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GST Inventory System

A Project Report

Submitted in partial fulfilment of the requirements for the

Award of the degree of

Master of Computer Applications (OL1624)

By

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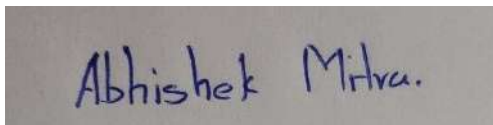# 2024

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Declaration by the Student

To whom-so-ever it may concern

I, **Abhishek Mitra, 322102726**, hereby declare that the work done by me on **"GST Inventory System"**, is a record of original work for the partial fulfilment of the requirements for the award of the degree, **Master of Computer Applications (OL1624)**.

Abhishek Mitra (322102726)

Signature of the student

Dated: 06-08-2024

Acknowledgement

I would like to express my sincere gratitude to our professors, for their invaluable support and guidance throughout the course of this project. Their expertise and encouragement were crucial in the completion of this project.

I also extend my gratitude to my family and friends for their constant support and understanding.

Thank you.

Abhishek Mitra

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Chapter - 1

Introduction

Aim

Objective of report the objective of this paper is to study the design and implementation for Goods and Services Tax (GST) Inventory System by making use of modern configuration software technologies. The new system, that works to ease the burden of filing monthly returns and minimise -perhaps eliminate- manual filings altogether providing an efficient way for businesses to keep a track record inventory management and calculation on GST while staying compliant with tax laws is in progress.

Importance

For any business, the economic sector whether goods or services require inventory management. Upkeeping inventory & associated tax are back-breaking duties for any business owner post GST introduction. Contents GST Inventory System is mainly required for the following purposes:

1. Precise computation of GST on every transaction.

2. Compliance with tax requirements.

3. Free from human error during the taxation calculations and inventory tracking.

4. Offering real-time inventory levels and tax liabilities.

Applicability

The GST Inventory System is relevant in most businesses such as retail, manufacturing, wholesale, and businesses that sell their products online. Any company that is into the b2c sales or trading of goods and services, which is liable to GST can benefit from this system. It can be used by:It can be used by:

- It is useful for small and medium enterprises SMEs engaging in the management of inventories as well as Goods and Services Tax GST.
- Big business with stock in their system and firms which have to deal with tax issues.
- Accountants and tax advisors to ensure the right records of the implemented GST

Scope

The scope of the proposed GST Inventory System includes the following key functionalities:

1. GST Calculation: Calculating the GST that is charged on every transaction the business makes based on the rate and rules for that specific transaction.

2. Reporting: Preparing of detailed report of inventories, sales, purchase, as well as the GST liability.

3. Integration: Including special integration into the current accounting and ERP systems for data integrity.

4. User Management: Offering privileges of access that will allow only the appropriate personnel to view certain data to secure the information provided.

5. Compliance: Checking to whether the system is up to date with the most current laws regarding GST.

Relevance

Thus, the importance of applying a GST Inventory System in today's business setting cannot be questioned. The complexity of modern tax legislation and the need for making accurate inventory continue to grow, which means that a firm needs a solid system to compete and remain legal. The GST Inventory System offers several advantages:The GST Inventory System offers several advantages:

- **Efficiency**: Saves time that would have otherwise been used undertaking tedious tasks that businesses owners and employees do not have time to do.
- **Accuracy**:   There's less likelihood of making errors while computing taxes or overemphasizing the inventory.
- **Compliance**: Saves the businesses from being penalized on account of failing to meet the current GST legislations.
- **Scalability**: Have the added advantage of expansion, thus being capable of handling large inventory and growing transactional demands of the business.

Another advantage that comes along with a successful adoption of a GST Inventory System is better control of the financial resources, enhancement of operations, and better compliance to taxes hence; improved business performance and growth.

We will explain the detailed information about the GST Inventory System and the way of developing it in the following sections of this report to ensure the understanding of the system architecture and its components, the approaches needed for its implementation, as well as the possible problems to be confronted

Chapter - 2

Review of Literature

Introduction

This chapter presents the relevant previous work of the research on GST Inventory Systems. It identifies and deals with databases and recent literature available on the subject, Including prior research work in the inventory management and GST compliance context. The following is the summary of the areas of research gap that forms the basis for the proposed work in this review.

Related Studies

1. **Study 1**: "Impact of GST on Inventory Management in Indian SMEs"

- **Author**: Sharma A.
- **Year**: 2018
- **Objectives**: In order to conduct this research, the following questions will be asked in relation to the implementation of GST in SMEs in India regarding inventory management practices prevalent in the firms:
- **Sample**: 50 SMEs from different industries.
- **Tools Used**: From the produced survey, interviews and financial analysis.
- **Findings**: They elucidated that GST has impacted the IMP substantially, thereby enhancing the tax compliance but at the same time escalating operational embellishment. Poor adoption in implementation was observed among SMEs when the system was first introduced, although, firms were able to observe the lengthy gains in managing business process and increased financial control.

2. **Study 2**: "Automation of GST Compliance in Inventory Systems"

- **Author**: Gupta, R.; Patel, S.
- **Year**: 2019
- **Objectives**: Proposed is a mixed method research in order to quantify and qualify the extent of automated GST compliance solutions connected with inventory management systems.
- **Sample**: 30 automated GST compliance software employed by the businesses.
- **Tools Used**: Examples, output, and use feedback.

