code :"))

    sql="DELETE FROM product WHERE pcode = %s;"

    val=(code,)

    mycursor.execute(sql,val)

    mydb.commit()

    print(mycursor.rowcount," record(s) deleted");
```

```
def purchase_mgmt( ):
        while True :
            print("\t\t\t 1. Add Order")
            print("\t\t\t 2. List Order")
            print("\t\t\t 3. Back (Main Menu)")
            o=int (input("\t\tEnter Your Choice :"))
            if o==1 :
                add_order()
            if o==2 :
                list_order()

            if o== 3 :
                break
```

```
def add_order():

    mydb=mysql.connector.connect(host="localhost",user="root",passwd="claw",
    database="stock")
    mycursor=mydb.cursor()
    now = datetime.datetime.now()
    sql="INSERT INTO orders (orderid, orderdate, pcode, pprice, pqty, supplier,
    pcat) values (%s,%s,%s,%s,%s,%s,%s)"
    code=int(input("Enter product code :"))
    oid=now.year+now.month+now.day+now.hour+now.minute+now.second
    qty=int(input("Enter product quantity : "))
    price=float(input("Enter Product unit price: "))
```

```
        cat=input("Enter product category: ")
        supplier=input("Enter Supplier details: ")
        val=(oid,now,code,price,qty,supplier,cat)
        mycursor.execute(sql,val)
        mydb.commit()




def list_order():
        mydb=mysql.connector.connect(host="localhost",user="root",passwd="claw",
        database="stock")
        mycursor=mydb.cursor()
        sql="SELECT * from orders"

        mycursor.execute(sql)
        print("\t\t\t\t\t\t\t ORDER DETAILS")
        print("-"*85)
        print("orderid  Date  Product code  price  quantity  Supplier
        Category")
        print("-"*85)

        for i in mycursor:
                print(i[0],"\t",i[1],"\t",i[2],"\t  ",i[3],"\t",i[4],"\t   ",i[5],"\t",i[6])
        print("-"*85)
```

```
def db_mgmt( ):
    while True :
        print("\t\t\t 1. Database creation")
        print("\t\t\t 2. List Database")
        print("\t\t\t 3. Back (Main Menu)")
        p=int (input("\t\tEnter Your Choice :"))
        if p==1 :
            create_database()
        if p==2 :
            list_database()
        if p== 3 :
            break

def create_database():
    mydb=mysql.connector.connect(host="localhost",user="root",passwd="claw",
    database="stock")
    print(" Creating PRODUCT table")
    sql = "CREATE TABLE if not exists product (\
        pcode int(4) PRIMARY KEY,\
        pname char(30) NOT NULL,\

        pprice float(8,2) ,\
        pqty int(4) ,\
        pcat char(30));"
    mycursor.execute(sql)
```

```
print(" Creating ORDER table")
 sql = "CREATE TABLE if not exists orders (\
        orderid int(4)PRIMARY KEY ,\
        orderdate DATE ,\
        pcode char(30) NOT NULL , \
        pprice float(8,2) ,\
        pqty int(4) ,\
        supplier char(50),\
        pcat char(30));"
 mycursor.execute(sql)
 print(" ORDER table created")
```

```
def list_database():

        mydb=mysql.connector.connect(host="localhost",user="root",passwd="claw",
        database="stock")
        mycursor=mydb.cursor()
        sql="show tables;"

          mycursor.execute(sql)
        for i in mycursor:
            print(i)
```

```
def clrscr():
        print("\n"*5)




while True:
        clrscr()
        print("\t\t\t STOCK MANAGEMENT")
        print("\t\t\t **********\n")
        print("\t\t 1. PRODUCT MANAGEMENT")
        print("\t\t 2. PURCHASE MANAGEMENT")
        print("\t\t 3. DATABASE SETUP")
        print("\t\t 4. EXIT\n")
        n=int(input("Enter your choice :"))
        if n== 1:
                product_mgmt()
        if n== 2:
                purchase_mgmt()
        if n== 3:
                db_mgmt()
        if n== 4:
              break
```

SAMPLE OUTPUT:

```
                        STOCK MANAGEMENT
                        ****************

                    1. PRODUCT MANAGEMENT
                    2. PURCHASE MANAGEMENT
                    3. DATABASE SETUP
                    4. EXIT

