



# Requirements and analysis document for Shedbolaget

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# 1 Introduction

## 1.1 Purpose of the application

The purpose of this project is to recreate a similar version to Systembolaget.se with additional functionality. The user is able to mark products as favourite, sort them with custom sorting methods and product variables. It is designed to extend the functionality of Systembolaget in some aspects. The user is also able to create custom products in case they do not find the product they're searching for.

## 1.2 Scope of application

Although the purpose of the project is to recreate Systembolaget, the goal is not to copy all of Systembolaget's functionality, but rather add some extra functionality on top of its basic design.

## 1.3 Objectives and success criterias of the project

- List all of Systembolagets products and display its information.
- Save favouritized products locally.
- Display products according to the user's needs.
- Custom products works like any other normal product.

## 1.4 Definition, acronyms and abbreviations

- **Systembolaget** - a government-owned chain liquor store in Sweden.
- **Shedbolaget** - the project/application name.
- **APK** - (alkohol per krona)/alcohol per crown

## 2 Requirements

### 2.1 Functional requirements

The user should be able to:

- Browse through all of Systembolaget's products.
- Filter products by two level of categories.
- Sort products from highest to lowest and vice versa.
- Favourite products and check their favourites.
- Add their own custom product.

### 2.2 Non-functional requirements

#### 2.2.1 Usability

The application's primary language is Swedish and will be designed to target an adult audience. With a single navigation bar, the application is designed to be simple and reliable.

#### 2.2.2 Reliability

The project fetches its data from the original website - Systembolaget. The displayed data is not completely in-sync with Systembolaget's, as it was fetched on 2021-09-02.

#### 2.2.3 Performance

The application should be running with low loading times.

#### 2.2.4 Supportability

Application should run on Mac, Windows and Linux.

#### 2.2.5 Packaging and installation

To install and run the project, it's required to clone the project repository and build the application with Maven. The instructions are found in the README.md file inside the project root.

### 2.3 Application models

**High priority use cases:**

- Show specific products
- Show all beverages
- Search for a beverage
- Popular beverages

**Medium priority use cases:**

- Popular beverages
- Detailed beverage information

**Low priority use cases:**

- APK information
- Custom product
- Drink generator
- Favourites

### **2.3.1 User case: Show specific products**

As a user, I want to select specific beverage types to view so that I can see all beverages within that selection.

**Status:** Done.

**Acceptance:**

- Can I select a specific type and show all products which share that property?
- Can I select several types at once and view all relevant products?
- Can I go the other way and exclude products?

**Tasks:**

- Show options for what to select.
- Show what property is selected.
- Show products within the selection.

**Priority:** High.

### **2.3.2 User case: Show all beverages**

As a user, I want to be able to browse all beverages so that I can get an overview of what's available. **Status:** Somewhat done.

**Acceptance:**

- Can I view all products in the app?
- Can I see an image of each product?
- Can I see specific information about the product?

**Tasks:**

- Show all beverages.
- Show the price of each product.
- Show a thumbnail of each beverage.

**Priority:** High.

### **2.3.3 User case: Popular beverages**

As a user, I want to see new beverages as soon as I launch the application because I often want to find drinks when I'm unsure what to order at the bar.

**Status:** Done.

**Acceptance:**

- Can I see images of new beverages without much effort?
- Can I easily see how much a new beverage costs?

**Tasks:**

- Show new beverages.
- Show thumbnail image of the popular beverage.
- Show price of the popular beverage.

**Priority:** Medium.

### **2.3.4 User case: Search for a beverage**

As a user, I want to be able to search for a product and find information about it so that I can quickly look up specific beverages.

**Status:** Done.

**Acceptance:**

- Can I search for specific products in the range of products?
- Can I use the search function to filter out products in a specific category?
- Am I able to search for products anywhere in the application?

**Tasks:**

- Show search box.
- Allow the user to enter a search term in the search box.
- Show results based on the search term.