- **Findings**: Regarding efficiency, there was evidence of time-saving and accuracy and eradication of manual errors when GST compliance was automated. But it was also revealed that integration issues of software and constant update due to change in laws governing taxes were some issues that were identified in the study.

3. **Study 3**: "Real-Time Inventory Tracking and GST Compliance"

- **Author**: Singh, K Archana, & Verma, P Poonam.
- **Year**: 2020
- **Objectives**: To examine the utility of real time stock monitoring for GST compliance in the retail business.
- **Sample**: that a total of 20 retail companies.
- **Tools Used**: Daily thermometer, GST reports, and KPI.
- **Findings**: The lights real-time inventory-tracking facilities offered a lot of help to maintain right records and compliance on GST. Some improvements that were stated in the course of the study included the visibility of the inventory as well as decreased differences in the computation of taxes.

4. **Study 4**: "GST and Inventory Optimization: A Case Study Approach"

- **Author**: Das, M.
- **Year**: 2021
- **Objectives**: To investigate as to how the level of GST compliance influences the use of inventory operating tactics among manufacturing firms.
- **Sample**: 10 manufacturing companies in its group.
- **Tools Used**: Questionnaires, organization's reports, and interviews with the executives of the organizations.
- **Findings**: Firms which embedded GST compliance issues in their inventory management systems obtained improved performance and minimized loss. The study again stressed that, it is critical to coordinate the tax compliance process with the stock control systems to get the desired results.

5. **Study 5**: "Challenges in Implementing GST Inventory Systems in E-commerce"

- **Author**: Sethi Nair, & Avtar kumar.
- **Year**: 2022
- **Objectives**: The objective of this study was to establish the GAPs encountered by e-commerce

- **Sample**: 15 firms that operate within e-commerce environment.
- **Tools Used**: People can be surveyed, system can be evaluated using performance metrics and Information Technology personnel and staff can be interviewed.
- **Findings**: Some of the issues that e-commerce giants encountered into were how to manage the returns, multiple warehouses, and varying taxation systems. The study advised that both challenges need a flexible and scalable approach to be effectively solved.

Research Gaps

The review of literature reveals several research gaps that underscore the need for the proposed GST Inventory System:The review of literature reveals several research gaps that underscore the need for the proposed GST Inventory System:

1. **Integration Challenges**: The paper reveals positive effects of automation but there is lacking evidence on the matter concerning harmonization of GST compliance with ERP as well as accounting systems.

2. **Real-Time Updates**: Most papers emphasize on how the various systems require constant update due to the numerous changes in GST regulations, however, there is a shortage of approaches that provide for real-time assistance and conformity assessment.

3. **Sector-Specific Solutions**: Many of the current studies pay attention to the general framework, while the specific sectoral needs and problems are underspecified, especially those in the e-business and manufacturing industries.

4. **User Experience**: Thus, literature gap exists concerning the user experience and adoption barriers of implementing GST Inventory Systems by businesses especially the SMEs.

5. **Comprehensive Reporting**: Present research can fail to consider more elements of existing software that solve reporting issues or provide flexible reporting solutions for businesses.

That is why it is important to have a sound GST Inventory System, which should have full integration, real-time update facilities, sector-wise solution, improved and easy to use interface and, most importantly better reporting solutions than the current one. The proposed work indeed intends to cope with these issues and develop a solution which can well serve the evolving purpose of helping the Businesses to manage their stock and GST in an efficient **manner.**

Chapter - 3

Implementation of Project

Objectives

The first goal of the GST Compliant Inventory Control System is to make the management of the stocks easier for offline retail shops with respect to GST. The system aims to:

- There should be a smooth way of handling stocks especially the products in store.
- Support in GST return filing process with highest procedural efficiency.
- Manage and automate the billing and invoicing.
- Engage shop employees with an operational interface.

Hypothesis

The present concept of a GST Compliant Inventory Control System will greatly help the offline retail shops as it will ease their work of inventory control and GST compliance greatly. This will consequently lead to efficiency in the filing of taxes and a general increased efficiency of its operations.

Experimental Work

The practical work incurred in the undertaking of the project included formulating and implementing different modules of GST Compliant Inventory Control System and to test them in a live business scenario of a retail shop.

Methodology

The project followed a structured approach with the following steps:The project followed a structured approach with the following steps:

1. **Requirement Analysis**: Photographic store owners' needs at the offline retail shops and the GST compliance concern.

2. **System Design**: Developing the Data Flow Diagrams (DFD), Entity Relationship (ER) diagrams and system architectural specification.

3. **Development**: Creating codes for the several modules in Java, JavaScript, and SQL.

4. **Testing**: To check compliance of the various tests on the system to the required standards, different tests are conducted.

5. **Deployment**: Implementing the system in retail set up and creating awareness among the employees.

