

# **Bakery Management System (BMS)**

## **Project Presentation**

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**Course: Yoobee Assessment 2 - PSE**

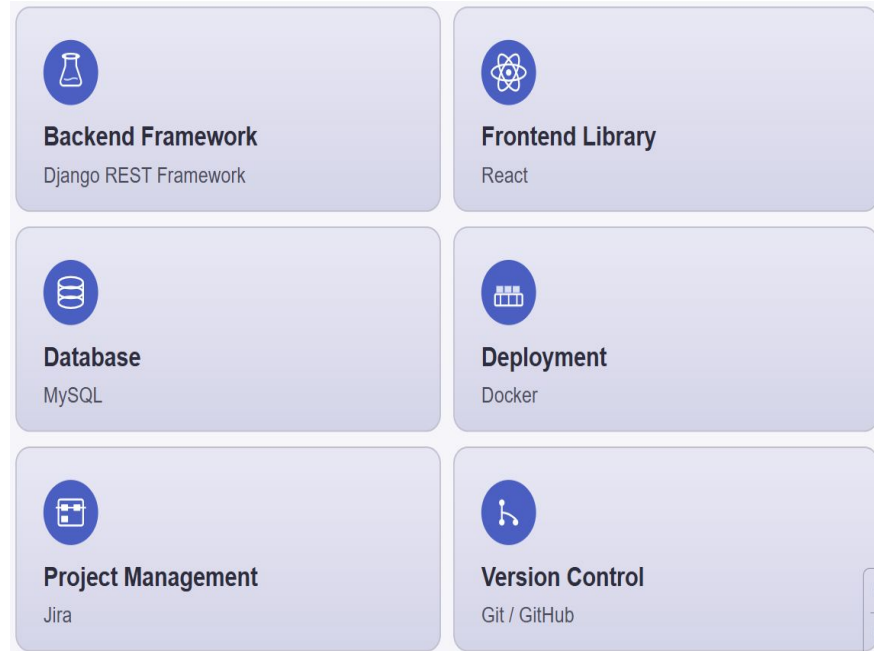
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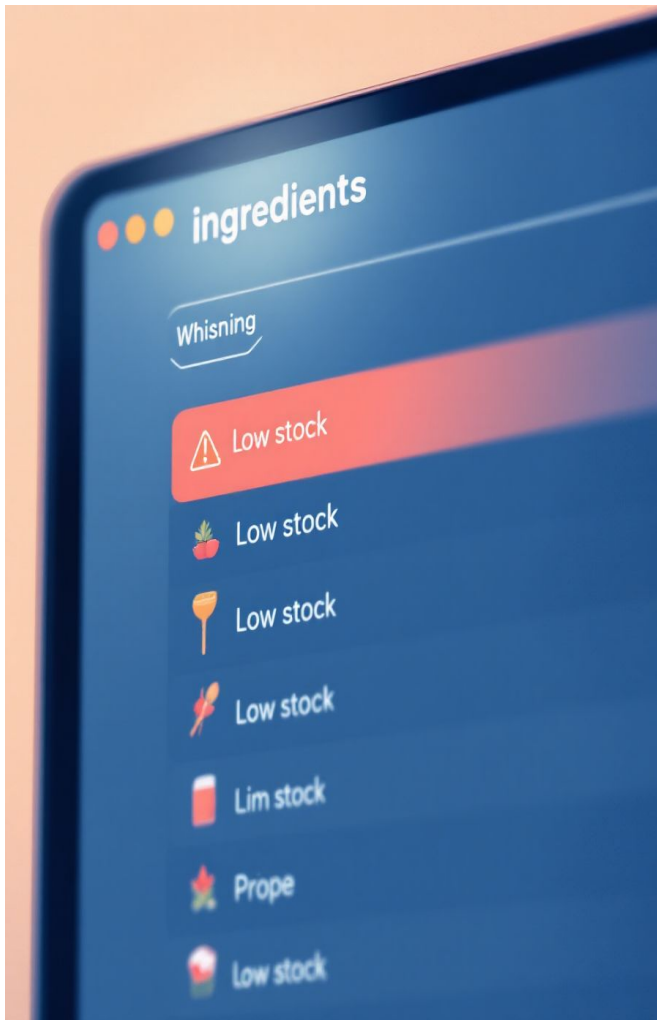


# Project Overview: Foundation

Application designed to streamline daily bakery operations. Its core function is to maintain operational efficiency by managing backend processes and providing a responsive frontend interface.

- Handles user authentication, ingredient tracking, production batch logging, and low-stock alerts.
- Secure access utilizing JSON Web Tokens (JWT).
- The project provided valuable hands-on experience in integrating diverse technologies.





# Features: Ingredient and Production Management

Features ensure the bakery runs smoothly, focusing on inventory control and production tracking.

## Low-Stock Alert Interface

A dedicated UI for Low Stock displays all ingredients whose current quantity is below the defined Reorder Point

## Filtered Batch History

The batch history at allows for efficient searching and filtering of past production records.

## Production Batch Creation

Users can create new production batches via and view a complete list of ongoing and completed batches



# Challenges: Troubleshooting Authentication

## Challenge 1: 401 Unauthorized Errors

Initial API requests to `Ingredients` failed due to token issues, returning 401 Unauthorized errors.

## Solution: Token Management

The fix involved correctly setting the `ACCESS_TOKEN_LIFETIME` to a practical duration (1 hour) and using `curl` to confirm token validity and expiration.

# Professional Growth: Key Development Takeaways

**BMS project was important for significant growth, transforming theoretical knowledge into practical development skills.**

## Permission System

**Gained understanding of Django's native authentication and custom permission classes, such as implementing authentication logic.**



## Debugging

**Developed skills in isolating and resolving backend-frontend integration issues, such as handling CORS and JWT token authentication errors.**

## Containerization

**Enhanced proficiency with Docker and MySQL, improving confidence in setting up and managing, multi-container project environments.**

# Visualizing Learning: The Debugging Cycle

technical challenges followed a systematic, iterative debugging process that reinforced core engineering principles.

**Identify Error**

**Isolate Issue**

**Verify**

**Implement Fix**



# Current State and Future Development

## What is Currently Working

- Full User Authentication flow (Login/Logout).
- Functional Low-Stock UI for inventory alerts.
- Creation, history and listing of new Production Batches.
- Secure Manager-only Low-Stock Report generation.

## Pending Tasks and Next Steps

- Implement and rigorously test all filter and search functionalities on the batch history page.
- Verify system permissions with non-manager staff user accounts.
- Refine UI and implement error handling across all forms and API interactions.
- Complete unit and integration testing coverage for critical components.



# Conclusion:

**The BMS project demonstrates a functional, secure management tool.**

**We gained full-stack development experience, overcome technical challenges, and solidified understanding of Django, React, and API integration.**

