

## **Lab No: 06 Case Study**

### **Case Study 1:**

#### **Code:**

```
class Employee:
```

```
    def __init__(self, emp_name, emp_age, emp_id, emp_salary):
```

```
        self.emp_name = emp_name
```

```
        self.emp_age = emp_age
```

```
        self.emp_id = emp_id
```

```
        self.emp_salary = emp_salary
```

```
class Programmer(Employee):
```

```
    def __init__(self, emp_name, emp_age, emp_id, emp_salary, language):
```

```
        Employee.__init__(self, emp_name, emp_age, emp_id, emp_salary)
```

```
        self.language = language
```

```
    def info(self):
```

```
        print(f"Employee: \nName : {self.emp_name} \nAge : {self.emp_age} \nId : {self.emp_id}")
```

```
        print(f"Salary : {self.emp_salary} \nLanguage : {self.language}")
```

```
p1 = Programmer("Bilal", "20", "052", "200000", "Python")
```

```
p1.info()
```

#### **Output:**

```
Employee:
Name : Bilal
Age : 20
Id : 052
Salary : 200000
Language : Python
```

## Case Study 2:

### Code:

```
class Employee:
```

```
    def __init__(self, emp_name, emp_age, emp_id, emp_salary):
```

```
        self.emp_name = emp_name
```

```
        self.emp_age = emp_age
```

```
        self.emp_id = emp_id
```

```
        self.emp_salary = emp_salary
```

```
    def info1(self):
```

```
        print(f'Employee: \nName : {self.emp_name} \nAge : {self.emp_age} \nId : {self.emp_id} \nSalary : {self.emp_salary}')
```

```
class Programmer:
```

```
    def __init__(self, language):
```

```
        self.language = language
```

```
    def info2(self):
```

```
        print(f'Language : {self.language}')
```

```
class Designer(Employee, Programmer):
```

```
    def __init__(self, emp_name, emp_age, emp_id, emp_salary, language, skills, experience):
```

```
        self.skill = skills
```

```
        self.experience = experience
```

```
        Employee.__init__(self, emp_name, emp_age, emp_id, emp_salary)
```

```
        Programmer.__init__(self, language)
```

```
    def info3(self):
```

```
        print(f'Skills : {self.skill} \nExperience : {self.experience}')
```

```
d1 = Designer("Bilal", "20", "52", "200000", "Python", "Web Designer", "2 Year")
```

```
d1.info1()
```

d1.info2()

d1.info3()

## **Output:**

```
Employee:
Name : Bilal
Age : 20
Id : 52
Salary : 200000
Language : Python
Skills : Web Designer
Experience : 2 Year
```

## Case Study 3:

### Car Loan Management System

#### Code:

```
class Car_dealer:
    def editable1(self):
        print("Car Company : Gulf Automobile")
        print("Car Available : Mercedes E-Class, Toyota Camry, Nissan Patrol, Hyundai Elantra, BMW X5")
        print("Car Price : Range from 50000 to 100000")

class Bank_Manager:
    def __init__(self, charges, interest_rate, user_income, doc_charges):
        self.charges = charges
        self.interest_rate = interest_rate
        self.user_income = user_income
        self.doc_charges = doc_charges
    def editable2(self):
        print(f"Processing Charges : {self.charges}")
        print(f"Interest Rate : {self.interest_rate}")
        print(f"User Income Estimation Charges : {self.user_income}")
        print(f"Document Charges : {self.doc_charges}")
    def non_editable2(self):
        print("Manager Name : Mohammed Bilal")
        print("Manager Bank Branch : Dubai Islamic Bank")
        print("Manager Email Id : mbilaluae543@gmail.com")
        print("Car Dealer : Abdul Samad")
        print("Car Dealer Email Id : absm@gmail.com")

class Visitor:
```

```
def __init__(self, installment_year, adv_deposit, delivery):
    self.installment_year = installment_year
    self.adv_deposit = adv_deposit
    self.delivery = delivery

def editable3(self):
    print(f"Installment Year : {self.installment_year}")
    print(f"Advance Deposit : {self.adv_deposit}")
    print(f"Delivery Charges : {self.delivery}")

def non_editable3(self):
    print("Processing Charges: \nMinimum : 5000 \t\tMaximum : 10000")
    print("Documentation Charges : 5000")

class Admin(Visitor,Bank_Manager,Car_dealer):
    def __init__(self, installment_year, adv_deposit, delivery, charges,
        interest_rate, user_income, doc_charges):
        Visitor.__init__(self, installment_year, adv_deposit, delivery)
        Bank_Manager.__init__(self, charges, interest_rate, user_income, doc_charges)

a = Admin("7 Years", "2500", "3000 to 7000",
    "5000 to 10000", "5%", "At Actual", "5000")

print("\t\t\t\t\t Gulf Automobile")

print("_____")
print("_____")

a.editable1()
a.editable2()
a.editable3()

print("_____")
print("_____")

a.non_editable2()
```

