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DATABASE MANAGEMENT SYSTEMS

CAPSTONE PROJECT REPORT

DONE BY :

TEAM 4
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KGISL INSTITUTE OF TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
PHP & MySQL Billing System

INTRODUCTION

The Billing System is a comprehensive web-based application built using PHP and MySQL, designed for efficient management of sales, billing, and inventory operations. The system provides a user-friendly interface for creating and managing bills, tracking inventory, generating reports, and handling customer information. This solution is particularly useful for retail businesses, small shops, and any organization that needs to manage billing and inventory operations efficiently.

In today's competitive business environment, having an efficient and reliable billing system is essential for maintaining accurate financial records and providing excellent customer service. This PHP and MySQL-based solution addresses these needs by offering a secure, scalable platform that centralizes all aspects of the billing process. By automating routine tasks such as tax calculations, inventory updates, and report generation, the system significantly reduces human error and allows staff to focus on more valuable customer-oriented activities.

The system is designed with flexibility in mind, catering to businesses of various sizes and domains. Whether handling retail transactions with immediate payment or managing B2B operations with recurring billing cycles, the application provides customizable workflows to accommodate different business models. Its integration capabilities with barcode systems and support for multiple user roles make it adaptable to diverse operational requirements while maintaining robust data security and integrity throughout the billing lifecycle.

ABSTRACT

This billing system streamlines the sales and inventory management process by offering a centralized platform for tracking products, generating bills, managing quotations, and analyzing business performance. The system incorporates GST (Goods and Services Tax) calculations, customer information management, barcode generation, and detailed reporting features, all within a secure environment accessible only to authorized personnel.

OBJECTIVES

- Provide an easy-to-use interface for creating, viewing, and managing bills
- Track and manage inventory with real-time updates
- Generate detailed sales reports for different time periods (daily, monthly, yearly)
- Enable efficient customer information management
- Facilitate GST calculations and compliance
- Support barcode generation and printing functionality
- Allow for pending payment tracking
- Secure access to the system with user authentication
- Support quotation creation before final billing

INNOVATION

- QR code integration for quick bill access and sharing
- Barcode generation for efficient product identification and inventory management
- Serial number tracking for products that require unique identification
- Flexible GST handling (inclusive or exclusive of price) with multiple percentage options
- Multiple vendor management for comprehensive inventory tracking
- Hold item functionality for temporarily reserving products
- Pending payment tracking for managing credit sales

TECHNIQUES / TOOLS

Backend:

- PHP 7+ for server-side processing
- MySQL database for data storage and management
- Session-based authentication for security

Frontend:

- HTML5, CSS3, and JavaScript for user interface
- Bootstrap framework for responsive design
- jQuery for enhanced user interaction
- SCSS for advanced styling

Libraries:

- Composer for dependency management
- Bootstrap Select for enhanced form controls
- Font Awesome for iconography

MODULES

Authentication Module

- User login and registration
- Session management
- Access control

Dashboard Module

- Overview of key metrics
- Quick access to common tasks
- System status information

Billing Module

- Create new bills
- View and print existing bills
- Manage billing details (customer info, items, quantities, pricing)
- GST calculation
- Bill printing

Inventory Management Module

- Add new items
- Update item details
- Track item quantities
- Manage item categories
- Hold items functionality

Customer Management Module

- Store customer information
- Retrieve customer history
- Manage customer contact details

Quotation Module

- Create quotations for customers
- Convert quotations to bills
- Manage existing quotations

Vendor Management Module

- Add and manage vendors
- Track items by vendor

Reporting Module

- Generate sales reports (daily, monthly, yearly)
- Export reports to CSV
- Analyze profitability
- Track sales trends

Barcode Module

- Generate barcodes for items
- Print barcodes for inventory management

SERVICE AVAILABILITY

The billing system is designed as a web-based application that can be deployed in various environments:

Local Deployment

- Can be installed on a local server using XAMPP, WAMP, or similar stacks
- Accessible within a local network for small businesses with a single location

Cloud Deployment

- Can be hosted on cloud servers for access from multiple locations
- Supports secure remote access with proper authentication

Access Options

- Web-based interface accessible from any modern browser
- Responsive design for use on different devices (desktops, tablets)

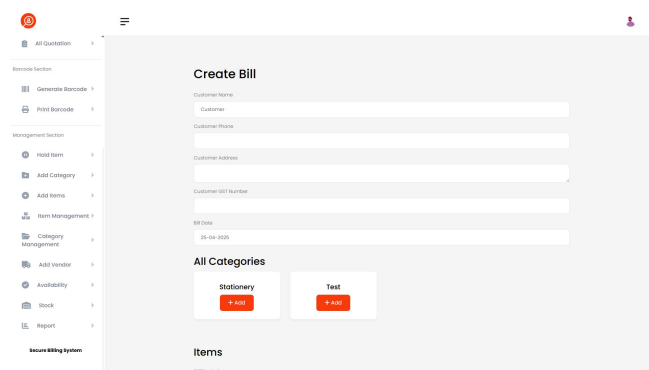
Backup & Recovery

- Database backup functionality for data protection
- Data export options for reporting and archiving

