

## **ASSIGNMENT 7 – Object Oriented Programming**

### **Problem 1: Smart Light Controller**

This class controls a smart light and displays its current ON/OFF status.

```
class SmartLight:  
    def __init__(self, name):  
        self.name = name  
        self.status = "OFF"  
  
    def turn_on(self):  
        self.status = "ON"  
  
    def turn_off(self):  
        self.status = "OFF"  
  
    def display_status(self):  
        print(self.name, "is", self.status)  
  
light = SmartLight("Bedroom Light")  
light.turn_on()  
light.display_status()
```

### **Problem 2: Employee ID Card System**

This class stores employee details and prints an ID card.

```
class Employee:  
    def __init__(self, name, emp_id, department):  
        self.name = name  
        self.emp_id = emp_id  
        self.department = department  
  
    def display_id_card(self):  
        print("Employee ID Card")  
        print("Name:", self.name)  
        print("ID:", self.emp_id)  
        print("Department:", self.department)  
  
emp = Employee("Rahul", "EMP102", "IT")  
emp.display_id_card()
```

### **Problem 3: Mobile Contact Record**

This class saves and displays mobile contact information.

```

class Contact:
    def __init__(self, name, phone):
        self.name = name
        self.phone = phone

    def display_contact(self):
        print("Contact Saved")
        print("Name:", self.name)
        print("Phone:", self.phone)

contact = Contact("Anita", "9876543210")
contact.display_contact()

```

## Problem 4: Product Price Tag Generator

This class generates a formatted product price tag.

```

class Product:
    def __init__(self, name, price):
        self.name = name
        self.price = price

    def display_price_tag(self):
        print("Product:", self.name)
        print("Price: ■" + str(self.price))

product = Product("Headphones", 2499)
product.display_price_tag()

```

## Problem 5: Movie Rating Display System

This class stores movie rating information and displays it.

```

class Movie:
    def __init__(self, name, rating):
        self.name = name
        self.rating = rating

    def display_movie(self):
        print("Movie:", self.name)
        print("Rating:", self.rating, "/ 5")

movie = Movie("Inception", 4.8)
movie.display_movie()

```

## Problem 6: Delivery Address Manager

This class stores customer delivery details and prints them.

```
class Delivery:  
    def __init__(self, customer, address):  
        self.customer = customer  
        self.address = address  
  
    def display_details(self):  
        print("Delivery Details")  
        print("Customer:", self.customer)  
        print("Address:", self.address)  
  
delivery = Delivery("Suman", "Hyderabad")  
delivery.display_details()
```