GANPAT UNIVERSITY
U. V. PATEL COLLEGE OF ENGINEERING
B.Tech CE/IT Semester IV
2CEIT404: Python Programming

Practical-9: Python Database Connectivity

1. **Write a python code to establish connection with MySQL and create database demo_data. Also display list of all the available database.**

Code:

```
import pymysql
con=pymysql.connect(host='localhost',user='root',passwd='tiger',port=3306)
query=("create database demo_data;")
q=("show databases;")
try:
   cursor=con.cursor()
   cursor.execute(query)
   con.commit()
   print("Database is created Successfully")
   cursor.execute(q)
   result=cursor.fetchall()
   for i in result:
     print(i)
except pymysql.DatabaseError as e:
   print("Problem is:",e)
finally:
   if cursor:
      cursor.close()
   if con:
      con.close()
```

Output:

```
PS E:\Python> python -u "e:\Python\PR9.py"
Database is created Successfully
('demo_data',)
('hospital',)
('information_schema',)
('mysql',)
('performance_schema',)
('sample',)
('sys',)
PS E:\Python>
```

2. **Write a python code to create below specified two tables 'hospital_details' and 'doctor_details' and insert values as mentioned below.**

hospital_details		
Hospital_Id	**Hospital_Name**	**Bed_count**
1	Janta	200
2	Zydus	500
3	Sal	1000
4	Stirling	1500

doctor_details					
Doctor_Id	**Doctor_Name**	**Hospital_Id**	**Specialist**	**Salary**	**Experience**
101	Karan	1	Pediatric	40000	0
102	Naresh	1	Onchologist	80000	5
103	Hardik	2	Surgen	60000	2
104	Vishal	2	Homeopathy	50000	1
105	Jay	3	Aayurvedic	40000	0
106	Deep	3	Physeotherapist	70000	4
107	Divyesh	4	Pediatric	55000	3
108	Arjun	4	Scin	55000	3

Code:

```
import pymysql
con=pymysql.connect(host='localhost',user='root',passwd='t
iger',port=3306,database='demo_data')
query=("create table hospital_details(Hospital_Id
int,Hospital_Name varchar(30),Bed_Count int);")
q=("create table doctor_details(Doctor_Id int,Doctor_Name
varchar(30),Hospital_Id int,Specialist varchar(30),Salary
int,Experience int);")
```

```
try:
    cursor=con.cursor()
    cursor.execute(query)
    print("Created hospital_details Table")
    cursor.execute(q)
    print("Created doctor_details Table")
    con.commit()
except pymysql.DatabaseError as e:
                print("Problem is:",e)
finally:
     if cursor:
        cursor.close()
        if con:
         con.close()
```

```
import pymysql
con=pymysql.connect(host='localhost',user='root',passwd='t
iger',port=3306,database='demo_data')
query=("insert into hospital_details
values(1,'Janta',200),(2,'Zydus',500),(3,'Sal',1000),(4,'S
tirling',1500);") q=("insert into doctor_details
values(101,'Karan',1,'Pediatric',40000,0),(102,'Naresh',1,
'Onchologist',80000,5)
,(103,'Hardik',2,'Surgen',60000,2),(104,'Vishal',2,'Homeop
athy',50000,1),(105,'J
ay',3,'Aayurvedic',40000,0),(106,'Deep',3,'Physeotherapist
',70000,4),(107,'Divye
sh',4,'Pediatric',55000,3),(108,'Arjun',4,'Scin',55000,3);
") try:
    cursor=con.cursor()
    cursor.execute(query)
    con.commit()
    print("Inserted Values in hospital_details")
    cursor.execute(q)
    con.commit()
    print("Inserted Values in doctor_details")
except pymysql.DatabaseError as e:
                print("Problem is:",e)
```

```
finally:
    if cursor:
        cursor.close()
    if con:
        con.close()
```