  Enter your choice :1
                            1. Add New Product
                            2. List Product
                            3. Update Product
                            4. Delete Product
                            5. Back (Main Menu)
                    Enter Your Choice :1
                    Enter product code :1021
                    Enter product name :Android OS Beta
                    Enter product quantity :60
                    Enter product unit price :6799
                    Enter Product category :Operating System
                            1. Add New Product
                            2. List Product
                            3. Update Product
                            4. Delete Product
                            5. Back (Main Menu)
                    Enter Your Choice :2
                            1. List all product
                            2. List product code wise
                            3. List product categoty wise
                            4. Back (Main Menu)
                    Enter Your Choice :1
```

```
                PRODUCT DETAILS
-------------------------------------------------------------------------------------------------------
code    name                                    price           quantity        category
-------------------------------------------------------------------------------------------------------
1001    Seagate 1 TB Backup                     4100.0          100             Hard Disk
1002    WD Passport 1TB                         3500.0          50              Hard Disk
1003    Adata 16GB 1866 XPG                     6100.0          60              RAM
1004    4 GB DDR 3 Cossair                      1500.0          150             RAM
1005    Intel i9 9900 K                         40900.0         50              CPU
1006    Intel i7 9700k                          29000.0         60              CPU
1007    AMD Ryzen 9 3900 X                      47900.0         50              CPU
1008    ASUS Prime X299A                        25850.0         80              Motherboard
1009    Asus ROG Maximus X                      24600.0         120             Motherboard
1010    Intex USB mouse                         1000.0          200             Mouse
1011    Dell Wireless Mouse                     1300.0          150             Mouse
1012    Zotac 730 4 GB DDR 3                    5000.0          5000            Graphic Card
1013    Gigabyte GeForce 2070                   49000.0         150             Graphic Card
1014    LG CRT 15 Inches                        2450.0          200             Monitor
1015    Dell SE198WFP 19"                       7700.0          150             Monitor
1016    Acer 2300 Gaming Rock                   1600.0          600             keyboard
1017    ASUS N55 SLIVER                         1800.0          150             Keyboard
1018    Ms Windows 10 64bit                     8700.0          50              Operating System
1019    Windows 8 64 bit                        8700.0          50              Operating System
1020    Windows 10 pro 64 bit                   9000.0          100             Operating system
1021    Android OS Beta                         6799.0          60              Operating System
-------------------------------------------------------------------------------------------------------
        1. List all product
        2. List product code wise
        3. List product categoty wise
```

```
        4. Back (Main Menu)
Enter Your Choice :2
Enter product code :1013
```

PRODUCT DETAILS

code	name	price	quantity	category
1013	Gigabyte GeForce 2070	49000.0	150	Graphic Card

```
        1. List all product
        2. List product code wise
        3. List product categoty wise
        4. Back (Main Menu)
Enter Your Choice :3
```

PRODUCT DETAILS

code	name	price	quantity	category
1018	Ms Windows 10 64bit	8700.0	50	Operating System
1019	Windows 8 64 bit	8700.0	50	Operating System
1020	Windows 10 pro 64 bit	9000.0	100	Operating system
1021	Android OS Beta	6799.0	60	Operating System

```
        1. List all product
        2. List product code wise
        3. List product categoty wise
        4. Back (Main Menu)
Enter Your Choice :4
        1. Add New Product
        2. List Product
        3. Update Product
        4. Delete Product
        5. Back (Main Menu)
Enter Your Choice :3
Enter the product code :1008
Enter the quantity :20
 Product details updated
        1. Add New Product
        2. List Product
        3. Update Product
        4. Delete Product
        5. Back (Main Menu)
Enter Your Choice :2
        1. List all product
        2. List product code wise
        3. List product categoty wise
        4. Back (Main Menu)
```

```
Enter Your Choice :1
```

PRODUCT DETAILS

code	name	price	quantity	category
1001	Seagate 1 TB Backup	4100.0	100	Hard Disk
1002	WD Passport 1TB	3500.0	50	Hard Disk
1003	Adata 16GB 1866 XPG	6100.0	60	RAM
1004	4 GB DDR 3 Cossair	1500.0	150	RAM
1005	Intel i9 9900 K	40900.0	50	CPU
1006	Intel i7 9700k	29000.0	60	CPU
1007	AMD Ryzen 9 3900 X	47900.0	50	CPU
1008	ASUS Prime X299A	25850.0	100	Motherboard
1009	Asus ROG Maximus X	24600.0	120	Motherboard
1010	Intex USB mouse	1000.0	200	Mouse
1011	Dell Wireless Mouse	1300.0	150	Mouse
1012	Zotac 730 4 GB DDR 3	5000.0	5000	Graphic Card
1013	Gigabyte GeForce 2070	49000.0	150	Graphic Card
1014	LG CRT 15 Inches	2450.0	200	Monitor
1015	Dell SE198WFP 19"	7700.0	150	Monitor
1016	Acer 2300 Gaming Rock	1600.0	600	keyboard
1017	ASUS N55 SLIVER	1800.0	150	Keyboard
1018	Ms Windows 10 64bit	8700.0	50	Operating System
1019	Windows 8 64 bit	8700.0	50	Operating System
1020	Windows 10 pro 64 bit	9000.0	100	Operating system
1021	Android OS Beta	6799.0	60	Operating System

