

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()
```