Chapter No. 01

1. **Introduction**

In today's fast-paced world, efficient management of distribution centers is crucial for ensuring the smooth flow of products and services. Distribution centers are key places where beverages are received, stored, and sent to different retail stores. However, the current manual systems used in these centers often have problems like mistakes in keeping track of inventory, delays in processing orders, and a lack of real-time monitoring. These issues can lead to higher costs, lower customer satisfaction, and missed business opportunities. That's why we need a solution that automates and improves the way distribution centers for beverages work.

That's where Smart Access comes in. It's a modern and innovative system that revolutionizes the management of cold drink distribution centers. By automating tasks, optimizing operations, and providing real-time information, Smart Access helps businesses become more efficient and provide better customer service. With its user-friendly features and easy-to-use interface, Smart Access is ready to transform the cold drink distribution industry and set new standards for how distribution centers are managed.

Smart Access aims to increase productivity, reduce mistakes, and make customers happier. It does this by simplifying tasks, giving real-time data and insights, and making it easier for businesses to manage their operations. Smart Access is an exciting step forward in managing distribution centers for cold drinks, and it will help businesses succeed in this competitive industry.

* 1. **Scope of the Project**

The scope of this project is to develop the Smart Access application and website specifically for distribution center. The Smart Access system will cover different aspects of distribution center's operations. It will include features like real-time tracking of inventory, processing of orders, monitoring of sales, and managing finances. These functionalities will help us have better control over inventory, streamline order processing, and make informed decisions based on up-to-date information.

The project's main focus is on creating a solution that addresses specific distribution center's needs. While the application and website are designed for use, there is potential for future expansion and adaptation to benefit other distribution centers in the cold drink industry.

In summary, the scope of this project involves developing the Smart Access application and website tailored to distribution center. By addressing unique challenges and requirements, the system will streamline operations, increase efficiency, and enhance customer satisfaction. While primarily focused on distribution center, this project have the potential for broader industry application.

**Problem Statement**

The distribution center's reliance on outdated manual systems for record management offline leads to various operational inefficiencies, including difficulties in inventory management, delays in order processing, a lack of real-time monitoring capabilities, and challenges in efficient financial and employee management.

**Problem Description**

The Beverage distribution center's current reliance on manual systems poses substantial challenges and limitations that hinder operational efficiency and effectiveness.

* **Inefficient Inventory Management:**

Existing manual inventory management processes for Beverage lead to inaccuracies and discrepancies in tracking stock levels. This creates challenges in maintaining optimal inventory levels, leading to issues like overstocking or stockouts. Furthermore, the lack of real-time visibility into inventory levels hinders the prompt identification and resolution of inventory discrepancies, resulting in increased costs, product wastage, and potential customer dissatisfaction.

* **Order Processing Delays:**

The manual order processing system introduces delays in fulfilling customer orders. Manual data entry, paper-based processes, and a lack of automated workflows slow down the order fulfillment process. This can lead to delayed order processing and shipments, causing customer dissatisfaction, missed business opportunities, and potential revenue loss.

3. **Lack of Real-time Monitoring:**

The absence of real-time monitoring capabilities in current systems hampers ability to gain a comprehensive view of the distribution center's operations. The lack of real-time data on inventory levels, order status, and overall performance makes it difficult to make informed decisions and promptly address any issues or bottlenecks. This lack of visibility impacts operational efficiency, timely decision-making, and proactive problem-solving.

**Inefficient Financial and Employee Management:**

The manual systems hinder accurate tracking and management of financial aspects such as expense tracking, sales analysis, and profit and loss calculations. This Cause challenges in effective financial management, budgeting, and reporting.

These problems collectively impact the overall performance, productivity, and profitability of distribution center. There is a clear need for an automated and optimized system to address these challenges, streamline operations, provide real-time insights, and improve inventory management, order processing, financial management, and employee tracking. The development of the Smart Access application and website aims to address these problems and revolutionize distribution center's management processes, leading to improved efficiency, customer satisfaction, and business performance.

* 1. **Objective**

Smart Access project is to develop an automated and optimized system that revolutionizes the management of distribution centers for beverages, addressing challenges such as inefficient inventory management, order processing delays, a lack of real-time monitoring, and inefficient financial and employee management. The project aims to streamline operations, provide real-time insights, improve customer satisfaction, and enhance overall efficiency and profitability of the distribution center.

**Features**

Smart Access, an innovative system for beverage distribution centers, offers the following features:

* Efficiently manage and track stock levels of beverages, preventing inventory discrepancies and optimizing inventory management processes.
* Real-time monitoring of daily sales, enabling businesses to gain insights into sales performance and trends.
* Streamline order processing and fulfillment, reducing delays and improving customer satisfaction.
* Comprehensive financial management, including expense tracking, profit and loss calculations, and managing company credit/debit.
* User-friendly interface and easy-to-use features, simplifying tasks and providing real-time data and insights for efficient operations.
* Employee management capabilities, including salesperson tracking, commission management, and recovery tracking.
* Customizable pricing rates and promotional management to support dynamic pricing strategies and marketing campaigns.
* Generate various financial reports, such as balance sheets and net profit statements, for informed decision-making and financial analysis.
  1. **Nature of the Project**

The project is an android-based application registered on Google Play Store and developed by using various modern technologies.

* 1. **Tools/Technology**

Smart Access are developed under the following hardware and software technologies and tools.

* + 1. **React Native**

The logical functionalities of Smart Access are written in React Native developed by Meta.

* + 1. **Javascript/React JS**

For Web Panel, Code is written in React Js.

* + 1. **Firebase**

For back-end database operations, the application used cloud-hosted NoSQL realtime database called firebase.

* 1. **Process Model**

Smart Acess is developed by using iterative model. In which at initial development work is conducted based on initial requirements that are clearly defined, and subsequent features are added through iterations until the final system is completed.

* 1. **Summary**

This chapter covered Smart Access an android based application & Web Based Panel brief introduction, the scope of this project, why was this application necessary, its objective, the various features this application provided and nature of the project. After explaining this, the following chapter also discuss tools and technologies under which application was developed and process model through which it completed.