Design Document

Our product name here!

Version 0.1

Client: A software toolbox for small retail shops

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Introduction

The well-known big supermarket chains in The Netherlands have large budgets available for automation of their business operations. The complete chain, from ordering (the right amount and type of) products, delivery of stock, handling losses due to overtime goods and returns, and of course the actual sales are handled by big centralized ERP systems giving very precise management information to the retailers.

Our product name here! aims to provide many of these services to the Dorpswinkel in Sauwerd (a village 10km north of Groningen). **Our product name here!** is a database system specifically built to fit the environment, and needs, of the Dorpswinkel in Sauwerd. It provides a better basis to retrieve management information, perform standard queries and access hard data on sales to be able to optimize the shop.

The main interface to this database will be web based, so as to ensure compatibility across all platforms; windows, macOS, Linux but also android and iOS. This also provides managers of the shop access to the data while they are off-premise, to be able to crunch numbers at every moment of the day!
Additionally, **Our product name here!** adds loyalty card support for the Dorpswinkel. Transaction information will be stored in the database to allow personalized bonus discounts.

Database design

Since it is important to keep a database small in size, only the necessary information should be stored. This will not only reduce the size of the database, but also improves the reading speed.

How the products are stored

There are lots of possibilities when it comes to storing the products in the database. We think the most suitable design is one where every individual item (e.g. banana 1, banana 2 etc) is stored in the database. We prefer this over a design where you store every type of product (e.g. bananas), because then information can be coupled to every individual item such as buying price and selling price.

Table design

For every individual product, some information needs to be stored. The following information is being stored:

** The following list should be send to Han, so he can choose what we should store

- Journal record
- Cashier
- Record Type
- PLU
- Product name
- Amount
- Selling price
- Discount
- Payment method (cash/vic107payment-PINNEN)
- Ticketdata
- Total
- MixMatchDiscount

- Leesmethode
- date and time
- Buying price

API design

Technology Stack

Languages:

- Python 3

Libraries:

- -

Extensions:

- -

Building tools:

- MySQL
- Flask

Testing:

- SonarQube

From our first meeting with the client, he stated very clearly that the stack is fully at our discretion. For the database we use MySQL and for testing we use SonarQube at the moment, as required by the coordinators of the course.

Team organisation

For the first sprint, there were no real clear teams. The main purpose was for everybody to understand the data that was given to us and to understand the language that we need to use. Eventually, the group was split into three groups: one in data review, one for writing this document and the other group doing code and code review.

The aim of the second sprint was to start working with the APIs, which we got from our client, working more on the mappers and creating a front-end. This is done by splitting the work up to three group, in which one worked on the mappers, one on the front-end and the other on the APIs.

After the third sprint we decided to have a weekly meeting, in which we will be working on the project all together on the same time. This way, when a part of the code written is not understood, we can explain it directly and or change it.

Change log

Who	When	Which section	What	Time
Abel	13.03.20	Introduction	Added the introduction	1h
Dan	13.03.20	Team organisation, Technology Stack, API Design	Added the Team organisation, API Design and Technology Stack parts	1h