Case Studies
(Inheritance – Aggregation)

OOP – Spring 2022 (Python)

Case Study I

*"Develop a **Banking System** in which customer can open account. The account has the functionality of deposit, withdraw and get balance. There are two kinds of account; Current Account and Saving Account. Each kind of accounts withdraw in different ways. The account is identified by account number."*

- Extract the main objects (entities) for above system.
- Find the necessary attributes and functions that need to be associated with each object (You are required to mention at most three attributes and one functions for a class).
- Identify the relationships between these objects.
- Construct a final comprehensive Class diagram.

https://github.com/saif86/UML-class-diagram---Banking-System

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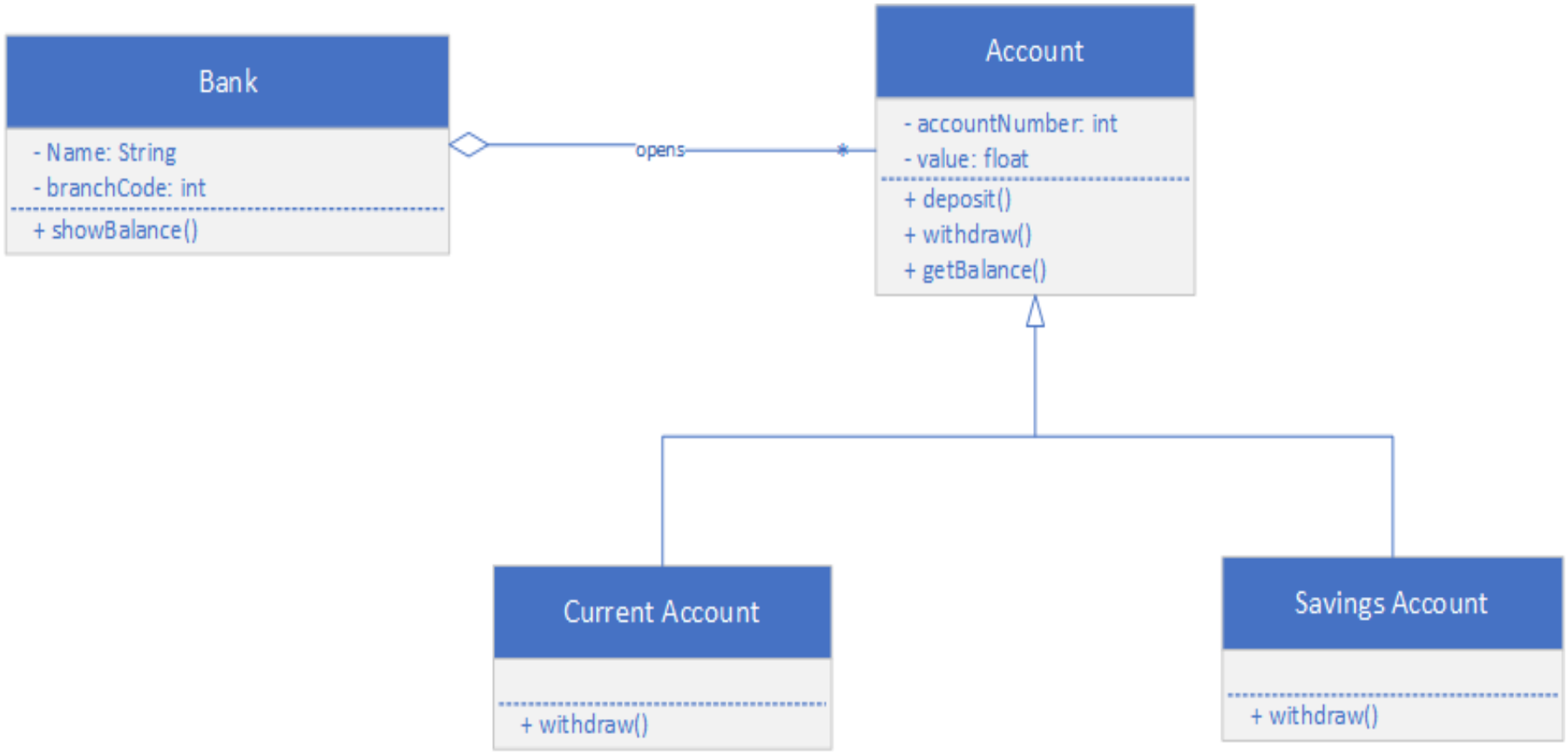
Case Study I (Class Diagram)



This class diagram is taken from the source, I have mentioned the link in previous slide.
However, there can be more classes in this design. Customer class should be added.

Case Study I

Consider a company called ***ABC Foods***, that is running an export of food to three continents Africa, Asia and Europe. There are three sources of transportation currently used. The company transport food by road, by air, and by sea. The shipment sent to Asia and Africa by road and by sea. The shipment to European countries is sent by sea and by air. The company also offer storage of food in cold rooms and halls on rent. For smaller orders of customers cold rooms are used and for larger orders halls are used.

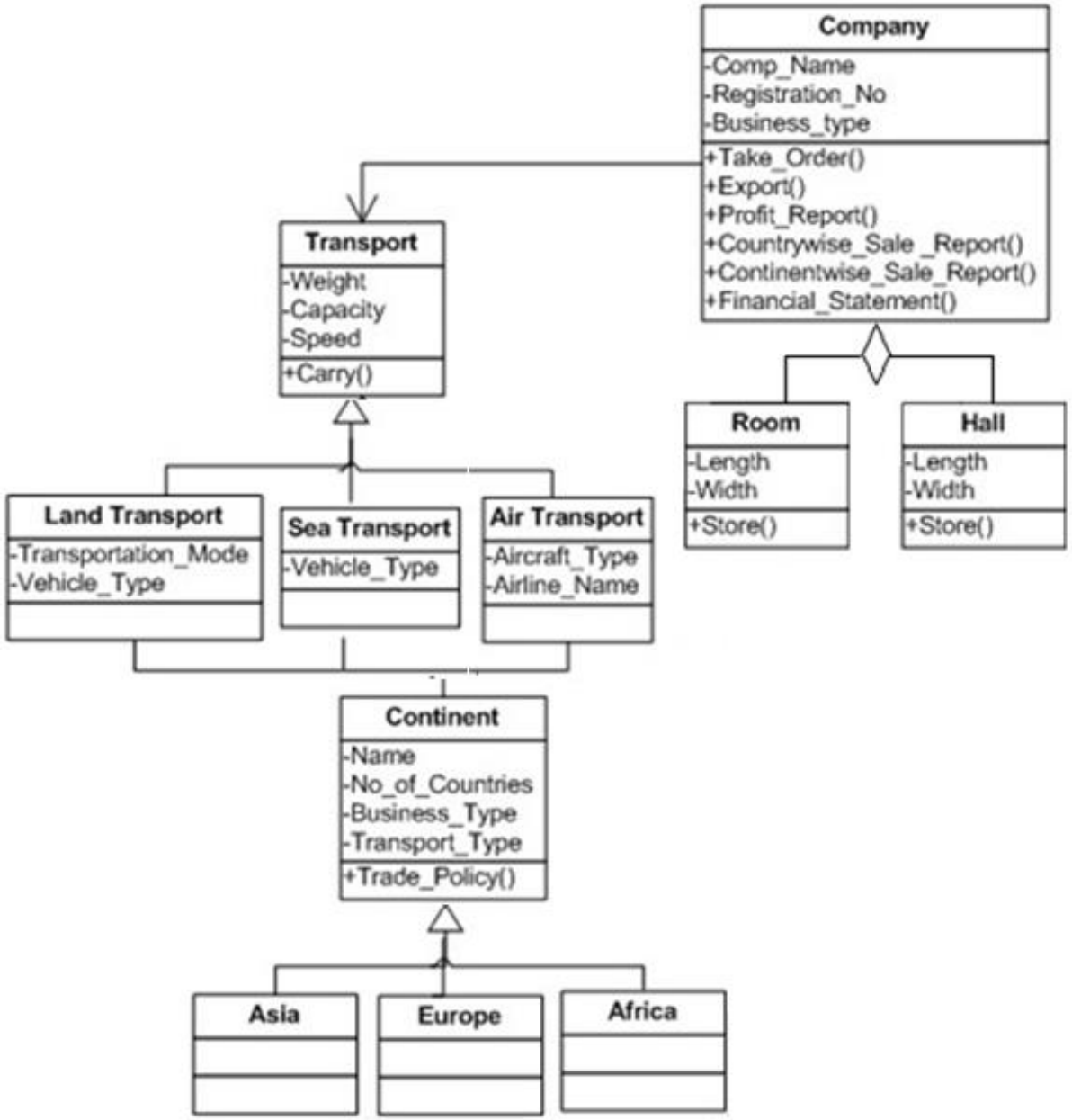
- Identify the main objects
- For specified objects, identify the necessary attributes and functions (Identify at most three attributes and one functions for each class)
- Find the relationship between objects
- Draw class diagram showing having all objects, attributes and functions

https://github.com/saif86/Pakfood-Internationals---OOP-Case-Study

Case Study I (Nouns)

Consider a **company** called ***ABC Foods***, that is running an **export** of **food** to three **continents Africa**, **Asia** and **Europe**. There are three sources of transportation currently used. The company **transport** food by **road**, by **air**, and by **sea**. The shipment sent to Asia and Africa by road and by sea. The shipment to European countries is sent by sea and by air. The company also offer storage of food in **cold rooms** and **halls** on **rent**. For smaller **orders** of **customers** cold rooms are used and for larger orders halls are used.

Class Diagram (Case Study I)



Again, this class diagram is taken from the source, I have mentioned the link in the previous slide.
There can be more classes in this design. For example **Storage** class should be a parent of Room and Hall, you can see both have same members. Moreover, there can be a **customer** and **Order** classes.