Batch Name: Infosys FP5.0 Summer 2018

Enrollment No: R171217044

SAPID: 500060722

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Sem: SEM-II

Branch: CSE-DEVOPS

MODULE 2

ASSIGNMENT 1

- Consider a table "**Employer**" in Oracle database. Structure and sample data for this table is given below.
- Table Structure:

Column Name	Type	Size	Description
CompanyID	Varchar2	5	Primary key eg: C1001
CompanyName	Varchar2	30	Not Null
EmailId	Varchar2	20	Foreign Key referring to Users table
Mobile	Number	10	Must be 10 digit UNIQUE
City	Varchar2	20	
IndustryType	Varchar2	20	
FunctionalArea	Varchar2	20	
MembershipPlan	Varchar2	20	Either Trial or Premium Monthly or Premium Yearly
DateofSignup	Date		Must be greater or equal to current date. Current Date as Default Value
DateofRenewal	Date		Must be based on Membership plan
Renewal status	Varchar2	20	Active or Expired

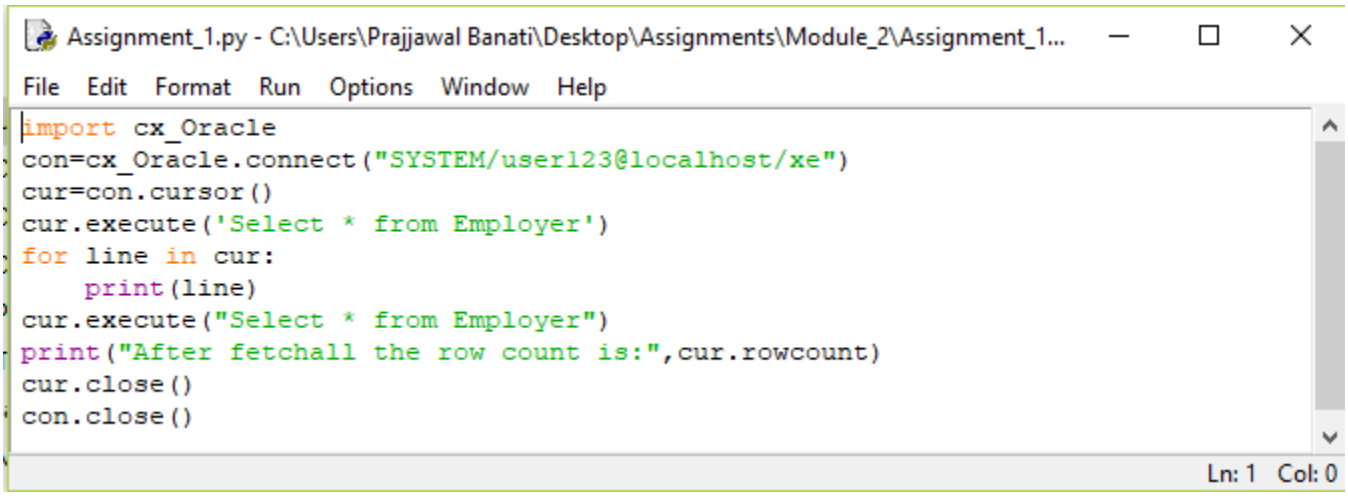
Company ID	Company Name	EmailID	Mobile	City	IndustryType	Functional Area	Membership Plan	DateOf SignUp	DateOf Renewal	Renewal Status
'C1000'	'Infosys Limited'	'jobs@infosys.com'	7896579875	'Chennai'	'IT'	'Accounting'	'Yearly'	'1-Jul-16'	'30-Jun-17'	'Active'
'C1001'	'Accenture'	'careers@accenture.com'	9878776567	'Bangalore'	'IT'	'Marketing'	'Monthly'	'2-Jun-16'	'1-Jun-17'	'Active'
'C1002'	'HP'	'openings@hp.com'	8789878750	'Mumbai'	'IT'	'Marketing'	'Monthly'	'12-Jul-16'	'11-Jul-17'	'Active'
'C1003'	'NewGen'	'jobs@newgen.com'	8877643228	'Bangalore'	'Manufacturing'	'Marketing'	'Yearly'	'2-Sep-16'	'1-Sep-17'	'Expired'

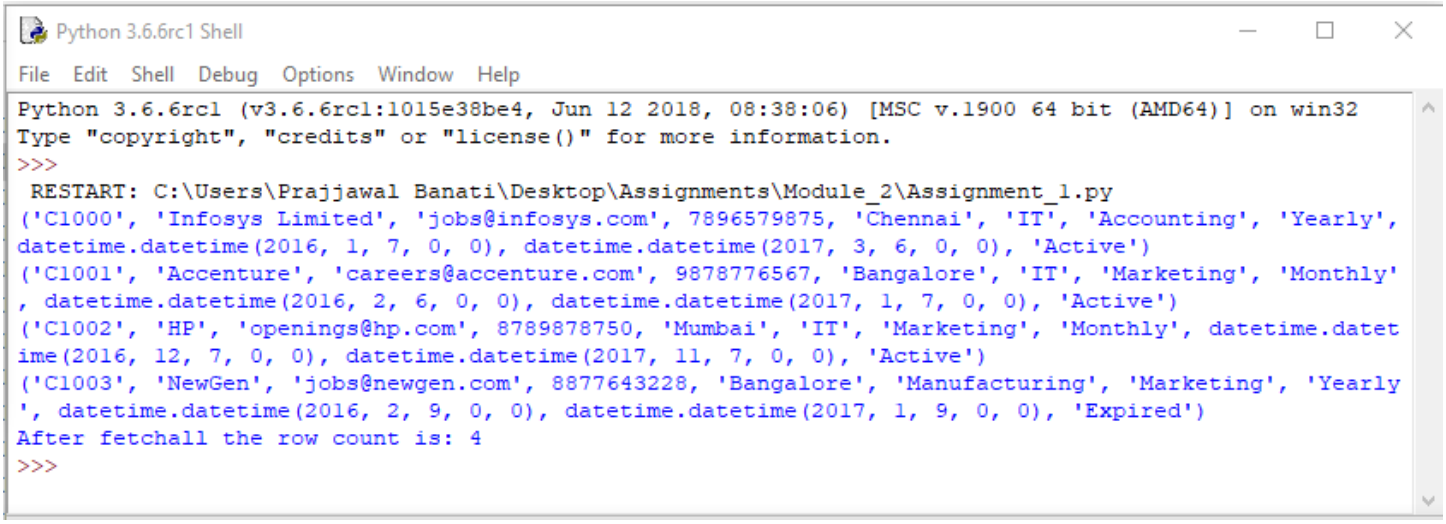
Write a Python program for the following:

1) Connect to Oracle database
2) Fetch all the rows from the table Employer
3) Display all the rows
4) Display the count of rows fetched
5) Display the description of all columns of the table

Ans:

```
import cx_Oracle
con=cx_Oracle.connect("SYSTEM/user123@localhost/xe")
cur=con.cursor()
cur.execute('Select * from Employer')
for line in cur:
    print(line)
cur.execute("Select * from Employer")
print("After fetchall the row count is:",cur.rowcount)
cur.close()
con.close()
```





```
Command Prompt - sqlplus.exe
SQL> select * from Employer;

COMPA COMPANYNAME                                    EMAILID                        MOBILE CITY           INDUSTRYTYPE
      FUNCTIONALAREA       MEMBERSHIPPLAN
  DATEOFSIG DATEOFREN RENEWALSTA
----- ---------------------------------------------- ------------------------------ ---------- --------------- ---------------
----- -------------------- -------------------- --------- --------- ----------
C1000 Infosys Limited                                jobs@infosys.com               7896579875 Chennai         IT
      Accounting           Yearly
  07-JAN-16 06-MAR-17 Active
C1001 Accenture                                      careers@accenture.com          9878776567 Bangalore       IT
      Marketing            Monthly
  06-FEB-16 07-JAN-17 Active
C1002 HP                                             openings@hp.com                8789878750 Mumbai          IT
      Marketing            Monthly
  07-DEC-16 07-NOV-17 Active
C1003 NewGen                                         jobs@newgen.com                8877643228 Bangalore       Manufacturing
      Marketing            Yearly
```

ASSIGNMENT 2

InfoTech Systems wants to retrieve certain information regarding their employers. Help them implement the following business requirements:

1) **Retrieve the name and email id of all 'IT' companies in 'Bangalore'.**
   Ans:

```
import cx_Oracle
con = cx_Oracle.connect('SYSTEM/user123@localhost/xe')
cur = con.cursor()
cur.execute(""" SELECT CompanyName,EmailId from Employer where
IndustryType = 'IT' AND City = 'Bangalore' """)
res = cur.fetchall()
print(res)
con.close()
```

2) **Retrieve the name, mobile number and email id of all companies in a given city whose Renewal Status is 'Active'. Accept 'city' and ‘functionalarea’ as an input from user. Use positional bind variables.**
   Ans:

```
import cx_Oracle
city=input("Enter name of city: ")
con = cx_Oracle.connect('SYSTEM/user123@localhost/xe')
cur = con.cursor()
```

```
cur.execute(""" SELECT CompanyName,Mobile,EmailId from Employer
where RenewalStatus =:param1 AND city =:param2 """,('Active',city))
res = cur.fetchall()
print(res)
con.close()
```

3) Reverse the order of passing the parameter values in the above program and observe the output.

Ans:

```
import cx_Oracle
city=input("Enter Name of City: ")
con = cx_Oracle.connect('SYSTEM/user123@localhost/xe')
cur = con.cursor()
cur.execute(""" SELECT CompanyName,Mobile,EmailId from Employer
where RenewalStatus =:param1 AND city =:param2 """,(city,'Active'))
res = cur.fetchall()
print(res)
con.close()
```

4) Implement the scenario in question# 2 using named bind variables.

Ans:

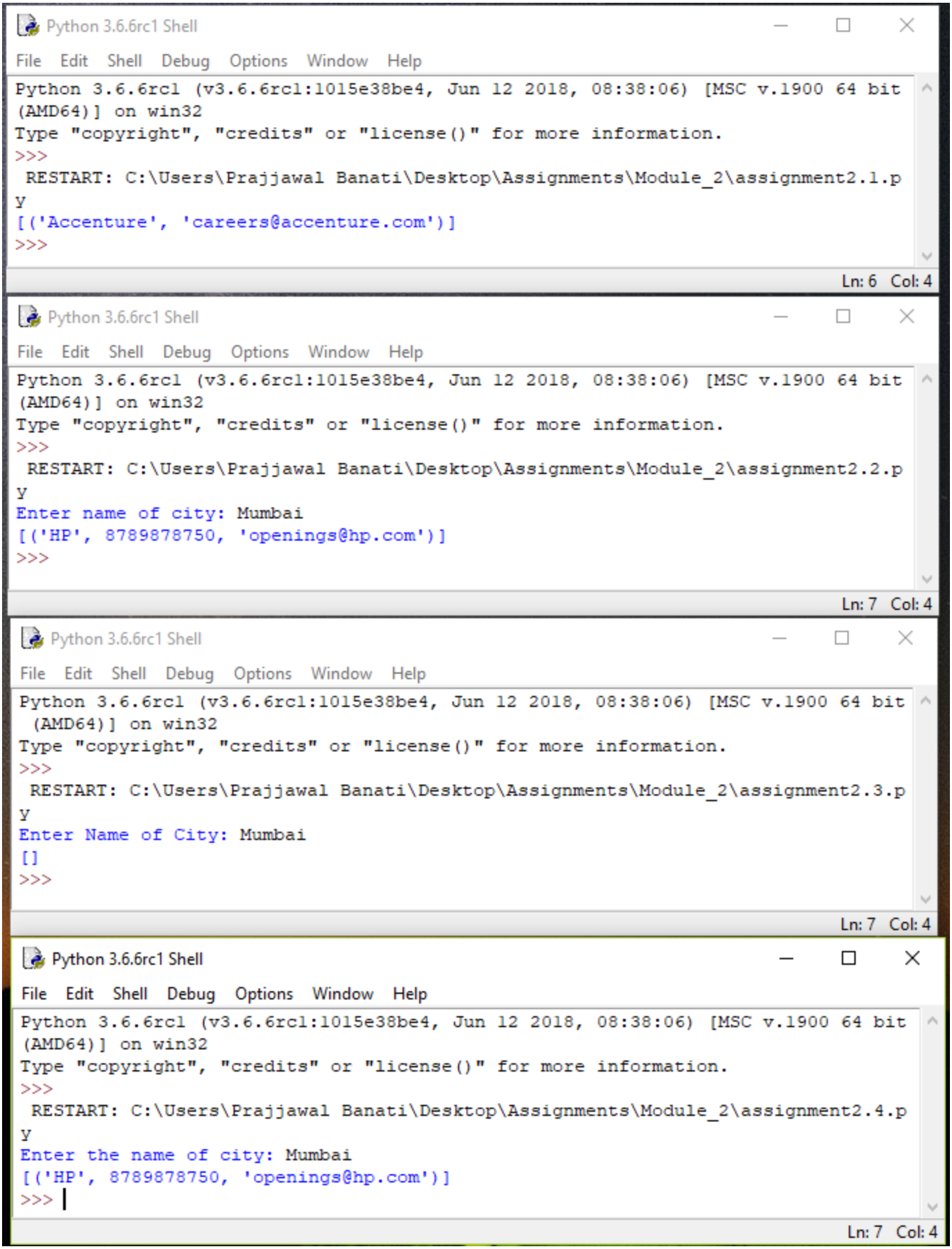
```
import cx_Oracle
city=input("Enter the name of city: ")
con = cx_Oracle.connect('SYSTEM/user123@localhost/xe')
cur = con.cursor()
cur.execute(""" SELECT CompanyName,Mobile,EmailId from Employer
where RenewalStatus =:param1 AND city =:param2
""",{'param1':'Active','param2':city})
res = cur.fetchall()
print(res)
con.close()
```

5) Reverse the order of passing of the bind variables in the above program and observe the output. Are you still getting the same result?

Ans:

```
import cx_Oracle
city=input("Enter the name of the city: ")
```

```
con = cx_Oracle.connect('SYSTEM/user123@localhost/xe')
cur = con.cursor()
cur.execute(""" SELECT CompanyName,Mobile,EmailId from Employer
where RenewalStatus =:param1 AND city =:param2
""",{'param2':city,'param1':'Active'})
res = cur.fetchall()
print(res)
con.close()
```


Python 3.6.6rc1 Shell
File Edit Shell Debug Options Window Help
Python 3.6.6rc1 (v3.6.6rc1:1015e38be4, Jun 12 2018, 08:38:06) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\assignment2.1.py
[('Accenture', 'careers@accenture.com')]
>>>
Ln: 6 Col: 4
Python 3.6.6rc1 Shell
File Edit Shell Debug Options Window Help
Python 3.6.6rc1 (v3.6.6rc1:1015e38be4, Jun 12 2018, 08:38:06) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\assignment2.2.py
Enter name of city: Mumbai
[('HP', 8789878750, 'openings@hp.com')]
>>>
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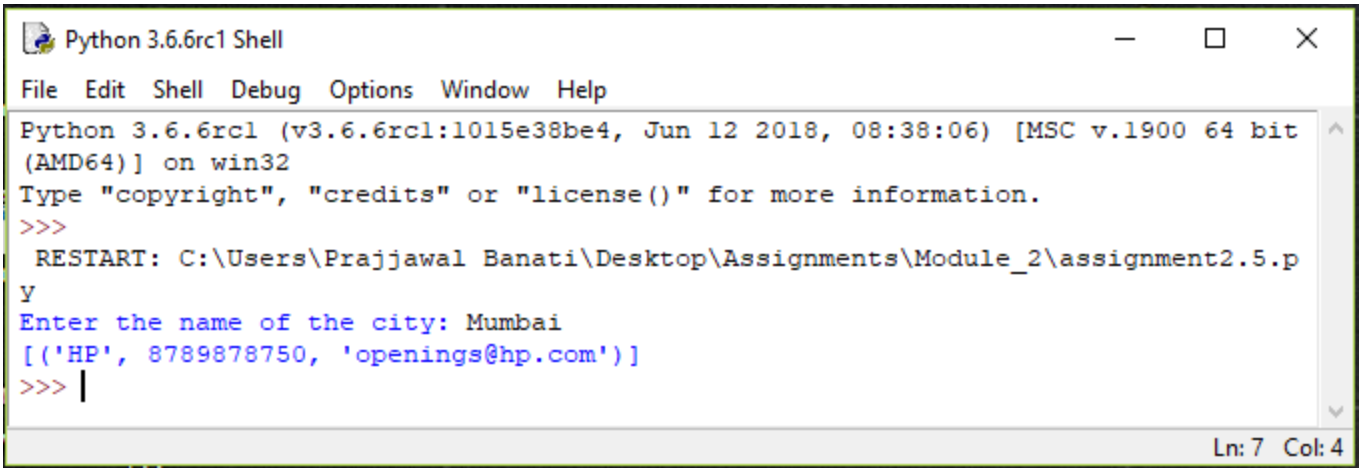
Python 3.6.6rc1 Shell
File Edit Shell Debug Options Window Help
Python 3.6.6rc1 (v3.6.6rc1:1015e38be4, Jun 12 2018, 08:38:06) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\assignment2.3.py
Enter Name of City: Mumbai
[]
>>>
Ln: 7 Col: 4
Python 3.6.6rc1 Shell
File Edit Shell Debug Options Window Help
Python 3.6.6rc1 (v3.6.6rc1:1015e38be4, Jun 12 2018, 08:38:06) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\assignment2.4.py
Enter the name of city: Mumbai
[('HP', 8789878750, 'openings@hp.com')]
>>>
Ln: 7 Col: 4



ASSIGNMENT 3

InfoTech Systems is creating an online application for automating the task of job search between employer and job seekers.

1. **Create a table 'Users' from Python code. The column details are given below:**

Column Name	Type	Size	Description
UserId	Number	10	Primary key, Must be a digit
UserName	Varchar2	30	Cannot be null
Password	Varchar2	20	Cannot be null
UserType	Varchar2	20	Value can be either 'Employer 'or 'Jobseeker'

2. Insert the following data into Users table using cx_Oracle as per the specifications provided below:

UserId	Username	Password	UserType
1	jobs@infosys.com	jobs@infosys	Employer
2	careers@accenture.com	Acc1	Employer
3	rahulitsme@gmaill.com	rahulindia93	Jobseeker
4	careers@amazon.com	amazonindia	Employer

- **Insert first row using hard-coded values in INSERT query.**
- **Insert second row using positional bind variables.**

• Insert third row using named bind variables.

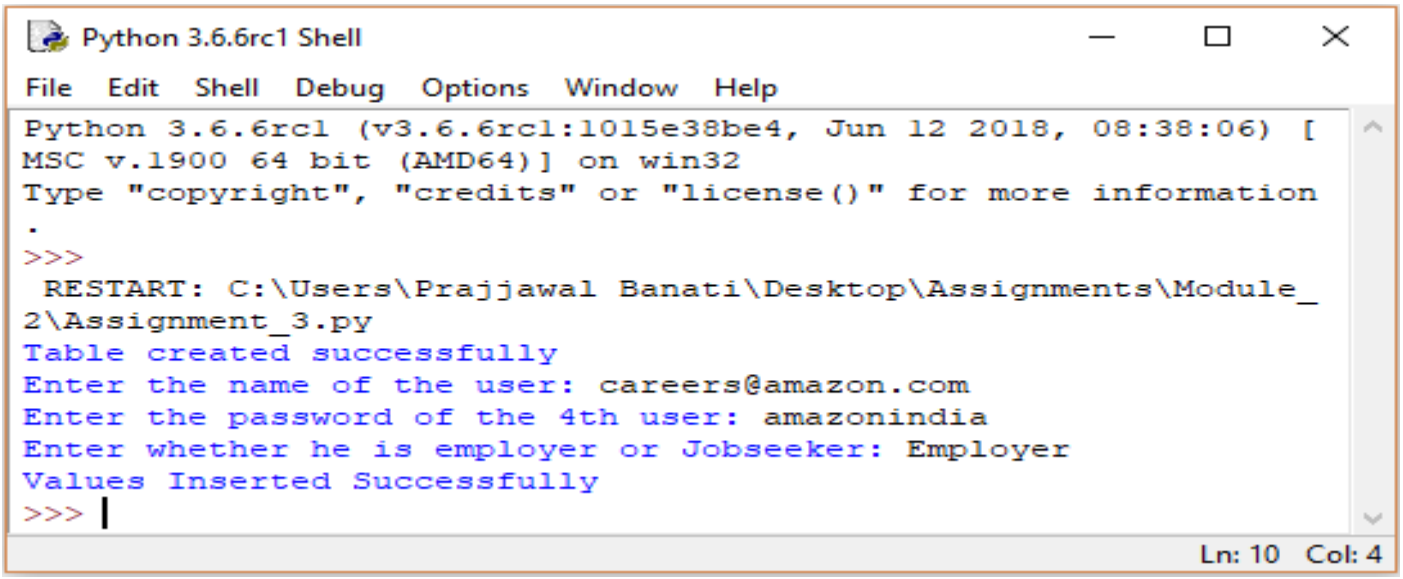
• Accept the values for fourth row from user and insert using bind variables.

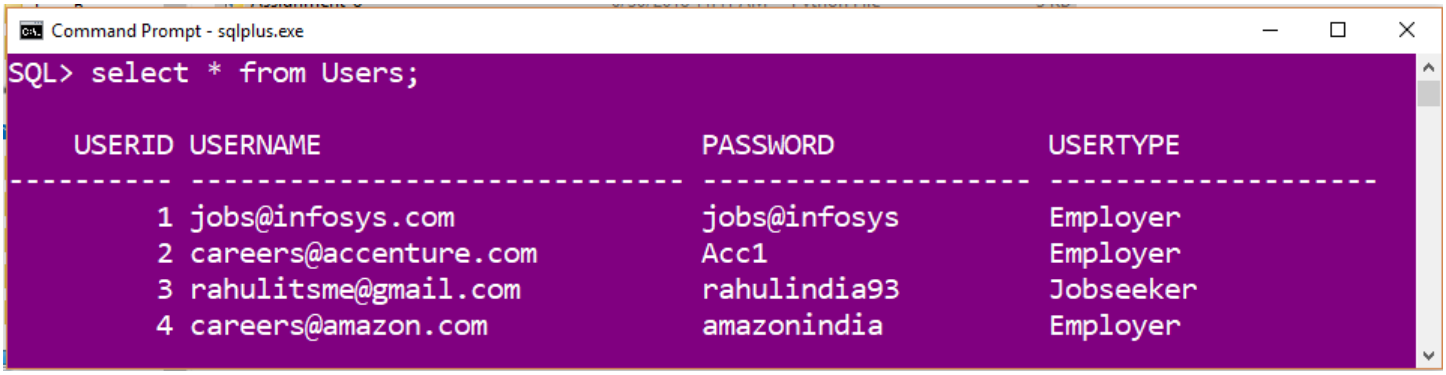
• Fetch and display all the records from users table.