Output:

```
PS E:\Python> python -u "e:\Python\PR9.py"
Created hospital_details Table
Created doctor_details Table
PS E:\Python>
```

```
PS E:\Python> python -u "e:\Python\PR9.py"
Inserted Values in hospital_details
Inserted Values in doctor_details
PS E:\Python>
```

Hospital_Id	Hospital_Name	Bed_Count
1	Janta	200
2	Zydus	500
3	Sal	1000
4	Stirling	1500

Doctor_Id	Doctor_Name	Hospital_Id	Specialist	Salary	Experience
101	Karan	1	Pediatric	40000	0
102	Naresh	1	Onchologist	80000	5
103	Hardik	2	Surgen	60000	2
104	Vishal	2	Homeopathy	50000	1
105	Jay	3	Aayurvedic	40000	0
106	Deep	3	Physeotherapist	70000	4
107	Divyesh	4	Pediatric	55000	3
108	Arjun	4	Scin	55000	3

3. Write a python code to retrieve all the details of doctors.

Code:

```
from unittest import result
import pymysql
con=pymysql.connect(host='localhost',user='root',passwd='tiger'
,port=3306,database='demo_data')
query=("select * from doctor_details;" )
try:
    cursor=con.cursor()
    cursor.execute(query)
```

```
    result=cursor.fetchall()
    for i in result:
        print(i)
except pymysql.DatabaseError as e:
                print("Problem is:",e)
finally:
    if cursor:
        cursor.close()
    if con:
        con.close()
```

Output:

```
PS E:\Python> python -u "e:\Python\Practice.py"
(101, 'Karan', 1, 'Pediatric', 40000, 0)
(102, 'Naresh', 1, 'Onchologist', 80000, 5)
(103, 'Hardik', 2, 'Surgen', 60000, 2)
(104, 'Vishal', 2, 'Homeopathy', 50000, 1)
(105, 'Jay', 3, 'Aayurvedic', 40000, 0)
(106, 'Deep', 3, 'Physeotherapist', 70000, 4)
(107, 'Divyesh', 4, 'Pediatric', 55000, 3)
(108, 'Arjun', 4, 'Scin', 55000, 3)
PS E:\Python>
```

4. **Write a python code to retrieve all the doctors who are in Janta hospital.**

Code:

```
import pymysql
con=pymysql.connect(host='localhost',user='root',passwd='tiger'
,port=3306,database='demo_data')
query=("select d.* from doctor_details d, hospital_details h
where h.Hospital_id=d.Hospital_id and
h.Hospital_name='Janta';")
try:
    cursor=con.cursor()
    cursor.execute(query)
    result=cursor.fetchall()
    for i in result:
        print(i)
except pymysql.DatabaseError as e:
                print("Problem is:",e)
finally:
     if cursor:
```

```
        cursor.close()
    if con:
        con.close()
```

Output:

```
PS E:\Python> python -u "e:\Python\PR9.py"
(101, 'Karan', 1, 'Pediatric', 40000, 0)
(102, 'Naresh', 1, 'Onchologist', 80000, 5)
PS E:\Python>
```

5. **Write a python code to update experience of doctors.**

Code:

```
import pymysql
con=pymysql.connect(host='localhost',user='root',passwd='tiger'
,port=3306,database='demo_data')
query=("update doctor_details set Experience='5' where
Doctor_Id='101';")
try:
    cursor=con.cursor()
    cursor.execute(query)
    con.commit()
    print("Updated Successfully")
except pymysql.DatabaseError as e:
                print("Problem is:",e)
finally:
    if cursor:
        cursor.close()
    if con:
        con.close()
```

Output:

```
PS E:\Python> python -u "e:\Python\PR9.py"
Updated Successfully
PS E:\Python>
```

