

Software-Challenge

In this challenge you can prove your know-how as a software engineer and convince us that you are fit to start with Markt-Pilot.

Description

A friend is completely crazy about chocolate. In order not to spend too much money on his passion, he has written a crawler that always researches the current prices on the Internet. While the crawler is still under development, he wants you to start with a web interface to display the results already.

For a first prototype, **two views** should be created. In the **overview**, all chocolates should be displayed on one page including name, manufacturer, the lowest price per 100g, the average price per 100g and a direct link to the cheapest shop. In a **details view**, the name, brand and all market prices including the amount and shop link should be displayed for a selected chocolate.

Since the backend is still under development, a static data set will be shown first for demonstration purposes¹. The structure of the data set already corresponds to the response of the future REST API.

```
{
  "id": "1",
  "name": "Sesam",
  "brand": "Ritter-Sport",
  "currency": "EUR",
  "prices": [
    {
      "price": 2.09,
      "shop": "Ritter-Sport",
      "link": "https://www.ritter-sport.com/de/produkte/sesam",
      "unit": "g",
      "amount": 100
    }
  ],
  "nutrition": {
    "fat": {
      "total": 38,
      "saturated": 19
    },
    "carbohydrates": {
      "total": 42,
      "sugar": 40
    },
    "protein": 11,
    "salt": 0.04
  }
}
```

You want your prototype to be ready for use as soon as your friend has finished the backend. Thus, you are already thinking about how to design the application in a way which lets you switch to the REST API with minimal effort.

¹ The entire dataset is in the appendix as JSON

Requirements

Technical:

- Programming Language: TypeScript
- Framework: Angular (Or any other comparable framework that you have experience with)

Functional:

- View **Overview**: For every chocolate in the dataset display
 - Name
 - Brand
 - Lowest price per 100g
 - Average price per 100g
 - Link to the cheapest shop
- View **Details**: For a chocolate selected by the user display
 - Name
 - Brand
 - Prices (including amount and shop link)

Non-Functional:

- Your code should be SOLID.
- Create an appealing interface. Use the tools of your choice.
- Use tools that are common for the software development, especially for larger projects.

Additional Information

The challenge should be completed in about 3 hours. If you need to read up on some topics first, maybe even longer. *In any case, please let us know how much time you have spent.*

The layout of the application should work on the desktop, optimization for other formats is not necessary.

The challenge is intentionally formulated openly that you could also put significantly more time into it. If you have something in mind that you think is important but too extensive for this challenge, feel free to write it down for us in comments, a readme or similar.

Bonus

If 3 hours is too much time for you or if you want to invest more time, you can also try to solve one or more of the following tasks.

- Highlight the cheapest price per 100g in the details view.
- Make the name and brand editable in the details view. The backend will later provide a POST Method for this.
- Your friend is worried about his health because of his high chocolate consumption. In the detail view, display the nutritional values graphically in the form of a pie chart.