

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
```