

Database with Python

```
In [1]: import mysql.connector
        from mysql.connector import Error
```

```
In [2]: def create_connection():

        try:
            con = mysql.connector.connect(host='localhost',username='root',password=

            if con.is_connected():
                print("Database connected")
                return con

        except Error as e:
            print("Exception occurred",e)

        # def close_connection(con):

        #     con.close()
        #     print("Database Disconnected")
        # finally:
        #     if con.is_connected():
        #         con.close()
```

```
In [ ]:
```

Create employee table

```
In [3]: con = create_connection()

        if con.is_connected():
            cur = con.cursor()

            create_table = ''' Create table employee(
                                EmpID int not null,
                                EmpFirstName varchar(255) not null,
                                EmpLastName varchar(255) not null,
                                EmpSalary int not null,
                                EmpDesignation varchar(255) not null,
                                EmpJoiningDate date not null,
                                primary key(EmpID)
                                )'''

            # create_table = '''drop table if exists student;
            # Create table student(
            #     id int not null,
            #     name varchar(255) not null,
            #     course varchar(255) not null,
            #     admission_date date not null,
            #     primary key(id)
```

```
#
    )'''

    try:
        cur.execute(create_table)
        print("Table created")
        con.close()

    except Error as e:
        print("Exception occurred",e)
```

Database connected
Table created

In []:

Inserting multiple employee data into table

```
In [5]: con = create_connection()

cur = con.cursor()

insert_many = '''insert into employee(EmpID, EmpFirstName, EmpLastName, EmpSalary, EmpJoiningDate)
values (%s,%s,%s,%s,%s,%s);
'''

data = [
    (1, 'Suresh', 'Nagarkar', 50000, 'Developer', '2022/06/01'),
    (2, 'Devi', 'Rao', 45000, 'Trainee', '2022/06/02'),
    (3, 'Sandeep', 'Chaudhari', 60000, 'Junior Developer', '2022/06/02'),
    (4, 'Amita', 'Narang', 50000, 'Associate Trainer', '2022/05/15'),
    (5, 'Saraswati', 'Mishra', 70000, 'Senior Developer', '2022/07/01'),
    (6, 'Surya', 'Tamboli', 55000, 'Developer', '2022/06/01'),
    (7, 'Harsha', 'Devi', 53000, 'Manager', '2022/08/01'),
    (8, 'Shekhar', 'Gupta', 45000, 'Analyst', '2022/06/23'),
    (9, 'Rama', 'Sharma', 40000, 'Trainee', '2022/06/20'),
    (10, 'Ankit', 'Singh', 35000, 'Trainee', '2022/07/05'),
    (11, 'Laxmi', 'Misra', 70000, 'Database Admin', '2022/06/01'),
    (12, 'Anantha', 'William', 50000, 'Data Scientist', '2022/08/01'),
    (13, 'Manpreet', 'Sharma', 50000, 'Data Scientist', '2022/08/01'),
    (14, 'Sanjana', 'Bachchan', 60000, 'Developer', '2022/07/02'),
    (15, 'Minali', 'Joshi', 65000, 'Web Developer', '2022/06/30')
]

try:
    cur.executemany(insert_many,data)
    con.commit()
    print("Data inserted")
    con.close()

except Error as e:
    print("Exception occurred",e)
```

Database connected
Data inserted

Fetch all records

```
In [6]: con = create_connection()

cur = con.cursor()

retrieve_query = '''Select * from employee;'''

cur.execute(retrieve_query)

result = cur.fetchall()

for record in result:

    print(f'Employee Id: {record[0]}')
    print(f'Employee Full name: {record[1]} {record[2]}')
    print(f'Employee Salary: {record[3]}')
    print(f'Employee Designation: {record[4]}')
    print(f'Employee joining date: {record[5]}')

    print('=====')
con.close()
```

```
Database connected
Employee Id: 1
Employee Full name: Suresh Nagarkar
Employee Salary: 50000
Employee Designation: Developer
Employee joining date: 2022-06-01
=====
Employee Id: 2
Employee Full name: Devi Rao
Employee Salary: 45000
Employee Designation: Trainee
Employee joining date: 2022-06-02
=====
Employee Id: 3
Employee Full name: Sandeep Chaudhari
Employee Salary: 60000
Employee Designation: Junior Developer
Employee joining date: 2022-06-02
=====
Employee Id: 4
Employee Full name: Amita Narang
Employee Salary: 50000
Employee Designation: Associate Trainer
Employee joining date: 2022-05-15
=====
Employee Id: 5
Employee Full name: Saraswati Mishra
Employee Salary: 70000
Employee Designation: Senior Developer
Employee joining date: 2022-07-01
=====
Employee Id: 6
Employee Full name: Surya Tamboli
Employee Salary: 55000
Employee Designation: Developer
Employee joining date: 2022-06-01
=====
Employee Id: 7
Employee Full name: Harsha Devi
Employee Salary: 53000
Employee Designation: Manager
Employee joining date: 2022-08-01
=====
Employee Id: 8
Employee Full name: Shekhar Gupta
Employee Salary: 45000
Employee Designation: Analyst
Employee joining date: 2022-06-23
=====
Employee Id: 9
Employee Full name: Rama Sharma
Employee Salary: 40000
Employee Designation: Trainee
Employee joining date: 2022-06-20
=====
Employee Id: 10
Employee Full name: Ankit Singh
Employee Salary: 35000
Employee Designation: Trainee
Employee joining date: 2022-07-05
```

```

=====
Employee Id: 11
Employee Full name: Laxmi Misra
Employee Salary: 70000
Employee Designation: Database Admin
Employee joining date: 2022-06-01
=====
Employee Id: 12
Employee Full name: Anantha William
Employee Salary: 50000
Employee Designation: Data Scientist
Employee joining date: 2022-08-01
=====
Employee Id: 13
Employee Full name: Manpreet Sharma
Employee Salary: 50000
Employee Designation: Data Scientist
Employee joining date: 2022-08-01
=====
Employee Id: 14
Employee Full name: Sanjana Bachchan
Employee Salary: 60000
Employee Designation: Developer
Employee joining date: 2022-07-02
=====
Employee Id: 15
Employee Full name: Minali Joshi
Employee Salary: 65000
Employee Designation: Web Developer
Employee joining date: 2022-06-30
=====

```

Get odd number of record from the table

```

In [7]: con = create_connection()

cur = con.cursor()

retrieve_query = '''Select * from employee where mod(EmpID,2)!=0;'''

cur.execute(retrieve_query)

result = cur.fetchall()

for record in result:

    print(f'Employee Id: {record[0]}')
    print(f'Employee Full name: {record[1]} {record[2]}')
    print(f'Employee Salary: {record[3]}')
    print(f'Employee Designation: {record[4]}')
    print(f'Employee joining date: {record[5]}')

    print('=====')
con.close()

```

```

Database connected
Employee Id: 1
Employee Full name: Suresh Nagarkar
Employee Salary: 50000
Employee Designation: Developer
Employee joining date: 2022-06-01
=====
Employee Id: 3
Employee Full name: Sandeep Chaudhari
Employee Salary: 60000
Employee Designation: Junior Developer
Employee joining date: 2022-06-02
=====
Employee Id: 5
Employee Full name: Saraswati Mishra
Employee Salary: 70000
Employee Designation: Senior Developer
Employee joining date: 2022-07-01
=====
Employee Id: 7
Employee Full name: Harsha Devi
Employee Salary: 53000
Employee Designation: Manager
Employee joining date: 2022-08-01
=====
Employee Id: 9
Employee Full name: Rama Sharma
Employee Salary: 40000
Employee Designation: Trainee
Employee joining date: 2022-06-20
=====
Employee Id: 11
Employee Full name: Laxmi Misra
Employee Salary: 70000
Employee Designation: Database Admin
Employee joining date: 2022-06-01
=====
Employee Id: 13
Employee Full name: Manpreet Sharma
Employee Salary: 50000
Employee Designation: Data Scientist
Employee joining date: 2022-08-01
=====
Employee Id: 15
Employee Full name: Minali Joshi
Employee Salary: 65000
Employee Designation: Web Developer
Employee joining date: 2022-06-30
=====

```

In []:

Update 5 records

```

In [8]: con = create_connection()

        cur = con.cursor()

```

```
update_query = '''Update employee set EmpDesignation = "Developer" where EmpID in (1,2,3)'''
cur.execute(update_query)
con.commit()

print(f'{cur.rowcount} record/s updated')

update_query = '''Update employee set EmpDesignation = "Analyst" where EmpID in (4,5)'''
cur.execute(update_query)
con.commit()

print(f'{cur.rowcount} record/s updated')

con.close()
```

Database connected

3 record/s updated

2 record/s updated

Fetch all records

```
In [10]: con = create_connection()

cur = con.cursor()

retrieve_query = '''Select * from employee;'''

cur.execute(retrieve_query)

result = cur.fetchall()

for record in result:

    print(f'Employee Id: {record[0]}')
    print(f'Employee Full name: {record[1]} {record[2]}')
    print(f'Employee Salary: {record[3]}')
    print(f'Employee Designation: {record[4]}')
    print(f'Employee joining date: {record[5]}')

    print('=====')

con.close()
```

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=====

```

Delete even no of records

```

In [13]: con = create_connection()

cur = con.cursor()

delete_query = '''Delete from employee where mod(EmpID,2)=0;'''

cur.execute(delete_query)
con.commit()
print(f'{cur.rowcount} record/s deleted')
con.close()

```

Database connected
7 record/s deleted

Fetch all record to check whether the data is deleted or not

```

In [14]: con = create_connection()

cur = con.cursor()

```

```
retrieve_query = '''Select * from employee;'''

cur.execute(retrieve_query)

result = cur.fetchall()

for record in result:

    print(f'Employee Id: {record[0]}')
    print(f'Employee Full name: {record[1]} {record[2]}')
    print(f'Employee Salary: {record[3]}')
    print(f'Employee Designation: {record[4]}')
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    print('=====')
con.close()
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In []: