



Create a class useful for modeling a train. Every train has maximum 15 carriages and the carriages are stored into an array. A carriage can be a PassengersCarA, a PassengersCarB or a LoadsCar. Every train contains maximum 15 carriages, regardless of their type (PassengersCarA, PassengersCarB or LoadsCar).

PassengersCarA

- maximum passengers capacity: 40
- maximum packages capacity: 300
- provides two services, for opening/closing the doors

PassengersCarB

- maximum passengers capacity: 50
- maximum packages capacity: 400
- provides two services, for opening/closing the doors
- provides a service for blocking the windows



LoadsCar

- maximum packages capacity: 400
- does not provides services for opening/closing the doors and blocking the windows

Calling the services for opening/closing the doors and blocking the window will print a suitable message on the screen like “The windows were blocked”.



Class Train contains a constructor with a variable number of parameters for setting the carriages of the train. Implement a proper method for testing if two trains are equal (we consider that two trains are equal if they can transport the same number of packages) and a method for printing the types of the existing carriages in the train.

Implement the carriages with

- 1) corresponding attributes for storing the maximum capacities (passengers, packages)
- 2) without attributes for storing the maximum capacities (passengers, packages)

What is the difference between the two implementations?