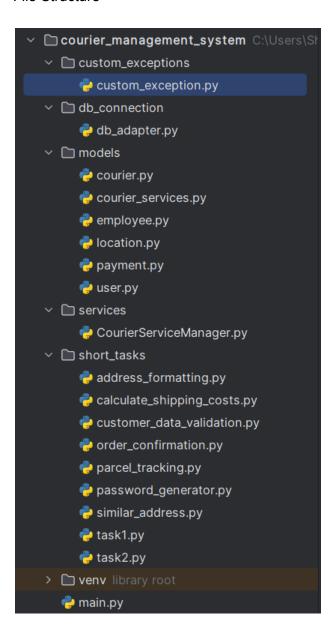
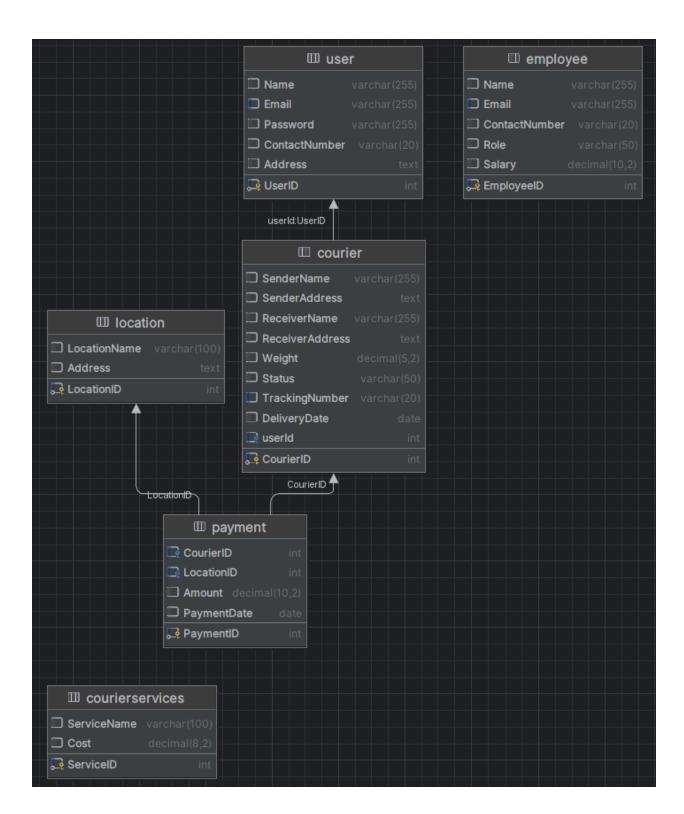
# **Courier Management System**

File Structure



Database Schema



#### Custom\_exception.py

```
class CourierNotFound(Exception):
    def __init__(self, value):
        self.value = value
```

```
def __str__(self):
    return "CourierNotFound :" + self.value

class TrackingNumberNotFoundException(Exception):
    def __init__(self, message="Tracking number not found"):
        self.message = message
        super().__init__(self.message)

class InvalidEmployeeIdException(Exception):
    def __init__(self, message="Invalid employee ID"):
        self.message = message
        super().__init__(self.message)
```

#### Db\_adapter.py

```
def get_db_connection():
    # Replace the following values with your MySQL server credentials
    config = {
        'user': 'root',
        'password': 'prakhar123',
        'host': 'localhost',
        'database': 'cmsdb'
}

try:
    connection = mysql.connector.connect(**config)
    # print("Connected to the database")
    # print(hello World')
    return connection
except mysql.connector.Error as err:
    print(f"Error: {err}")
    return None

def get_ids(table_name, id_column_name):
    mydb = get_db_connection()
    my_cursor = mydb.cursor()
    sql = 'SELECT ' + id_column_name + ' FROM ' + table_name + ' ORDER BY ' +
id_column_name + ' DESC_LIMIT 1'
    # print(sql)
    my_cursor.execute(sql)
    x = list(my_cursor.fetchone())[0]
```

```
return int(x) + 1

def get_cnts(table_name, id_column_name, column_id):
    mydb = get_db_connection()
    my_cursor = mydb.cursor()
    sql = 'SELECT count(*) as count FROM ' + table_name + ' WHERE ' +
    id_column_name + '=' + column_id
    # print(sql)
    my_cursor.execute(sql)
    x = list(my_cursor.fetchone())[0]
    return int(x)

def get_counts(table_name, id_column_name1, id_column_name2, column_id1,
    column_id2):
    mydb = get_db_connection()
    my_cursor = mydb.cursor()
    sql = 'SELECT count(*) as count FROM ' + table_name + ' WHERE ' +
    id_column_name1 + '=' + column_id1 + ' AND ' + id_column_name2 + '=' + '"' +
    str(column_id2) + '"'
    # print(sql)
    my_cursor.execute(sql)
    x = list(my_cursor.fetchone())[0]
    # print(x)
    return int(x)
```

