

## PROG3\_SHIPMENTENTITY

### Shipmententity

Devi shipping company is a big name in the Logistics marketplace, with their global presense in over 10 conuntries. Having a widespread influence, the company has huge connects with many Agents and carriers for a customer –centric delivery.

A Shipment Entity can be handled by customer himself, Agent, Carriers or the company. At Devi shipping company, there is enourmous shipment data flowing across and therefore they need an efficient system to handle them. Write a program that will retrieve the details of the Shipment Entity based on 4 types of people who handle it namely, Customer, Agent, Carriers and Company. Get all the details related to the Shipment Entity as input from the user.

The problem uses the concept of Hierarchical Inheritance. ShipmentEntity class is the parent class and classes Customer, Agent, Carrier and Company extend it.

**[Note: strictly adhere to the object oriented specifications given as a part of the problem statement. Use the same class names and member variable names. Create separate classes in separate files.]**

#### 1. Create a class named **Shipment Entity**

Include the following protected data members/attributes:

- String Shipment Entity number
- String identification number

Includes appropriate getters and setters and constructor

Constructor: ShipmentEntity(String shipmentEntityName,String identification number).

Include the methods **Void display()** which will be implemented by all its sub classes.

#### 2. Create a class named **Customer** that extends **ShipmentEntity**

Include the following protected data members/attributes:

- Integer id
- String name

Includes appropriate getters and setters and constructor

Constructor: Customer (String shipmentEntityName,String identification number, Integer id, String name).

Include the following methods :

S.NO	Method Name	Method Description
1.	Void display()	Display the customer details

Use `system.out.format('%-15s%-25s%-15s%-15s/n', "Name", "Identification number", "Customer id", "Customer name")` in display method.

### 3. Create a class named **Company** that extends **ShipmentEntity**

Include the following protected data members/attributes:

- String identifier
- String iata
- String fmc

Includes appropriate getters and setters and constructor

Constructor: Company (String name ,String identification number, String identifier, String iata, String fmc )

Include the following methods :

S.NO	Method Name	Method Description
1.	Void display ()	Display the company details

Use `system.out.format('%-15s%-25s%-15s%-15s/n', "Name", "Identification number", "Company name", "IATA", "FMC")` in display method.

### 4. Create a class named **Agent** that extends **ShipmentEntity**

Include the following protected data members/attributes:

- String name
- String iata
- String fmc

Includes appropriate getters and setters and constructor

Constructor as follows Agent: (String Shipment Entity name ,String identification number, String name , String iata, String fmc )

Include the following methods :

S.NO	Method Name	Method Description
1.	Void display ()	Display the agent details

Use `system.out.format('%-15s%-25s%-15s%-15s/n', "Name", "Identification number", "Agent Name", "IATA", "FMC")`.

5. Create a class named **Carrier** that extends **ShipmentEntity**

Include the following protected data members/attributes:

- String carriercode
- String iata

Includes appropriate getters and setters and constructor

Constructor carrier : (String name ,String identification number, String carrier code , String iata ).

Include the following methods :

S.NO	Method Name	Method Description
1.	Void display	Display the carrier details

Use `system.out.format('%-15s%-25s%-15s%-15s/n', "Name", "Identification number", "Code Name", "IATA")`.

### Input and output Format:

Refer sample input and output for formatting specification.

**[All the text in bold corresponds to input and the rest corresponds to output.]**

### Sample Input and Output :

Enter the number of shipment entity

**3**

Enter the shipment entity 1details

Select the shipment entity type

1. Customer
2. Company
3. Agent
4. Carrier

**1**

### **Laptop,800101,111,Rahul**

Enter the shipment entity 2details

Select the shipment entity type

1. Customer
2. Company
3. Agent
4. Carrier

**1**

### **Microphone,801102,211,Mitharan**

Enter the shipment entity 3details

Select the shipment entity type

1. Customer
2. Company
3. Agent
4. Carrier

**3**

### **Electric Fan,912115,Rahul, USCTG1230,PMI/SJC/1361**

Shipment details are

Enter the shipment entity type to display

#### **Customer**

Name	Identification number	Customer Id	Customer Name
Laptop	800101	111	Rahul
Microphone	801102	211	Mitharan