

Protocol

Shopping List Manager

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Last edited: 2026-01-15

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Chapter 0:

Prelude

0.0. Information

For the first semester of the *Computer Science and Digital Communications* study program at *Hochschule Campus Wien – University of Applied Sciences*, a team project is undertaken as part of the subjects *Programmierung* (Programming) and *Teamarbeit* (Teamwork).

This document is mainly for the Teamarbeit part. It contains at least our story map, user stories (backlog), and mockups.

Project team members are hereinafter referred to by their first names.

0.1. Original Idea Description

On 2025-10-08, the following idea was pitched and ultimately decided on:

Eine mögliche Idee:

Einkaufslistenverwaltung

Man kann Einkaufslisten erstellen, speichern, bearbeiten, löschen, und als Favorit markieren. Ein Einkaufslisteneintrag hat Name, Größe, Menge, und Preis. Dies ohne Menge kann man auch als Favorit markieren.

Die Summe wird dann automatisch berechnet.

Und es besteht die Möglichkeit es auszudrucken. Dabei wird die Typst CLI verwendet.

– Oktalon

English translation:

One possible idea:

Shopping List Management

You can create, save, edit, delete, and favorite shopping lists.

A shopping list entry has a name, size, amount, and price. This, without the amount, can be favorited.

The sum is automatically calculated

Also, it should be possible to print it out. The Typst CLI will be used for this.

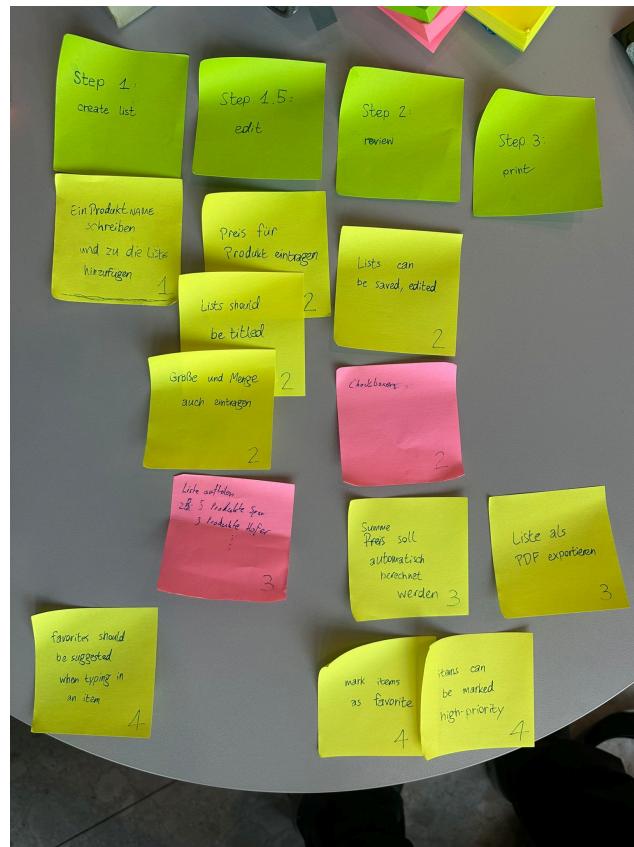
– Oktalon

Chapter 1:

Design & Planning

1.0. Story Map

We made this together on 2025-11-27:



Digital version:

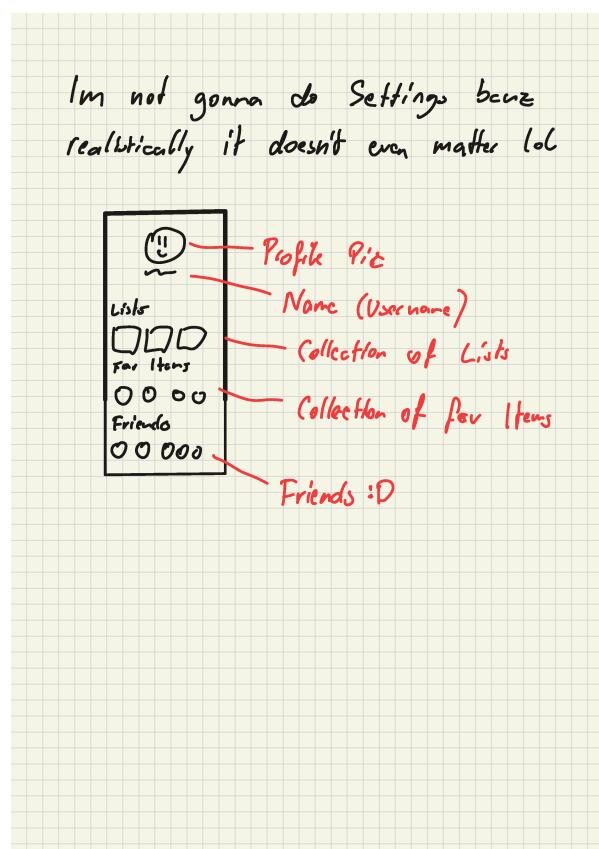
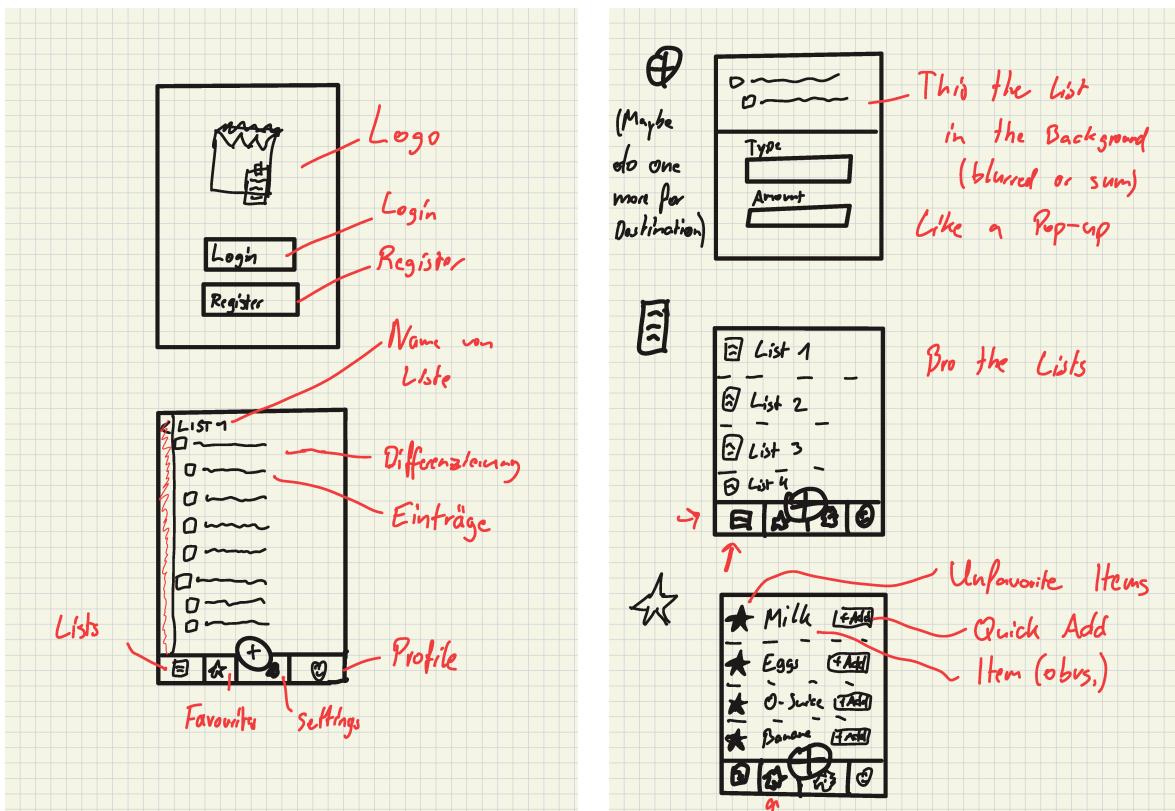


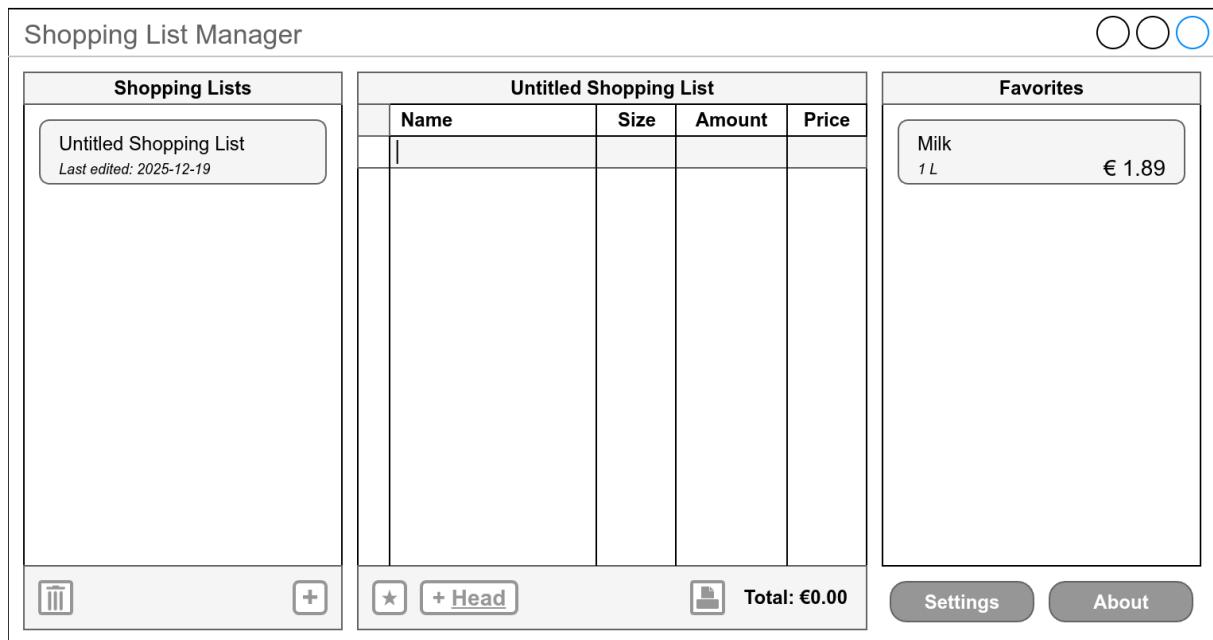
1.1. User Stories (Backlog)

	Who?	Do/Want What?	Why?
As a	User	I'd like to write a product name and add it to the list	so that I can remember it while shopping.
As a	User	I'd like to add a price to a product in the list	so that I can manage my finances.
As a	User	I'd like to give the list a title	so that I can differentiate between the lists.
As a	User	I'd like to add a size and amount to a product in the list	so that I know which exact product and how many to get.
As a	User	I'd like to be able to save and edit the list	so that I can remember what I shopped for the last times and can correct mistake.
As a	User	I'd like the sum to be calculated automatically	so that I know how much I'll have to pay.
As a	User	I'd like to add separation (headers) in the list	so that I know which stores to visit.
As a	User	I'd like to have checkboxes next to each entry	so that I can check off stuff I've already bought.
As a	User	I'd like to be able to export the list as a PDF	so that I can print it out and bring it with me while shopping.
As a	User	I'd like to be able to mark products as high priority	so that I can focus on getting the important products in case my budget is not enough.
As a	User	I'd like to favorite products	so that I don't need to re-enter or spend time remembering it for future shopping lists.
As a	User	I'd like to have my favorites suggested to me while typing in a product name	so that I can type the shopping list faster.

1.2. Mockups

Nemanja's mockup:



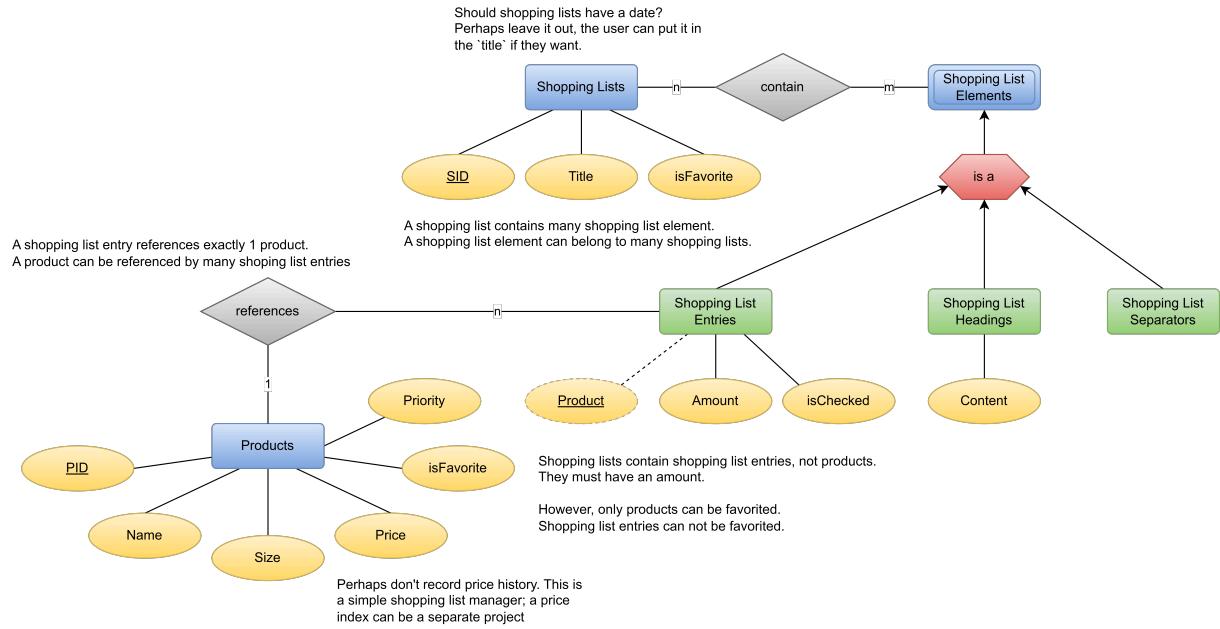
Oktalon's mockup:**Desktop View**

Chapter 2:

Data & Architecture

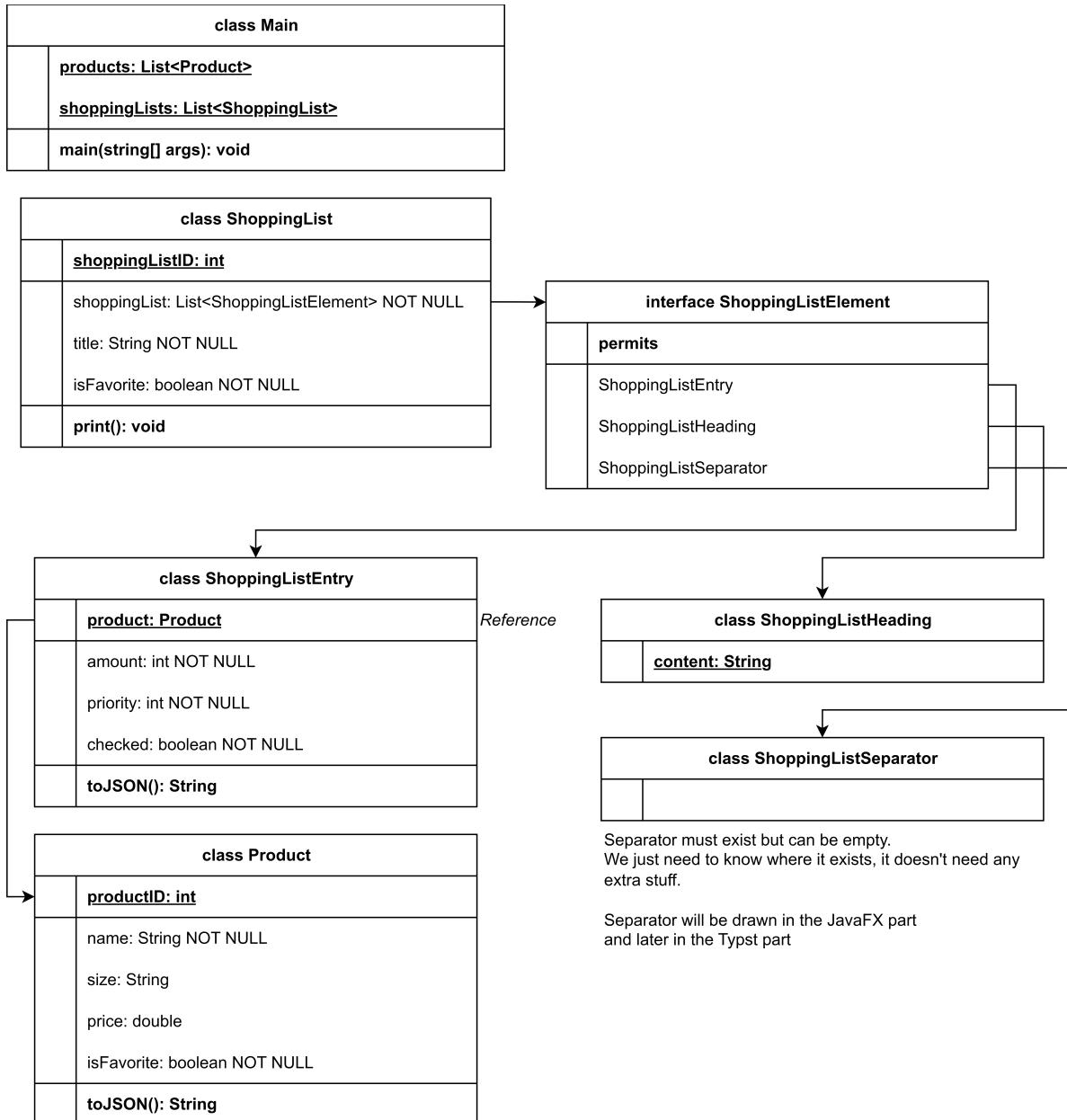
2.0. ER Diagram

Here is a non-standards-conforming Entity Relationship (ER) Diagram which models our data:



2.1. UML Diagram

Here is a non-standards-conforming Unified Modeling Language (UML) Diagram which also models our data:



2.2. JSON

Here's how we could save data if we wanted to use JSON (JavaScript Object Model):

```
{  
  "products": [  
    {  
      "productID": 0,  
      "name": "Milk",  
      "size": "1L",  
      "price": 1.99,  
      "isFavorite": false  
    },  
    {  
      "productID": 1,  
      "name": "Eggs",  
      "size": "10 pcs.",  
      "price": 2.99,  
      "isFavorite": false  
    },  
    {  
      "productID": 2,  
      "name": "Chips",  
      "size": "250g",  
      "price": 2.99,  
      "isFavorite": true  
    }  
  ],  
  "shoppingLists": [  
    {  
      "shoppingListID": 0,  
      "title": "Untitled Shopping List",  
      "isFavorite": false,  
      "shoppingList": [  
        { "type": "product", "productID": 0, "amount": 1, "priority": 0 },  
        { "type": "product", "productID": 1, "amount": 2, "priority": 0 }  
      ]  
    },  
    {  
      "shoppingListID": 1,  
      "title": "My Shopping List",  
      "isFavorite": true,  
      "shoppingList": [  
        { "type": "heading", "content": "HOFER" },  
        { "type": "product", "productID": 1, "amount": 1, "priority": 2 },  
        { "type": "separator" }  
      ]  
    }  
  ]  
}
```