#### Courier.py

```
def get sender name(self):
  def get tracking number(self):
receiver name=None, receiver address=None,
delivery date=None):
          para = (sender name, self. courier id)
          my cursor.execute(sql, para)
          self.connection.commit()
      if sender address:
          sql = 'UPDATE courier SET SenderAddress = %s WHERE CourierID = %s'
          para = (sender address, self. courier id)
          my cursor.execute(sql, para)
```

```
para = (receiver name, self. courier id)
   my cursor.execute(sql, para)
    self.connection.commit()
if receiver address:
   sql = 'UPDATE courier SET ReceiverAddress = %s WHERE CourierID = %s'
   my cursor.execute(sql, para)
   para = (weight, self. courier id)
   my cursor.execute(sql, para)
    self.connection.commit()
   para = (status, self. courier id)
   my_cursor.execute(sql, para)
    sql = 'UPDATE courier SET TrackingNumber = %s WHERE CourierID = %s'
   para = (tracking number, self. courier id)
   my cursor.execute(sql, para)
    self.connection.commit()
   para = (delivery date, self. courier id)
   my cursor.execute(sql, para)
    self.connection.commit()
print(f"Sender Name: {self.get sender name()}")
```

```
print(f"Receiver Address: {self.get receiver address()}")
      print(f"Status: {self.get status()}")
      print(f"Delivery Date: {self.get delivery_date()}")
  def place courier(self, sender name, sender address, receiver name,
receiver_address, weight, status,
      my cursor = self.connection.cursor()
receiver name, receiver address, weight,
          my cursor.execute(sql, para)
          connection.close()
       random number = random.randint(100000, 9999999)
      return tracking_number
```

```
import random
from custom exceptions.custom exception import CourierNotFound
from db connection.db adapter import *
class Courier:
```

```
def get delivery date(self):
  def update courier details (self, sender name=None, sender address=None,
receiver name=None, receiver address=None,
                              weight=None, status=None, tracking number=None,
delivery date=None):
          para = (sender name, self. courier id)
          my cursor.execute(sql, para)
          self.connection.commit()
      if sender address:
          para = (sender address, self. courier id)
          my cursor.execute(sql, para)
          self.connection.commit()
          para = (receiver name, self. courier id)
          my cursor.execute(sql, para)
          self.connection.commit()
       if receiver address:
          para = (receiver address, self. courier id)
          my cursor.execute(sql, para)
          my cursor.execute(sql, para)
          self.connection.commit()
           sql = 'UPDATE courier SET Status = %s WHERE CourierID = %s'
          para = (status, self. courier id)
          my cursor.execute(sql, para)
```

```
self.connection.commit()
          para = (tracking number, self. courier id)
          my cursor.execute(sql, para)
           self.connection.commit()
          para = (delivery date, self. courier id)
          my cursor.execute(sql, para)
          self.connection.commit()
      print(f"Courier ID: {self.get courier id()}")
      print(f"Sender Name: {self.get sender name()}")
      print(f"Receiver Name: {self.get receiver name()}")
      print(f"Receiver Address: {self.get receiver address()}")
      print(f"Weight: {self.get weight()}")
  def place courier(self, sender name, sender address, receiver name,
                    tracking number, delivery date):
      my cursor = self.connection.cursor()
receiver name, receiver address, weight,
```

```
delivery_date)
   my_cursor.execute(sql, para)
   connection.commit()
   print('Courier placed successfully.')
except Exception as e:
   print(f'Error placing courier: {e}')
finally:
   connection.close()

@classmethod
def generate_tracking_number(cls):
   random_number = random.randint(100000, 999999)
   tracking_number = f"TN{random_number}"
   return tracking_number
```