```
        1. List all product
        2. List product code wise
        3. List product categoty wise
        4. Back (Main Menu)
Enter Your Choice :4
```

```
                        1. Add New Product
                        2. List Product
                        3. Update Product
                        4. Delete Product
                        5. Back (Main Menu)
                Enter Your Choice :4
Enter the product code :1021
1  record(s) deleted
                        1. Add New Product
                        2. List Product
                        3. Update Product
                        4. Delete Product
                        5. Back (Main Menu)
                Enter Your Choice :2
                        1. List all product
                        2. List product code wise
                        3. List product categoty wise
                        4. Back (Main Menu)
                Enter Your Choice :1
```

PRODUCT DETAILS

code	name	price	quantity	category
1001	Seagate 1 TB Backup	4100.0	100	Hard Disk
1002	WD Passport 1TB	3500.0	50	Hard Disk
1003	Adata 16GB 1866 XPG	6100.0	60	RAM
1004	4 GB DDR 3 Cossair	1500.0	150	RAM
1005	Intel i9 9900 K	40900.0	50	CPU
1006	Intel i7 9700k	29000.0	60	CPU
1007	AMD Ryzen 9 3900 X	47900.0	50	CPU
1008	ASUS Prime X299A	25850.0	100	Motherboard
1009	Asus ROG Maximus X	24600.0	120	Motherboard
1010	Intex USB mouse	1000.0	200	Mouse
1011	Dell Wireless Mouse	1300.0	150	Mouse
1012	Zotac 730 4 GB DDR 3	5000.0	5000	Graphic Card
1013	Gigabyte GeForce 2070	49000.0	150	Graphic Card
1014	LG CRT 15 Inches	2450.0	200	Monitor
1015	Dell SE198WFP 19"	7700.0	150	Monitor
1016	Acer 2300 Gaming Rock	1600.0	600	keyboard
1017	ASUS N55 SLIVER	1800.0	150	Keyboard
1018	Ms Windows 10 64bit	8700.0	50	Operating System
1019	Windows 8 64 bit	8700.0	50	Operating System
1020	Windows 10 pro 64 bit	9000.0	100	Operating system

```
        1. List all product
        2. List product code wise
        3. List product categoty wise
        4. Back (Main Menu)
```

```
       Enter Your Choice :4
                1. Add New Product
                2. List Product
                3. Update Product
                4. Delete Product
                5. Back (Main Menu)
       Enter Your Choice :5
```

```
                    STOCK MANAGEMENT
                    ****************

                1. PRODUCT MANAGEMENT
                2. PURCHASE MANAGEMENT
                3. DATABASE SETUP
                4. EXIT

        Enter your choice :2
                                1. Add Order
                                2. List Order
                                3. Back (Main Menu)
                            Enter Your Choice :1
        Enter product code :1006
        Enter product quantity : 10
        Enter Product unit price: 29000
        Enter product category: Processor
        Enter Supplier details: Harsh
                                1. Add Order
                                2. List Order
                                3. Back (Main Menu)
                            Enter Your Choice :2
```

ORDER DETAILS

orderid	Date	Product code	price	quantity	Supplier	Category
2102	2019-12-17	1004	1500.0	10	Chahat	RAM
2113	2019-12-17	1003	6100.0	10	Anshuka	RAM
2115	2019-12-17	1002	3500.0	10	Ansh	Hard Disk
2135	2019-12-17	1001	4100.0	1	Dhruva	Hard Disk
2136	2019-12-17	1001	4100.0	10	Aniket	Hard Disk
2149	2019-12-17	1005	40900.0	10	Dhruva	Processor
2160	2019-12-17	1006	29000.0	10	Harsh	Processor

```
                        1. Add Order
                        2. List Order
                        3. Back (Main Menu)
                    Enter Your Choice :3
```

```
                    STOCK MANAGEMENT
                    ****************

                1. PRODUCT MANAGEMENT
                2. PURCHASE MANAGEMENT
                3. DATABASE SETUP
                4. EXIT

        Enter your choice :4
```