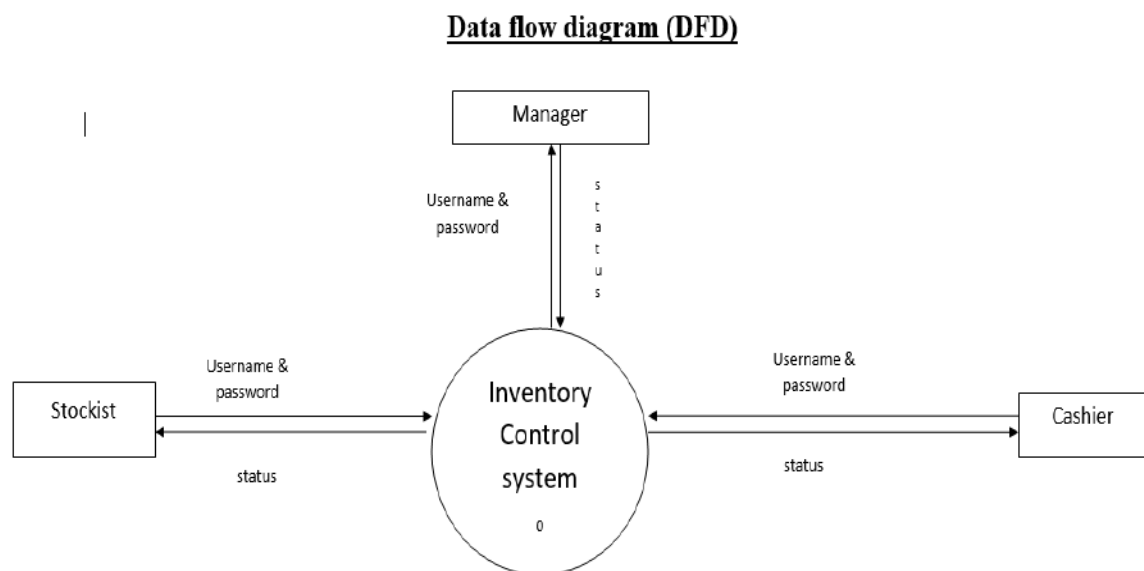## System Design

- **Data Flow Diagrams (DFD)**

  - DFD Level 0 :

Figure 3.1: The context diagram representing the system as a single process.
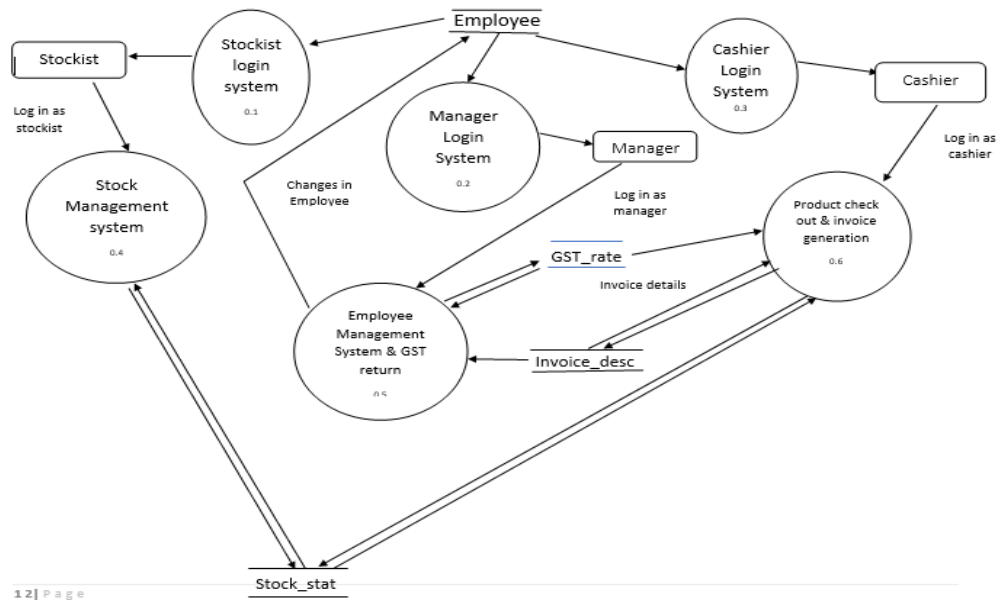
➢ Level 1

Figure 3.2: The decomposition of the context diagram into major processes.
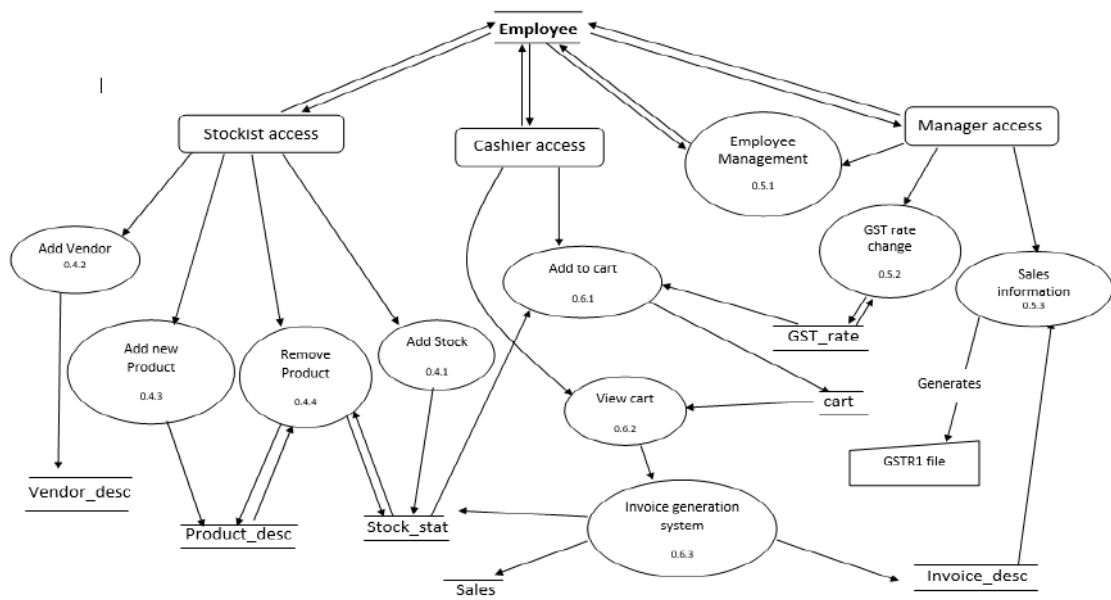
➢ Level 2

