

Annexure-1

Billing Management & Inventory System

A Project Work

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Annexure-2
DECLARATION

I, **Pranav Goel**, student of '**Bachelor of Engineering in CSE-Cloud Computing**', **session:** Department of Computer Science and Engineering, Apex Institute of Technology, Chandigarh University, Punjab, hereby declare that the work presented in this Project Work entitled '**Billing and Inventory Management System**' is the outcome of our bona fide work and is correct to the best of our knowledge and this work has been undertaken taking care of Engineering Ethics. It contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

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ABSTRACT

BILLING & INVENTORY MANAGEMENT SYSTEM

The Billing & Inventory Management System is concerned with the automation of supermarkets. This program will assist salespeople in handling numerous sorts of client records. The product will assist the user in working in an extremely productive and efficient atmosphere. It wastes a significant amount of time and energy that could be spent on more productive pursuits. Aside from that, when customer strength grows, the work of managing each client's information becomes increasingly difficult. A salesperson faces numerous inefficiencies in the manual system. One of the most pressing issues in information retrieval. It is quite tough to compile the customer's total performance reports. Large record books must be kept in which important and irrelevant information is preserved. Automation deals with all of these issues and seeks to solve them in the most effective way possible. The new technology will suit the needs of every supermarket's salesperson, allowing them to handle the system efficiently. The Billing & Inventory Management System was created to make the system more dependable, simple, speedy, and informative.

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PROBLEM DEFINITION

It is extremely difficult to compete in today's fast-paced society without access to cutting-edge technology. The data has expanded significantly over the course of several years of operation. It is getting increasingly difficult for people to manage such data effectively. To be more efficient in order processing, we require a solution that uses technology and software to simplify their present procedures. As the quantity of orders increases, it becomes more challenging for salespeople to manage orders effectively and efficiently. It is quite difficult to sift through all of the paperwork and reverse orders.

PROJECT OVERVIEW

This project seeks to make the Billing System and Inventory Management easy and stress-free for both the customer and the owner. A computer system like this can assist in managing a big collection of data without the element of human inaccuracy. The project's goal is to create software that is quick in processing while also having a clutter-free user interface so that users can readily adjust to it and it can be used for a long period without failure or maintenance. The security of the manager's access has also been addressed to prevent unauthorized access.

SOFTWARE SPECIFICATIONS

- VS-Code
- Txt file Opener
- MinGW

EXISTING SYSTEM

For almost a decade, several supermarkets have used this sort of invoicing method. It has also been improved several times in response to the needs of merchants and customers. It performs the same function of computing the bill, delivering it to the client, and creates a stable database. They are slightly imprecise and can become stuck when printing. The system also considers their needs and offers them more commission. While this is true, the software's processing speed is not fast enough to allow it to work quickly. When the burden is high, the systems tend to hang. The existing system requires large personnel to operate it. The system does not make good use of its resources.

PROPOSED SYSTEM

The suggested solution is designed to give the capability of automating the supermarket's billing system. There is a need to build a new system to eliminate the bottlenecks of the present system. The new system should address the needs of both customers and merchants. The objective of this project is to make the present system more instructive, dependable, quick, and simple. There are several causes for the project's inception, including the fact that selling ten goods through the manual method of a salesman encounters numerous inefficiencies. It necessitates the handling of enormous record books that include both irrelevant and vital information, making it difficult to discover the necessary information. Object-Oriented Programming principles made it easy for me to construct project modules.

FEASIBILITY STUDY

A feasibility study is a method of analysing and determining whether or not an issue can be handled, to assist in answering the fundamental question of "should we pursue the suggested project ideas?" The study's efforts are all geared toward answering this question. A Feasibility Study is broad in nature and may be used for any sort of project, including system and software development, acquisitions, and other projects. A feasibility study is a test of the system's workability, organizational impact, ability to fulfil user demands, and effective use of resources. We may put our system to the test using various feasibilities.

OBJECTIVES

- To decrease the amount of time spent on management.
- To improve the system's efficiency and accuracy.
- To relieve labour strain by relieving workers of dull and monotonous tasks.
- To speed up the recovery of information.
- To improve the system's viability
- To remove a significant quantity of paperwork.
- To improve system reliability and eliminate the uncertainty.
- To lower the system's cost factor.
- To increase the system's flexibility.
- It offers an easy billing pattern solution.
- It keeps track of newly added categories or goods.

METHODOLOGY

There are 4 modules in this project. These are as follows:

- Segregated portals for customers and admin control
- Secure access to Inventory Management
- Self-checkout system for the customer
- Digital Invoice generated for the customer

Segregated portals for customers and admin control: This module segregates two different portals for the customer as well as the Inventory Manager. The inventory manager can create/modify/delete products according to the stock. The customer can buy the required products from their portal.

Secure access to Inventory Management: The Inventory manager gets secure access to their portal and they can manage their inventory however required by creating/modifying/deleting products.

Self-checkout system for the customer: The customer gets a user-friendly interface to order all the required products with the specified quantity and can checkout themselves without the need for any supervision

Digital Invoice generated for the customer: Keeping in mind the digital revolution as well as the save paper initiative, we generated a service of generating a digital invoice for all the customers in order reduce the demand for printing a bill, when not necessary.

CONCLUSION & DISCUSSION

This software has been designed to reduce the time taken to handle the sales activity. It is designed to replace an existing manual record system for reducing the time taken for calculations and for storing data. This system has been developed with the Concept of OOPs and File Handling. This system has been developed with OOPs concepts. The system is strong to handle daily operations where the database is cleared over a certain time. This system will reduce manual work, calculations and will also provide periodic reports at any time. Let's Discuss how else can the concept of the Billing and Inventory management system be improved over time.

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