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HouseholdHero Application

Metropolia University of Applied Sciences

Engineer (Bachelor's Degree)

Information and Communication Technology Degree Programme

Project Report

13.10.2021

1 Project description

Our software is for households to keep track of their groceries and the money spent on the groceries.

2 Development environment

JavaFX was used for the project's UI and Maven was used as the project's management and comprehension tool.

3 Installation and configuration

Required software:

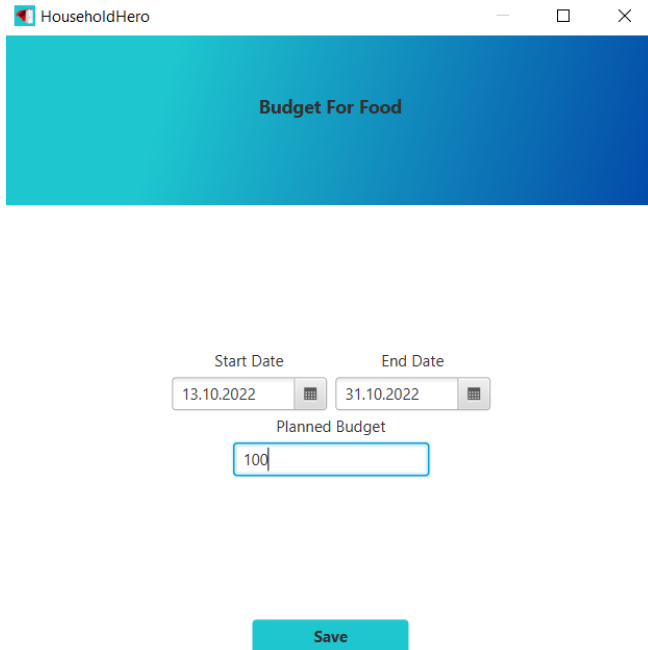
- Eclipse IDE
- MariaDB

Steps:

1. Clone the Git repository to your machine.
2. Import the project to Eclipse. File > Open projects from file system...
3. Run HouseholdHero.sql in MariaDB.
4. Add your MariaDB credentials to DBInfo.java in Eclipse.
5. Run the application by right clicking the project name in Eclipse and selecting Run As > Java Application.

4 How to use HouseholdHero

Budget



HouseholdHero

Budget For Food

Start Date 13.10.2022

End Date 31.10.2022

Planned Budget 100

Save

Figure 1: Once you open the application for the first time, you have to set a budget for groceries for a certain time period and a certain amount of money.

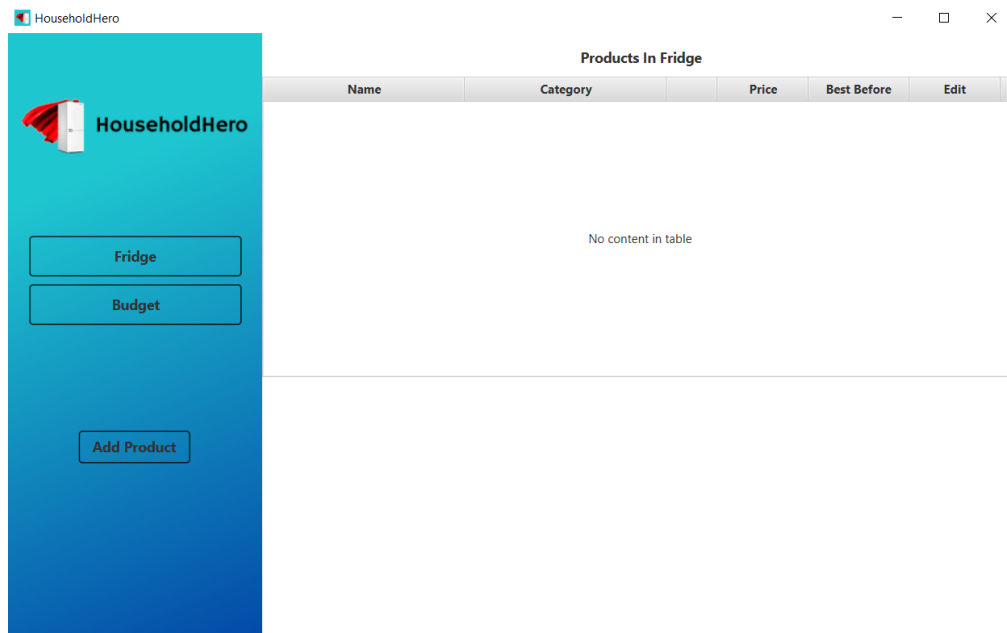


Figure 2: After you have set the budget, you will see your fridge.