Figure 3.3: Further decomposition of Level 1 processes into sub-processes.
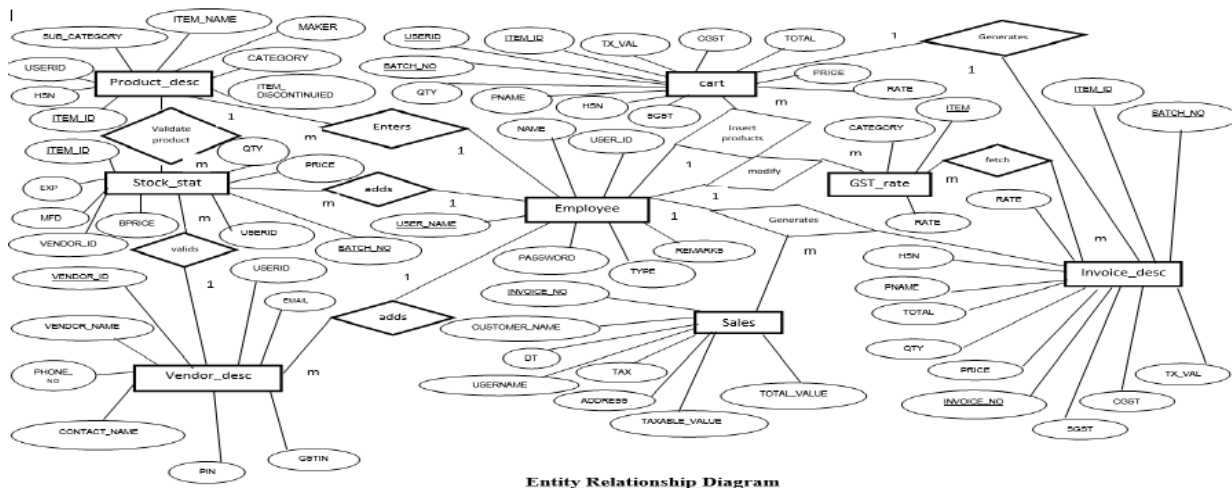
- <u>Entity-Relationship (ER) Diagram</u> :

Figure 3.4: Visual representation of the database structure.

Architecture

The architecture of the GST Compliant Inventory Control System is based on a three-tier model.

1. **Presentation Layer**: This is the front-end of the system that has been implemented using Html, CSS and Javascript to create a favorable and engorged user interface for the shop employees.

2. **Business Logic Layer**: This layer contains the basic behaviors of the system or applications and it is developed using Java platform. It processes the business rules, arithmetic and the actual computations The numerator 5a is greater than the denominator 'b'.

3. **Data Access Layer**: This layer is solely responsible for interacting with the database and the management of storing and processing data using SQL commands. It is instrumental in making sure that any information obtained is easily recoverable and that storage is optimally done.

Coding

The coding part of the project involves developing various modules that handle different aspects of inventory management and GST compliance. Below are the key components with detailed code and diagrams.

https://github.com/Abhi986shek/GST-Compliant-Inventory-Control-System

In here, I have placed a GitHub link where the whole project will be available, including the HTML pages, controller classes, repository classes, entity classes, and everything else as they are too extensive to include here.

Project Description

The description of the system's functionalities is as follows:

- ## <u>Login Page</u> :

The login page is the initial interface where users enter their credentials to access the system. The functionalities are as follows:

User Authentication: Users enter their username and password.

Error Handling: If incorrect credentials are provided, an error message is displayed, prompting the user to re-enter valid credentials.

Screenshot:

Figure 3.5: Screenshot of the main Login Page

Figure 3.6: Screenshot of the Error Handling of the login page

- ## <u>Navigation Options</u> :

Once logged in, users can navigate to different pages based on their roles. The available pages are:

1. Manager Page

2. Stockiest Page

3. Cashier Page

1. Manager Page

WELCOME Asish

ROLE : MANAGER

| Add Employee | Manage Employee | Change GST Rate | Sales Information |

Figure 3.7: Screenshot of the Manager Page

The Manager Page is divided into four main sections, each with its own functionalities:

> ➢ **Add Employee**

   - Add New Employee: Allows the manager to input details for new employees and add them to the system.