Doctor_Id	Doctor_Name	Hospital_Id	Specialist	Salary	Experience
101	Karan	1	Pediatric	40000	5
102	Naresh	1	Onchologist	80000	5
103	Hardik	2	Surgen	60000	2
104	Vishal	2	Homeopathy	50000	1
105	Jay	3	Aayurvedic	40000	0
106	Deep	3	Physeotherapist	70000	4
107	Divyesh	4	Pediatric	55000	3
108	Arjun	4	Scin	55000	3

6. **Write a python code to drop table 'hospital_details'.**

Code:

```
import pymysql
con=pymysql.connect(host='localhost',user='root',passwd='tiger'
,port=3306,database='demo_data')
query=("drop table hospital_details;")
try:
    cursor=con.cursor()
    cursor.execute(query)
    con.commit()
    print("Table is Drop")
except pymysql.DatabaseError as e:
                print("Problem is:",e)
finally:
     if cursor:
        cursor.close()
     if con:
        con.close()
```

Output:

```
PS E:\Python> python -u "e:\Python\PR9.py"
Table is Drop
PS E:\Python>
```

Result Grid | Filter Rows:

Tables_in_demo_data
doctor_details

7. **Write a python code to create in memory database and table using sqlite database engine.**

Code:

```
import sqlite3
con=sqlite3.connect("memory.db")

create_table="create table memory(user_name varchar(150) not
null);"
insert_record="insert into memory values('Keval
Vasoya'),('Jainam Modi'),('Jaydip Patel');"
result="select * from memory;"

try:
        cursor=con.cursor()
        cursor.execute(create_table)
        print("memory Tabel is Created")
        cursor.execute(insert_record)
        print("Record Inserted")
        con.commit()
        cursor.execute(result)
        ans=cursor.fetchall()
        for i in ans:
            print(i)

except Exception as ex:
    print(ex)
finally:
     if cursor:
            cursor.close()
     if con:
            con.close()
```

Output:

```
PS E:\Python> python -u "e:\Python\PR9.py"
memory Tabel is Created
Record Inserted
('Keval Vasoya',)
('Jainam Modi',)
('Jaydip Patel',)
PS E:\Python>
```

8. **Establish connection with sqlite database engine and create above tables into database demo. Show demonstration of execute script to execute multiple queries at a time.**

Code:

```
create table hospital_details (Hospital_Id int NOT NULL primary
key,  Hospital_Name varchar(100) not null, Bed_Count
bigint(20));
create table doctor_details (Doctor_Id int not null primary
key, Doctor_Name  varchar(100), Hospital_Id int, Specialite
varchar(100), Salary float, Experience  int);
insert into hospital_details
values(1,'Janta',200),(2,'Zydus',500),(3,'Sal',1000),(4,'Stirli
ng',1500);
insert into doctor_details
values(101,'Karan',1,'Pediatric',40000,0),
(102,'Naresh',1,'Onchologist',80000,5),
(103,'Hardik',2,'Surgen',60000,2),
(104,'Vishal',2,'Homeopathy',50000,1),
(105,'Jay',3,'Aayurvedic',40000,0),
(106,'Deep',3,'Physeotherapist',70000,4),
(107,'Divyesh',4,'Pediatric',55000,3),
(108,'Arjun',4,'Scin',55000,3);
```

```
import sqlite3
con=sqlite3.connect("demo_data")

f=open('P9.sql','r')
query=f.read()
try:
        cursor=con.cursor()
        cursor.executescript(query)
        con.commit()
        print("hospital_details tabel is Created in Database
demo")
        print("doctor_details tabel is Created in Database
demo")
        print("hospital_details Record Inserted")
        print("doctor_details Record Inserted")
except Exception as ex:
        print(ex)
```

```
finally:
        f.close()
if cursor:
            cursor.close()
if con:
            con.close()
```

Output:

```
PS E:\Python> python -u "e:\Python\PR9.py"
hospital_details tabel is Created in Database demo
doctor_details tabel is Created in Database demo
hospital_details Record Inserted
doctor_details Record Inserted
PS E:\Python>
```