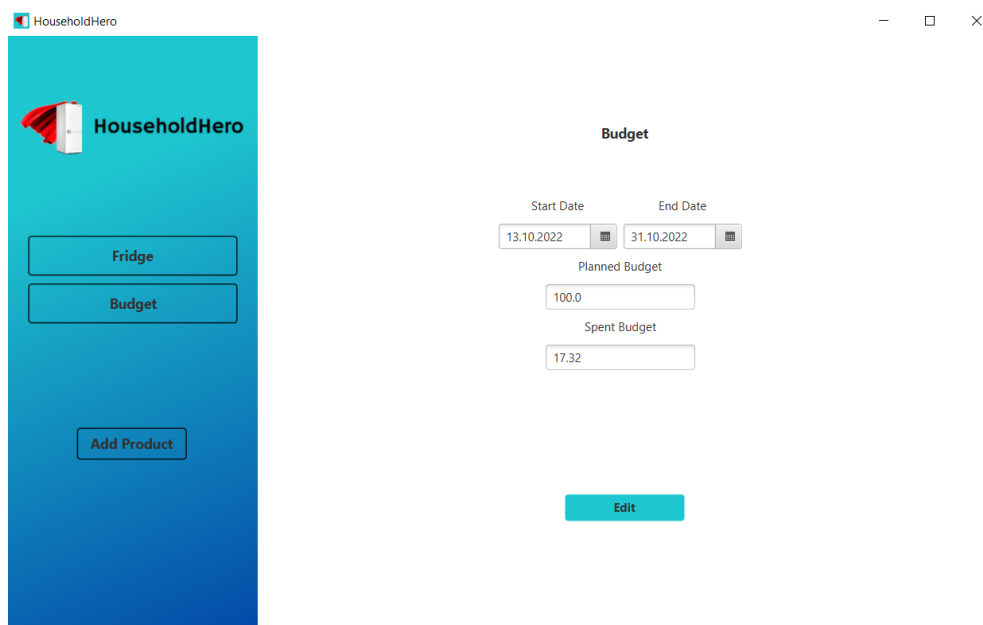
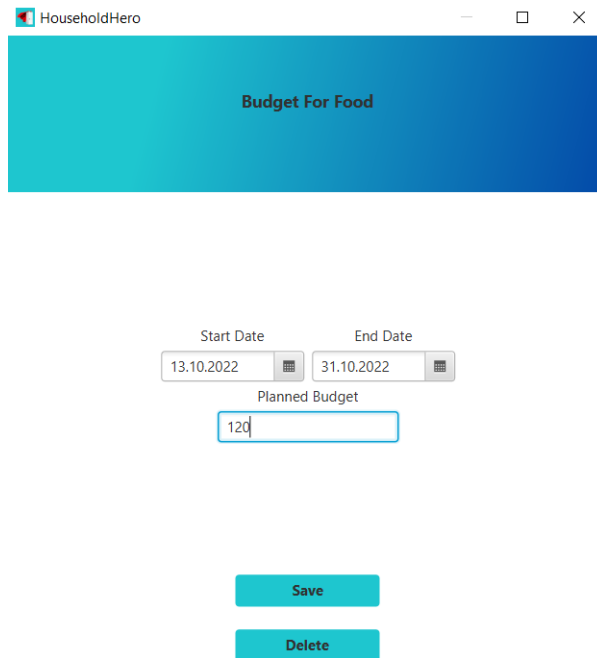
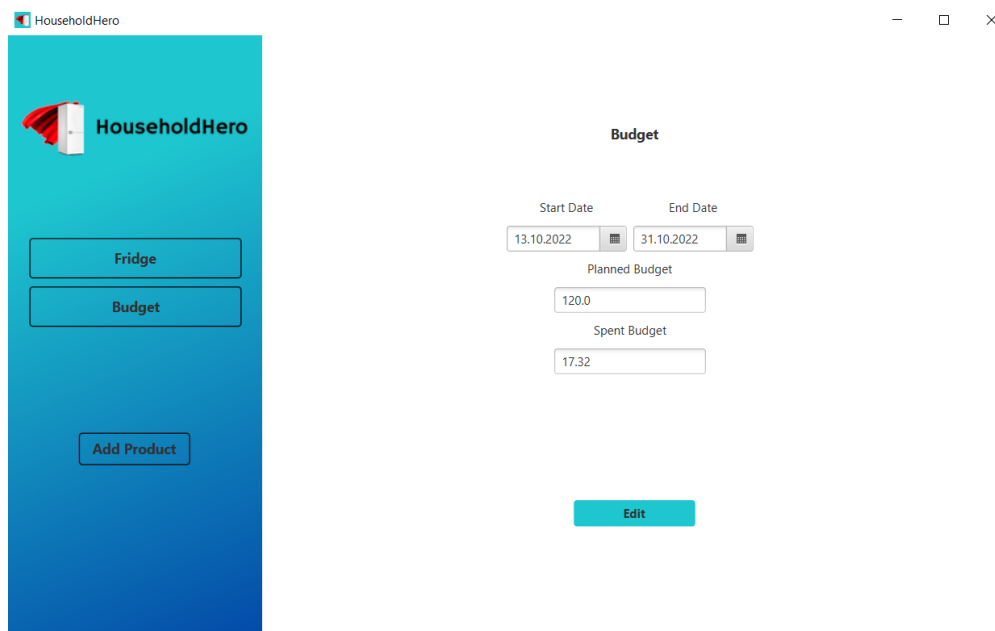


Figure 3: By clicking on "Budget", you can see how much of your budget you have used.



The screenshot shows a window titled 'HouseholdHero' with a blue gradient background. The main heading is 'Budget For Food'. Below this, there are two date pickers: 'Start Date' with the value '13.10.2022' and 'End Date' with the value '31.10.2022'. Below the dates is a 'Planned Budget' input field containing the value '120'. At the bottom of the form are two buttons: 'Save' and 'Delete'.

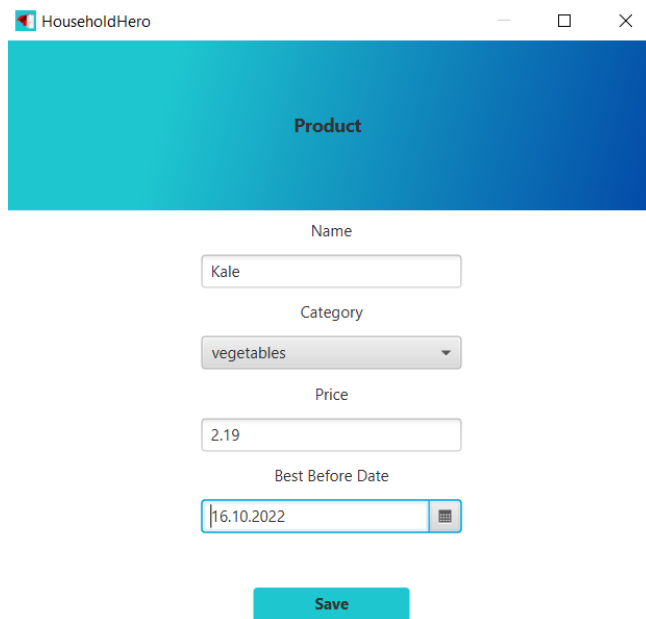
Figure 4: You can also edit the budget by clicking “Edit”, making your changes and then clicking “Save”.



