In [5]:

```python
import mysql.connector

def create_db():
    mydb = mysql.connector.connect(
        host="localhost",
        user="root",
        password="1234",
        database="sqlproject"
    )
    mycursor = mydb.cursor()
    return mydb, mycursor

def insert(mycursor, table, columns, data):
    query = f'INSERT INTO {table} ({", ".join(columns)}) VALUES ({", ".join(["%s"
    mycursor.execute(query, data)
    mydb.commit()

def insertmany(mycursor, table, columns, data):
    query = f'INSERT INTO {table} ({", ".join(columns)}) VALUES ({", ".join(["%s"
    mycursor.executemany(query, data)
    mydb.commit()

def update(mycursor, table, set_column, set_value, where_column, where_value):
    query = f'UPDATE {table} SET {set_column} = %s WHERE {where_column} = %s'
    values = (set_value, where_value)
    mycursor.execute(query, values)
    mydb.commit()

def delete(mycursor, table, where_column, where_value):
    query = f'DELETE FROM {table} WHERE {where_column} = %s'
    values = (where_value,)
    mycursor.execute(query, values)
    mydb.commit()

def select(mycursor, table):
    mycursor.execute(f'SELECT * FROM {table}')
    result = mycursor.fetchall()
    for row in result:
        print(row)
    print(" ")

try:
    # Call the functions for employee table
    mydb, mycursor = create_db()

    # Insert single record
    employee_columns = ['emp_id', 'first_name', 'last_name', 'age', 'gender', 'sa
    employee_data = (101, 'Priya', 'Dayalan', 25, 'F', 80000, 'Chennai', 'IT')
    insert(mycursor, 'employee1', employee_columns, employee_data)

    # Select and print all rows
    select(mycursor, 'employee1')

    # Insert multiple records
    employee_data_many = [
        (102, 'Kanimozhi', 'Ezhumalai', 32, 'F', 50000, 'Delhi', 'BPO'),
        # ... (other records)
    ]
    insertmany(mycursor, 'employee1', employee_columns, employee_data_many)

    # Select and print all rows
```

```
    select(mycursor, 'employee1')

    # Update data for emp_id 101
    update(mycursor, 'employee1', 'salary', 55000, 'emp_id', 101)

    # Select and print all rows
    select(mycursor, 'employee1')

    # Delete data for emp_id 102
    delete(mycursor, 'employee1', 'emp_id', 102)

    # Select and print all rows
    select(mycursor, 'employee1')

    # Call the functions for department table
    # Similar to the employee table, with appropriate column names and data

finally:
    # Close the connection
    mycursor.close()
    mydb.close()
```

```
(101, 'Priya', 'Dayalan', 25, 'F', 80000, 'Chennai', 'IT')

(101, 'Priya', 'Dayalan', 25, 'F', 80000, 'Chennai', 'IT')
(102, 'Kanimozhi', 'Ezhumalai', 32, 'F', 50000, 'Delhi', 'BPO')

(101, 'Priya', 'Dayalan', 25, 'F', 55000, 'Chennai', 'IT')
(102, 'Kanimozhi', 'Ezhumalai', 32, 'F', 50000, 'Delhi', 'BPO')

(101, 'Priya', 'Dayalan', 25, 'F', 55000, 'Chennai', 'IT')
```

In [7]:

```python
import mysql.connector

def create_db():
    mydb = mysql.connector.connect(
        host="localhost",
        user="root",
        password="1234",
        database="sqlproject"
    )
    mycursor = mydb.cursor()
    return mydb, mycursor

def insert(mycursor, table, columns, data):
    query = f'INSERT INTO {table} ({", ".join(columns)}) VALUES ({", ".join(["%s"
    mycursor.execute(query, data)
    mydb.commit()

def insertmany(mycursor, table, columns, data):
    query = f'INSERT INTO {table} ({", ".join(columns)}) VALUES ({", ".join(["%s"
    mycursor.executemany(query, data)
    mydb.commit()

def update(mycursor, table, set_column, set_value, where_column, where_value):
    query = f'UPDATE {table} SET {set_column} = %s WHERE {where_column} = %s'
    values = (set_value, where_value)
    mycursor.execute(query, values)
    mydb.commit()

def delete(mycursor, table, where_column, where_value):
    query = f'DELETE FROM {table} WHERE {where_column} = %s'
    values = (where_value,)
    mycursor.execute(query, values)
    mydb.commit()

def select(mycursor, table):
    mycursor.execute(f'SELECT * FROM {table}')
    result = mycursor.fetchall()
    for row in result:
        print(row)
    print(" ")

try:
    # Call the functions for department table
    mydb, mycursor = create_db()

    # Insert single record
    department_columns = ['department_id', 'department_name']
    department_data = ('001', 'IT')
    insert(mycursor, 'department1', department_columns, department_data)

    # Select and print all rows
    select(mycursor, 'department1')

    # Insert multiple records
    department_data_many = [('002', 'Finance'),
                            ('003', 'Medical'),
                            ('004', 'BPO'),
                            ('005', 'Education')]

    insertmany(mycursor, 'department1', department_columns, department_data_many)

```

```
    # Select and print all rows
    select(mycursor, 'department1')

    # Update data for department_id '003'
    update(mycursor, 'department1', 'department_name', 'Healthcare & Sciences', '

    # Select and print all rows
    select(mycursor, 'department1')

    # Delete data for department_id '003'
    delete(mycursor, 'department1', 'department_id', '003')

    # Select and print all rows
    select(mycursor, 'department1')

finally:
    # Close the connection
    mycursor.close()
    mydb.close()

```

```
(1, 'IT')

(1, 'IT')
(2, 'Finance')
(3, 'Medical')
(4, 'BPO')
(5, 'Education')

(1, 'IT')
(2, 'Finance')
(3, 'Healthcare & Sciences')
(4, 'BPO')
(5, 'Education')

(1, 'IT')
(2, 'Finance')
(4, 'BPO')
(5, 'Education')
```

In [ ]:

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