

Algorithms and Data Structures

Abstract Data Types and Linked Lists in a Trains Configuration System

Assignment-1 ADDITIONAL INFORMATION

Version: September 20th, 2023

This document provides some corrections and additional information in response to questions asked by several students. These do not change the requirements of the assignment but may help you to overcome possible issues with your implementation of the solution.



1. The output when you run the TrainsMain class is different than stated in the assignment. You can fix this by applying the following changes:
 - a. On line 37 change the 4 into a 3.
 - b. On line 41 change the 1 into a 0.

Below you see the unchanged content of lines 35 until 43.

```
35 Locomotive vanGogh = new Locomotive( locNumber: 63427, maxWagons: 6);
36 Train amsterdamLondon = new Train(vanGogh, origin: "Amsterdam", destination: "London");
37 amsterdamParis.splitAtPosition( position: 4, amsterdamLondon);
38 amsterdamLondon.reverse();
39 amsterdamLondon.insertAtFront((Wagon)(Object)new FreightWagon( wagonId: 9001, maxWeight: 50000));
40 amsterdamParis.reverse();
41 amsterdamParis.splitAtPosition( position: 1, amsterdamLondon);
42 amsterdamParis.attachToRear(amsterdamLondon.getLastWagonAttached());
43 amsterdamLondon.moveOneWagon( wagonId: 8003, amsterdamParis);
```

Below you see the changed content of lines 35 until 43.

```
35 Locomotive vanGogh = new Locomotive( locNumber: 63427, maxWagons: 6);
36 Train amsterdamLondon = new Train(vanGogh, origin: "Amsterdam", destination: "London");
37 amsterdamParis.splitAtPosition( position: 3, amsterdamLondon);
38 amsterdamLondon.reverse();
39 amsterdamLondon.insertAtFront((Wagon)(Object)new FreightWagon( wagonId: 9001, maxWeight: 50000));
40 amsterdamParis.reverse();
41 amsterdamParis.splitAtPosition( position: 0, amsterdamLondon);
42 amsterdamParis.attachToRear(amsterdamLondon.getLastWagonAttached());
43 amsterdamLondon.moveOneWagon( wagonId: 8003, amsterdamParis);
```