Scalability

- The system architecture supports scaling as business grows
- Modular design allows for adding new features as needed

SOURCE CODE SNAPSHOT:



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Bill Section

Create Bill

Add Bill With Serial No

All Bills

Pending Pay

Quotation Section

Create Quotation

All Quotation

Barcode Section

Generate Barcode

Print Barcode

Management Section

Add Item

Add Category

Add Items

Add Item

New Item

Category

Test

Price

800

Selling Price

800

Vendor Name

TEST

Serial Number

1234

Date

20-04-2025

Quantity

10

Add Item

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Bill Section

Create Bill

Add Bill With Serial No

All Bills

Pending Pay

Quotation Section

Create Quotation

All Quotation

Barcode Section

Generate Barcode

Print Barcode

Management Section

Add Item

Add Category

Add Items

Test

Item

Price

Selling Price

Vendor Name

Available

Quantity

NEW ITEM

800.00

800.00

TEST

10

1

Add

Close

Customer Address

QWERTY

Customer ID Number

12

RECEIPT

20-04-2025

All Categories

Stationery

Test

Search Items by Serial Number

Search for all items

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Bill Section

Create Bill

Add Bill With Serial No

All Bills

Pending Pay

Quotation Section

Create Quotation

All Quotation

Barcode Section

Generate Barcode

Print Barcode

Management Section

Add Item

Add Category

Add Items

BILL

Bill: 2025-04-20

Bill Number: 140

Customer Name: ABC

Customer Phone Number: 123

Customer Address: QWERTY

Items

Quantity

Selling Price

Total

NEW ITEM

10

800.00

8000

Total Quantity:

10

Total Amount:

8000

Stationery

8000.00

Total Amount:

8000.00

Test

800.00

Total Amount (incl. GST):

8780.00

Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

Check and Paying

Print Bill

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Bill Section

Create Bill

Add Bill With Serial No

All Bills

Pending Pay

Quotation Section

Create Quotation

All Quotation

Barcode Section

Generate Barcode

Print Barcode

Management Section

Add Item

Add Category

Add Items

Sales and Profit Report

Today's Total Sales: ₹11,794.54

Today's Profit: ₹10,233.50

Yesterday's Total Sales: 0.00

Yesterday's Profit: 0.00

Sales Difference from Yesterday: ₹11,794.54

Profit Difference from Yesterday: ₹10,233.50

Daily Sales

Date

Total Sales

2025-04-20

₹11,794.54

Monthly Sales

Monthly

Total Sales

2025-04

₹11,794.54

Download Reports

Download Daily Sales Report

Download Monthly Sales Report

Download Yearly Sales Report

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Bill Section

Create Bill

Add Bill With Serial No

All Bills

Pending Pay

Quotation Section

Create Quotation

All Quotation

Barcode Section

Generate Barcode

Print Barcode

Management Section

Add Item

Add Category

Add Items

Available Stocks

Total Stock Value: ₹11,538.00

#

Item Name

Category

Selling Price

Quantity

Stock Value

101

Sticky Notes

Stationery

₹10.00

9

₹90.00

102

Pen

Stationery

₹15.00

10

₹150.00

103

Pencil

Stationery

₹15.00

10

₹150.00

104

Erasor

Stationery

₹15.00

10

₹150.00

105

Sharpener

Stationery

₹15.00

10

₹150.00

106

Handbook (A4)

Stationery

₹10.00

10

₹100.00

107

Scale

Stationery

₹10.00

10

₹100.00

108

Color Pencils

Stationery

₹10.00

10

₹100.00

109

Sketch Pen

Stationery

₹10.00

10

₹100.00

110

Marker

Stationery

₹10.00

10

₹100.00

111

NEW ITEM

Test

800.00

10

₹8000.00

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VIDEO EXECUTION LINK:

<https://drive.google.com/file/d/1RpWfk0TLr4G1WJg7T0G6l08bu8zDXugS/view?usp=sharing>

CONCLUSION

The PHP and MySQL-based Billing System provides a comprehensive solution for businesses to manage their sales, inventory, and reporting needs efficiently. By combining user-friendly interfaces with powerful backend functionality, the system streamlines business operations and provides valuable insights into performance metrics. The integration of features like GST handling, barcode generation, quotation management, and detailed reporting makes this system a versatile tool for modern businesses of various sizes.

The modular architecture of the system allows for future enhancements and customizations based on specific business requirements. With its focus on security, efficiency, and ease of use, this billing system serves as an essential tool for businesses looking to digitize and optimize their sales and inventory management processes.

PROJECT TEAM DETAILS

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