



SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

Higher National Diploma in Information Technology
2021 Academic Year
Group Project

PROJECT PROPOSAL

A billing system for a retail shop

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1) Title

A billing system for a retail shop.

2) Introduction

This project proposal is submitted to meet the software development requirements of the Project module conducted by Advanced Technological institute Kurunegala.

A billing system is a vital component of any retail shop as it helps to manage and streamline the payment process for customers. This system is designed to automate the process of generating bills and receipts, making it easier for both the customers and the staff to keep track of the transactions. With a good billing system, a retail shop can save time and effort by eliminating the need for manual calculations and paperwork.

The main objective of a billing system is to provide an accurate and efficient way to calculate the total cost of the products or services purchased by the customer. This system should be user-friendly and easy to navigate, with a clear and concise interface that allows the staff to quickly generate bills and receipts.

So our proposal is a responsive website custom built for Sareeha Traders that makes the task easier. With the help of this system, Customers don't have to wait too long at a queue waiting for a bill.

The requirements of our clients are,

- Accurate calculations
- User Friendly Interface
- Customizable receipts
- Automatic inventory system
- Security
- Keeping track of the receipts

3) Background & Motivation

3.1) Background

The concept of billing systems dates back several decades when businesses started using manual methods of invoicing and billing. These manual systems involved generating bills and invoices by hand, calculating totals, and tracking payments and balances manually. With the growth of technology, billing systems have evolved to become more automated and streamlined, helping businesses to manage their billing and payment processes more efficiently.

Today, billing systems are an essential part of most businesses, particularly in the retail industry. They are used to manage the payment process, create invoices, and generate reports on sales and revenue. Modern billing systems are typically cloud-based, meaning that they are accessible from any device with an internet connection. They often include features such as customizable templates, automatic payment reminders, and integration with accounting

3.2) Motivation

The motivation behind building a billing system for a retail shop is to improve the efficiency, accuracy, and reliability of the payment process. A billing system can help to streamline the billing process by automating tasks that were previously done manually, such as calculating totals and generating invoices. This not only saves time but also reduces the risk of errors, which can lead to discrepancies in sales and inventory.

Overall, a billing system can help a retail shop to improve its operations and customer service, while also providing valuable data for strategic decision-making. By investing in a billing system, a retail shop can stay competitive in a fast-paced and rapidly evolving market, while also providing a seamless and professional payment experience for its customers.

- **Improved efficiency:**

A billing system can automate the billing process, reducing the time and effort required to generate bills and invoices manually.

- **Improved customer experience:**

A billing system can provide customers with fast and accurate billing, reducing wait times and improving overall customer satisfaction.

- **Detailed reporting:**

A billing system can generate detailed reports on sales, revenue, and profits, helping the retail shop to make informed decisions about pricing, promotions, and restocking.

- **Data security:**

A billing system can help to secure customer data and payment information, reducing the risk of data breaches and fraud

4) Problem in Brief

The billing system for a retail shop is facing several problems that need to be addressed. The system may be inefficient, slow, or prone to errors, resulting in customer dissatisfaction and revenue loss. Some specific problems that may need to be addressed include:

- **Inaccurate pricing:**

If the prices of items are not updated regularly or are entered incorrectly, customers may be charged the wrong amount, which can lead to disputes and loss of trust.

- **Long queues and wait times:**

If the system is slow or inefficient, customers may have to wait in long queues, leading to frustration and dissatisfaction.

- **Limited payment options:**

If the billing system does not support a variety of payment options, such as credit cards or mobile payments, it can inconvenience customers and reduce sales.

- **Lack of inventory tracking:**

If the system does not have an inventory tracking feature, the shop may run out of stock for popular items, leading to lost sales and dissatisfied customers.

- **Poor customer service:**

If the staff is not properly trained on the billing system or is unhelpful when customers have questions or concerns, it can lead to negative reviews and loss of business.

5) Aims and objectives

5.1) Aims

The aims of a billing system for a retail shop are to provide accurate pricing, efficient checkout process, multiple payment options, inventory tracking, customer service, and reporting and analytics. The billing system should aim to provide a seamless and satisfying checkout experience for customers while maximizing revenue and minimizing errors.

5.2) Objectives

- Minimizing errors in pricing and billing
- Reducing wait times for customers during checkout
- Increasing sales by offering multiple payment options and promoting upselling and cross-selling
- Optimizing inventory management by tracking stock levels and reordering products when necessary
- Improving customer satisfaction by providing excellent customer service and addressing customer concerns promptly
- Generating reports and analytics to inform business decisions and identify areas for improvement.

6) Proposed Solutions

The proposed system will provide the most wanted solutions to handle the current situation of the retail shop.

- This includes account creating, account verification, item showcasing, adding items to the cart and contacting details along with payment methods..
- The project is planned to create with Visual Studio and MySQL along with different programming languages.

7) Resources Requirements

7.1) Hardware:

- A desktop or laptop computer with sufficient processing power and memory to run Visual Studio and the billing system software.
- ARM64 or x64 processor; Quad-core or better recommended. ARM 32 processors are not supported.
- Minimum of 4 GB of RAM. Many factors impact resources used; we recommend 16 GB RAM for typical professional solutions.
- Minimum 2 vCPU and 8 GB RAM. 4 vCPU and 16 GB of RAM recommended.
- Hard disk space: Minimum of 850 MB up to 210 GB of available space, depending on features installed; typical installations require 20-50 GB of free space. We recommend installing Windows and Visual Studio on a solid-state drive (SSD) to increase performance.
- Video card that supports a minimum display resolution of WXGA (1366 by 768); Visual Studio will work best at a resolution of 1920 by 1080 or higher.

7.2) Software :

- Operating System: A supported operating system such as Windows 10 or Windows 11.
- Visual Studio: A licensed copy of Visual Studio, which is a development environment that enables programmers to create software applications for Windows, web, and mobile platforms.
- Database Management System: A database management system (DBMS) such as Microsoft SQL Server, which is used to store and manage data for the billing system.

8) Group Members

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 - <https://www.w3schools.com/cs/index.php>
- UI Designs
 - <https://www.youtube.com/watch?v=y13C9jn1n6Q>
- GUI designs
 - https://dribbble.com/tags/pos_system

Date :

Signature :