The screenshot shows the main interface of the 'HouseholdHero' application. On the left is a sidebar with a red and white logo and the text 'HouseholdHero'. It contains three buttons: 'Fridge', 'Budget', and 'Add Product'. On the right, the 'Budget' section is displayed. It has the same date pickers as Figure 4, but now includes a 'Spent Budget' input field with the value '17.32'. The 'Planned Budget' field still shows '120.0'. An 'Edit' button is located at the bottom of the budget section.

Figure 5: Once you have edited the budget, you can see that it is updated.

Fridge

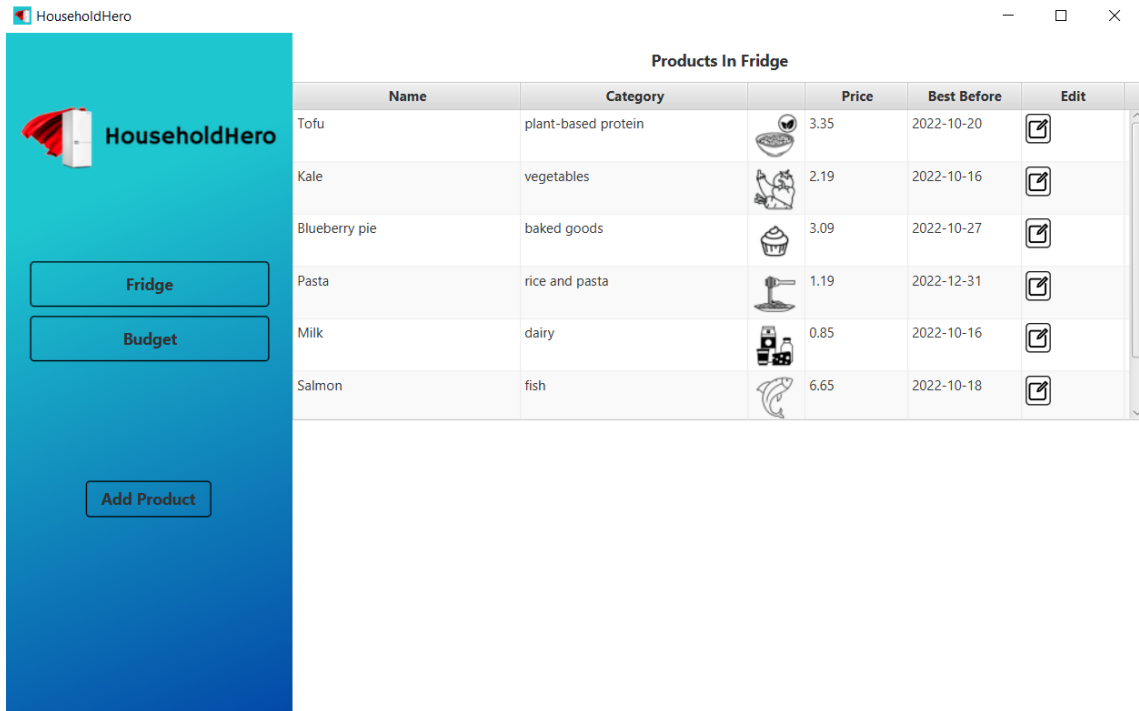


The screenshot shows a web application window titled 'HouseholdHero' with standard window controls. The main content area has a blue gradient header with the word 'Product' in white. Below the header, there is a form with the following fields:

- Name:** A text input field containing the value 'Kale'.
- Category:** A dropdown menu with 'vegetables' selected.
- Price:** A text input field containing the value '2.19'.
- Best Before Date:** A date input field containing '16.10.2022' with a calendar icon on the right.

At the bottom of the form is a teal 'Save' button.

