

## Deleting rows from database table

For deleting rows from database table, SQL provides a command called "DELETE".

### Example:

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

```
cn=mysql.connect(database="pydb7",user="root",password="root")
c=cn.cursor()
rollno=int(input("Enter Rollno of Student to Delete ?"))
c.execute("delete from student where rollno=%s",params=[rollno])
a=c.rowcount
if a>0:
    print("Student Deleted")
    cn.commit()
else:
    print("Invalid Rollno")
```

### Output:

```
Enter Rollno of Student to Delete ?2
Student Deleted
```

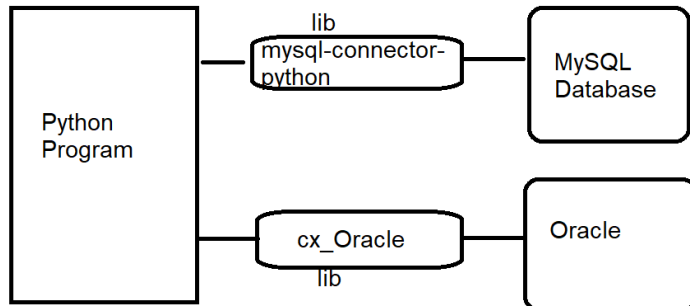
```
Enter Rollno of Student to Delete ?2
Invalid Rollno
```

```
mysql> select * from student;
+-----+-----+-----+-----+
| rollno | name   | course | fee    |
+-----+-----+-----+-----+
| 1      | naresh | python | 9000.00 |
| 3      | kishore | C++    | 2000.00 |
| 4      | ramesh | ui     | 6000.00 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

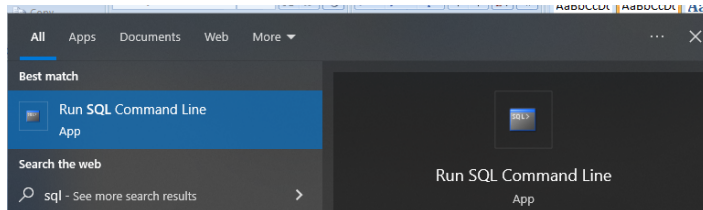
mysql>
```

## How to communicate with ORACLE database

1. Install Oracle Software (Oracle 11g)
2. Install library cx\_Oracle (Python 3.8, Python 3.9)



## To work with oracle database



User name: system  
Password : manager

```
Run SQL Command Line

SQL*Plus: Release 11.2.0.2.0 Production on Sat Nov 11 07:55:57 2023

Copyright (c) 1982, 2014, Oracle. All rights reserved.

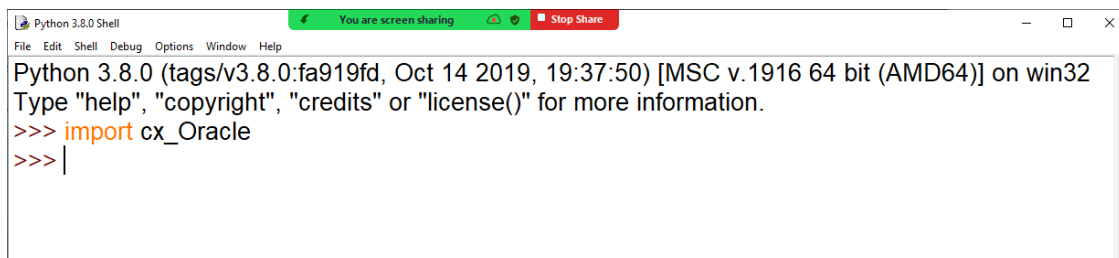
SQL> connect system/manager
Connected.
SQL> _
```

## Installing cx\_Oracle Library

```
Command Prompt

C:\Users\nit>pip install cx_Oracle
Collecting cx_Oracle
  Downloading https://files.pythonhosted.org/packages/e5/49/2233f49e27213c183b89429ed08d12fe98288df32234267430713099d0/cx_Oracle-8.3.0-cp38-cp38-win_amd64.whl (219kB)
    | 225kB 1.1MB/s
Installing collected packages: cx-Oracle
Successfully installed cx-Oracle-8.3.0
WARNING: You are using pip version 19.2.3, however version 23.3.1 is available.
You should consider upgrading via the 'python -m pip install --upgrade pip' command.

C:\Users\nit> _
```

A screenshot of a Python 3.8.0 Shell window. The title bar says "Python 3.8.0 Shell". Below the title bar is a menu bar with "File", "Edit", "Shell", "Debug", "Options", "Window", and "Help". The main text area shows the following: "Python 3.8.0 (tags/v3.8.0:fa919fd, Oct 14 2019, 19:37:50) [MSC v.1916 64 bit (AMD64)] on win32", "Type 'help', 'copyright', 'credits' or 'license()' for more information.", ">>> import cx\_Oracle", and ">>> |". At the top of the window, there is a green bar that says "You are screen sharing" and a red button that says "Stop Share".

```
Python 3.8.0 (tags/v3.8.0:fa919fd, Oct 14 2019, 19:37:50) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> import cx_Oracle
>>> |
```

Oracle Express Edition → Database Name → XE  
Oracle Enterprise Edition → Database Name → ORCL

### Example:

# Establishing Connection to Database

```
import cx_Oracle
```

```
cn=cx_Oracle.connect("system/manager@XE")
print("Connection Established...")
```

### Output:

Connection Established...

### Example:

# Write a Python program to create table within database

```
import cx_Oracle
```

```
cn=cx_Oracle.connect("system/manager@XE")
c=cn.cursor()
c.execute("""create table user_register(
name varchar2(20),
uname varchar2(15) primary key,
pwd varchar2(15))""")
print("Table Created...")
cn.close()
```

### Output:

Table Created...

```
SQL> connect system/manager
Connected.
```

```
SQL> desc user_register;
```

Name	Null?	Type
NAME		VARCHAR2(20)
UNAME	NOT NULL	VARCHAR2(15)
PWD		VARCHAR2(15)

```
SQL>
```

### Example:

# Write a program to register user or signup (inserting user details into database table)

```
import cx_Oracle
cn=cx_Oracle.connect("system/manager@XE")
c=cn.cursor()
print("Signup Details")
name=input("Name :")
user=input("UserName :")
password=input("Password :")
try:
    c.execute("insert into user_register
values(:1,:2,:3)",(name,user,password))
    print("User Registered....")
    cn.commit()
except:
    print("User Name exists")
finally:
    cn.close()
```

### Output:

```
Signup Details
Name :naresh
UserName :nit
Password :nit123
User Registered....
>>>
```

```
Signup Details
Name :naresh
UserName :nit
```

Password :nit123  
User Name exists

```
SQL> select * from user_register;
```

NAME	UNAME	PWD
naresh	nit	nit123

```
SQL> _
```

### Example:

# Write a program to signin (reading data from database table)

```
import cx_Oracle
cn=cx_Oracle.connect("system/manager@XE")
c=cn.cursor()
print("Signin")
user=input("UserName : ")
pwd=input("Password : ")
c.execute("select * from user_register where uname=:1 and
pwd=:2",(user,pwd))
row=c.fetchone()
if row==None:
    print("Invalid username or password")
else:
    print(f'{user} welcome')
```

### Output:

```
Signin
UserName : nit
Password : nit123
nit welcome
>>>
Signin
UserName : abc
Password : xyz
Invalid username or password
```

### Example:

# Write a program to update password of user

```

import cx_Oracle
cn=cx_Oracle.connect("system/manager@XE")
c=cn.cursor()
print("Update Password")
user=input("UserName ")
oldp=input("Old Password ")
newp=input("New Password ")
c.execute("update user_register set pwd=:1 where uname=:2 and
pwd=:3",(newp,user,oldp))
a=c.rowcount
if a>0:
    print("password updated...")
    cn.commit()
else:
    print("invalid username or password")

cn.close()

```

### **Output:**

```

Update Password
UserName nit
Old Password nit123
New Password nit321
password updated...

```

### **Example:**

# Write a program to delete user from database table

```

import cx_Oracle

cn=cx_Oracle.connect("system/manager@XE")
c=cn.cursor()

print("User Deletion")
user=input("UserName ")
c.execute("Delete from user_register where uname=:1",(user,))
a=c.rowcount
if a>0:
    print("user deleted...")
    cn.commit()
else:

```

```
print("invalid username")
```

**Output:**

```
User Deletion  
UserName nit  
user deleted...  
>>>
```

```
User Deletion  
UserName nit  
invalid username
```

**Networking (socket module)**

Python is general purpose programming language; this language is used to develop any application or software.

Using socket module, python developer can develop networking application.