# Assignment II: Supermarket statistics

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# Introduction

After our first assignment we have received feedback which made us able to understand the assignment better. We have gotten a clearer and broader idea of what needs to happen to pass the assignments, whether it is about the code or the documentation. In this document we will we getting into why we made certain choices within our code by using code snippets and an explanations provided with these snippets. We will be explaining about certain elements take part in our code and why we chose to make use of these elements. After last assignment our class has gotten a lot of feedback regarding the documentation and what was done well as well as what we could improve in our way of documentation. We will be trying to implement our individual feedback as well as the collective feedback provided in the lectures during this assignment and are optimistic about the outcome.

Now about the assignment. During the classes that we have had when creating the second assignment for ADS we have come across a multitude of subjects to learn. One of these subjects is how fast different algorithms are and the use case of all those different methods. Another was lambda expressions, how to give a function as a parameter. And yet another one was about recursion. And recursion is something we have been using in the previous assignment as well, but we didn’t follow any classes regarding recursion. For the second assignment we did get some exercises to practice our recursion, which already seemed to be quite the challenge. Nevertheless we managed as well as getting the assignment done in time. Together with all the work that we need to be doing for school it seems like a lot. And it is, but it is still doable.

In this document we will be focusing yet again on a minimum of seven code snippets with an explanation of why we made the choices that we did. We will be discussing subjects like the OrderedArrayList and the implementation of other methods that make use of the right representation invariant.

This assignment contained some brain breakers of tests for us to solve and in our experience this required a lot more thinking than the first assignments about trains. Yet again we kept seeing errors rising when creating the code to complete the tests. Something we noticed is that some errors were as small as an expectation of *61* and actually gotten *62*. Some were even smaller when the expectation was *1* and actually gotten *1*. We got so confused for a while but we did managed to solve it.

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Prepare your document with explanations of seven code snippets.

Explain how the OrderedArrayList representation invariant is sustained by your overridden implementation of add(index,item) or one of the remove methods. (Choose the most relevant.) Explain correctness of one code snippet by involving a loop invariant.