   - Screenshot:

Logout

WELCOME Asish

ROLE : MANAGER

| Add Employee | Manage Employee | Change GST Rate | Sales Information |

Add Employee

Username	Username
Password	Password
Name	Name
Type	Select
Reset	Submit

Figure 3.8: Screenshot of the Add Employee section

- Table:

SHOW COLUMNS FROM users;

FIELD	TYPE	NULL	KEY	DEFAULT
USERNAME	CHARACTER VARYING(255)	NO	PRI	NULL
NAME	CHARACTER VARYING(255)	YES		NULL
PASSWORD	CHARACTER VARYING(255)	YES		NULL
ROLE	CHARACTER VARYING(255)	YES		NULL
STATUS	CHARACTER VARYING(255)	YES		NULL

(5 rows, 0 ms)

Table 3.1: Sample Employee data generated by the system.

➢ **Manage Employee**

- **Edit Employee Details:** Managers can edit the details of existing employees.

- **Delete Employee:** Managers can remove employees from the system.

- **View Employee List**: Displays a list of all employees with their details.

- **Manage Employee Status:** Managers can block or unblock employees. An unblocked employee will not be able to log in and will receive a message saying "You are not authorized" if they attempt to log in.

- **Screenshot:**

Figure 3.9: Screenshot of Manage Employee section

➢ **Change GST Rate**

- **Update GST Rate:** Managers can update the GST rate applied to sales within the system.

- **Screenshot:**

Figure 3.10: Screenshot of the Change GST Rate section

- **Table:**

FIELD	TYPE	NULL	KEY	DEFAULT
ITEM	CHARACTER VARYING(255)	NO	PRI	NULL
CAT	CHARACTER VARYING(255)	YES		NULL
RATE	DOUBLE PRECISION	YES		NULL

SHOW COLUMNS FROM gstrate;
(3 rows, 2 ms)

Table 3.2: Sample GST Rate data generated by the system.

> ➢ **Sales Report**

- **Generate Sales Report**: Managers can generate sales reports for specific time periods.

- **View Sales Data**: Displays detailed sales data and analytics.

- **Screenshot**:

Figure 3.11: Screenshot of the Sales Information section

- **Table:**

Table 3.3: Sample Sales report data generated by the system.

2. Stockiest Page

The Stockiest Page includes functionalities for managing inventory and stock.

Figure 3.12: Screenshot of the Stockiest Page

➢ **Add New Product**

- **Add New Product**: Add new products to the inventory.

- **Screenshot**:

Figure 3.13: Screenshot of the Add New Product section

- **Table**:

Table 3.4: Sample Product data generated by the system.

➢ **Add New Vendor**

- **Add New Vendor:** Add new vendors to the system.

- **Screenshot:**

Figure 3.14: Screenshot of the Add New Vendor section

- Table:

SHOW COLUMNS FROM vendor;

FIELD	TYPE	NULL	KEY	DEFAULT
VENDOR_NAME	CHARACTER VARYING(255)	NO	PRI	NULL
ADDRESS	CHARACTER VARYING(255)	YES		NULL
EMAIL_ID	CHARACTER VARYING(255)	YES		NULL
GST_IN	CHARACTER VARYING(255)	YES		NULL
MOBILE_NO	BIGINT	YES		NULL
PIN_CODE	BIGINT	YES		NULL
VENDOR_CONTACT	CHARACTER VARYING(255)	YES		NULL

(7 rows, 11 ms)

Table 3.5: Sample Vendor report data generated by the system.

➢ **Add Stock**

- Add Stock: Add new stock items to the inventory.

- Screenshot:

Figure 3.15: Screenshot of the Add Stock section

- Table:

SHOW COLUMNS FROM stock;

FIELD	TYPE	NULL	KEY	DEFAULT
STOCK_ID	INTEGER	NO	PRI	NULL
MF_DATE	CHARACTER VARYING(255)	YES		NULL
BATCH_NO	CHARACTER VARYING(255)	YES		NULL
BUY_PRICE	DOUBLE PRECISION	YES		NULL
EXP_DATE	CHARACTER VARYING(255)	YES		NULL
ITEM_ID	CHARACTER VARYING(255)	YES		NULL
ITEM_NAME	CHARACTER VARYING(255)	YES		NULL
QUANTITY	DOUBLE PRECISION	YES		NULL
SELL_PRICE	DOUBLE PRECISION	YES		NULL
VENDOR_ID	CHARACTER VARYING(255)	YES		NULL

(10 rows, 0 ms)

Table 3.6: Sample Stock report data generated by the system.

➢ **Remove Product**

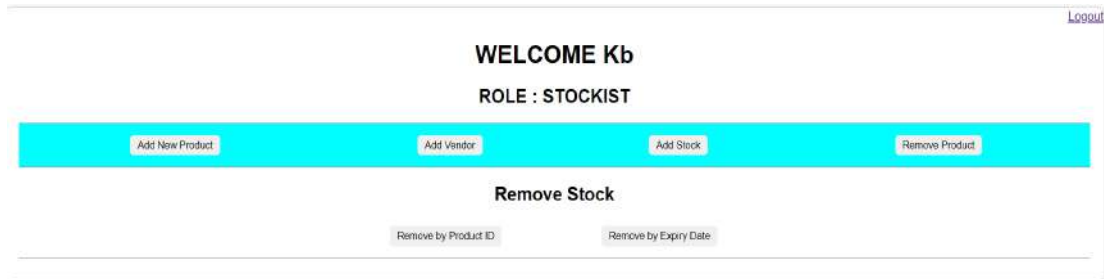- **Remove Product**: Remove products from the inventory.

