Algorithms and Data Structures

Abstract Data Types and Linked Lists in a Trains Configuration System

Assignment-1 ADDITIONAL INFORMATION

Version: September 20th, 2021

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 Class diagram is not fully consistent with the code in the starter project.
   E.g. the method Wagon.getLastWagonAttached() is provided in the starter project, but missing from the class diagram. This method is indeed relevant in multiple parts of your solution, probably.
2. The JavaDoc of Train.attachToRear, Train.insertAtFront, Train.insertAtPosition has been clarified in that the head wagon of the sequence to be inserted or attached may need to be detached from its predecessors first before you can reconnect them. This only after you have verified compatibility and capacity.
3. The JavaDoc of Wagon.attachTail(tail) has been clarified in that the tail wagon including its connected successors should be attached behind this wagon.
4. The three overloaded methods at the bottom of the Train class should be removed
   ```
   public boolean attachToRear(PassengerWagon wagon) { return false; }
   public boolean attachToRear(FreightWagon wagon) { return false; }
   public boolean insertAtFront(FreightWagon wagon) { return false; }
   ```
   They are an unintended remnant of testing the starter project, but have no purpose.