**DAV Institute of Engineering & Technology**

# Jalandhar

**BCA BATCH 2021 Onwards**

**Synopsis**

**Stock Management System**



**In partial fulfillment of the requirement for the**

# Award of degree of

**Bachelors of computer application**

**Submitted To. Submitted By.**

**Ms. Simranjot Kour Name: - Rahul kr. Paswan**

**Assistance Professor (CA) Univ. RN: -21020922**

**Name- Prince Kumar**

**Univ. RN: 2102918**

**Student Declaration**

I, Rahul Kumar Paswan and Prine Kumar are student of Dav Institute of Engineering and Technology, Jalandhar, declare my commitment to a major project guided by Ms. SimranJot Kaur from August 2023 to January 2024. I embrace this project with dedication, pledging to follow Ms. SimranJot Kaur's guidance, maintain academic integrity, and invest my utmost effort. I will communicate regularly, ensuring progress updates and seeking guidance as needed. This project holds significant importance in my academic journey, and I am determined to fulfill all requirements and expectations, using it as a stepping stone for my future endeavors.

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name – Rahul Kumar Paswan Name – Prince Kumar

Branch – BCA Branch - BCA

CR No – 3177/21 CRN – 3173/21

**Faculty Declaration**

I, Ms. SimranJot Kaur, faculty guide at Dav Institute of Engineering and Technology, Jalandhar, declare my commitment to mentoring and supervising Rahul Kumar Paswan's minor project from August 2023 to January 2024. I have discussed, approved the project's scope, and will provide guidance throughout. I'll ensure academic integrity, ethical research, and proper source acknowledgment. This declaration signifies my dedication to Rahul Kumar Paswan's academic growth.

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ms. SimranJot Kaur

Faculty Guide and Supervisor

**Certificate**

This is certified that Rahul Kumar Paswan and Prince Kumar are students of BCA at Dav institute of engineering and technology Jalandhar completed their project entitled “**Stock Management System**” Under my supervision and guidance in the academic year 2023-2024.This project fulfilled the requirement of the prescribed by “PUNJAB TECHNICAL UNVERSITY” for the said course.

Signature of student

It is further certified that the work is done in this project is a result of candidate’s own efforts has been submitted to any organization in any manner.

Signature of Supervisor

Signature of H.O.D

Signature of external examiner

**Acknowledgement**

I, Rahul Kumar Paswan, Prince Kumar want to express my gratitude to everyone who supported me during my major project at Dav Institute of Engineering and Technology, Jalandhar. I'm thankful to my mentor, Ms. SimranJot Kaur, for her guidance and encouragement. I also appreciate the help from my friends and fellow students, as well as the resources provided by the college. Lastly, my heartfelt thanks go to my family for their constant support. I couldn't have completed this project without all of your help.

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Thank You!

Rahul Kumar Paswan

Prince Kumar

**Project Title: Stock Management System**

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   1. **Introduction:** The Stock Management System is a comprehensive desktop application developed to efficiently manage retail shop operations. The project focuses on key features such as custom barcode generation, error-free billing, and a paperless workflow.
   2. **Objectives –**

* Implement a robust barcode generation feature for creating custom barcodes.
* Ensure error-free billing through automated price calculation and discount application.
* Digitize and automate processes to eliminate manual paperwork.
* Provide a centralized platform for managing the entire shop's operations, including inventory, sales, and customer information.

**3**. **Technologies Used:**

* 1. **Java -** Java serves as the primary programming language for developing the Stock Management System. Its platform independence, object-oriented nature, and extensive libraries make it a suitable choice for creating the application's logic and user interface.
  2. **MySQL -** MySQL is employed as the relational database management system (RDBMS) for the project.
  3. **JDBC -** Java Database Connectivity (JDBC) is utilized to establish a connection between the Java application and the MySQL database.
  4. **Java Swing -** Java Swing is a GUI (Graphical User Interface) toolkit for Java. It is used to create the graphical user interface of the desktop application. Java Swing provides a set of components for building interactive and user-friendly interfaces, allowing for the design of windows, buttons, forms, and other UI elements.
  5. **Barcode API -** The Barcode API is integrated into the system to facilitate the generation of custom barcodes. This feature is essential for efficient inventory tracking. The API allows the application to dynamically create and display barcodes for products, streamlining the checkout process and enhancing inventory management.

**4. Key Features –**

* 1. **Barcode Generation -** Custom barcode generation serves the purpose of uniquely identifying and labeling products within the inventory.
  2. **Eror-Free Billing –**
* Automated calculation of prices, quantities, and total amounts during the checkout process.
* Integration with the barcode system for seamless product identification and pricing retrieval.
* Application of discounts and promotions is automated based on predefined rules and customer loyalty programs.
  1. **Zere Paperwork –**
* Transition from manual, paper-based processes to digital workflows within the Stock Management System.
* Digital recording of sales transactions, inventory updates, and customer information.
* Electronic storage of invoices, receipts, and other relevant documents.
* Automation of reporting and analytics, minimizing the need for manual data entry and analysis.

**5. Benefits-** Implementing the Stock Management System revolutionizes retail operations, enhancing efficiency, customer service, and decision-making. The automated inventory control ensures precise stock levels, expediting transactions through barcode technology. Accurate billing and discounts contribute to a positive customer experience, while robust reporting provides data-driven insights. The system's paperless workflow promotes environmental sustainability, saving time and costs. Centralized shop management streamlines operations, and the project's adaptability to modern technologies ensures long-term relevance. In just 100 words, the Stock Management System emerges as a comprehensive solution, positively impacting diverse aspects of retail business management.

**6. Conclusion -** In summary, the Stock Management System encapsulates a transformative solution for retail business operations. Its key aspects, including automated inventory control, accurate billing, a paperless workflow, and centralized shop management, collectively elevate efficiency and customer service. The project's utilization of advanced technologies—Java, SQL, Oracle, and Barcode API—ensures a forward-looking approach to stock management. Emphasizing the significance of these technologies, the conclusion underscores their pivotal role in modernizing retail practices. As businesses evolve, the Stock Management System stands as a testament to the effectiveness of technological integration for enhanced stock management, poised to meet the dynamic demands of the retail landscape.