



SNS

Inventory Management System with Barcode and QR Code Integration



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Abstract

The project aimed to improve the inventory management experience for small and large scale enterprises by implementing the application as a Progressive Web App (PWA) with functionalities such as scanning of bar and QR codes or pin point the warehouse based on the user's geolocation. We successfully designed a responsive and intuitive application with the most vital functionalities that is accessible on multiple devices. We learned about the restrictions and strengths of PWA as well as the process of integrating into a complete application. It will help future researchers to better design and integrate this technology in their projects.

1 INTRODUCTION

2 CONNECTED WORKS

2.1 Tech Stack

- Angular
- Spring
- AWS
- PWA
- Docker
- ZXing

2.2 Project assumptions

At the beginning of the project we set multiple restrictions and assumptions to limit the scope and guide the development in the right direction.

We set out to create a simple and intuitive application to allow users across all skill levels to successfully use our application. Thanks to the PWA technology we wanted to achieve an application that is available on multiple devices with simple installation and a native feel.

We decided to limit the scope and support only a single company owning multiple warehouses. Those warehouses can contain items shared between them and have individual stocks. There will not be a registration form - each employee in the company will have to be manually added by the administrator.

3 RESULTS

3.1 Summary

- Successfully implemented an application using PWA technology
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3.2 Functionalities

- Create / Read / Update / Delete
- scanning bar codes and QR codes
- managing stock across multiple warehouses
- managing users and their access to CRUD endpoints
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3.3 Business goals

TBD

4 CONCLUSIONS

TBD

5 FURTHER RESEARCH

TBD

6 ACKNOWLEDGMENTS

TBD

[1] [2]

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