

Introduction

CARE (*Centro de Apoyo y Recursos para Estudiantes*) is a newly established student association at the Polytechnic University of Puerto Rico, dedicated to supporting student success through various essential services, including food, hygiene products, and nutritional education. The association's goal is to promote the well-being of students by providing resources tailored to their specific needs.

Problem Description

CARE currently lacks a centralized system for managing inventory and distributing resources to students, resulting in operational inefficiencies. Without a digital platform, the association faces challenges in tracking, organizing, and distributing essential resources like food and hygiene products in a timely and personalized manner, which affects service delivery and student satisfaction.

This project aims to address these challenges by developing a multi-platform web application that streamlines inventory management and improves the distribution process. The app will provide students with an intuitive interface to register for available resource packages, while offering administrators tools to monitor inventory, manage student registrations, and customize resource allocation. By integrating these features, the application will enhance operational efficiency, ensure better resource distribution, and improve the overall user experience. Ultimately, this project will help CARE achieve its mission of supporting student through success through more efficient, transparent, and personalized resource management.

Technology Stack



Software Architecture Diagram

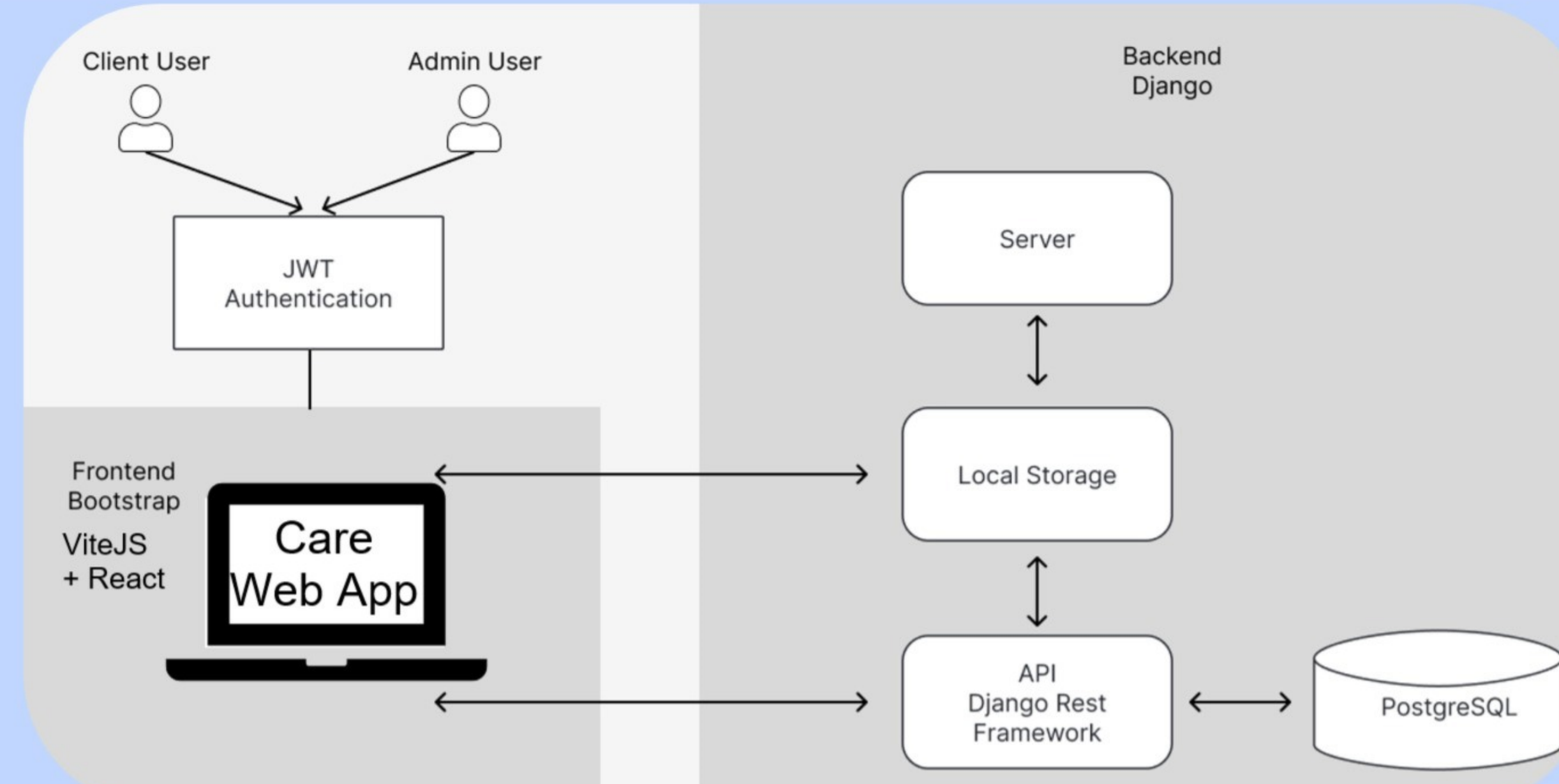


Figure 1: System Interface:

This presents the structure of the web application regarding the connection between the frontend and backend.

Graphical User Interface

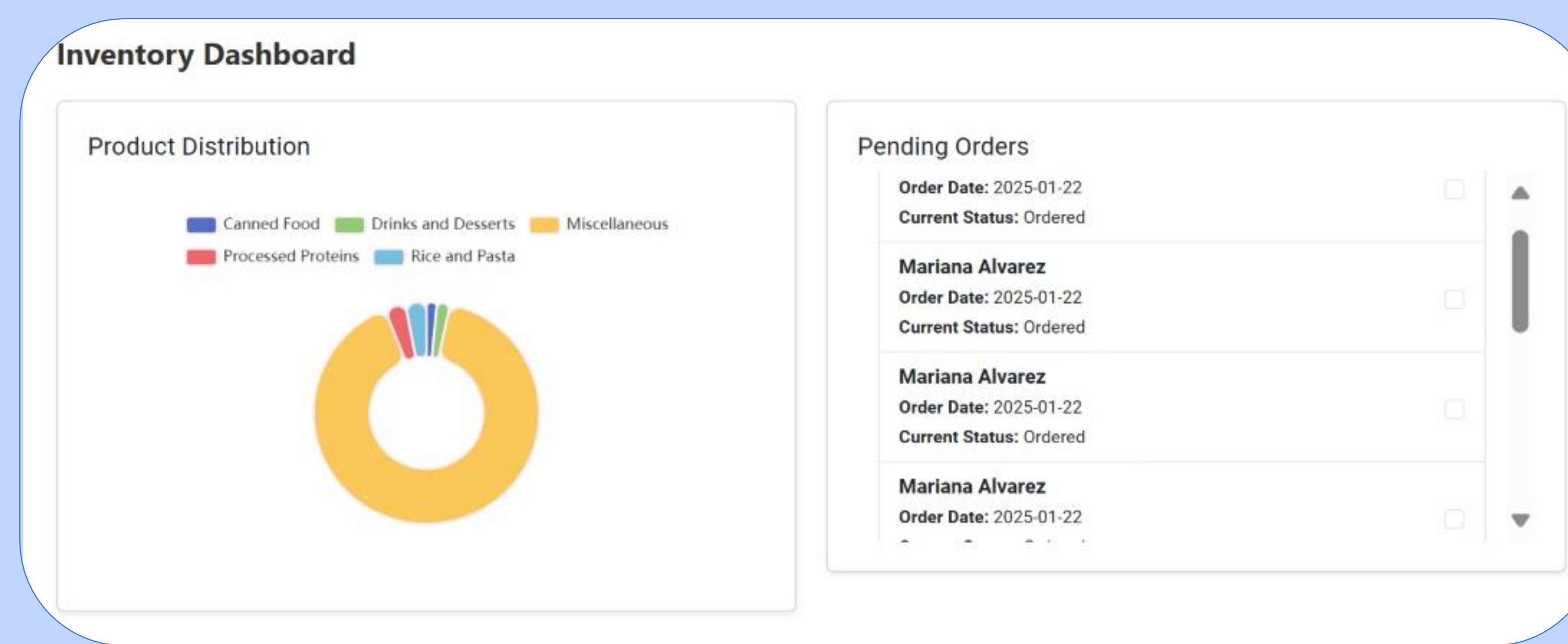


Figure 2: Admin Dashboard

Admin view of some Dashboard functionalities including Inventory category distribution and Order pick-up validation.

Inventory Management

Product Name: Quantity: Category: Expiration Date: Add Product

Name	Quantity	Category	Expiration Date	Actions
Apple Juice	0	Drinks and Desserts	2025-02-08	<input type="button" value="Update"/> <input type="button" value="Delete"/>
Green Beans	0	Miscellaneous	2025-02-08	<input type="button" value="Update"/> <input type="button" value="Delete"/>
Mashed Potatoes	0	Miscellaneous	2025-01-31	<input type="button" value="Update"/> <input type="button" value="Delete"/>
test	0	Miscellaneous	2025-01-23	<input type="button" value="Update"/> <input type="button" value="Delete"/>

Figure 3: Inventory Management

Admin view of the Inventory table for products. Each product has a name, quantity, category, and expiration date.

Box Content



Package Details:

Pickup Location:
Pabellones from 2-5pm

Package Contents:
Applesauce: 3, Oreo Cookies: 1, Chicken: 2, Sardines: 1, Mac and Cheese: 1

Order Pickup Day:
2025-01-31

Figure 4: Box Selection

Showcase of the User view when selecting their desired package to view its contents.

Conclusion

The CARE Web App provides administrative users the ability to carefully keep track of their inventory (both product-wise and Care Packages). The Admin Dashboard allows for Order Pickup validation and important statistics regarding orders and inventory stocks. Admins can also view their Calendar for upcoming hand-out dates. Student users can view upcoming packages and of their own orders in their own User Calendar. Students can also select their own package and view its contents before ordering it. Easy visibility allows students to display their Student ID and Order History to view their order status. Once confirming the order, students receive an email confirmation of said order in real-time. The full-fledged product is ready-to-use and will be deployed in the coming months.

Future Work

This web application features key functionalities that will allow the organization to streamline their donation hand-out process and prevent any donation waste as students will be able to hand-pick their own packages. In the future, the web application could include additional features such as: Order Cancellations, easier mobile visibility, and potential development as a mobile app!

Acknowledgements

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References

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