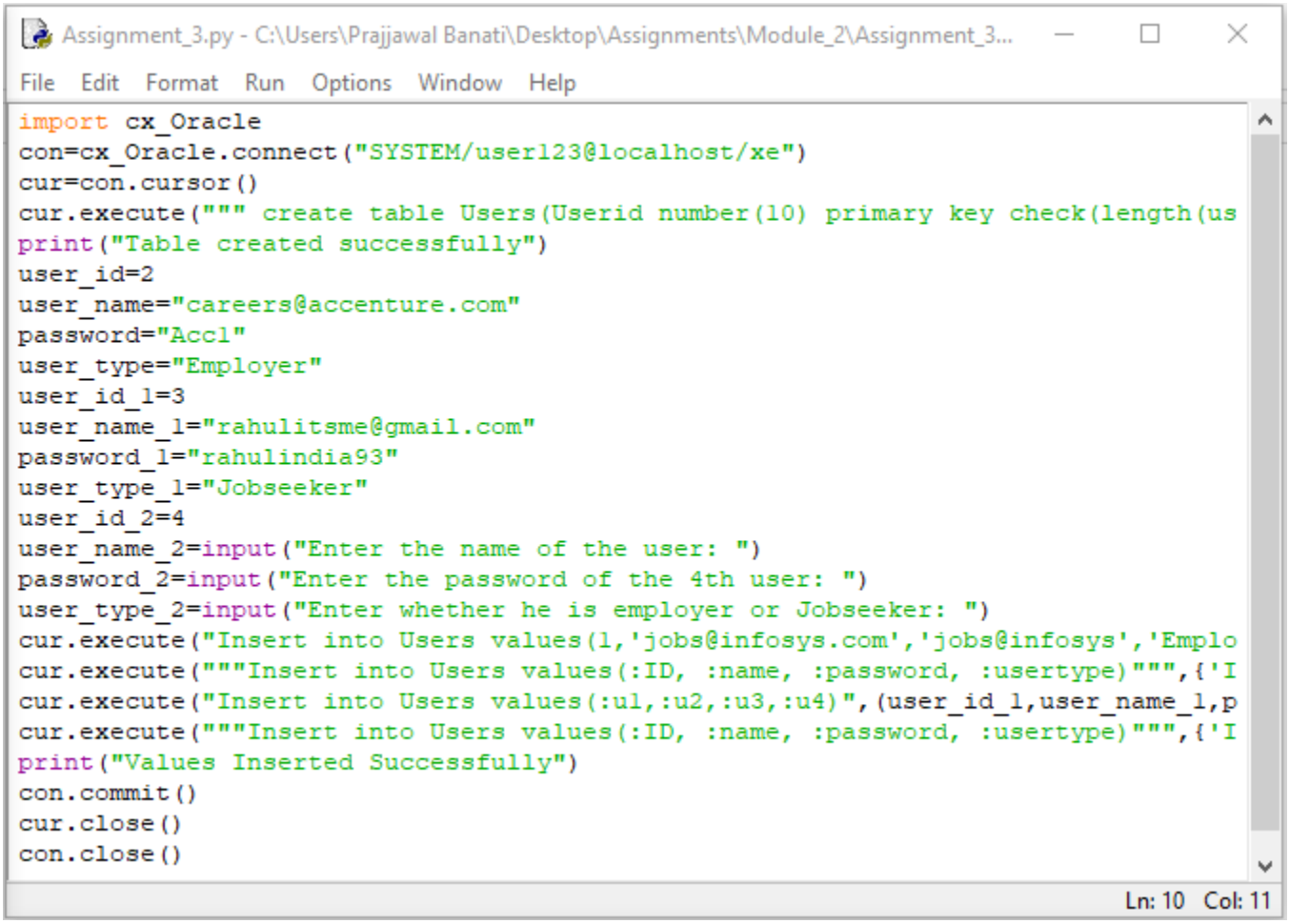
Ans:

```
import cx_Oracle

con=cx_Oracle.connect("SYSTEM/user123@localhost/xe")

cur=con.cursor()

cur.execute(""" create table Users(Userid number(10) primary key
check(length(userid)>=1),Username varchar2(30) not null,Password varchar2(20)
not null,Usertype varchar2(20) check (usertype in ('Employer','Jobseeker')))""")

print("Table created successfully")

user_id=2

user_name="careers@accenture.com"

password="Acc1"

user_type="Employer"

user_id_1=3

user_name_1="rahulitsme@gmail.com"

password_1="rahulindia93"

user_type_1="Jobseeker"

user_id_2=4

user_name_2=input("Enter the name of the user: ")

password_2=input("Enter the password of the 4th user: ")

user_type_2=input("Enter whether he is employer or Jobseeker: ")

cur.execute("Insert into Users
values(1,'jobs@infosys.com','jobs@infosys','Employer')")
```

```
cur.execute("""Insert into Users values(:ID, :name, :password, :usertype)""",{'ID' : user_id,'name' : user_name,'password' : password,'usertype' : user_type})

cur.execute("Insert into Users values(:u1,:u2,:u3,:u4)",(user_id_1,user_name_1,password_1,user_type_1))

cur.execute("""Insert into Users values(:ID, :name, :password, :usertype)""",{'ID' : user_id_2,'name' : user_name_2,'password' : password_2,'usertype' : user_type_2})

print("Values Inserted Successfully")

con.commit()

cur.close()

con.close()
```







ASSIGNMENT 4

Bloom Technology wants to maintain their employee's vehicle details to make parking facility flexible to the employees.

1. **Create the following Vehicle table as a part of the application. Specifications are provided below:**

Column Names	Datatype & Size	Constraints
Vehicleid	Number(5)	Primary Key
Vehiclename	Varchar2(10)	

2. **Insert the following records using executemany() function of cursor. Use positional bind variables.**

Vehicleid	Vehiclename
2001	Toyota
2002	Maruti
2003	Nissan
2004	Hyundai

3. **Insert two more rows using named bind variables(use executemany() function).**

Vehicleid	Vehiclename
2006	Honda
2007	Volkswagen

4. Fetch and display all the records from Vehicle table.

Ans:

```
import cx_Oracle

con=cx_Oracle.connect("SYSTEM/user123@localhost/xe")

cur=con.cursor()

cur.execute(""" create table Vehicles(Vehicleid number(5) primary key,vehiclename varchar2(10))""")

print("Table created Successfully")

counter=2000

cur.executemany("INSERT INTO Vehicles values(:1 , :2)",[(counter+1,'Toyota'),(counter+2,'Maruti'),(counter+3,'Nissan'),(counter+4,'Hyundai')])

print("Values inserted successfuly using positonal bind variables. The values are: ")

cur.execute("select * from Vehicles")

for line in cur:

    print(line)
```

cur.executemany("INSERT INTO Vehicles values(:vehicleid,:vehiclename)",

[{'vehicleid':counter+6,'vehiclename':'Honda'},

{'vehicleid':counter+7,'vehiclename':'Volkswagen'}])

print("Values inserted successfully using named bind variables. Now All the values are: ")

cur.execute("select * from Vehicles")

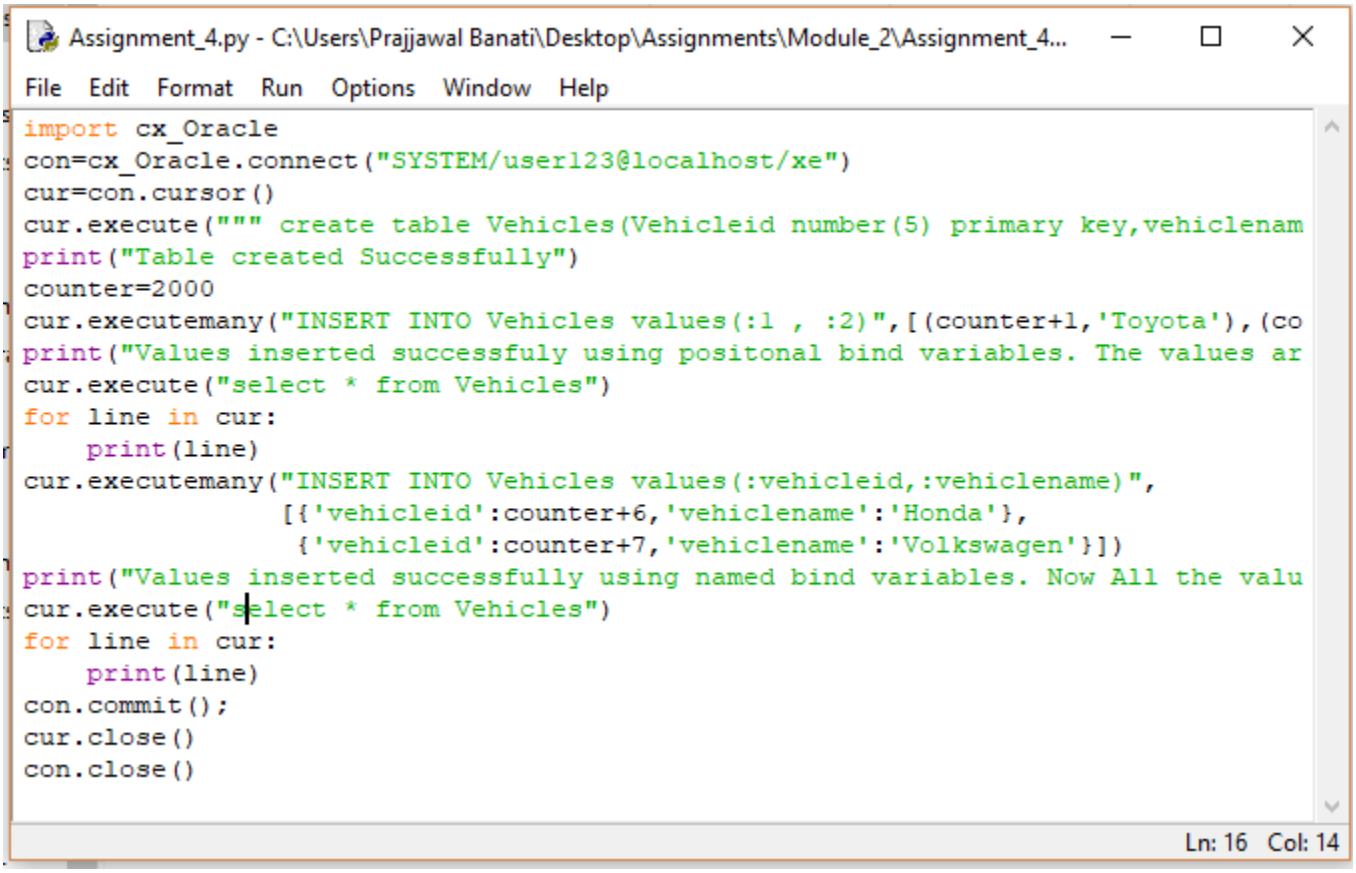
for line in cur:

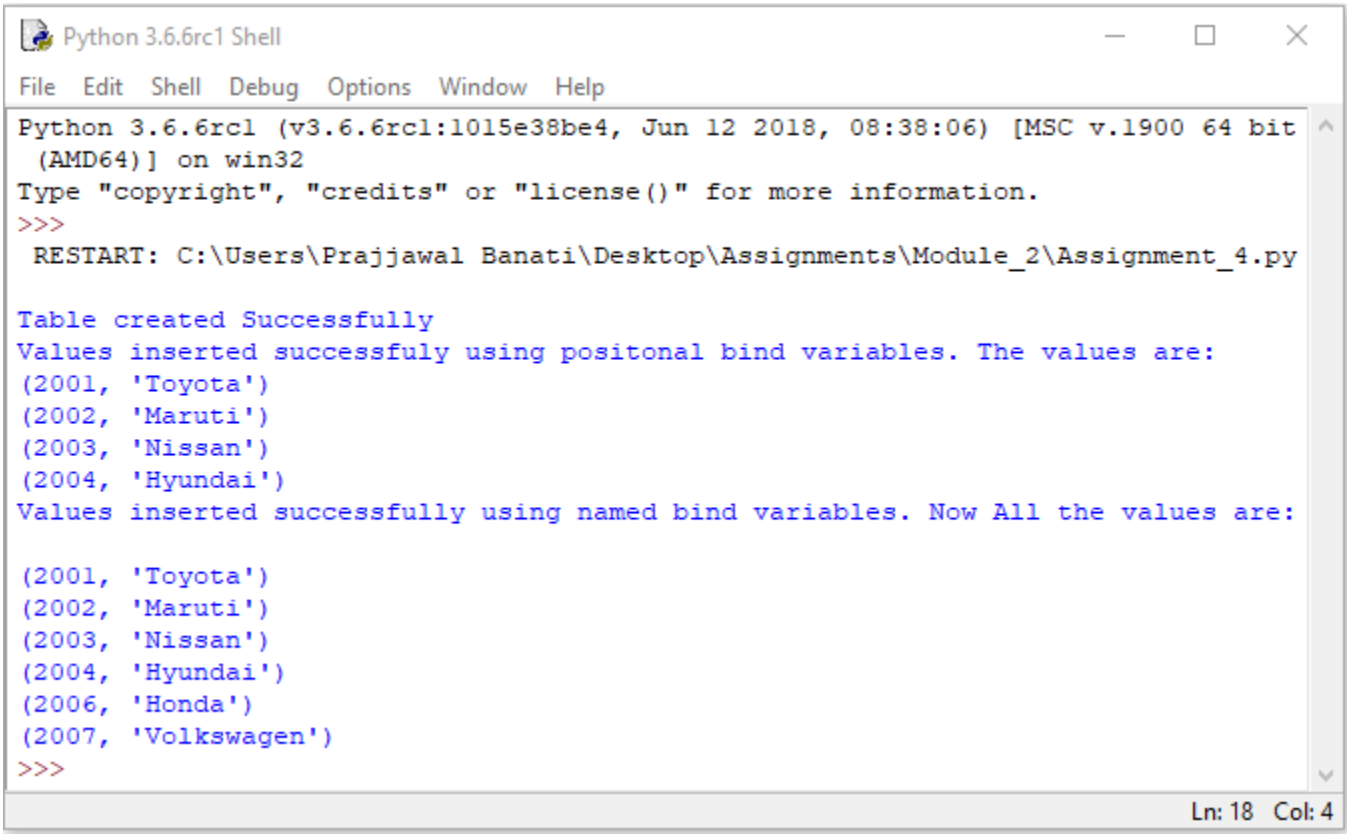
print(line)

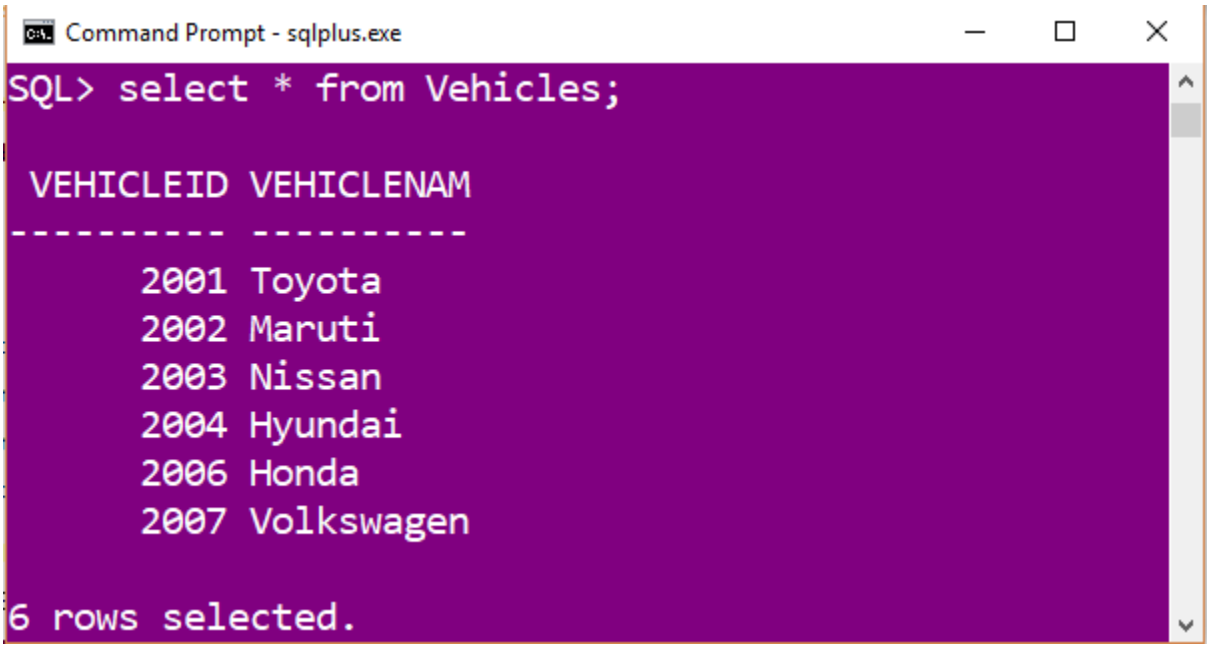
con.commit();

cur.close()

con.close()







ASSIGNMENT 5

Refer to the table 'users' created earlier. The existing table data for “users” table is given below:

1. **Modify the username and usertype of the user with userid = 4 with the following values:**

- **Username: lookingforjob@yahoo.com**
- **UserType: Jobseeker**

UserId	Username	Password	UserType
1	jobs@infosys.com	jobs@infosys	Employer
2	careers@accenture.com	Acc1	Employer
3	rahulitsme@gmaill.com	rahulindia93	Jobseeker
4	careers@amazon.com	amazonindia	Employer

Fetch and observe the values of 'username' and 'usertype' of the user with 'userid = 4' before and after 'update' operation.

2. **Change the password for userid = 1. Accept the new password as an input from user. Fetch and observe the value of 'password' of the user with 'userid = 1' before and after 'update' operation.**

Ans:

```
import cx_Oracle
con=cx_Oracle.connect("SYSTEM/user123@localhost/xe")
cur=con.cursor()
ID=4
user_name="lookingfojob@yahoo.com"
user_type="Jobseeker"
print("Before Update operation we have the following row: ")
cur.execute("Select * from Users where Userid = :ID",{'ID':ID})
for line in cur:
   print(line)
cur.execute("""update Users set Username = :name , Usertype = :type where Userid = :ID""",{'name':user_name,'type':user_type,'ID':ID})
print("After updating we have: ")
```

```
cur.execute("Select * from Users where Userid = :ID",{'ID':ID})
for line in cur:
   print(line)
ID=1
password=input("Enter the new password for User 1.")
print("Before Update the password of the User1 is:")
cur.execute("Select Password from Users where Userid = :ID",{'ID':ID})
for line in cur:
   print(line)
cur.execute("""update Users set Password = :password where Userid = :ID""",{'password': password,'ID':ID})
print("After updating we have: ")
cur.execute("Select Password from Users where Userid = :ID",{'ID':ID})
for line in cur:
   print(line)
con.commit()
cur.close()
con.close()
```

Assignment_5.py - C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\Assignment_5...

File Edit Format Run Options Window Help

```
import cx_Oracle
con=cx_Oracle.connect("SYSTEM/user123@localhost/xe")
cur=con.cursor()
ID=4
user_name="lookingfojob@yahoo.com"
user_type="Jobseeker"
print("Before Update operation we have the following row: ")
cur.execute("Select * from Users where Userid = :ID",{'ID':ID})
for line in cur:
    print(line)
cur.execute("""update Users set Username = :name , Usertype = :type where Userid
print("After updating we have: ")
cur.execute("Select * from Users where Userid = :ID",{'ID':ID})
for line in cur:
    print(line)
ID=1
password=input("Enter the new password for User 1.")
print("Before Update the password of the User1 is:")
cur.execute("Select Password from Users where Userid = :ID",{'ID':ID})
for line in cur:
    print(line)
cur.execute("""update Users set Password = :password where Userid = :ID""",{'pas
print("After updating we have: ")
cur.execute("Select Password from Users where Userid = :ID",{'ID':ID})
for line in cur:
    print(line)
con.commit()
cur.close()
con.close()
```

Ln: 29 Col: 11

Python 3.6.6rc1 Shell

File Edit Shell Debug Options Window Help

```
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 (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
 RESTART: C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\Assignment_5.py

Before Update operation we have the following row:
(4, 'careers@amazon.com', 'amazonindia', 'Employer')
After updating we have:
(4, 'lookingfojob@yahoo.com', 'amazonindia', 'Jobseeker')
Enter the new password for User 1.itsme@jogi
Before Update the password of the User1 is:
('jobs@infosys',)
After updating we have:
('itsme@jogi',)
>>>
```
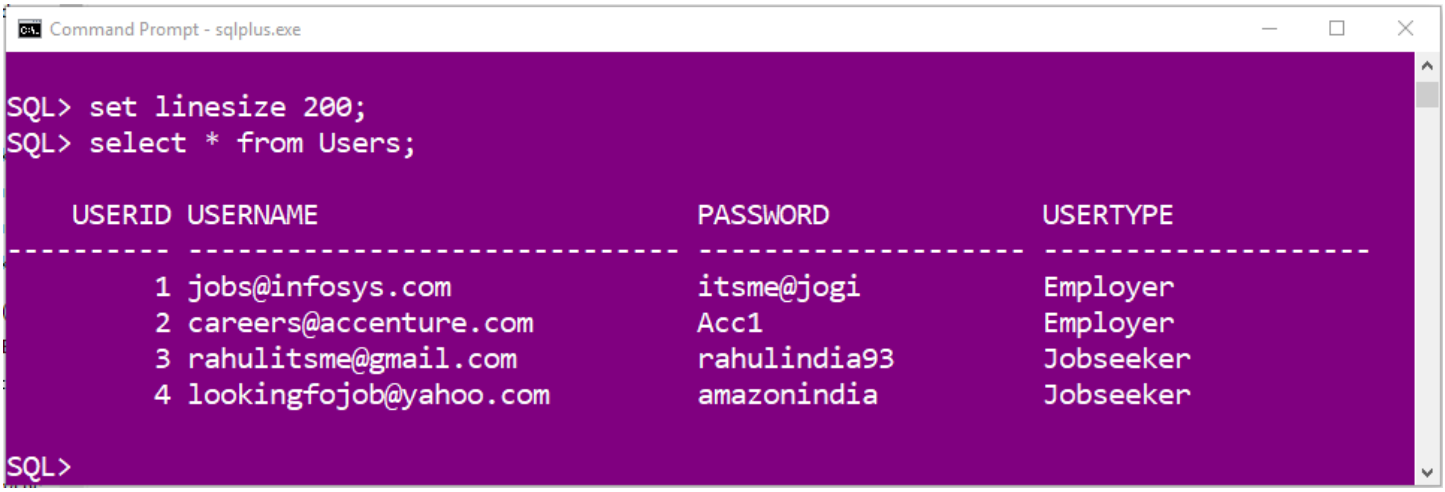

Ln: 6 Col: 24



ASSIGNMENT 6

Consider the 'Vehicle' table created earlier. Currently 'Vehicleid' is an integer field with values starting from 2001 onwards.

