

Task1:

```
# Coffee Shop Bill System
from abc import ABC, abstractmethod
import os

class BillSystem(ABC):

    @abstractmethod
    def create_bill(self):
        pass

    @abstractmethod
    def add_item(self):
        pass

    @abstractmethod
    def show_bill(self):
        pass

    @abstractmethod
    def cancel_order(self):
        pass

class CoffeeShop(BillSystem):

    def __init__(self):
        self.filename = ""

    def create_bill(self):
        name = input("Enter Customer Name: ")
        self.filename = name + ".txt"

        with open(self.filename, "w") as file:
            file.write("Coffee Shop Bill\n")
            file.write("Customer: " + name + "\n")
```

```
print("Bill Created Successfully")

def add_item(self):
    item = input("Enter Item Name: ")
    quantity = int(input("Enter Quantity: "))
    price = int(input("Enter Price per item: "))

    total = quantity * price

    with open(self.filename, "a") as file:
        file.write(f'{item} - {quantity} cups - {total}\n')

    print("Item Added Successfully")

def show_bill(self):
    with open(self.filename, "r") as file:
        print(file.read())

def cancel_order(self):
    if os.path.exists(self.filename):
        os.remove(self.filename)
        print("Order Cancelled")
        print("Bill Deleted Successfully")
    else:
        print("No bill found.")

shop = CoffeeShop()

shop.create_bill()
shop.add_item()
shop.add_item()
shop.show_bill()
shop.cancel_order()
```

Task2:

```
# Create and write into a file  
file = open("message.txt", "w")  
file.write("Hello, this is my first file handling program.")  
file.close()  
print("File created and message written successfully.")
```

```
# Open file in read mode
```

```
file = open("message.txt", "r")  
content = file.read()  
print("File Content:")  
print(content)  
file.close()
```

```
# Open file in append mode
```

```
file = open("message.txt", "a")  
file.write("\nThis line is appended to the file.")  
file.close()  
print("Data appended successfully.")
```

```
# Read file line by line
```

```
file = open("message.txt", "r")  
  
print("Reading file line by line:")  
for line in file:  
    print(line.strip())  
file.close()
```

Task3:

```
# Method Overriding

class Shape:

    def area(self):
        print("Area of shape")



class Rectangle(Shape):

    def __init__(self, length, width):
        self.length = length
        self.width = width


    def area(self):
        print("Area of Rectangle:", self.length * self.width)

r = Rectangle(5, 4)
r.area()
```

Task4:

```
# Movie Info

class Movie:

    def __init__(self, title, rating):
        self.title = title
        self.rating = rating


    def check_rating(self):
        if self.rating >= 8:
            print(self.title, "is a Hit Movie")
        else:
            print(self.title, "is an Average Movie")

m1 = Movie("Inception", 9)
m1.check_rating()
```

Task5:

```
# Book Discount

class BookStore:

    def __init__(self, book_name, price):
        self.book_name = book_name
        self.price = price

    def discount(self):
        if self.price > 500:
            discount_price = self.price * 0.9
            print("Discounted Price:", discount_price)
        else:
            print("No Discount Applied")

b1 = BookStore("Python Guide", 600)
b1.discount()
```

Task6:

```
# Password Protection

class UserAccount:

    def __init__(self):
        self.__password = ""

    def set_password(self, pwd):
        if len(pwd) > 6:
            self.__password = pwd
            print("Password Set Successfully")
        else:
            print("Password must be more than 6 characters")

    def validate_password(self, pwd):
        if pwd == self.__password:
            print("Password Matched")
        else:
            print("Incorrect Password")
```

```
u = UserAccount()  
u.set_password("mypassword")  
u.validate_password("mypassword")
```

Task7:

```
# Temperature Control  
class Thermostat:  
    def __init__(self):  
        self.__temperature = 20  
  
    def set_temperature(self, temp):  
        if 16 <= temp <= 30:  
            self.__temperature = temp  
            print("Temperature Set to", temp)  
        else:  
            print("Temperature must be between 16 and 30")  
  
    def get_temperature(self):  
        return self.__temperature
```

```
t = Thermostat()  
t.set_temperature(25)  
print("Current Temperature:", t.get_temperature())
```

Task8:

```
# Electronics Store  
class ElectronicItem:  
    def __init__(self, brand):  
        self.brand = brand  
  
class WashingMachine(ElectronicItem):  
    def __init__(self, brand, capacity):  
        super().__init__(brand)  
        self.capacity = capacity
```

```
def display(self):
    print("Brand:", self.brand)
    print("Capacity:", self.capacity)

wm = WashingMachine("LG", "7kg")
wm.display()
```

Task9:

```
# Media Player
class AudioPlayer:
    def play_audio(self):
        print("Playing Audio")

class VideoPlayer:
    def play_video(self):
        print("Playing Video")

class SmartPlayer(AudioPlayer, VideoPlayer):
    pass

sp = SmartPlayer()
sp.play_audio()
sp.play_video()
```

Outputs:

```
PS D:\Internship\Day11> python task1.py
Enter Customer Name: Rahul
Bill Created Successfully
Enter Item Name: Latte
Enter Quantity: 2
Enter Price per item: 100
Item Added Successfully
Enter Item Name: Sandwich
Enter Quantity: 1
Enter Price per item: 80
Item Added Successfully
Coffee Shop Bill
Customer: Rahul
Latte - 2 cups - 200
Sandwich - 1 cups - 80

Order Cancelled
Bill Deleted Successfully
```

- PS D:\Internship\Day11> **python task2.py**
File created and message written successfully.
File Content:
Hello, this is my first file handling program.
Data appended successfully.
Reading file line by line:
Hello, this is my first file handling program.
This line is appended to the file.

Day11 > message.txt

```
1 Hello, this is my first file handling program.
2 This line is appended to the file.
```

- PS D:\Internship\Day11> **python task3-9.py**
Area of Rectangle: 20
Inception is a Hit Movie
Discounted Price: 540.0
Password Set Successfully
Password Matched
Temperature Set to 25
Current Temperature: 25
Brand: LG
Capacity: 7kg
Playing Audio
Playing Video