#### Employee.py

```
class Employee:
    def __init__(self, employee_id, name, email, contact_number, role, salary):
        self.connection = get_db_connection()
        self.__employee_id = employee_id
        self.__name = name
        self.__email = email
        self.__contact_number = contact_number
        self.__role = role
        self.__salary = salary

def get_employee_id(self):
        return self.__employee_id

def get_employee_email(self):
        return self.__name

def get_employee_email(self):
        return self.__email

def get_employee_contact_number(self):
        return self.__contact_number

def get_employee_role(self):
```

```
contact number=None, role=None, salary=None):
          para = (name, self. employee id)
          my cursor.execute(sql, para)
       if email:
          para = (email, self. employee id)
          my cursor.execute(sql, para)
          self.connection.commit()
      if contact number:
          para = (contact number, self. employee id)
          my cursor.execute(sql, para)
           sql = 'UPDATE employee SET Role = %s WHERE EmployeeID = %s'
          para = (role, self. employee id)
          my cursor.execute(sql, para)
          self.connection.commit()
       if salary:
          para = (salary, self.__employee_id)
          my cursor.execute(sql, para)
          self.connection.commit()
      print(f"Employee ID: {self.get employee id()}")
      print(f"Name: {self.get employee name()}")
```

```
print(f"Email: {self.get_employee_email()}")
print(f"Contact Number: {self.get_employee_contact_number()}")
print(f"Role: {self.get_employee_role()}")
print(f"Salary: {self.get_employee_salary()}")
print("-----")
```

#### Location.py

```
from db connection.db adapter import *
class Location:
      self. address = address
  def get address(self):
          para = (location name, self. location id)
          my cursor.execute(sql, para)
           sql = 'UPDATE location SET Address = %s WHERE LocationID = %s'
          para = (address, self. location id)
          my cursor.execute(sql, para)
          self.connection.commit()
      print(f"Location ID: {self.get location id()}")
```

```
print(f"Location Name: {self.get_location_name()}")
print(f"Address: {self.get_address()}")
print("-----")
```

#### Payment.py

```
from db connection.db adapter import *
class Payment:
  def init (self, payment id, courier id, location id, amount,
payment date):
      self. payment id = payment id
      self. payment date = payment date
      return self. payment id
      return self. payment date
amount=None, payment date=None):
      if courier id:
          para = (courier id, self. payment id)
          my cursor.execute(sql, para)
          self.connection.commit()
          para = (location id, self. payment id)
          my cursor.execute(sql, para)
```

```
self.connection.commit()
    print('LocationID Updated successfully')

if amount:
    sql = 'UPDATE payment SET Amount = %s WHERE PaymentID = %s'
    para = (amount, self._payment_id)
    my_cursor.execute(sql, para)
    self.connection.commit()
    print('Amount Updated successfully')

if payment_date:
    sql = 'UPDATE payment SET PaymentDate = %s WHERE PaymentID = %s'
    para = (payment_date, self._payment_id)
    my_cursor.execute(sql, para)
    self.connection.commit()
    print('PaymentDate Updated successfully')

print('Payment details updated successfully')

def info(self):
    print(f"Payment ID: {self.get_payment_id()}")
    print(f"Courier ID: {self.get_location_id()}")
    print(f"Amount: {self.get_amount()}")
    print(f"Payment Date: {self.get_payment_date()}")
    print("-------")
```