- **Update the values of 'Vehicleid' to start from 1001 onwards as shown below.**
- **Update the Vehiclename to "Mahindra" for vehicle with vehicle id 1003.**
- **Fetch and display the values before and after the update operation.**

Vehicle Table : Current Data

Vehicleid	Vehiclename
2001	Toyota
2002	Maruti
2003	Nissan
2004	Hyundai
2005	Honda
2006	Volkswagen

Vehicle Table: Expected Data

Vehicleid	Vehiclename
1001	Toyota
1002	Maruti
1003	Mahindra
1004	Hyundai
1005	Honda
1006	Volkswagen

Ans:

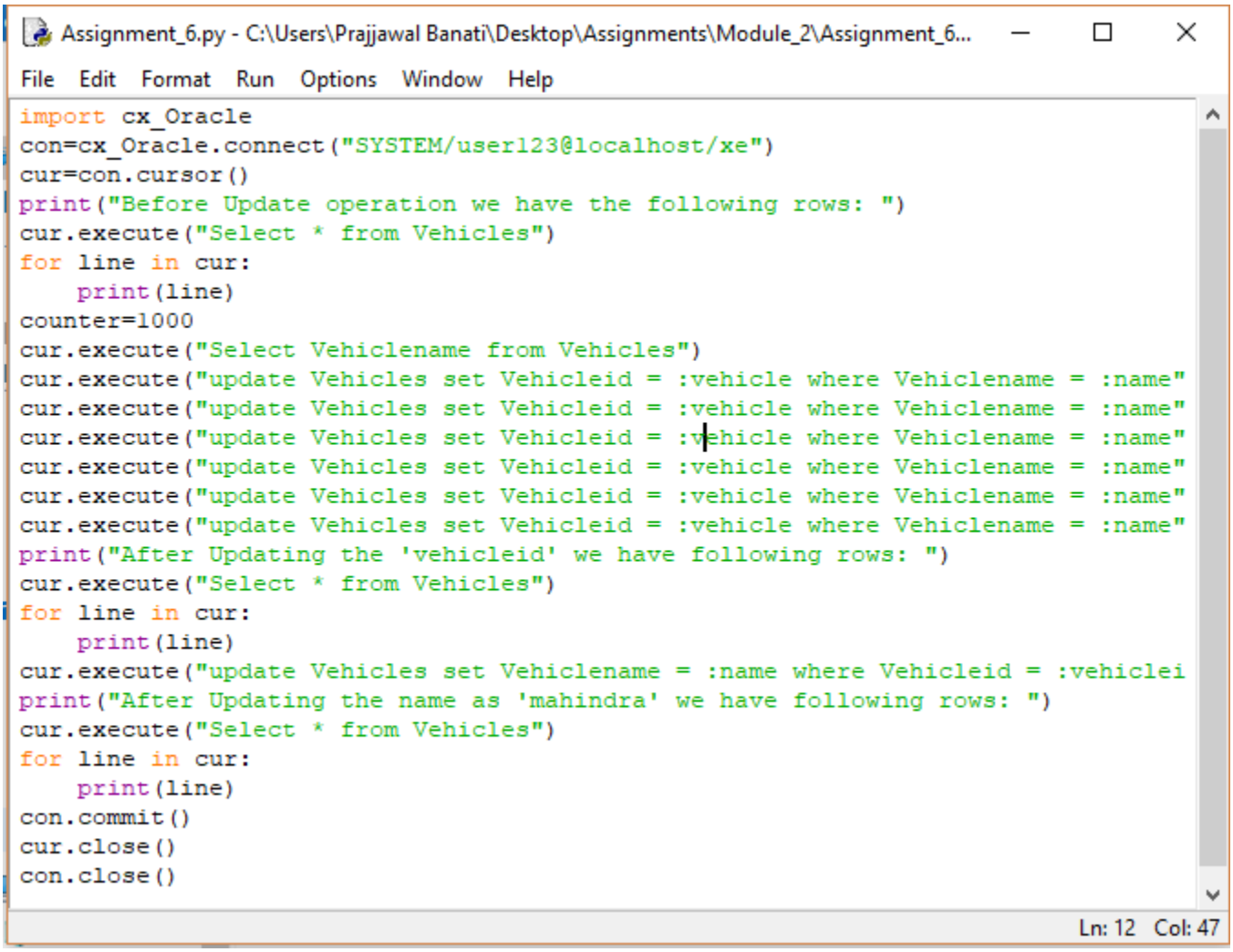
```
import cx_Oracle
con=cx_Oracle.connect("SYSTEM/user123@localhost/xe")
cur=con.cursor()
print("Before Update operation we have the following rows: ")
```

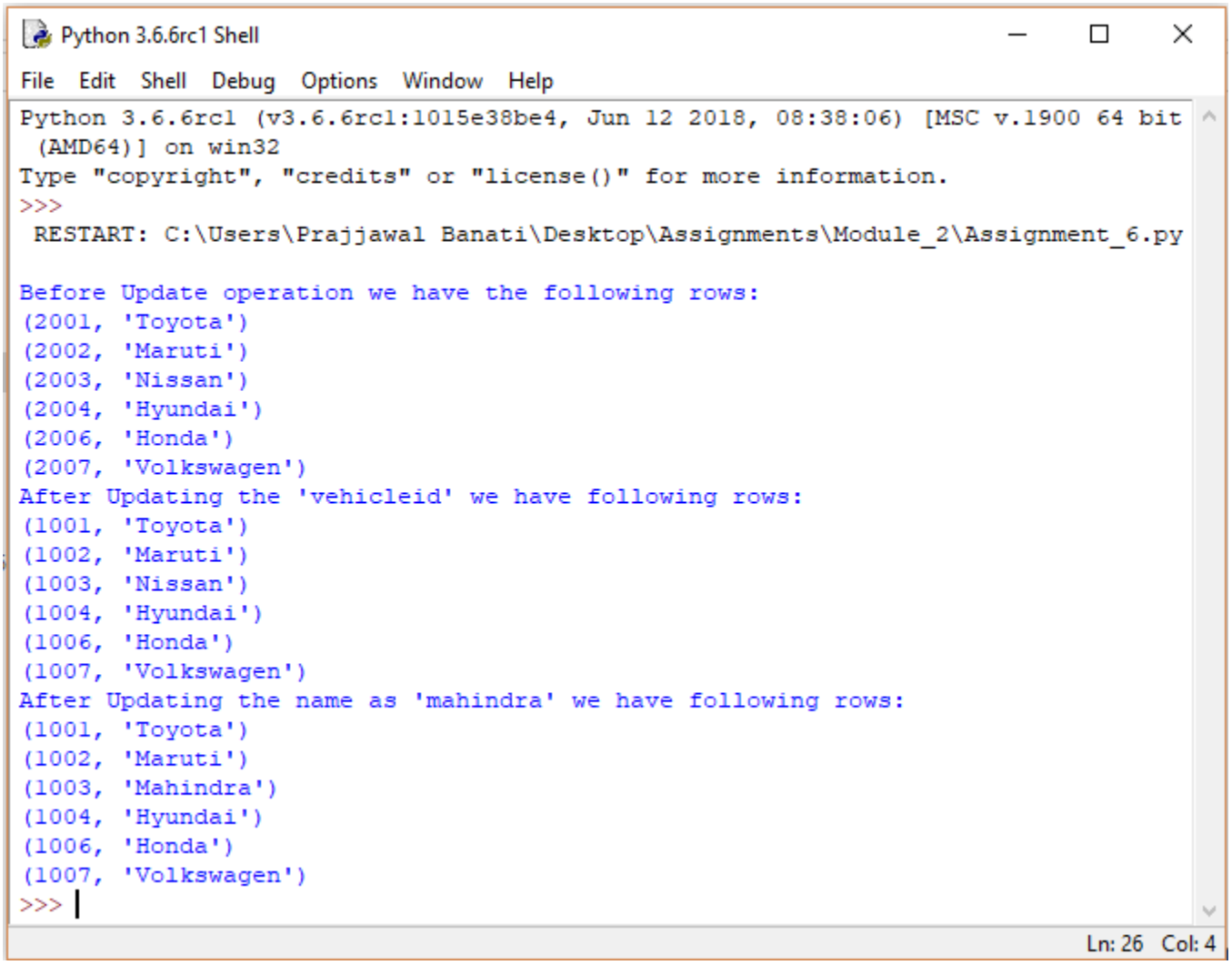
```
cur.execute("Select * from Vehicles")
for line in cur:
    print(line)
counter=1000
cur.execute("Select Vehiclename from Vehicles")
cur.execute("update Vehicles set Vehicleid = :vehicle where Vehiclename =
:name",{'vehicle':counter+1,'name':'Toyota'})
cur.execute("update Vehicles set Vehicleid = :vehicle where Vehiclename =
:name",{'vehicle':counter+2,'name':'Maruti'})
cur.execute("update Vehicles set Vehicleid = :vehicle where Vehiclename =
:name",{'vehicle':counter+3,'name':'Nissan'})
cur.execute("update Vehicles set Vehicleid = :vehicle where Vehiclename =
:name",{'vehicle':counter+4,'name':'Hyundai'})
cur.execute("update Vehicles set Vehicleid = :vehicle where Vehiclename =
:name",{'vehicle':counter+6,'name':'Honda'})
cur.execute("update Vehicles set Vehicleid = :vehicle where Vehiclename =
:name",{'vehicle':counter+7,'name':'Volkswagen'})
print("After Updating the 'vehicleid' we have following rows: ")
cur.execute("Select * from Vehicles")
for line in cur:
    print(line)
cur.execute("update Vehicles set Vehiclename = :name where Vehicleid =
:vehicleid",{'vehicleid':counter+3,'name':'Mahindra'})
print("After Updating the name as 'mahindra' we have following rows: ")
cur.execute("Select * from Vehicles")
for line in cur:
    print(line)
```

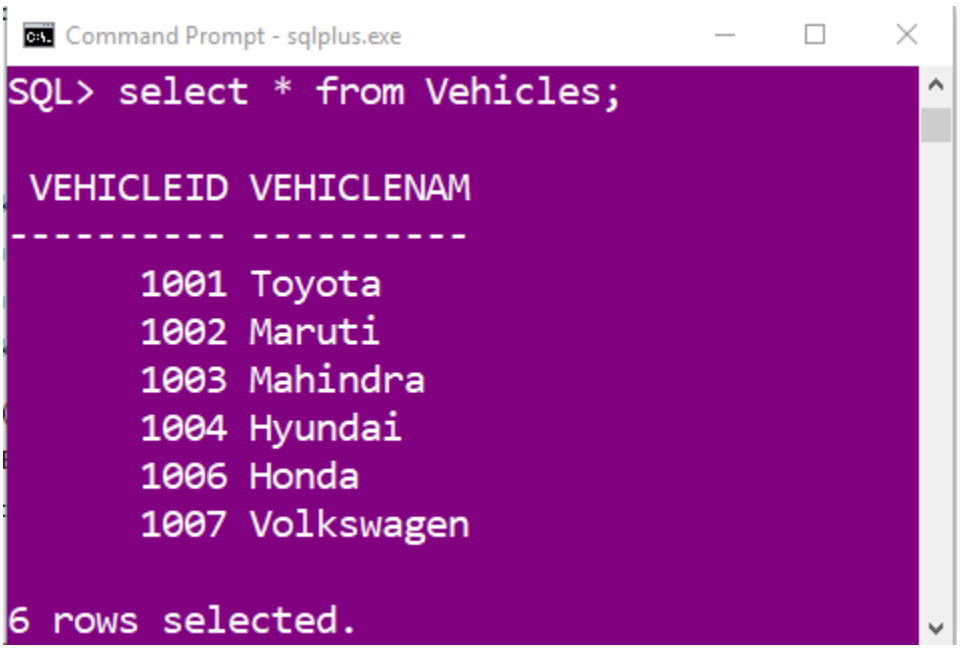
con.commit()

cur.close()

con.close()




Python 3.6.6rc1 Shell
File Edit Shell Debug Options Window Help
Python 3.6.6rc1 (v3.6.6rc1:1015e38be4, Jun 12 2018, 08:38:06) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\Assignment_6.py
Before Update operation we have the following rows:
(2001, 'Toyota')
(2002, 'Maruti')
(2003, 'Nissan')
(2004, 'Hyundai')
(2006, 'Honda')
(2007, 'Volkswagen')
After Updating the 'vehicleid' we have following rows:
(1001, 'Toyota')
(1002, 'Maruti')
(1003, 'Nissan')
(1004, 'Hyundai')
(1006, 'Honda')
(1007, 'Volkswagen')
After Updating the name as 'mahindra' we have following rows:
(1001, 'Toyota')
(1002, 'Maruti')
(1003, 'Mahindra')
(1004, 'Hyundai')
(1006, 'Honda')
(1007, 'Volkswagen')
>>>
Ln: 26 Col: 4


Command Prompt - sqlplus.exe
SQL> select * from Vehicles;
VEHICLEID VEHICLENAM
1001 Toyota
1002 Maruti
1003 Mahindra
1004 Hyundai
1006 Honda
1007 Volkswagen
6 rows selected.