**Priority:** Medium.

### **2.3.5 User case: Detailed beverage information**

As a user, I want to see detailed information about a product, so that I can learn more about products that interest me.

**Status:** Done.

**Acceptance:**

- Can I view an image of the product?
- Can I see:

- How much it costs?
- Product APK?
- Product volume?
- Alcoholic percentage?
- Product description?
- Can I obtain this information from anywhere where there are products?

**Tasks:**

- Show search box.
- Allow the user to enter a search term in the search box.
- Show results based on the search term.

**Priority:** Medium.

### **2.3.6 User case: APK information**

As a user, I want to be able to find the products with the highest APK in a leaderboard so that I can see which products are the most cost efficient in terms of alcohol contents.

**Status:** Done.

**Acceptance:**

- Can I view the products with the highest APK?
- Can I choose which product types to view when I'm looking at APK values?
- Can I access an item and get more information about it from the list?

**Tasks:**

- Show the leaderboard.
- Show the products with the highest APK ratio.
- Allow the user to choose which type of beverages are shown.
- Show which type of beverage each product is as well as its name, alcohol contents, volume, apk and price.

**Priority:** Low.

### **2.3.7 User case: Custom product**

As a user, I want to be able to add a product that doesn't exist in the application so that I can use the custom product with the application's services.

**Status:** Done.

**Acceptance:**

- Can I add the the custom product?

- Can I use the custom product as any other product?

**Tasks:**

- Offer to add the product.
- Allow user to enter values for the custom product
- Display the custom product
- Use the custom product like a normal product

**Priority:** Low.

### **2.3.8 User case: Drink generator**

As a user, I want to be able to find drinks based on products I select so that I can find new drink recipes to try out.

**Status:** Done.

**Acceptance:**

- Can I choose some ingredients and get new drinks with added ingredients?
- If I'm not satisfied with my result, can I retry?

**Tasks:**

- Allow users to select some known ingredients.
- Generate new drinks based on the known ingredients.
- Show the generated drinks on screen.

**Priority:** Low.

### **2.3.9 User case: Favourites**

As a customer, I want to be able to mark some products as favourites because I want to remember to keep buying those.

**Status:** Done.

**Acceptance:**

- Can I mark a beverage as a favourite?
- If I change my mind, can I unmark favourited beverages?

**Tasks:**

- Allow user to mark beverages as favourite.
- Allow the user to view all marked beverages.
- Allow the user to unmark beverages in case they change their mind.

**Priority:** Low.



## 2.4 Definition of Done

- All acceptance criteria are met
- All public methods has unit tests.
- All Travis checks pass.
- Completed Java doc (if applicable)
  - All new files need to have an author.
  - All public methods except getters and setters has Javadoc.
- Pull request is accepted by everyone in the group

## 2.5 User interfaces

# Välkommen till Shedbolaget.

Sök och sortera bland 22170 produkter.

## Nya produkter

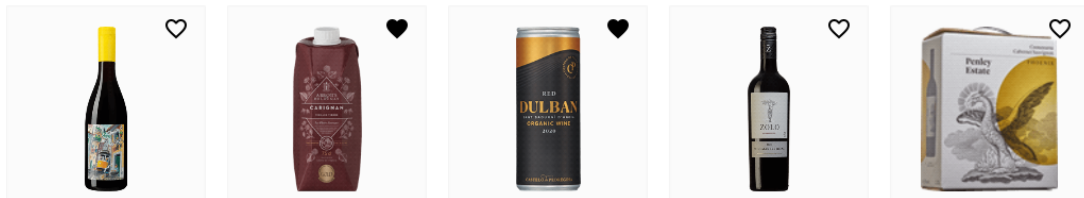


Figure 1: This is the starting page for the application. A welcoming message with products is displayed at the bottom part of the application.