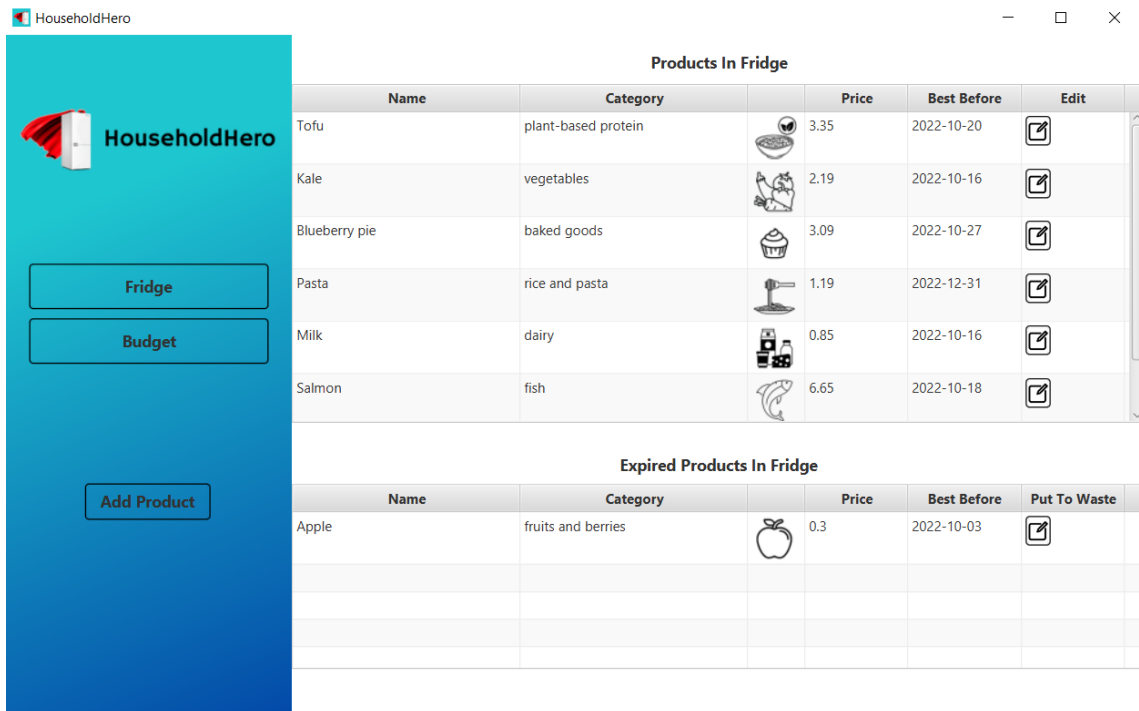
Figure 6: By clicking on "Add Product" you can add a product to your fridge. You have to enter the product's name, category, price and best before date before saving the product.



The screenshot shows the HouseholdHero application window. On the left is a sidebar with a red and white icon, the text 'HouseholdHero', and three buttons: 'Fridge', 'Budget', and 'Add Product'. The main area displays a table titled 'Products In Fridge' with columns: Name, Category, Price, Best Before, and Edit. The table contains seven rows of food items.

Name	Category	Price	Best Before	Edit
Tofu	plant-based protein	3.35	2022-10-20	
Kale	vegetables	2.19	2022-10-16	
Blueberry pie	baked goods	3.09	2022-10-27	
Pasta	rice and pasta	1.19	2022-12-31	
Milk	dairy	0.85	2022-10-16	
Salmon	fish	6.65	2022-10-18	

Figure 7: You can see what products there are in your fridge.



The screenshot shows the HouseholdHero application window with the 'Expired Products In Fridge' table added below the first one. The sidebar remains the same. The 'Products In Fridge' table is identical to the one in Figure 7. The 'Expired Products In Fridge' table has columns: Name, Category, Price, Best Before, and Put To Waste. It contains one row for an expired apple.

Name	Category	Price	Best Before	Put To Waste
Apple	fruits and berries	0.3	2022-10-03	

Figure 8: If you have expired products, you will see them in the fridge as “Expired Products In Fridge”. A product becomes expired after its best before date has passed.

