# Challenge - Train

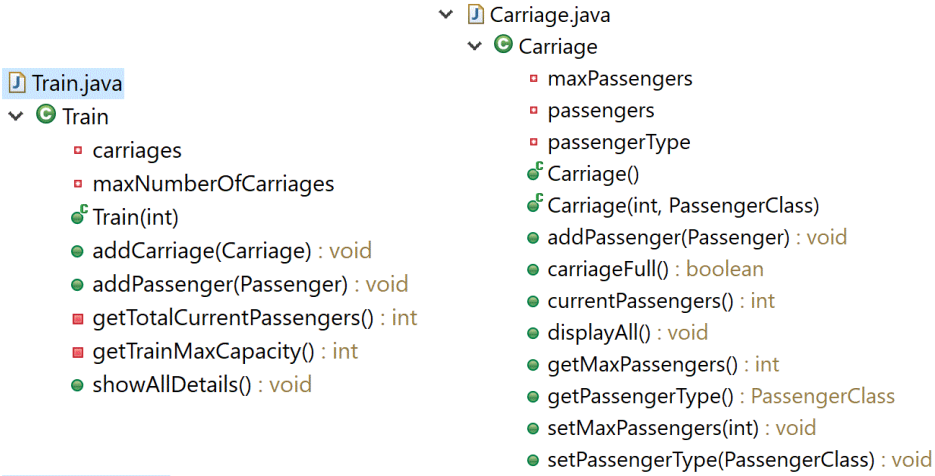
## Train in Vain - Create a booking system for a train

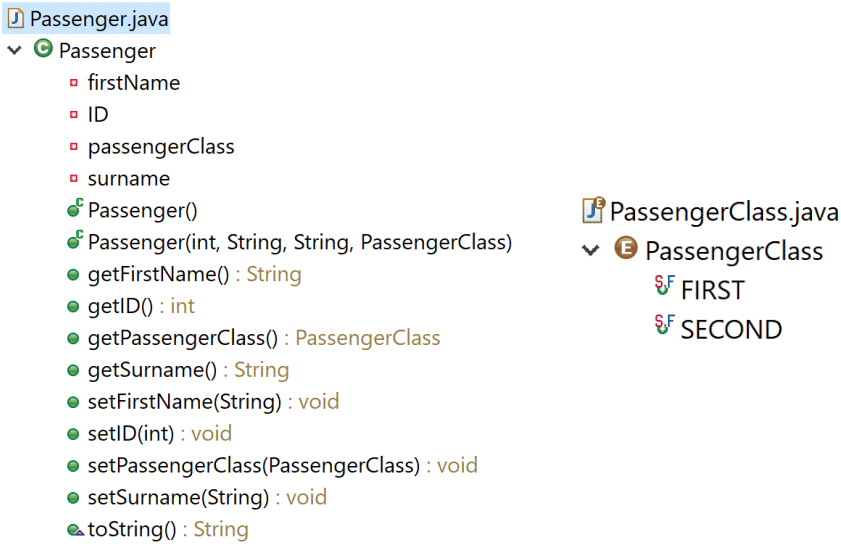
Few rules:

Each **train** consists of a number of **carriages**. When a train is created in the system it should have a max number of carriages set (which cannot then be exceeded or reset). The train should hold a list (arraylist) of each carriage.

Each **carriage** should store (arraylist) of all **passengers** currently booked onto to the carriage. The carriage should also have a max number of **passengers** (set when created in the system) and be either FIRST or SECOND class.  The carriages can be added to the train in any order of class.

Each **passenger** consists of attributes firstName, ID, passengerClass (FIRST or SECOND), surname.




**Booking rules** :

1st class passengers are allocated to the  first available first class carriage. If none available then they go to the first available 2nd class. If none available then they are told to wait until the next train.

2nd class passengers are allocated to the  first available 2nd class carriage. If none available then they are told to wait until the next train.

The above descriptions are the suggested classes for the  system (you are free to alter!). Plus an ad hoc test class... **BookingSystem.java (https://canvas.qub.ac.uk/courses/11041/files/1074283/download?wrap=1)**

(https://canvas.qub.ac.uk/courses/11041/files/1074283/download?wrap=1)

**Solution code :**

**TrainBooking.zip (https://canvas.qub.ac.uk/courses/11041/files/1074197/download?wrap=1)**