Seamless Invoicing

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Abstract—**This Seamless Invoicing is an attempt to automate the Billing Invoice Process and Inventory management in an organization which provides software solution to the small unit of businesses such as Trading businesses (Grains, Pulses, Oil seeds), General store, Industries. This web portal is built to create a sale agreement for a new customer(client), Amount calculation and generate the invoice for a customer(client), as well as allow to client to request product from web portal to admin of company by generating invoice and acknowledgement for admin. Further, it also offers and update, cancel services for generated invoices. Apart from that, it also provide functionality to manage monthly sales reports, number of invoices generated, client details, payment details.**

Keywords—Billing Invoice, Trading Businesses, sale agreement, track records, Invoice Processing, Web portal, client, admin acknowledgement

I. INTRODUCTION

Seamless Invoicing is a process of generating invoice from client side (client itself able to generate invoice by portal by requesting particular goods to admin of any company).It consist of following characteristics: (1)Essay and effective UI for client as well as admi to generate invoicing, (2)track records of generated invoice,(3)client details manage, (4)Monthly Tax calculation that is IGST ,CGST and SGST, (5)If client generate invoice for particular product the this will direct acknowledge to admin, (6)Allow Client to track hole details of requesting invoice and total payment done by him on particular company, (7) Allow admin to track all client details, their generated invoice and print option for duplicate invoice.

As per the survey there are almost 80% of company (Rice mills, Pulse mill , and other grain and pulses industries) are not well equipped in terms of their sale system, currently they are using manual approach for hiring workers to track details and which create a loophole in system. For instance, there is a chance of human error or any thieving or larceny.

Therefor our system create a secure and uncomplicated way to generate invoice, which provide client as well as admin to track all details in a uninvolved and effortless way.

II. OBJECTIVES

The main objective of our system is to improve the current sale system for any trading business and industries and make it even more flexible or uncomplicated for company admin as well as client (customers). Further, significantly assist to automate the logistics of invoicing generation and managing inventory, furnish the customer with a cognitive and comfortable user interface with facilities of accessing services without visiting the office and typical software. The users of our system are:

A. Client requesting for goods

This System is for the customers requesting or buying goods. Its allow and provide client to generate invoice for particular goods for particular industries by follow few easy steps this will also provide acknowledgment to admin or company owner about the sale agreement

B. Admin (Company Owner)

The system provide any industries (Trading industries ,Pulses or Grains Processing Industries).This web portal is fruitful to company in many ways: Provide easy interface for track all records of client and manage them. As client generate invoicing admin knows all the details and deliver the items as per mention as well as it also know about the payment mode either online or cash. The word "data" is plural, not singular.

III. SYSTEM ARCHITECTURE

The architecture of the proposed system consists of the following components:

A. Graphical User Interface Block (GUI block)

The GUI block deals with the interface for the user where the client(customer) Or Admin will login and generated invoice. It acts as a communicator which connects the database and helps in transfer of data from Database to GUI.

B. Check Inventory

Check Inventory is a process that can check the product for which the invoice is generated is available in stock or notify customer about product availability. Whereas, on the admin side it provide managing product with it HSN code.

C. Perform Required Calculation

The actual processing take place in this block. The calculation related to amount of product according to rate that per define by admin and perform all processing steps that required such a save date to database as well as acknowledgment to admin and assigning request to admin dashboard.