## Nya produkter

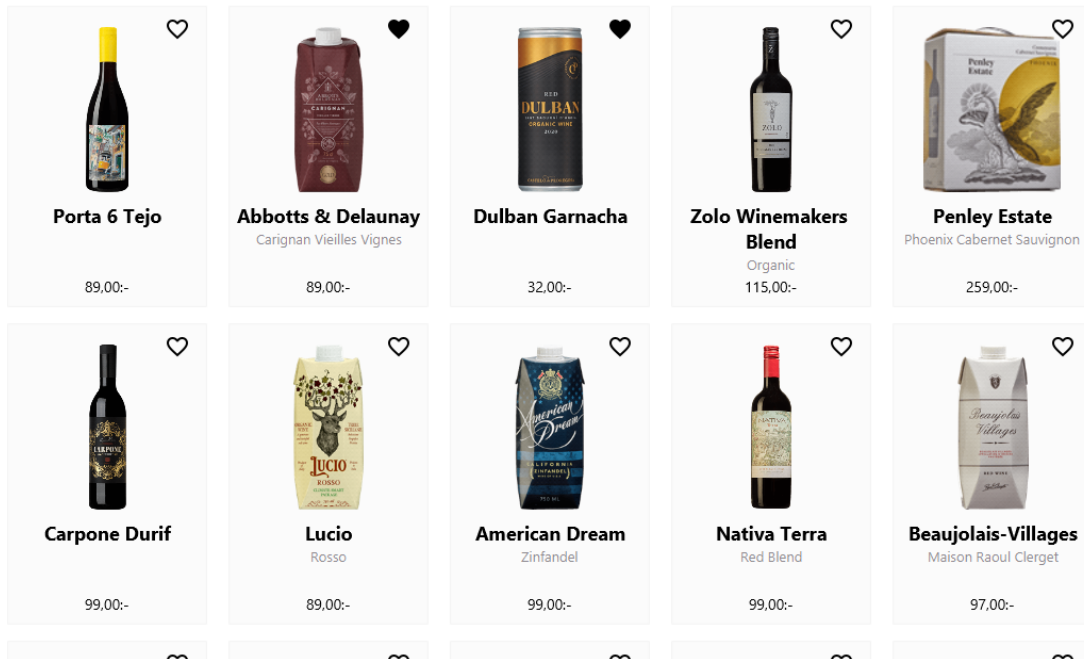


Figure 2: Further down in the start page is a grid of products under the label "Nya produkter".

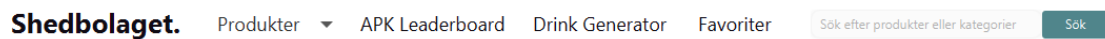



Figure 3: This navigation bar is shown at the top of the application. This bar is used for almost all of the navigation paths. The Escape Hatch included in the top left corner and the Search bar in the opposite corner. Between these, the user finds the necessary links to the main pages of the application.

**Shedbolaget.**
Produkter
APK Leaderboard
Drink Generator
Favoriter

**Sortera efter:**  
Pris


**Drycker:**  
☒ Alkoholfritt  
☐ Öl  
☐ Mousseerande  
☐ Must  
☐ Cider & Blanddryck  
☐ Glögg & andra juldrycker  
☐ Vitt  
☐ Aperitif & Bitter  
☐ Rosé  
☐ Rött

## Alkoholfritt




**Einbecker Brauherren**  
Alkoholfrei Pils  
Alkoholhalt: 0,5 % | 330 ml | APK: 0,21  
Öl | Tyskland

7,90:-




**Maisel's Weisse**  
Alkoholfrei  
Alkoholhalt: 0,0 % | 330 ml | APK: 0,00  
Öl | Tyskland

8,90:-




**Störtebeker 1402**  
Alkoholhalt: 0,5 % | 330 ml | APK: 0,19  
Öl | Tyskland

8,90:-



**Kiviks**  
Skånsk Äppelcider Alkoholfri  
Alkoholhalt: 0,5 % | 330 ml | APK: 0,17  
Cider & Blanddryck | Sverige

9,90:-



**Pistonhead**  
Flat Tire Non Alcoholic  
Alkoholhalt: 0,5 % | 330 ml | APK: 0,15

10,90:-

Figure 4: The products page shows a list of products on the right, and a choice of secondary categories to the left.