ASSIGNMENT 7

1) **Consider 'users' table. Delete the record of user with userid = 1.**

UserId	Username	Password	UserType
1	jobs@infosys.com	Infy@1234	Employer
2	careers@accenture.com	Acc1	Employer
3	rahulitsme@gmaill.com	rahulindia93	JobSeeker
4	lookingforjob@yahoo.com	amazonindia	JobSeeker

2) **Delete a record from 'Vehicle' table using named bind variables. Accept VehicleId as an input from the user.**

Vehicleid	Vehiclename
1001	Toyota
1002	Maruti
1003	Mahindra
1004	Hyundai
1005	Honda
1006	Volkswagen

Ans:

```
import cx_Oracle
con=cx_Oracle.connect("SYSTEM/user123@localhost/xe")
cur=con.cursor()
Id=1
cur.execute("delete from Users where Userid = :ID",{'ID':Id})
cur.execute("Select * from Users")
for line in cur:
   print(line)
```

print("Coming On to Next Question. Delete a record from 'Vehicle' table using named bind variables. Accept VehicleId as an input from the user.")

vehicleid = input("enter the vehicle id of the car which you want to delete: ")

cur.execute("delete from Vehicles where Vehicleid = :ID",{'ID':vehicleid})

cur.execute("Select * from Vehicles")

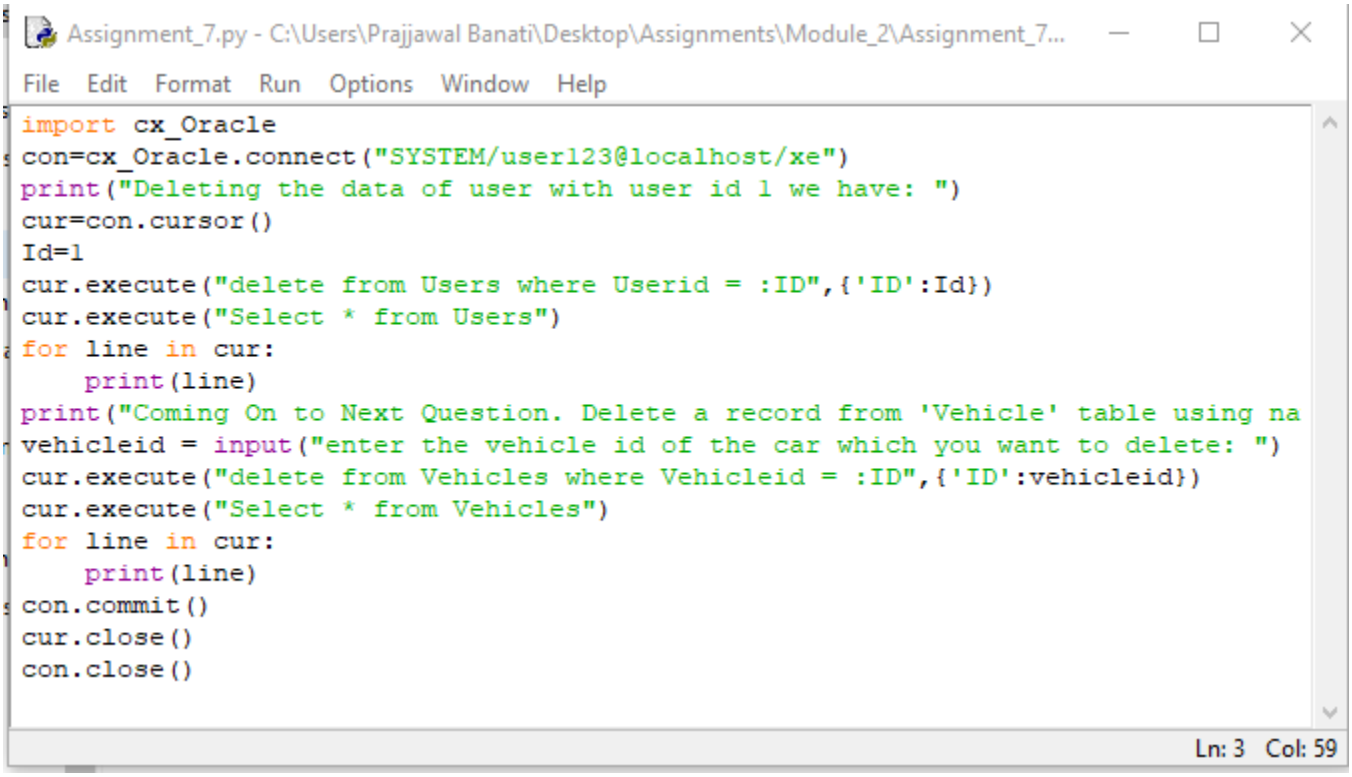
for line in cur:

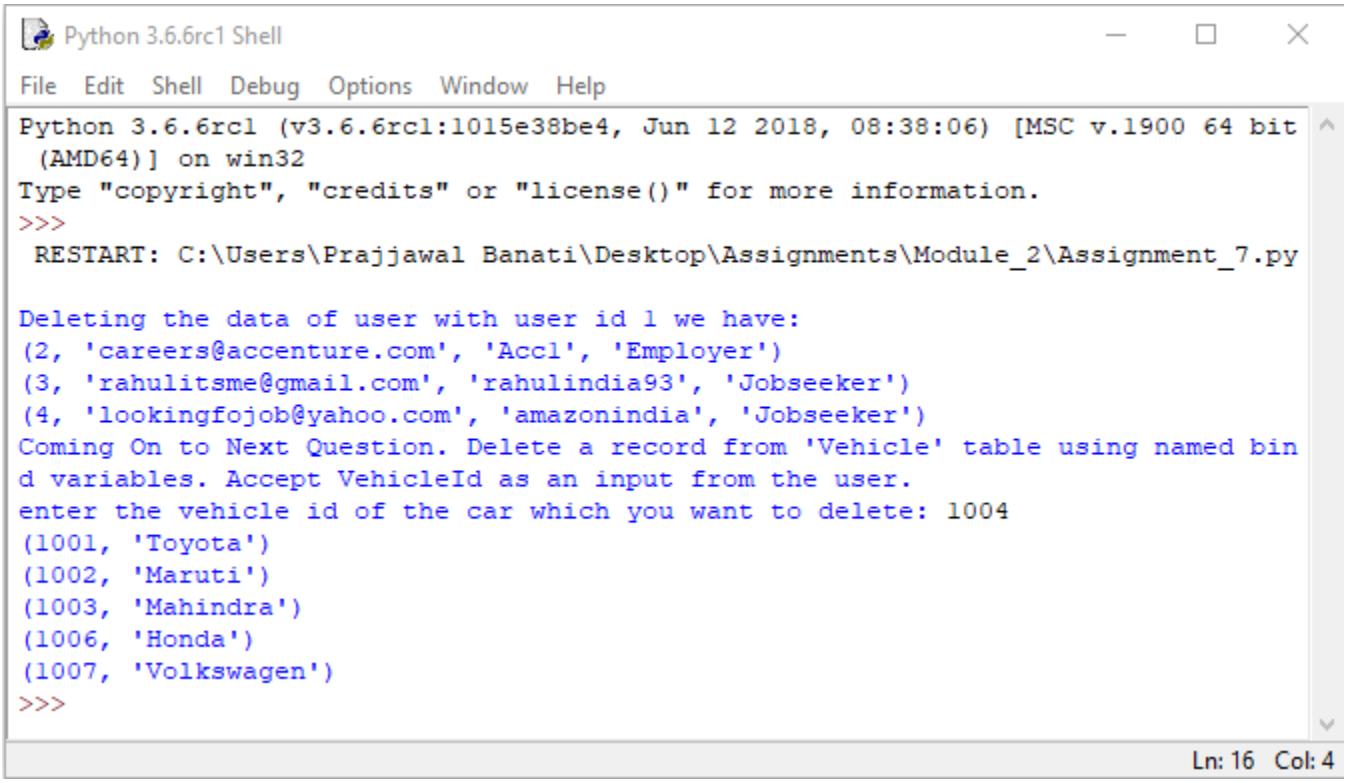
print(line)

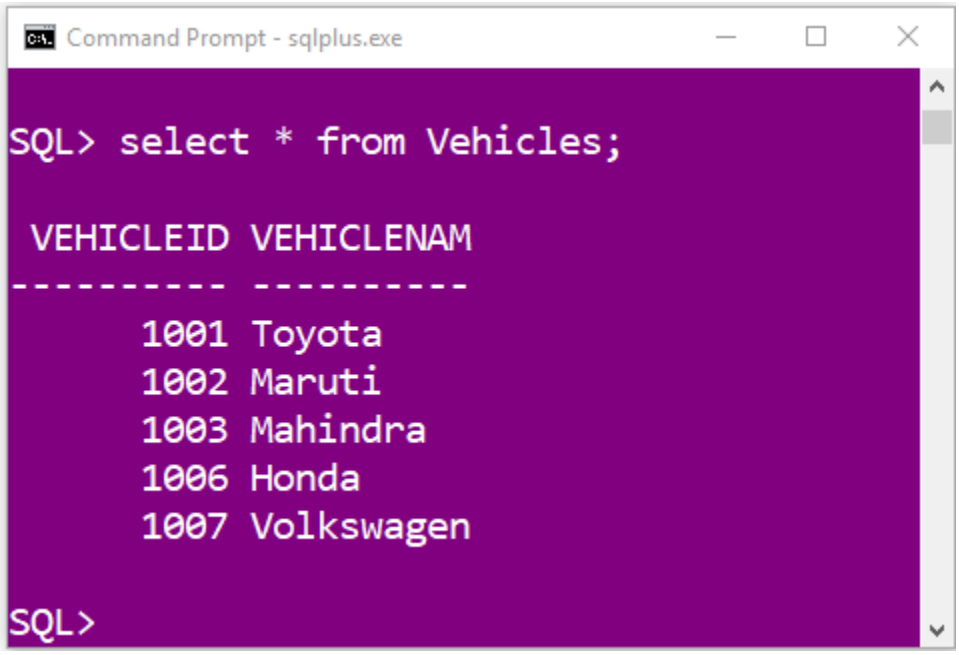
con.commit()

cur.close()

con.close()







ASSIGNMENT 8

Consider a scenario from a State Banking organization. The account table is created to store the account details of a customer (Assume every customer can have only one account).