- **Screenshot:**

Figure 3.16: Screenshot of Remove Product section

Cashier Page

The Cashier Page is designed for handling sales transactions.

Figure 3.17: Screenshot of the Cashier Page

➢ **Add to Cart**

- **Add to Cart**: Cashiers can add items to the cart.

- **Screenshot**:

Figure 3.18: Screenshot of the Add To Cart section
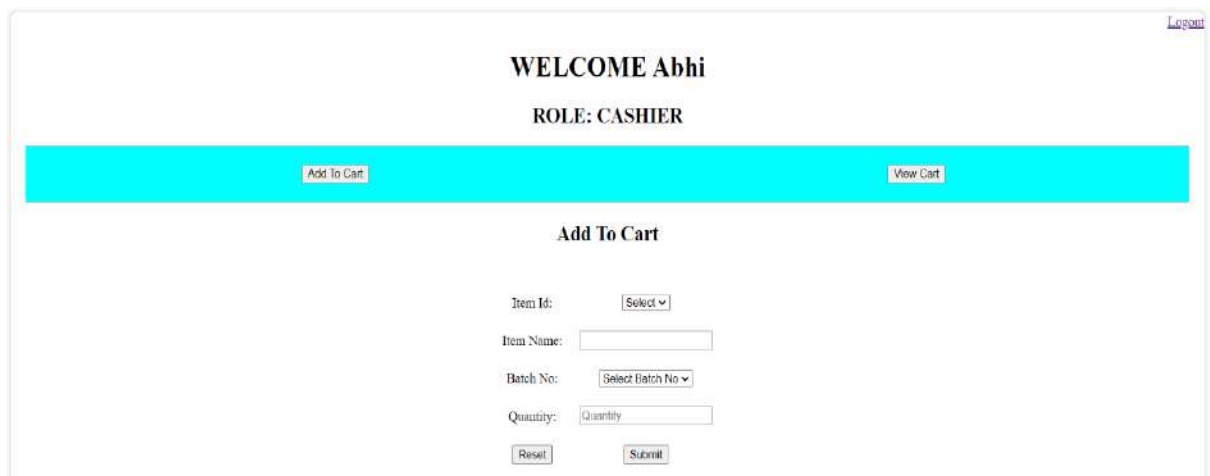
- Table:


```
SHOW COLUMNS FROM cart;
FIELD                 TYPE                          NULL  KEY  DEFAULT
CART_ID               INTEGER                       NO    PRI  NULL
BATCH_NO              CHARACTER VARYING(255)  YES        NULL
CGST                  DOUBLE PRECISION            YES        NULL
GST                   DOUBLE PRECISION            YES        NULL
GST_RATE              DOUBLE PRECISION            YES        NULL
HSN_CODE              CHARACTER VARYING(255)  YES        NULL
ITEM_ID               CHARACTER VARYING(255)  YES        NULL
ITEM_NAME             CHARACTER VARYING(255)  YES        NULL
QUANTITY              DOUBLE PRECISION            YES        NULL
SELL_PRICE            DOUBLE PRECISION            YES        NULL
SGST                  DOUBLE PRECISION            YES        NULL
TOTALWITH_GST         DOUBLE PRECISION            YES        NULL
TRANSANCTION_VALUE  DOUBLE PRECISION            YES        NULL
USER_NAME             CHARACTER VARYING(255)  YES        NULL
(14 rows, 0 ms)
```

Table 3.7: Sample Cart data generated by the system.

➢ **View Cart***

- View Cart: Displays items added to the cart. Items added by one cashier will not be visible to another cashier.

- Checkout: Redirects to a page where customer information, such as name and address, needs to be entered.

Screenshot:

Figure 3.19: Screenshot of the View Cart section

- Customer Information Page: After submitting customer information, it redirects to the Invoice Generator page.

Screenshot:

Figure 3.20: Screenshot of the Customer Information Page

- Invoice Generator: Generates an invoice that can be downloaded as a PDF.

Screenshot:

Figure 3.21: Screenshot of the Invoice

Application Features

1. **Manage Employee Section**:

- Entering a user ID fetches details regarding the name and status (blocked/unblocked) of that particular user ID.

2. **Change User Status**:

- Changing the status of a particular user from unblocked to blocked prevents that user from logging in from the login page.

3. **Change GST Rate Section:**

- Selecting a category from the dropdown lists all items under that category in the items dropdown.

- Selecting a particular item from the list fetches the GST rate of that item.

4. **Add New Product Section:**

- While inputting an item, selecting the relevant category of that item from the category dropdown fetches all the sub-categories under that category in the sub-category dropdown.

- In case of a new category or sub-category, there is an option to add a new category/sub-category within the same dropdown.

5. **Add To Cart Section:**

- After selecting the batch number, the available quantity for a particular item ID is automatically fetched.

Testing

The testing phase involved:

- **Unit Testing**: No unit testing was done.
- **Integration Testing**: Modules were integrated, and their interactions were tested to ensure seamless operation.
- **User Acceptance Testing (UAT)**: The system was tested by end-users (shop employees) to ensure it met their requirements and was easy to use.

Implementation

The implementation of the GST Compliant Inventory Control System involved:

1. **Installation**: Setting up the system on the shop's computers.
2. **Configuration**: Customizing the system settings as per the shop's requirements.
3. **Training**: Conducting training sessions for the shop employees on how to use the system.
4. **Go-Live**: Officially launching the system for everyday use in the shop.

Conclusion

The GST Compliant Inventory Control System was successfully implemented in the retail shop, significantly improving inventory management and GST compliance. The system is user-friendly and has reduced the time and effort required for inventory tasks and tax filing.

Chapter – 4

Results and Discussions

Introduction

This chapter aims to present the findings gotten from the application of the GST Compliant Inventory Control System. The further discussions concerning the received outcomes are the system effectiveness, the degree of its fidelity in creating invoices, the level of convenience when managing the inventory and employees, as well as the efficiency of the GSTR1 generation/filing. These are the figures, the tables, the graphs, the screenshots or the outputs as it is necessary to present the readers with the complete picture of the functionality and efficiency of the developed system.

Results

- Inventory Management

Functionalities of the inventory management module include the general management of products on stock, stock information, vendor details and others were checked and validated. These aspects were successfully managed by the system and real-time information along with an alert of low quantity was displaying on the screen.
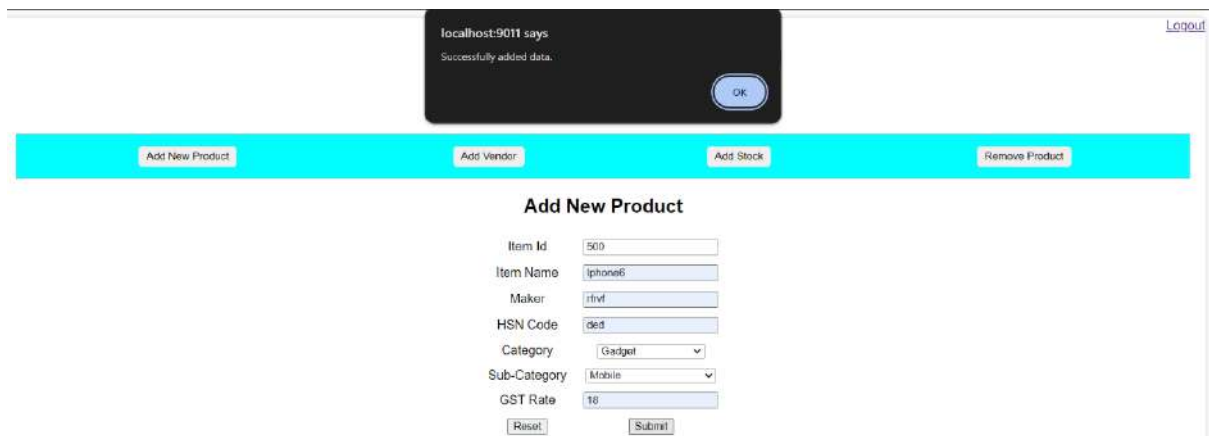
Screenshot:

Figure 4.1: Screenshot of the Adding a New Product

- **Invoice Generation**

In this case, the invoice generation module was assessed based on a set of criterions that checked for the compliance to the GST rates and standards. It was effective in the creation of invoice and all details like product description, customers' information, GST etc were also created.

Table: Example of Invoice Information

Select * from invoice;													
INVOICE_ID	BATCH_NO	CGST	GST	GST_RATE	HSN_CODE	INVOICE_NO	ITEM_ID	ITEM_NAME	QUANTITY	SELL_PRICE	SGST	TOTALWITH_GST	TRANSANCTION_VAL
1	2	11250.0	22500.0	18.0	PH2005	1	23	Philips Daily Collection HD2582/00 2-Slice Pop-up Toaster	50.0	2500.0	11250.0	147500.0	125000.0
2	2	587.5	1175.0	5.0	TF2002	1	14	Grill Sambal Chicken	50.0	470.0	587.5	24675.0	23500.0
33	1	180.0	360.0	18.0	AV2000	2	10	Shrimp and Coriander Dumplings	10.0	200.0	180.0	2360.0	2000.0
34	1	450000.0	900000.0	18.0	AP2024	2	1	Iphone11	100.0	50000.0	450000.0	5900000.0	5000000.0
(4 rows, 0 ms)													

Table 4.1: Sample Invoice data generated by the system.

Screenshot:

Figure 4.2: Screenshot of the Invoice

- **Employee Management**

For the verification of the created employee management module functionalities, tests were conducted to add, modify, and delete records for some of the employees. These operations were carried out in the system effectively, and thus, human resource information was well managed.

Screenshot (Add Employee) :

Figure 4.3: Screenshot of the Adding a New Employee

Screenshot (Managing Employye):

Figure 4.4: Screenshot of Managing Employe

- **Report Generation**

The report generation feature was tested regarding the possibility of creating different reports such as the sales reports, stock reports, and employee performance reports. These reports were also generated fairly well by the system, and were useful for the decision-making process of a business.

Table: The following are guidelines for presenting Sales report data SAMPLE SALES REPORT DATA

	A	B	C	D	E	F	G	H	I	J	K
1	Sell ID	Transaction Value	CGST	SGST	GST	Total with GST	Invoice No	Customer Name	Customer Address	Transaction Date	
2	1	148500	11837.5	11837.5	23675	172175	1	abjishek	5646565	23-07-2024	
3	33	5002000	450180	450180	900360	5902360	2	Abhishek	Korar Bagan, Bongaon, North 24 pgs, 743235	26-07-2024	
4	34	4000	360	360	720	4720	3	abjishek	korar Bagan	26-07-2024	
5											
6											
7											
8											

Table 4.2: Sample Cart data generated by the system.

Screenshot:

Figure 4.5: Screenshot of Generating Sales Report

Discussions

- Inventory Management Efficiency

It was observed that the inventory management system used was one of the best as it provided current stock status with live tracking alerting users when specific stocks were low. Use of graphics showing stocks enabled one to comprehend the status of stocks and come up with the appropriate decisions.

- Skill and Efficiency in Invoicing

Its ability to generate invoices was as good as its previous performance since the details required and the GST norms were included. Having analyzed the sample invoice data table and the system's screenshots, there was enough evidence to prove the credibility of the system.

- Employee Management

The last was true to the employee management module that we inherited as the best solution for the management of employees' records. They said that with regards to the add and manage employee features it was easy to operate the software for the various processes of human resource.

- **Comprehensive Report Generation**

The report generation feature provided detailed analysis on sales, stock, and employees' performance. The agility of the system raised the reliability of the reports produced, which improved business decision-making.

Conclusion

The positive outcomes that were observed in the course of the experiment with the implementation of the GST Compliant Inventory Control System would testify to its efficiency in regard to the inventory, invoicing, filing of GST returns as well as record keeping of the organisation's employees. The additional graphs, tables, figures, and screenshots demonstrated favourable results of the system and recognized its effectiveness in the results enhancement of the business processes.

The discussion and illustration of the results of the project are given in this chapter, to explain the efficiency of the developed system. If you want to add any specific data or more screenshots you want to share with the readers then please do inform me I will try to incorporate this chapter more to that

Chapter – 5

Conclusion and Future Scope

Conclusion

Conclusively it can be stated that the objectives set for the GST Compliant Inventory Control System project has been effectively implemented to control inventory, generate invoices and even for filing GST returns for an offline retail shop. The efficient comprehensive system helped to automate the distinct business process, therefore, working rates were enhanced and errors were minimized. Key findings from the project include:Key findings from the project include:

1. **Effective Inventory Management**: C, on central and consignment items the real-time data of stock, vendor, and stock details made the inventory control easy and effective.

2. **Accurate Invoice Generation**: The invoices were also created in following the GST structure with product details, customer and the tax computation.

3. **Streamlined GSTR1 Filing**: Automated preparation of GSTR1 in the mandated excel format cut down the amount of work to be done in filing GST return.

4. **Efficient Employee Management**: The system was very helpful in documenting the employees as it could assign, edit, or even exclude employees' details as needed.

5. **Comprehensive Reporting:** This functionality of the report generation was very useful in gaining superior business understanding of sales, stock, and employees' performance in the organization.

In general, the project proved that offline retail business can also establish compliance with GST alongside inventory management. The effectiveness of the system and the degree of attained accuracy was ensured through various tests and employment of the system in practice.

Future Scope

As for the suggested here GST Compliant Inventory Control System, it has been established as efficient Nevertheless, there are several more directions for future development and enhancement . Potential future developments include:

1**. Automated GST Rate Updates**: Adding an API that checks for GST rates change based on government announcements would improve the system and reduce manual intervention.

2. **Expanded GST Return Generation**: It would be helpful to introduce elements that allow preparing the other returns under GST such as GSTR2 and GSTR3.

3. **Enhanced User Interface**: Providing a better look and feel for the application, more precisely and most effective manner would update and develop the application's front end.

4. **Mobile Application**: Adding a mobile application to the system will increase the usability of the business by allowing the use of mobile phones to manage the inventory and create bills anywhere.

5. **Integration with E-commerce Platforms**: Linking the system with some of the widely used e- commerce solutions would enhance the control over the online and offline sales fronts.

6. **Advanced Analytics**: Applying big data and use of machine learning for accurate expectations on stock flow or sales trends for more accurate decision making.

7. **Multi-language Support**: Incorporation of capability to expand the system to other languages would be useful since not all users in areas of the world are able read and write English.

8. **Scalability for Larger Businesses**: Improving the system's capacity to accommodate a greater number of products, and a higher number of sales transactions in larger corporations.

Applicability

The GST Compliant Inventory Control System is for every type of business organization involved in selling goods that requires managing stock, issuing bills, and dealing with GST. Due to the availability of customizable features and its relative flexibility of the system, it can easily be applied to businesses of all sizes and types, which can enhance their performance and non-compliance with taxes.

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