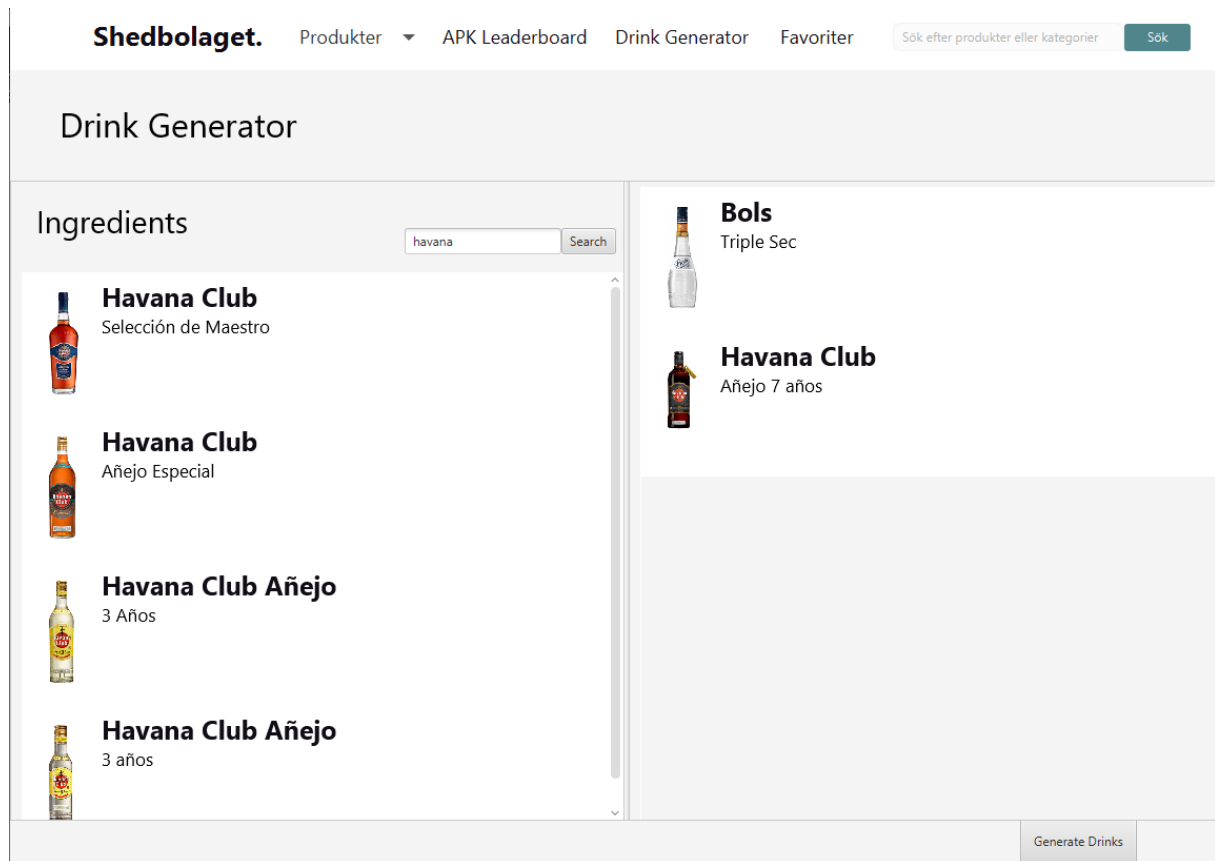


Figure 5: The drink generator page is split into two panels where the left panel displays a list of liquor that is used in drinks, and the right side is the selected liquors.

