

## LLD

- TravelPackage
  - +name: String
  - +passengerCapacity: int
  - +destinations: List<Destination>
  - +passengers: List<Passenger>
- Destination
  - +name: String
  - +activities: List<Activity>
- Activity
  - +name: String
  - +description: String
  - +cost: double
  - +capacity: int
- Passenger (abstract)
  - +name: String
  - +passengerNumber: int
- StandardPassenger, GoldPassenger, PremiumPassenger
  - (inherit from Passenger
  - +balance: double (Not in PremiumPassenger)

## Overview of Classes

TravelPackage: Represents a travel package offering that includes multiple destinations and can accommodate a certain number of passengers.

- Attributes:
- `name`: The name of the travel package.
- `passengerCapacity`: The maximum number of passengers the package can accommodate.
- `destinations`: A list of destinations included in the package.
- `passengers`: A list of passengers who have booked this package.

Destination: Represents a travel destination, which is part of a travel package.

- Attributes:
- `name`: The name of the destination.
- `activities`: A list of activities available at the destination.
- Activity: Details about an activity that can be undertaken at a destination.

- Attributes:
- `name`: The name of the activity.
- `description`: A brief description of the activity.
- `cost`: The cost to participate in the activity.
- `capacity`: The maximum number of participants for the activity.

Passenger (Abstract Class): A general representation of a passenger. This class is abstract because passengers are further specialized into different categories.

- Attributes:

- `name`: The name of the passenger.
- `passengerNumber`: A unique identifier for the passenger.  
StandardPassenger, GoldPassenger, PremiumPassenger: These classes inherit from Passenger and represent different levels of service and benefits for passengers. The PremiumPassenger class does not include a balance attribute, indicating that premium passengers might have different payment or benefit structures compared to the standard and gold passengers.
- Attributes (additional for Standard and Gold):
- `balance`: The current balance or credit available to the passenger. This attribute is not applicable to PremiumPassenger.

## HLD

TravelPackageSystem Block: Place this centrally or at the top. It's the core of your system, managing everything else.

TravelPackage Blocks: Draw several blocks labeled "TravelPackage" beneath or around the TravelPackageSystem, showing that the system can manage multiple travel packages. Connect these to the TravelPackageSystem with lines or arrows to show the relationship.

Destination Blocks within TravelPackage: For each TravelPackage block, draw smaller blocks within or connected to it labeled as "Destination". These represent the destinations within a travel package. Indicate that each Destination is part of a TravelPackage by drawing lines or by spatial grouping.

Activity Blocks within Destination: Similarly, within or connected to each Destination block, draw even smaller blocks labeled "Activity" to represent the activities available at each destination. Use lines to connect each Activity to its Destination block.

Passenger Block with Subclasses: Near or connected to each TravelPackage block, draw a block labeled "Passenger" to represent the passengers associated with the travel package. From this block, draw lines to three other blocks labeled "StandardPassenger", "GoldPassenger", and "PremiumPassenger" to illustrate the subclass relationship.

Labeling and Notes: Optionally, you can add notes next to the lines or blocks to describe actions or relationships, such as "manages" next to a line from TravelPackageSystem to TravelPackage, or "contains" next to lines connecting TravelPackage to Destinations and Passengers.