#### User.py

```
class User:
    def __init__(self, user_id, name, email, password, contact_number, address):
        self.connection = get_db_connection()
        self.__user_id = user_id
        self.__name = name
        self.__email = email
        self.__password = password
        self.__contact_number = contact_number
        self.__address = address

def get_user_id(self): return self.__user_id
    def get_user_name(self): return self.__name
    def get_user_email(self): return self.__email
    def get_user_password(self): return self.__password
    def get_user_contact_number(self): return self.__contact_number
    def get_user_address(self): return self.__contact_number
    def get_user_address(self): return self.__address
```

```
def update user details(self, name=None, email=None, password=None,
contact number=None, address=None):
          my cursor.execute(sql, para)
      if email:
           sql = 'UPDATE user SET email = %s WHERE userID = %s'
          para = (email, self. user id)
          my cursor.execute(sql, para)
          self.connection.connect()
          para = (password, self. user id)
          my cursor.execute(sql, para)
      if contact number:
          para = (contact number, self. user id)
          my cursor.execute(sql, para)
          self.connection.connect()
           sql = 'UPDATE user SET address = %s WHERE userID = %s'
          para = (address, self. user id)
          my cursor.execute(sql, para)
          self.connection.connect()
      print(f"User ID: {self.get user id()}")
      print(f"Name: {self.get user name()}")
      print(f"Email: {self.get user email()}")
```

#### Courier\_service\_manage.py

```
from custom exceptions.custom exception import CourierNotFound,
TrackingNumberNotFoundException
from db connection.db adapter import *
from models.courier import Courier
class CourierService:
  def add courier services (service id, service name, cost, employee id):
           if not CourierService.is employee admin(employee id):
           para = (service id, service name, cost)
          my cursor.execute(sql, para)
          connection.commit()
          connection.close()
   def is employee admin(employee id):
       admin counts = get counts('employee', 'employeeID', 'role', employee id,
          mydb = get db connection()
          my cursor = mydb.cursor()
```

```
para = (track id,)
    my cursor.execute(sql, para)
       raise TrackingNumberNotFoundException('Invalid Tracking Number')
        return Courier(*x)
except TrackingNumberNotFoundException as tnfe:
mydb = get db connection()
my cursor = mydb.cursor()
courier_exists = get_cnts('courier', 'CourierID', courierID)
    if courier exists > 0:
        para = (courier exists,)
        my cursor.execute(sql, para)
        raise CourierNotFound('Invalid Courier ID')
```

#### Main.py (entry point)

```
from models.courier import Courier
from services.CourierServiceManager import CourierService
from datetime import datetime

class CourierSystemMenu:
    def __init__(self):
```

```
self.place courier order()
              self.add courier service()
      receiver address = input("Enter receiver address: ")
      status = "Yet to Transit"
      delivery date = input("Enter delivery date (YYYY-MM-DD): ")
      Courier.place courier(sender name, sender address, receiver name,
datetime.strptime(delivery date, "%Y-%m-%d").date())
  def check order status(self):
CourierService.get courier by tracking no(track id=tracking number)
      print(f"Order Status: {temp courier.get status()}")
```

```
def cancel_courier_order(self):
    courier_id = input("Enter Courier ID: ")
    CourierService.cancel_courier(courier_id)

def add_courier_service(self):
    employee_id = input("Enter admin employee ID: ")
    if self.courier_service.is_employee_admin(employee_id):
        employee_id2 = (input("Enter Employee ID: "))
        service_id = (input("Enter service ID: "))
        service_name = input("Enter service name: ")
        cost = (input("Enter cost: "))
        self.courier_service.add_courier_services(service_id, service_name,
cost, employee_id2)
    else:
        print("Error: Only admins can add courier services.")

if __name__ == "__main__":
    menu = CourierSystemMenu()
    menu.display_menu()
```

## <u>Output</u>

```
Courier System Menu:

1. Place Courier Order

2. Check Order Status

3. Cancel Courier Order

4. Add Courier Service (Admin)

5. Exit
Enter your choice:
```

Enter your choice: 2

Enter tracking number: TN123456

Order Status: In Transit

Enter your choice: 4
Enter admin employee ID: 2
1
Enter Employee ID: 2
Enter service ID: 13
Enter service name: Indian Express Delivery
Enter cost: 99.99

Courier service added successfully.

Enter your choice: 1
Enter sender name: Prakhar
Enter sender address: Kanpur
Enter receiver name: Vaibhav
Enter receiver address: Lucknw
Enter weight: 300
Enter delivery date (YYYY-MM-DD): 2023-12-31
Courier placed successfully.
Courier order placed successfully. Tracking Number: TN218898

### 5. Exit

Enter your choice: 5

Exiting Courier System. Goodbye!