HouseholdHero













HouseholdHero

Fridge

Budget

Add Product

Products In Fridge

Name ▲	Category		Price	Best Before	Edit
Blueberry pie	baked goods		3.09	2022-10-27	
Kale	vegetables		2.19	2022-10-16	
Milk	dairy		0.85	2022-10-16	
Pasta	rice and pasta		1.19	2022-12-31	
Salmon	fish		6.65	2022-10-18	
Tofu	plant-based protein		3.35	2022-10-20	

Expired Products In Fridge



Name	Category		Price	Best Before	Put To Waste
Apple	fruits and berries		0.3	2022-10-03	

Figure 9: You can sort products alphabetically by their name.

HouseholdHero













HouseholdHero

Fridge

Budget

Add Product

Products In Fridge

Name	Category		Price	Best Before ▲	Edit
Kale	vegetables		2.19	2022-10-16	
Milk	dairy		0.85	2022-10-16	
Salmon	fish		6.65	2022-10-18	
Tofu	plant-based protein		3.35	2022-10-20	
Blueberry pie	baked goods		3.09	2022-10-27	
Pasta	rice and pasta		1.19	2022-12-31	

Expired Products In Fridge



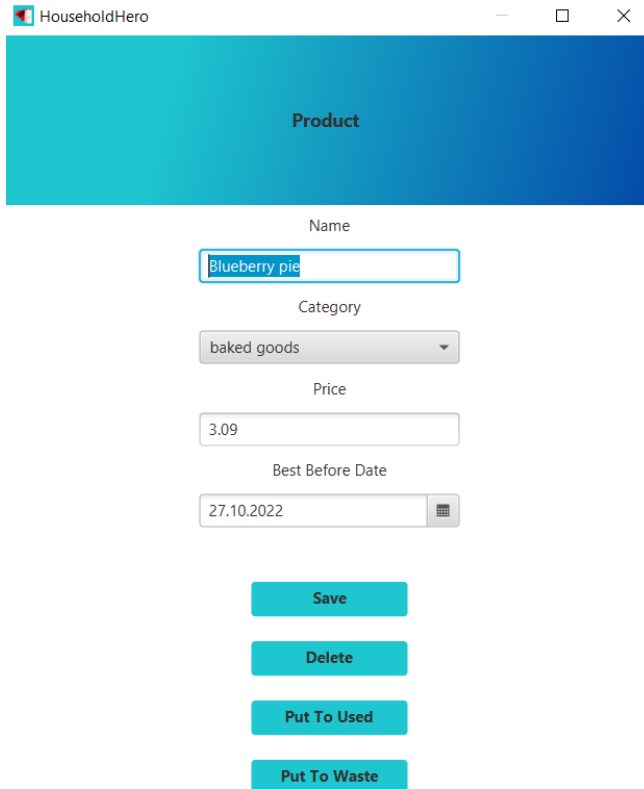
Name	Category		Price	Best Before	Put To Waste
Apple	fruits and berries		0.3	2022-10-03	

Figure 10: You can sort products by their best before date.



The screenshot shows a web application window titled "HouseholdHero". Inside, there is a form for editing a product. The form has a blue header with the word "Product" in white. Below the header, there are five input fields: "Name" (containing "Blueberry pie"), "Category" (a dropdown menu showing "baked goods"), "Price" (containing "3.09"), and "Best Before Date" (containing "27.10.2022" with a calendar icon). At the bottom of the form, there are four teal buttons: "Save", "Delete", "Put To Used", and "Put To Waste".

Figure 11: You can edit products in multiple ways.

You can edit a product that is in your fridge.

You can delete a product from your fridge. When you delete a product, it will be removed from the database as well.

You can set the product as "used" if you have consumed the product.

You can set the product as "waste" if the product has expired and you don't plan to use it.

5 Features to be implemented

Fridge view: The expired products are currently in a separate table from the rest of the fridge's contents. We will combine these two tables and add an indicator next to the expired products in order to make the user interface more streamlined and accessible. We may also add another indicator for products that are soon to expire.

Budget view: Currently the budget view only shows the currently active budget. In the future we will expand it so the user can select past budgets and view every product they have purchased during it. We would also like to add a pie chart that displays how much of the budget has been used and how much of it has gone to waste.

Edit budget view: The “Delete” button currently has no functionality. This will be fixed in the future.