Task

The Loft Digital coding monkeys have finished all their bananas, so they ordered 400 kg fair trade bananas, which were transported from Brazil to London. You are given a stack of delivery notes for various transportations that took the bananas from Brazil to London via several stops on the way. All of the delivery notes are out of order. Each delivery note contains information about the means of transportation, from destination to destination and about the delivery service provider.

Write an API that lets you sort this kind of list. For instance the API should be able to take an unordered set of delivery notes, provided in a format defined by you, and produce this list:

- Truck from Fazenda São Francisco Citros, Brazil to São Paulo–Guarulhos International Airport, Brazil. With delivery company Correios
- Flight from São Paulo–Guarulhos International Airport, Brazil to Porto International Airport, Portugal. With delivery company LATAM
- Van from Porto International Airport, Portugal to Adolfo Suárez Madrid–Barajas Airport, Spain. With delivery company AnyVan
- Flight from Adolfo Suárez Madrid–Barajas Airport, Spain to London Heathrow, UK. With delivery company DHL
- Van from London Heathrow, UK to our final final destination, Loft Digital, London, UK. With delivery company City Sprint

The list should be defined in a format that's compatible with the input format.
The API is to be an internal PHP API so it will only communicate with other parts of a PHP application, not server to server, nor server to client (Web API). Use PHP-doc to document the input and output your API accepts / returns

Requirements

- No 3rd party frameworks are allowed apart from for testing. Start all code from scratch.
- Composer is allowed to use for requiring dependencies necessary for testing and PSR-4 Autoloader functionality.
- Use Git to track your code changes. Source code should be pushed to provided remote repository.
- Provide a README file containing clear, simple instructions upon how to execute the code and tests.
- If anything needs clarification which is not detailed here, make an assumption and note this in the README file.

- The implementation of your sorting algorithm should work with any set of delivery notes, as long as there is always an unbroken chain between all the legs of the trip. i.e. it's one continuous trip with no interruptions.
- The algorithm should have the lowest possible order of complexity you can think of.

What we look at

This task is designed to give us an idea of:

- How you structure your code.
- Your understanding of OOP.
- Your understanding of TDD.
- Your understanding of domain-specific language (DSL)
- Your ability to use VCS, branching model and atomicity of commits.
- Your ability to deliver an appropriate, simple solution to a given problem.
- The efficiency of the sorting algorithm you implement.
- How long the exercise takes you

HINT

We are not looking for a solution designed to demonstrate your entire knowledge of PHP. Please just make appropriate use of the language to solve the problem in hand cleanly.

Glossary

A delivery note - a document accompanying a shipment of goods that lists the description, and quantity of the goods delivered. A copy of the delivery note, signed by the buyer or consignee, is returned to the seller or consignor as a proof of delivery.