A Major Project Synopsis on

Hotel Stock Reorder System

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by

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Introduction:

This application will automate and streamline inventory tracking and reordering processes to achieve operational efficiency, reduce costs, and elevate guest satisfaction.

Abstract:

A **Hotel Stock Reorder Management Web App** is a digital solution designed to help hotels efficiently track, manage, and reorder essential inventory items such as food supplies, housekeeping items, toiletries, linens, and other consumables. This system ensures that stock levels are maintained properly to avoid shortages and overstocking, improving hotel operations and guest satisfaction.

Objective of the Project:

1 Efficient Inventory Management

- Monitor stock levels of essential hotel supplies (food, toiletries, housekeeping items, etc.).
- Categorize inventory based on departments (kitchen, housekeeping, maintenance, etc.).

2 Automated Stock Reordering

- Set **minimum and maximum stock levels** to avoid shortages and overstocking.
- Generate **automatic purchase orders** when stock reaches the reorder threshold.

3 Real-Time Alerts & Notifications

- Send **email/SMS notifications** to procurement staff when stock is low.
- Alert managers for order approvals and urgent restocking needs.

4 Supplier & Purchase Order Management

- Maintain a **supplier database** for quick and efficient restocking.
- Track **pending, approved, and received orders** to prevent delays.

5 Data Analytics & Reporting

- Provide **real-time stock consumption trends** to optimize purchasing decisions.
- Generate **audit logs** to track stock movement and reduce wastage.

6 Integration with Other Hotel Systems

- Connect with **Property Management Systems (PMS)** for seamless hotel operations.
- Integrate with **POS systems** to track restaurant/bar stock usage.

7 Cost Optimization & Loss Prevention

- Reduce wastage by optimizing stock levels based on demand.
- Prevent theft and mismanagement through **detailed stock logs**.

What is Hotel Stock Reorder?

Hotel stock reorder refers to the process of replenishing inventory items used in hotel operations, ensuring that essential supplies such as food, beverages, toiletries, linens, cleaning materials, and maintenance items are always available. This process helps hotels **prevent stock shortages, reduce wastage, and maintain smooth operations**.

Benefits of the Hotel Stock Reorder App
✅ **Prevents Stock Shortages:** Ensures essential hotel supplies are always available
✅ **Cost Efficiency:** Reduces waste and over-purchasing through demand forecasting
✅ **Automation:** Saves time by automating reorders and supplier communication
✅ **Data-Driven Decisions:** Provides real-time insights into stock consumption
✅ **Improved Guest Experience:** Ensures smooth hotel operations with timely stock availability

Technology Stack

Frontend:
- **React.js or Vue.js for a modern UI**
- **Bootstrap/Tailwind CSS for responsive design**

Backend:
- **Node.js with Express.js (or Django/PHP-Laravel)**
- **MySQL/PostgreSQL for structured data storage**
- **Redis for caching (to improve performance on stock lookup)**

Project Overview:

This project focuses on training a CNN model using MRI scans taken from the Keggle . The model will classify scans into four stages, providing clinicians with probabilistic predictions and visual explanations of brain regions contributing to the diagnosis.

Literature Review on Hotel Stock Reorder Management Systems

A **Stock Reorder Management System** plays a crucial role in inventory control, ensuring that essential hotel supplies are available while minimizing excess stock. Various studies and existing systems have highlighted the importance of automated inventory management in the hospitality industry. This literature review explores **previous research, existing systems, challenges, and technological advancements** related to hotel stock reorder management.

Proposed Methodology for Hotel Stock Reorder Management Web App

The **Hotel Stock Reorder Management Web App** will be developed using a structured methodology that follows a systematic approach to designing, implementing, and testing the system. The methodology includes **requirement analysis, system design, development, testing, and deployment** to ensure an efficient and user-friendly inventory management solution.

Short Note on Overall Requirements for Hotel Stock Reorder Management Web App

The **Hotel Stock Reorder Management Web App** requires a combination of **hardware, software, functional, and non-functional requirements** to ensure smooth operation.

- ◆ **Hardware Requirements:**

  - Client devices: Minimum **Intel i3, 4GB RAM, 10GB storage, stable internet**.
  - Server: **Quad-core processor, 16GB RAM, 200GB SSD, cloud hosting (AWS, DigitalOcean, or Azure)**.

- ◆ **Software Requirements:**

  - **Frontend:** React.js/Vue.js, Bootstrap/Tailwind CSS.
  - **Backend:** Node.js with Express.js, MySQL/PostgreSQL, RESTful APIs.
  - **Security: JWT/OAuth authentication, SSL encryption, role-based access**.

- ◆ **Functional Requirements:**

  - **Stock tracking, automated reordering, supplier management, alerts & reporting**.

- ◆ **Non-Functional Requirements:**

  - **Scalability, security, high performance, mobile responsiveness, and data backup**.

The system ensures **real-time inventory control, cost reduction, and seamless hotel operations** by integrating modern web technologies and automation.

Research Scope:

Peer-reviewed articles (2020–2023) from IEEE Xplore, PubMed, and ScienceDirect were prioritized. Conference papers and non-English studies were exclude

Conclusion:

A Hotel Stock Reorder Management Web App streamlines inventory control, improves supply chain efficiency, and enhances overall hotel operations. By integrating automated reorder triggers, supplier management, and real-time analytics, the system ensures seamless hotel management while reducing operational costs.

References

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