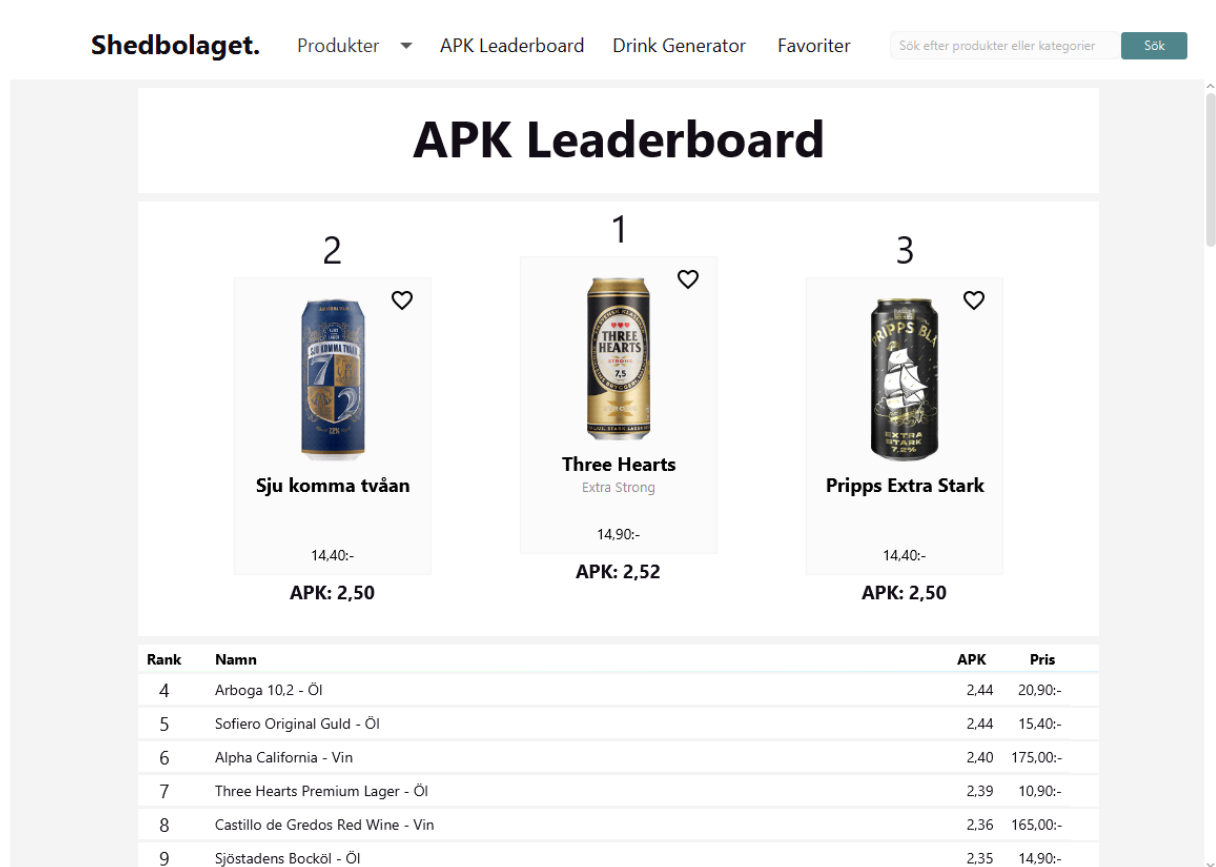


Figure 6: APK leaderboard.

The APK leaderboard shows the top 100 products with the highest APK in descending order.




**Shedbolaget.** Produkter ▾ APK Leaderboard Drink Generator Favoriter


Sök efter produkter eller kategorier Sök

**Hittar du inte din produkt?**  
Lägg till den!


## Favoriter

**Faustino VII**  
Rosado  
Alkoholhalt: 12,5 % | 187 ml | APK: 1,17  
Rosé | Spanien

20,00:-  
Ta bort favorit

**Wildberries Seend**  
Alkoholhalt: 4,5 % | 330 ml | APK: 1,31  
Blanddryck | Sverige

11,30:-  
Ta bort favorit

**Fem komma tvåan**  
Alkoholhalt: 5,2 % | 330 ml | APK: 2,00  
Ljus lager | Sverige

8,60:-  
Ta bort favorit

< 1/1 >

Figure 8: List of favourite products.



### 3 Domain Model

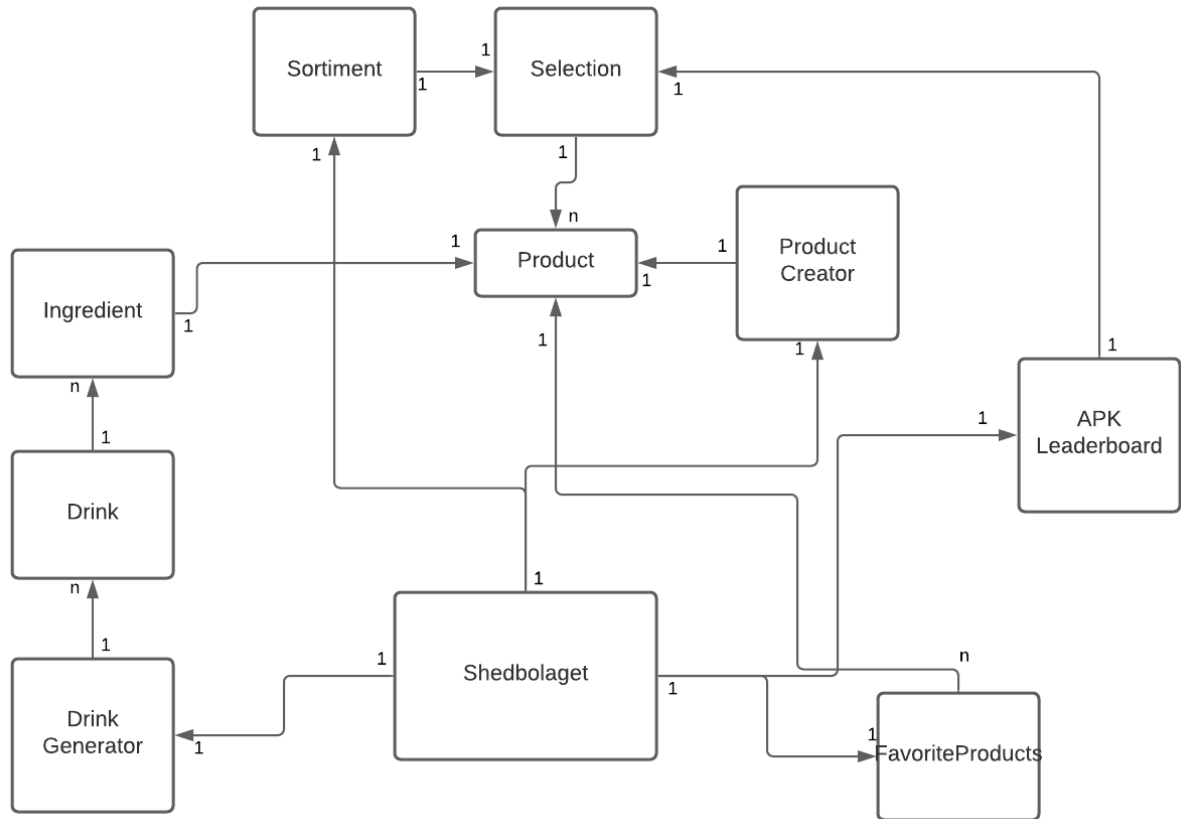


Figure 9: Domain Model

#### 3.1 Class Responsibilities

As observed in the domain model image, all class modules work independently with the exception of the references to the Product class. All modules are bound to the product class in some way, since the whole program is built upon the product data. Each of the modules has their own area of responsibility and the model 'Shedbolaget' ties together them to create the designed application.

## 4 References

- Systembolaget
- Maven