Inventory Transfer Management System: Inventory Staff Module

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ABSTRACT

This cooperative education project presents the design and development of the **Inventory Staff Module** within the Inventory Transfer Management System for Betagro Public Company Limited. While the managerial overview is handled by a separate module, this module focuses on empowering operational staff to execute daily inventory tasks through an Agile-based web application. The system comprises three core functional modules: Daily Stock Counting Management, Inter-branch Product Transfers, and Product Receipt Verification from manufacturers.
Through these modules, staff are able to create, edit, and track document statuses within a centralized platform. The system is designed to minimize human error, reduce processing times, and ensure high data accuracy, ultimately contributing to more efficient and reliable inventory management operations.

PROBLEMS and CHALLENGES

- **Manual Documentation:** Heavy reliance on paper-based reporting.
- **Lack of Real-time Visibility:** Inventory data is only updated at the end of the day.
- **Difficult Oversight:** Challenging for management to monitor the overall status of documents and transfers.

KEY BENEFITS

- **Real-time Monitoring and Tracking:** Instant access to document statuses and inventory data.
- **Digital Transformation:** Replacing paper-based workflows with a centralized web application.
- **Enhanced Accuracy:** Minimizing errors through digital validation and automated tracking

DEVELOPMENT PROCESS

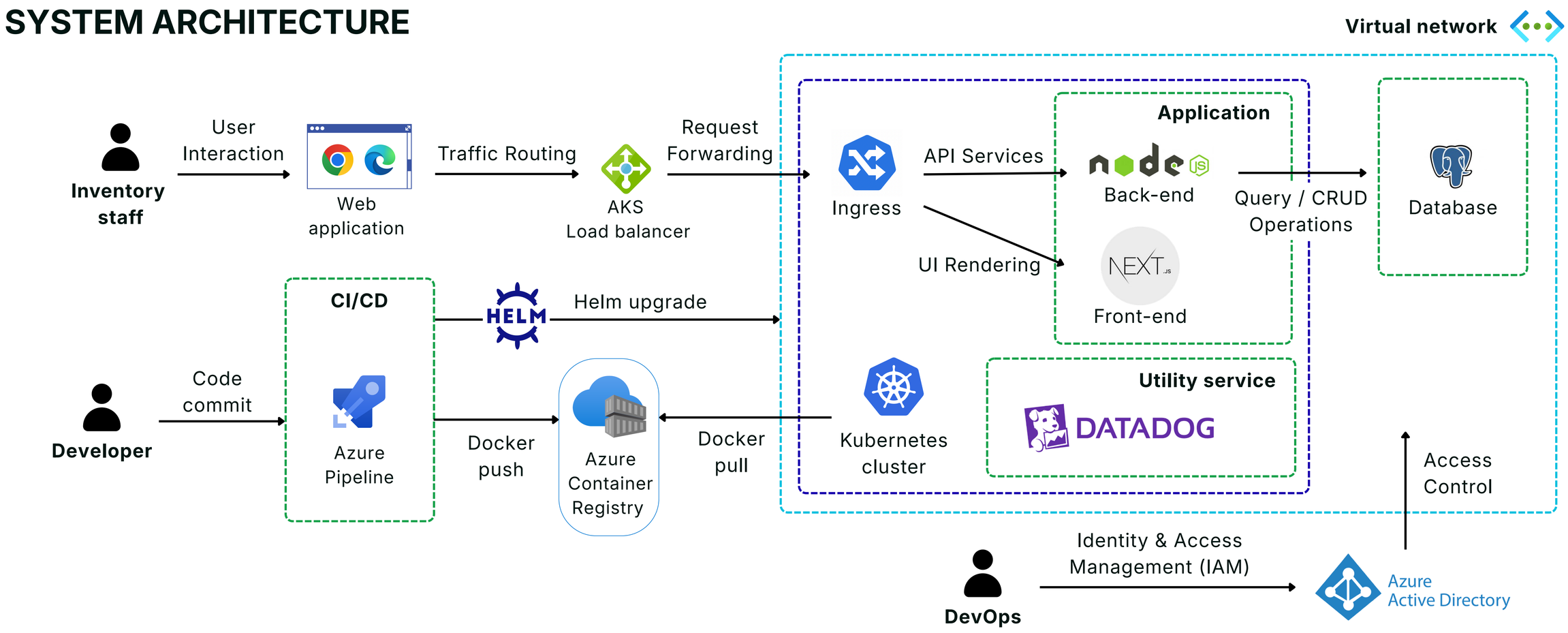
1. Requirement Gathering
Collaborated with PMO to analyze store-level pain points and translate business requirements into technical specifications.

2. Iterative Design & Feedback
This phase involved the implementation of functional web components based on high-fidelity designs from Figma. These components were designed by the UX/UI team to ensure a seamless and responsive user experience throughout the application.

3. Incremental Development (Core Responsibility)
Developed and tested the system module-by-module (Counting, Transfers, and Receipt) using Next.js and Node.js to ensure robust performance.

4. User Acceptance Testing (UAT)
Conducted testing sessions with end-users at Betagro stores to validate system functionality and ensure it effectively meets operational needs.

SYSTEM ARCHITECTURE



CONCLUSION

The Inventory Transfer Management System digitizes store operations by replacing manual, paper-based workflows with a centralized platform. By integrating Daily Stock Counting, Inter-branch Transfers, and Product Receipt, the system enhances visibility and reduces human error. Currently in final testing, it has already proven to streamline processes and improve efficiency. Moving forward, the project will expand to support other key operations and deeper system integrations, ensuring a comprehensive and seamless digital experience across all store functions.

Full Reference

Poster

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