Use cx_Oracle module to implement the following requirements from Python code.(Do not execute the queries in database directly)

1. **Create the table 'Account' as per below specifications:**

Column Name	Column Type	Description
CustomerId	Number	Primary Key
AccountNo	Varchar2(15)	Alphanumeric
AccountType	Varchar2(15)	Can be Savings, Current or Recurring
Balance	Number	Account balance of the customer

2. **Insert the following rows in the table:**

CustomerId	AccountNo	AccountType	Balance
101	IBI1001	Savings	0
102	IBI1002	Current	1200
103	IBI1003	Savings	6543
104	IBI1004	Recurring	7500
105	IBI1005	Current	0

3. **Display the customer id and account balance of the customer with maximum account balance.**
4. **Fetch the account balance of the customer with customer id 102 and store it in a Python variable – 'acct_bal'.**
5. **Increment 'acct_bal' with 2000 and update the 'Balance' field of the table (for that particular customer) with the new value.**
6. **Fetch and observe the updated account balance of the customer with customer id 102.**
7. **Delete the 'Current' accounts with zero balance.**

Ans:

```
import cx_Oracle

con=cx_Oracle.connect('SYSTEM/user123@localhost/xe')

cur=con.cursor()
```

```
print("Creating Table.....")

cur.execute("""create table Account(Customerid number(5) , Accountno
varchar2(15) , Accounttype varchar2(10) , Balance number(10))""")

print("Table created Successflly.....")

counter = 100

bal=0

print("Insering values into the table.....")

cur.executemany("INSERT INTO Account
values(:customerid,:accountno,:accounttype,:balance)",

            [{'customerid':counter+1 , 'accountno':'IBI1001' ,
'accounttype':'Savings' , 'balance': bal},

             {'customerid':counter+2 , 'accountno':'IBI1002' ,
'accounttype':'Current' , 'balance': bal+1200},

             {'customerid':counter+3 , 'accountno':'IBI1003' ,
'accounttype':'Savings' , 'balance': bal+6543},

             {'customerid':counter+4 , 'accountno':'IBI1004' ,
'accounttype':'Recurring','balance': bal+7500},

             {'customerid':counter+5 , 'accountno':'IBI1005' ,
'accounttype':'Current' , 'balance': bal}])

print("5 Values Inserted Successfully.....That are the values:")

cur.execute("select * from Account")

for line in cur:

   print(line)

print("2. The customerid and balance of the cutomer with maximum balance
is:")

cur.execute("select Customerid , Balance from Account where Balance =
7500")
```

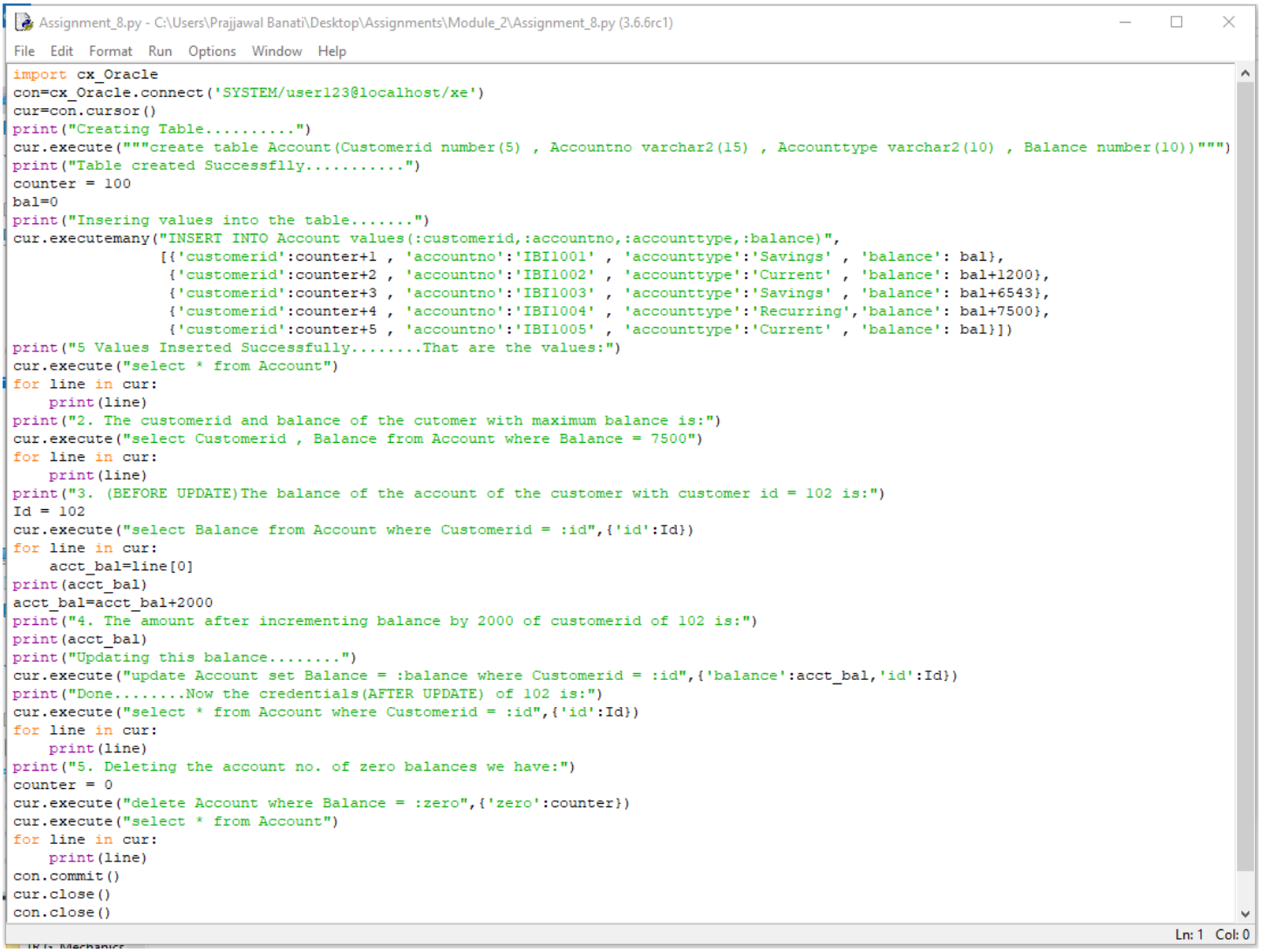
```
for line in cur:
    print(line)
print("3. (BEFORE UPDATE)The balance of the account of the customer with customer id = 102 is:")
Id = 102
cur.execute("select Balance from Account where Customerid = :id",{'id':Id})
for line in cur:
    acct_bal=line[0]
print(acct_bal)
acct_bal=acct_bal+2000
print("4. The amount after incrementing balance by 2000 of customerid of 102 is:")
print(acct_bal)
print("Updating this balance.....")
cur.execute("update Account set Balance = :balance where Customerid = :id",{'balance':acct_bal,'id':Id})
print("Done.....Now the credentials(AFTER UPDATE) of 102 is:")
cur.execute("select * from Account where Customerid = :id",{'id':Id})
for line in cur:
    print(line)
print("5. Deleting the account no. of zero balances we have:")
counter = 0
cur.execute("delete Account where Balance = :zero",{'zero':counter})
cur.execute("select * from Account")
for line in cur:
```

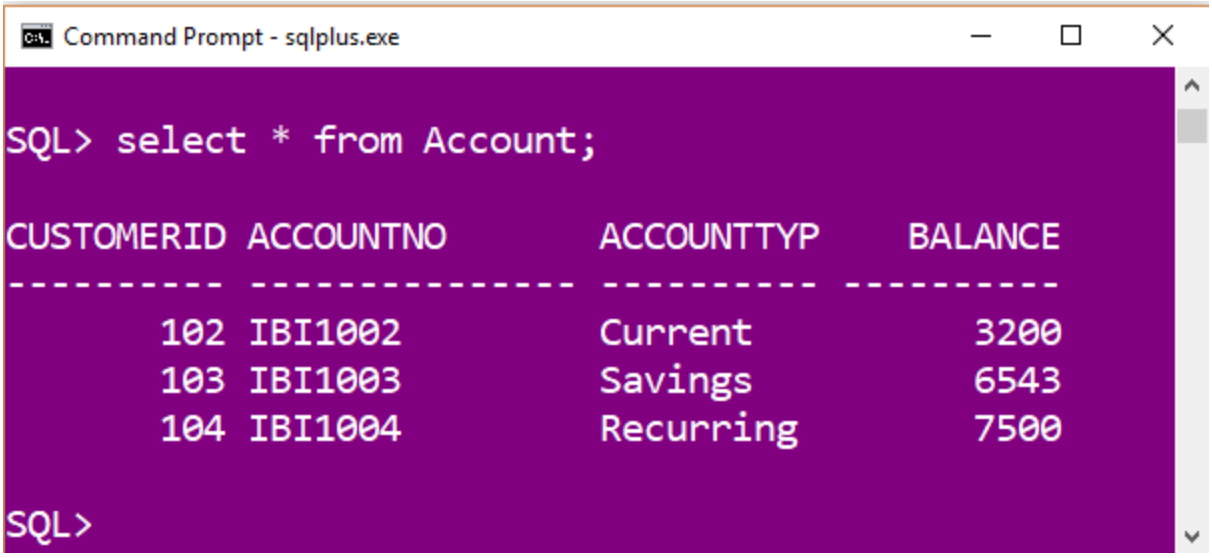
print(line)

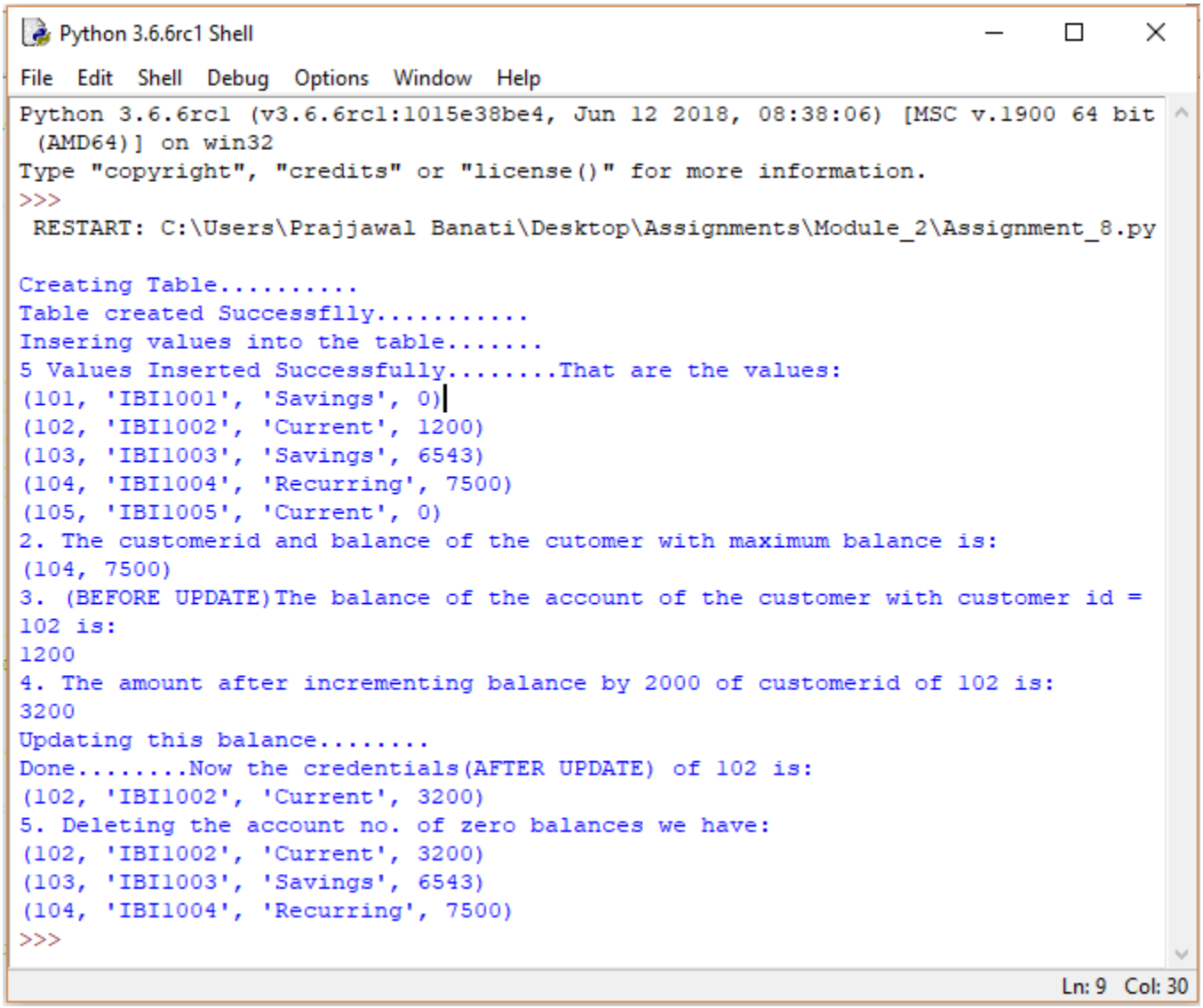
con.commit()

cur.close()

con.close()







ASSIGNMENT 9

- **Consider 'users' table already created. It has following data:**

UserId	Username	Password	UserType
2	careers@accenture.com	Acc1	Employer
3	rahulitsme@gmaill.com	rahulindia93	JobSeeker
4	lookingforjob@yahoo.com	amazonindia	JobSeeker

There is a requirement to delete the record of user with 'userid' 2.

•Try to mention incorrect column name(e.g. user_id) and observe the error.

•Use exception handling to handle the exception appropriately. Display the error code and message.

•Try to give incorrect username for connection string and observe the error code and message.

•Provide a wrong table name while writing the query and observe the error message.

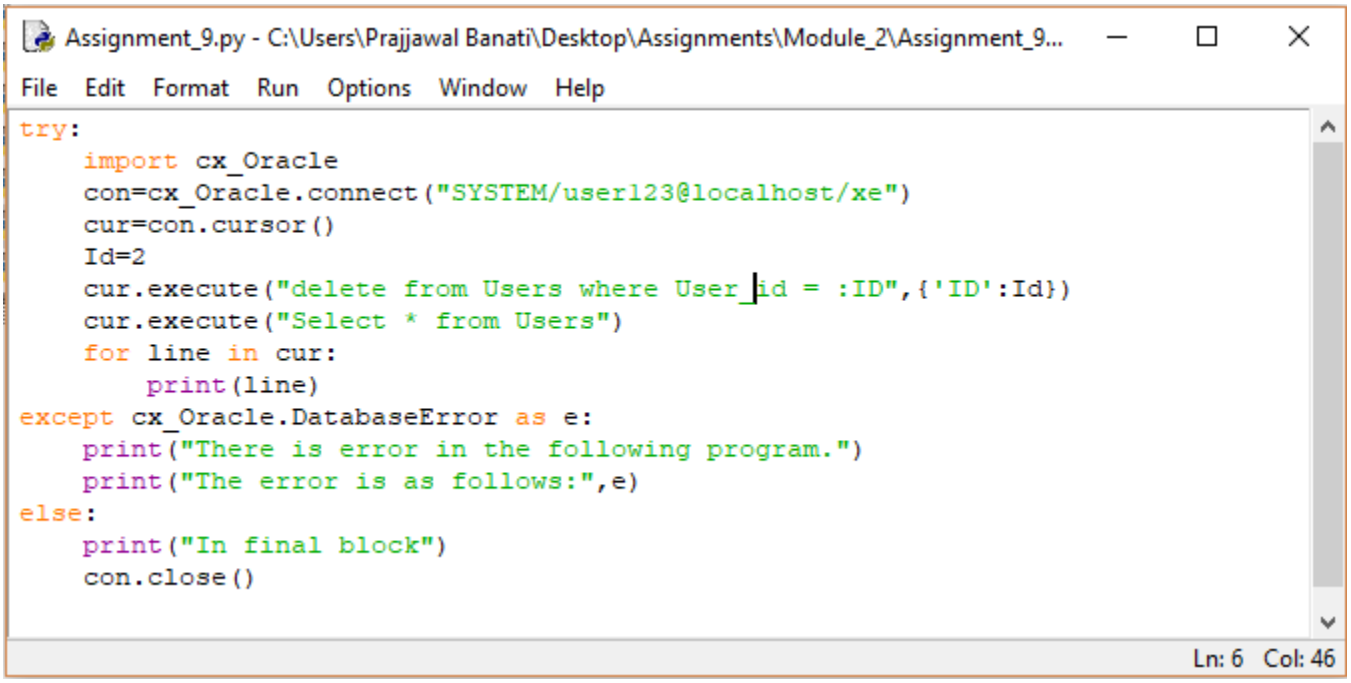
Ans:

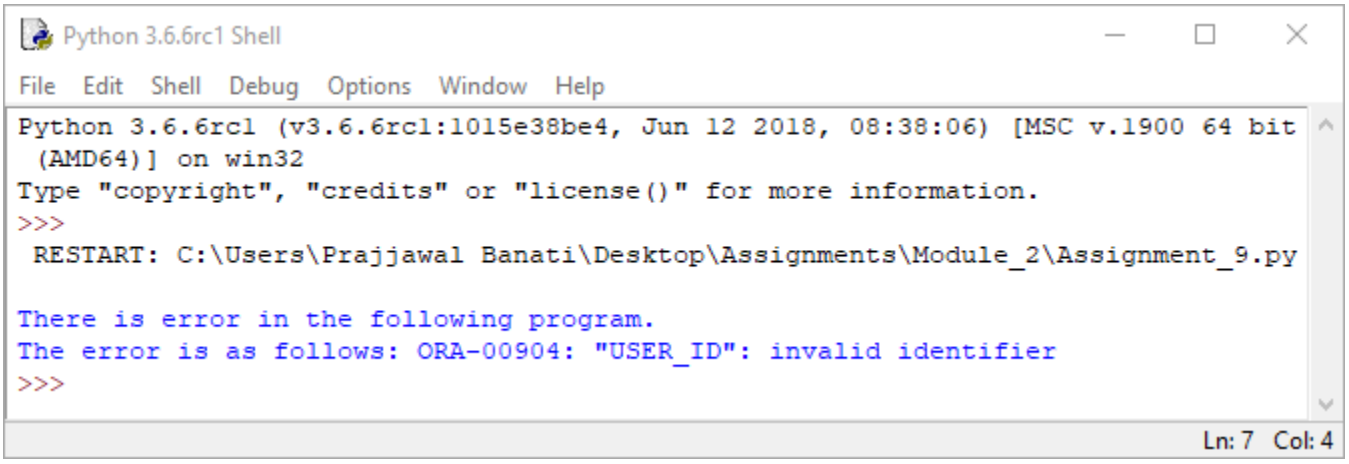
```
try:
   import cx_Oracle
   con=cx_Oracle.connect("SYSTEM/user123@localhost/xe")
   cur=con.cursor()
   Id=2
   cur.execute("delete from Users where Userid = :ID",{'ID':Id})
   cur.execute("Select * from Users")
   for line in cur:
      print(line)
except cx_Oracle.DatabaseError as e:
   print("There is error in the following program.")
   print("The error is as follows:",e)
else:
```

print("In final block")

con.close()

Error 1





Resolved :

Corrected the row name.

Error 2

Assignment_9.py - C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\Assignment_9...

File Edit Format Run Options Window Help

```
try:
    import cx_Oracle
    con=cx_Oracle.connect("SYSTEM/ser123@localhost/xe")
    cur=con.cursor()
    Id=2
    cur.execute("delete from Users where User_id = :ID",{'ID':Id})
    cur.execute("Select * from Users")
    for line in cur:
        print(line)
except cx_Oracle.DatabaseError as e:
    print("There is error in the following program.")
    print("The error is as follows:",e)
else:
    print("In final block")
    con.close()
```

Ln: 16 Col: 0

Python 3.6.6rc1 Shell

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```
>>>
 RESTART: C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\Assignment_9.py

There is error in the following program.
The error is as follows: ORA-01017: invalid username/password; logon denied
>>>
```

Ln: 11 Col: 4

ASSIGNMENT 10

- Consider the 'product' table already created. There is a requirement to insert one more row in the table.

productid	type	price	quantity
P106	Jams	150	30

- The following Python program is written to insert the row to the 'product' table. Execute the program and observe if there is any error.

```
import cx_Oracle
con = cx_Oracle.connect('oracle/infy123@localhost/xe')
cur = con.cursor()
cur.execute("INSERT INTO product VALUES('P106','Jams',150)")
con.close()
```

- Use exception handling to handle the error (if any) and display error message appropriately.

Ans:

```
try:
    import cx_Oracle
    con=cx_Oracle.connect('SYSTEM/user123@localhost/xe')
    cur=con.cursor()
    cur.execute("INSERT INTO product VALUES('P106','Jams','150','10')")
    con.close()
except cx_Oracle.DatabaseError as e:
    print("There is error in the above program. That is as follows:")
    print(e)
else:
    print("Values Written successfully.....")
```

Exception 1

Assignment_10.py - C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\Assignment_...

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```
try:
    import cx_Oracle
    con=cx_Oracle.connect('ORACLE/infy123@localhost/xe')
    cur=con.cursor()
    cur.execute("INSERT INTO product VALUES('P106','Jams','150')")
    con.close()
except cx_Oracle.DatabaseError as e:
    print("There is error in the above program. That is as follows:")
    print(e)
else:
    print("Values Written successfully.........")
```

Ln: 3 Col: 40

Python 3.6.6rc1 Shell

File Edit Shell Debug Options Window Help

```
>>>
 RESTART: C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\Assignment_9.py

There is error in the following program.
The error is as follows: ORA-01017: invalid username/password; logon denied
>>>
```

Ln: 11 Col: 4

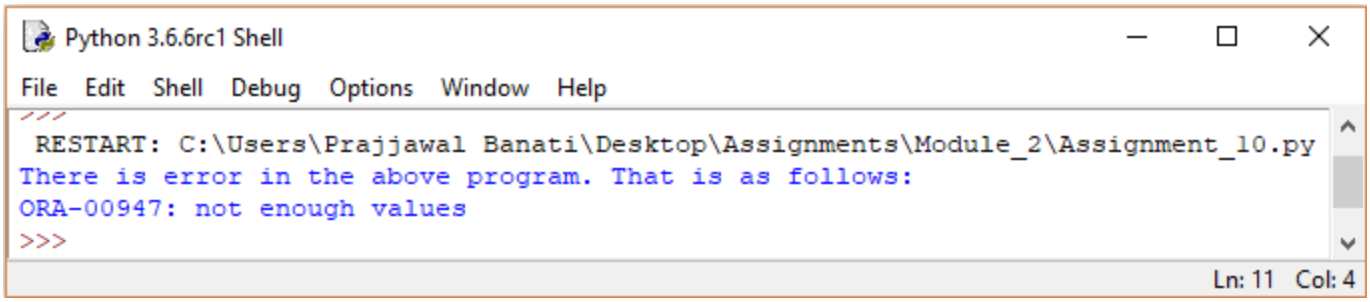
Exception 2:

Assignment_10.py - C:\Users\Prajjawal Banati\Desktop\Assignments\Module_2\Assignment_...

File Edit Format Run Options Window Help

```
try:
    import cx_Oracle
    con=cx_Oracle.connect('SYSTEM/user123@localhost/xe')
    cur=con.cursor()
    cur.execute("INSERT INTO product VALUES('P106','Jams','150')")
    con.close()
except cx_Oracle.DatabaseError as e:
    print("There is error in the above program. That is as follows:")
    print(e)
else:
    print("Values Written successfully.........")
```

Ln: 11 Col: 48



Resolved both: