MINI PROJECT REPORT

ON

INSTOCK.

BTECH CSE CORE

(SEMESTER 2)

Supervisor

Mansi kajal mam

Submitted by

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Submitted to

School of Engineering and Technology

K.R Mangalam University , Gurugram

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DECLARATION

We hereby declare that the Mini project work entitled **InStock. : An Inventory Management app** is an authentic record of our work carried out under the guidance of mentor Miss Mansi Kajal as a requirement of Minor Project in 2nd semester in School of Engineering and Technology, K.R Mangalam University, Gurugram.

The results embodied in this project have not been submitted to any other University or Institute for the award of any degree or diploma.

Lakshita Kalra

Shikha

Saieena Negi

Ananya Sharma

CERTIFICATE

This is to certify that **Lakshita**, **Shikha, Saieena, and Ananya** students of BTECH CSE CORE , 2nd Semester of K.R Mangalam University, Gurugram have completed their semester project for the Second semester.

Miss Mansi Kajal

Professor

ACKNOWLEDGEMENT

The project titled ‘ **IN STOCK. :AN INVENTORY MANAGEMENT** ’ has helped us to have exposure to Web Development like we create an website to manage things like Shop owners can keep track of their goods . This project has greatly helped us in enhancing our professional skills.

We **Lakshita**, **Shikha**, **Saieena and Ananya** express our sincere gratitude to **Mansi Kajal mam** for providing us the opportunity to work on this project and giving valuable suggestions for helping us in the completion of this project.

We extend our sincere gratitude to small shop owners , and Shopkeepers.

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INTRODUCTION

InStock is an innovative web-based inventory management system designed to simplify stock tracking for small-scale businesses, vendors, and retailers. It provides an efficient way to monitor inventory levels, track inward and outward movements of products, and receive real-time alerts when stock runs low. Unlike many existing applications that charge usage fees and lack customization, InStock offers a free, adaptable, and user-friendly solution to the specific needs of small businesses.

The platform ensures smooth stock management, reducing manual errors through an interface. Built using HTML, CSS, JavaScript, Python, and Django, with MySQL as the database, InStock seamlessly integrates frontend, backend, and database functionalities to deliver a streamlined experience.

With secure user authentication, automated stock monitoring, and insightful reports, InStock empowers businesses to make data-driven decisions, prevent stock shortages, and enhance overall workflow. By bridging the gap between small-scale vendors and digital inventory solutions, InStock offers a practical, accessible, and efficient alternative to costly enterprise-level inventory management systems

Introduction to the Problem:

1.Some web application also charge a price for the use of the application.

2.It also lacks individual customization of the application provided.

3.Some beginners may struggle with the advance feature of the application

Existing Inventories:

1.Zoho Inventory:

https://www.zoho.com/in/inventory/?
utm_source=softwareworld.co&utm_medium=referral

2.Inflow:

https://www.inflowi 1 nventory.com/?
utm_source=softwareworld.co&utm_medium=referral

Solution to Problem

1.It wouldn’t charge the user to use the application.

2.As this application is for small scale based user it can be customized by the preference of the user.

3.They will also provided with a manual to help them understand how to use the application easily.

Objectives:

1.To develop a web-based inventory management system that allows users to track and manage their goods efficiently.
2.To automate stock monitoring with real-time updates and alerts to prevent shortages and overstocking.
3.To optimize inventory control by providing data-driven insights for better decision-making.
4.To enhance operational efficiency by reducing manual errors and streamlining stock management processes.

METHODOLOGY

1.REQUIREMENT ANALYSIS

Identify the needs of the users and defining key features.

2.SYSTEM DESIGN

Planning the system structure and defining tables for products , stock levels and creating wireframes for easy usability.

3.DEVELOPMENT

Building user interface using HTML , CSS , JavaScript and implementing logic using Python.

4.IMPLEMENTATION & TESTING

Testing each module and ensuring smooth interaction between frontend,backend and database.

5.DEPLOYMENT & MAINTENANCE

Deploy the system on a local server and providing documentation and user training and regular updates.

WORKFLOW

The InStock web application follows a structured workflow to ensure seamless inventory management:

1. User Login – Users securely log into the system to access Inventory controls.

2. Product Management – Users can add, update, and delete product details to keep inventory records accurate.

3. Stock Updates – Every stock movement (inward and outward) is recorded, ensuring real-time updates.

4. Alerts & Reports – The system generates reports and sends notifications when stocks are low.

This workflow ensures efficient tracking, error reduction, and automated stock monitoring, making inventory management simpler and more effective for small-scale businesses and vendors.

TOOLS AND TECHNOLOGIES

The InStock web application is built using a combination of frontend, backend, database, development, and hosting technologies to ensure smooth functionality and scalability:

Frontend Technologies:

HTML – Structuring web pages

CSS – Styling and layout design

JavaScript – Enhancing interactivity

Backend Technologies:

Python – Handling business logic

Django – Framework for backend development

Database Management:

MySQL – Storing product and inventory data

Development Tools:

Visual Studio Code – Code writing and editing

Git & GitHub – Version control and collaboration

Hosting:

WAMP – Local server setup for development

This tech stack ensures a user-friendly, efficient, and scalable inventory management system suited for small-scale vendors and businesses.

APPLICATIONS

1.Small and Medium Enterprises (SMEs) – Helps businesses track stock efficiently, ensuring smooth inventory management.

2.Retail Stores – Manages stock replenishment and sales reports to prevent shortages.

3.Supermarkets – Assists in demand forecasting and timely restocking of products.

4.Vegetable Vendors – Reduces wastage by monitoring inventory levels and optimizing supply management.

5.Dairy & Milk Shops – Manages stock of dairy products like milk, curd, and cheese, ensuring timely restocking to avoid spoilage.

These applications make InStock a valuable tool for businesses aiming to streamline their inventory processes and enhance operational efficiency.

BENEFITS

1.Stock Tracking – Allows users to monitor available goods and inventory levels in real time.

2.Inward & Outward Management – Keeps track of items added to or removed from stock for better control.

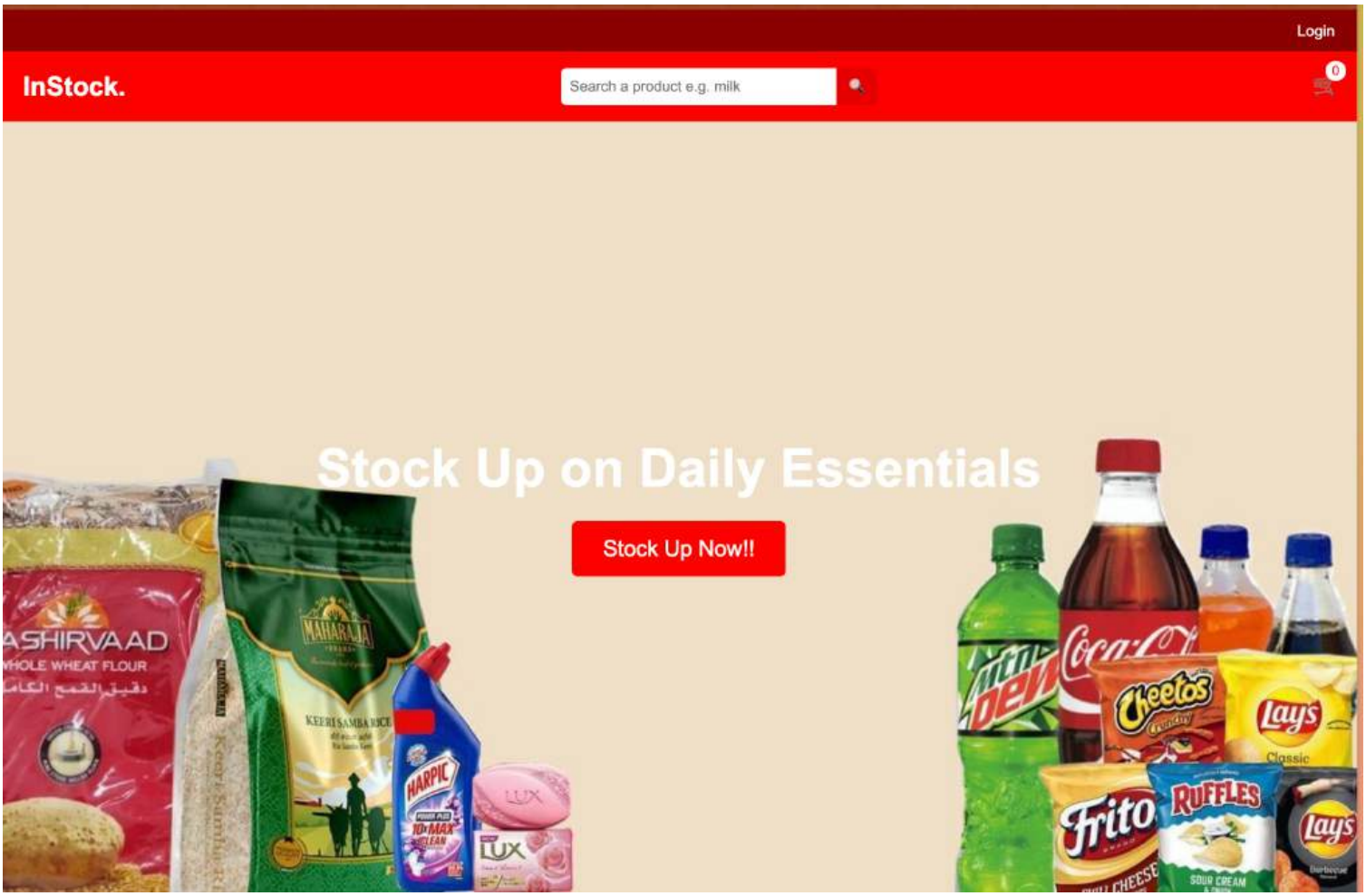
3.Low Stock Alerts – Notifies users when stock is running low, preventing shortages.