**Output:**

Gulf Automobile

---

Car Company : Gulf Automobile  
Car Available : Mercedes E-Class, Toyota Camry, Nissan Patrol, Hyundai Elantra, BMW X5  
Car Price : Range from 50000 to 100000  
Processing Charges : 5000 to 10000  
Interest Rate : 5%  
User Income Estimation Charges : At Actual  
Document Charges : 5000  
Installment Year : 7 Years  
Advance Deposit : 2500  
Delivery Charges : 3000 to 7000

---

Manager Name : Mohammed Bilal  
Manager Bank Branch : Dubai Islamic Bank  
Manager Email Id : mbilaluae543@gmail.com  
Car Dealer : Abdul Samad  
Car Dealer Email Id : absm@gmail.com

## Cargo Management System:

### Code:

```
class Customer:
```

```
    def
    __init__(self,customer_id,customer_name,customer_mobile,customer_email,customer_username,customer_password,customer_address):
```

```
        self.customer_id = customer_id

        self.customer_name = customer_name

        self.customer_mobile = customer_mobile

        self.customer_email = customer_email

        self.customer_username = customer_username

        self.customer_password = customer_password

        self.customer_address = customer_address
```

```
def get_info(self):
```

```
    print("Customer Info : ")

    print(f"Customer Id : {self.customer_id}")

    print(f"Customer Name : {self.customer_name}")

    print(f"Customer Mobile : {self.customer_mobile}")

    print(f"Customer Email : {self.customer_email}")

    print(f"Customer Username : {self.customer_username}")

    print(f"Customer Password : {self.customer_password}")

    print(f"Customer Address : {self.customer_address}")

    print("-----*****-----")
```

```
class Cargo:
```

```
    def __init__(self,cargo_id,cargo_customer_id,cargo_type,cargo_order,cargo_description):
```

```
        self.cargo_id = cargo_id

        self.cargo_customer_id = cargo_customer_id

        self.cargo_type = cargo_type

        self.cargo_order = cargo_order

        self.cargo_description = cargo_description
```

```
def get_info2(self):  
    print("Cargo Info : ")  
    print(f"Cargo Id : {self.cargo_id}")  
    print(f"Cargo Customer Id : {self.cargo_customer_id}")  
    print(f"Cargo Type : {self.cargo_type}")  
    print(f"Cargo Order : {self.cargo_order}")  
    print(f"Cargo Description : {self.cargo_description}")  
    print("-----*****-----")
```

class Transaction:

```
def __init__(self,transaction_id,transaction_amount,transaction_type):  
    self.transaction_id = transaction_id  
    self.transaction_amount = transaction_amount  
    self.transaction_type = transaction_type
```

```
def get_info3(self):  
    print("Transaction Info : ")  
    print(f"Transaction Id : {self.transaction_id}")  
    print(f"Transaction Amount : {self.transaction_amount}")  
    print(f"Transaction Type : {self.transaction_type}")  
    print("-----*****-----")
```

class Payment:

```
def __init__(self,payment_id,payment_type,payment_date,payment_description):  
    self.payment_id = payment_id  
    self.payment_type = payment_type  
    self.payment_date = payment_date  
    self.payment_description = payment_description
```

```
def get_info4(self):  
    print(f"Payment Id : {self.payment_id}")
```



```
print(f"Payment Type : {self.payment_type}")
print(f"Payment Date : {self.payment_date}")
print(f"Payment Description : {self.payment_description}")
print("-----*****-----")

class Admin(Customer, Cargo, Transaction, Payment):
    def
    __init__(self,customer_id,customer_name,customer_mobile,customer_email,customer_username,customer_password,
            customer_address,cargo_id,cargo_customer_id,cargo_type,cargo_order,cargo_description,
            transaction_id,transaction_amount,transaction_type,payment_id,payment_type,payment_date,payment_description):

Customer.__init__(self,customer_id,customer_name,customer_mobile,customer_email,customer_username,customer_password,
            customer_address)

Cargo.__init__(self,cargo_id,cargo_customer_id,cargo_type,cargo_order,cargo_description)

Transaction.__init__(self,transaction_id,transaction_amount,transaction_type)

Payment.__init__(self,payment_id,payment_type,payment_date,payment_description)

a = Admin("12345","Bilal","0300-2589789","bilal@gmail.com","mbilal_543","*****","Soldier
Bazar","789","8484","Container","524","Ship","44193654","30,00000","Credit","0000000123","Credit",
"28-June-2020","Purchase Stock on Credit")

print("\t\t\t\t\tCargo Managment System")
print("\t\t\t\t\t_____")
a.get_info()
a.get_info2()
a.get_info3()
a.get_info4()
```

**Output:**Cargo Managment System

---

```
Customer Info :
Customer Id : 12345
Customer Name : Bilal
Customer Mobile : 0300-2589789
Customer Email : bilal@gmail.com
Customer Username : mbilal_543
Customer Password : *****
Customer Address : Soldier Bazar
-----
Cargo Info :
Cargo Id : 789
Cargo Customer Id : 8484
Cargo Type : Container
Cargo Order : 524
Cargo Description : Ship
-----
Transaction Info :
Transaction Id : 44193654
Transaction Amount : 30,00000
Transaction Type : Credit
-----
Payment Id : 0000000123
Payment Type : Credit
Payment Date : 28-June-2020
Payment Description : Purchase Stock on Credit
-----
```