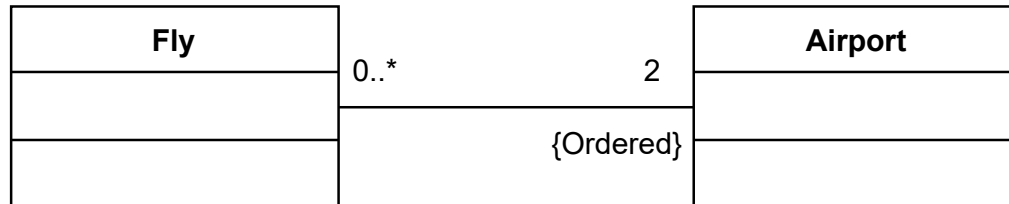


# Exercise 1

Design the class diagram for a flight from the departure airport to the arrival airport.

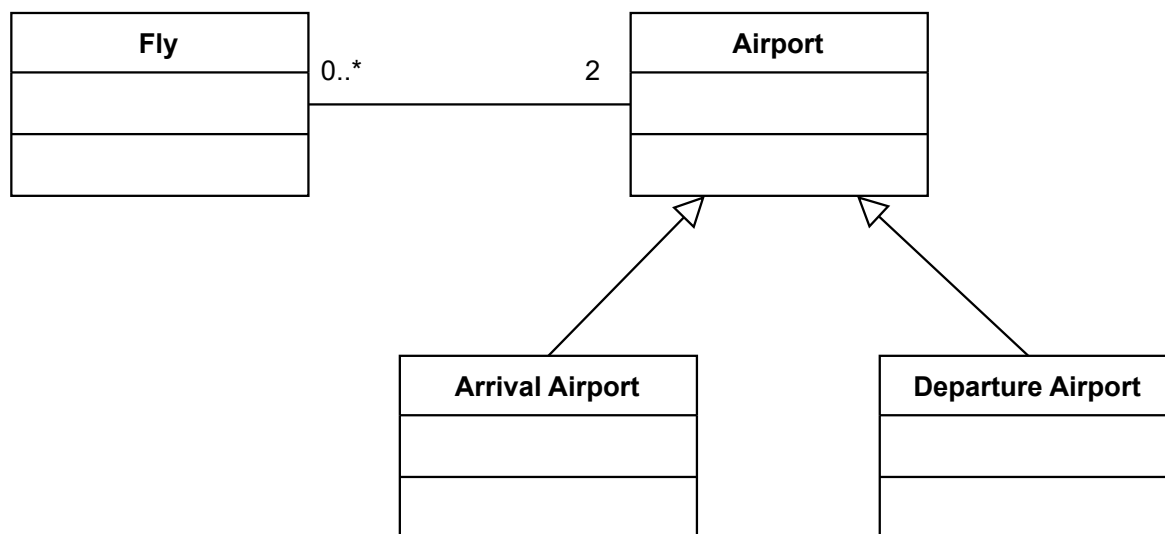
## Solution<sub>1</sub>



### Ordered

**{Ordered}** is a constraint applied to a collection of instances where the order of elements matters. For example, in this case, we have a collection of airports where the first element represents the departure airport, and the second represents the arrival airport.

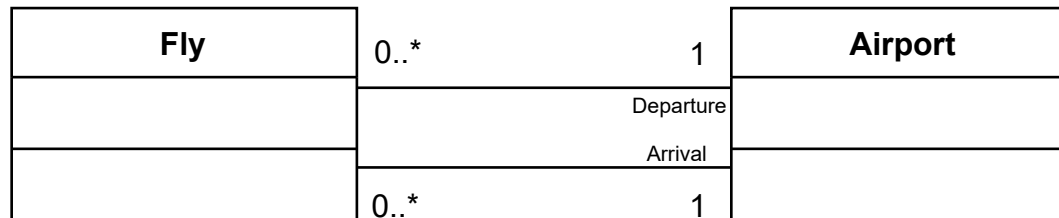
## Solution<sub>2</sub>



## Note

The issue with using inheritance is that it duplicates instances, as each airport would require a separate instance for departure and another for arrival.

## Solution<sub>3</sub>



## Role

A role defines the specific function a class plays in a relationship , a class might have more than just one role , in our case an airport plays 2 roles : departure or arrival airport.