4.Business Efficiency – Helps shops, warehouses, and e-commerce businesses manage inventory smoothly.

5.Easy Management – Provides a structured system for handling products, reducing errors and saving time.

These features ensure streamlined inventory control, making stock tracking easier and more effective for small-scale businesses.

PROJECT SNAPSHOTS



Inventory | Food | Beverages | Household | **Personal Care**

Shampoo
$6.99
Quantity: 62

Toothpaste
$3.99
Quantity: 62

Deodorant
$4.99
Quantity: 62

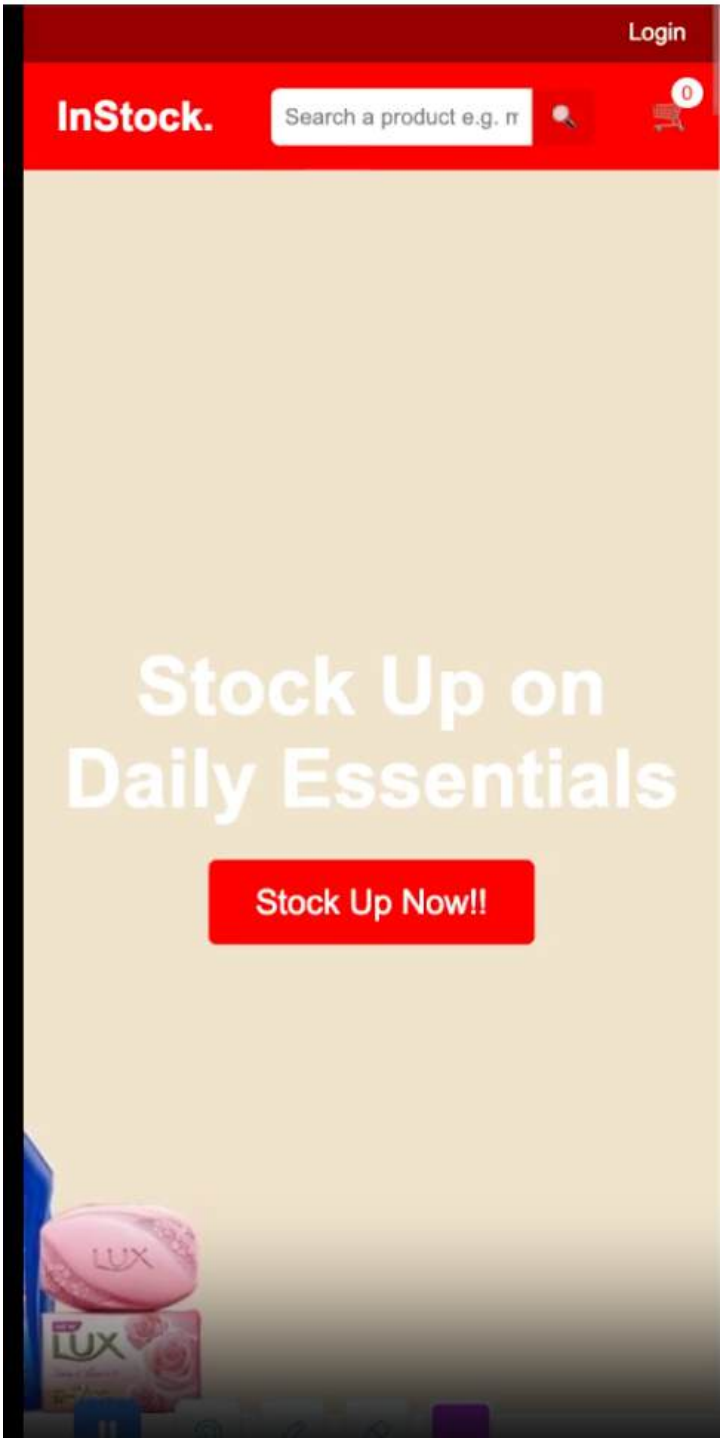
Body Wash
$5.99
Quantity: 62

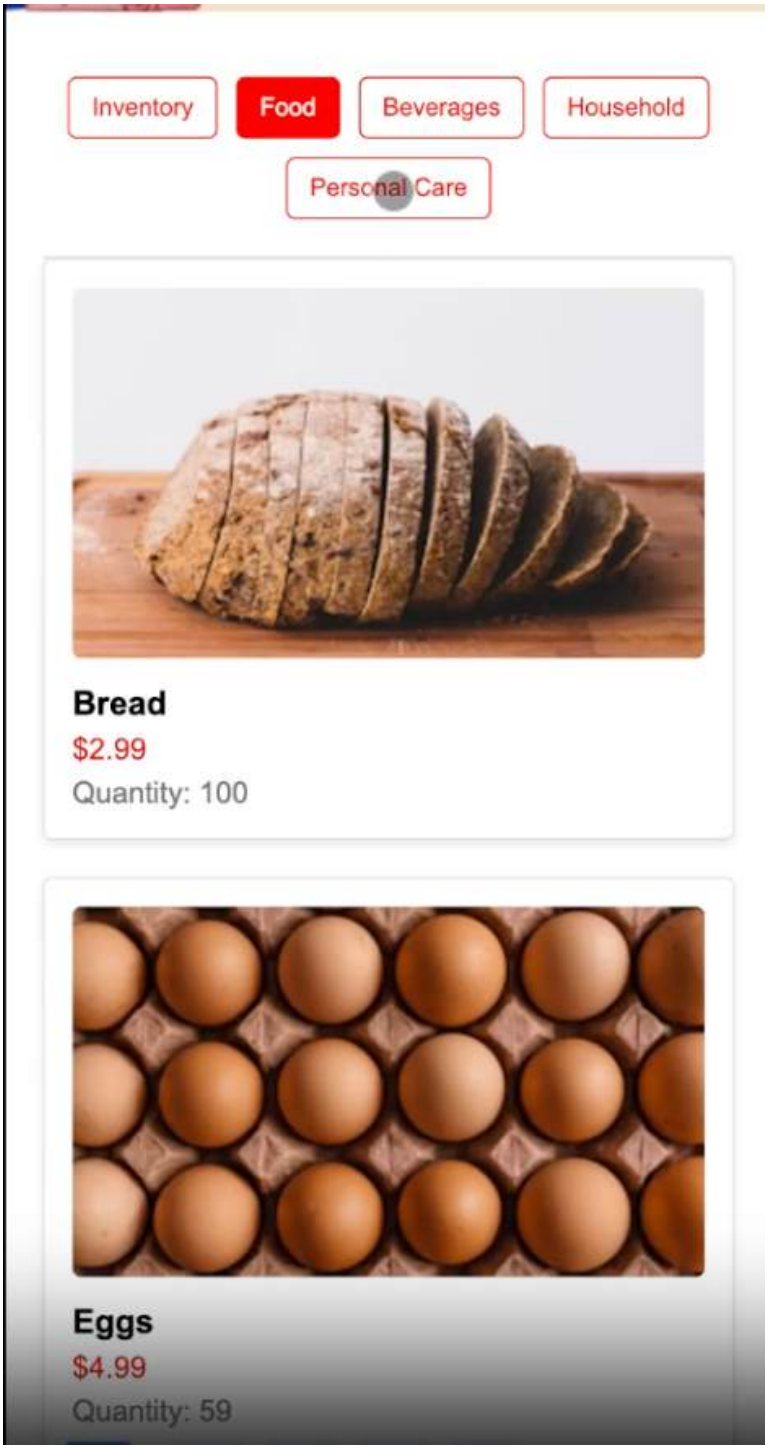
Hand Soap
$2.99
Quantity: 62

Lotion
$7.99
Quantity: 62

Tissues
$3.49
Quantity: 62

IN MOBILE VIEW





CHALLENGES

Limited Knowledge of Frontend Technologies – Since we are still in our second semester, mastering HTML, CSS, and JavaScript required extra effort in understanding layouts, responsiveness, and interactivity.

Consistency Across Devices – Making sure the design looked and worked well across different screen sizes and browsers required understanding media queries and responsiveness.

Handling Dynamic Elements – Implementing real-time updates, animations, and interactive features using JavaScript needed debugging and optimization to ensure smooth performance

Testing & Debugging Issues – The frontend often faced styling conflicts, rendering issues, and JavaScript errors, requiring continuous debugging and refinement to ensure a polished experience

CONCLUSION

InStock is a lightweight and efficient inventory management solution, designed to simplify stock tracking and enhance business operations. This project successfully implements a complete frontend, allowing users to interact seamlessly with the system.

Since we are currently in our second semester, we have focused solely on frontend development, as backend technologies are yet to be covered in our curriculum. Moving forward, we plan to continue developing this project by integrating backend functionality, database interactions, and advanced features to make InStock even more scalable and intelligent.