D. Database Block

It is used for the storage of data.This tier consists of all the data that is needed for the processing of the entire project such as registered client and registered company details as well as details of tax such as IGST,CGST,SGST.
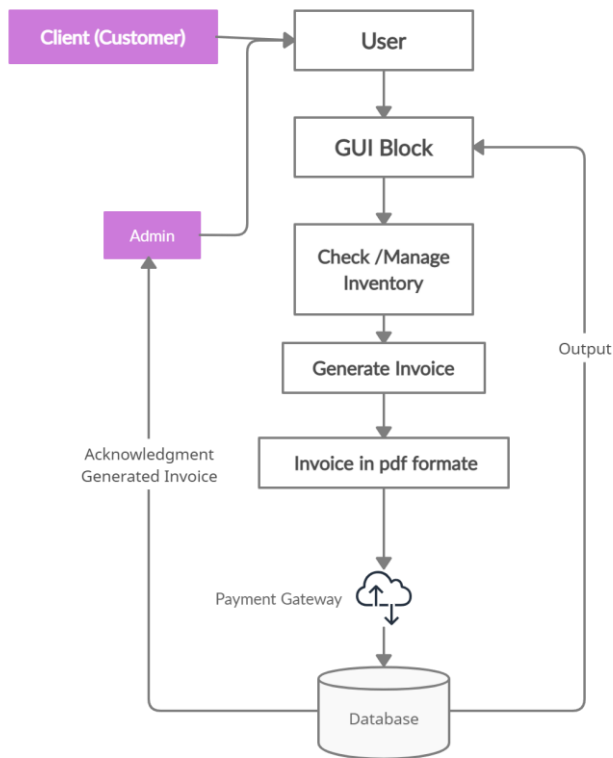
Fig. 1. Architecture of system

IV. METHODOLOGY

The proposed system consists of the following modules:

A. Admin Module

The admin will be able to perform the following tasks:

- Login
- Dashboard
- Generate Invoice
- Generate challan
- Print Duplicate Invoice
- Tax Info
    - Data Wise Tax info
    - All tax info
- Product
    - All Product Info
    - Add product
    - Remove Product
    - Update Product
Client
    - Add Client
    - Remove Client
    - Update Client
    - Find Client Details
- IGST Invoice
- Delete Invoice
- All Reports
    - Invoice Records
    - Client Records
    - Product Records

B. Client Module

The Client can perform the following tasks:

- Sign Up
- Log in
- Generate Invoice
- Tax Info
    - Data Wise Tax info
    - All tax info
- Product Info
- Client Manage
- Print Invoice
- All Reports
    - Invoice Records
    - Client Records
    - Product Records

C. Working

The User (Client/Customer) will first create an account and login into the system and generate invoice / assign request for particular goods from portal to host admin company. User has two options for payment [1] Online mode [2] Offline mode (Cash). Then, this direct notify to admin dashboard and if admin will accept that request for particular goods then, by accepting the request and further goods delivery done manually by admin. While, system has easy and convenient user interface that allow then to generate government valid invoice as well as all the details are count automatically either it cost or applied tax (if any).
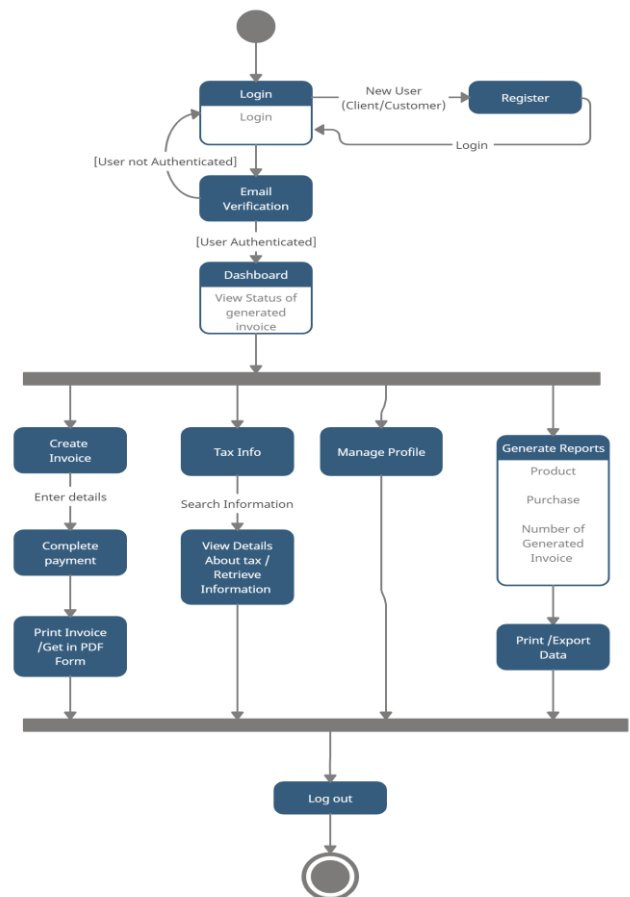

Fig. 2. State Diagram for Client / Customer

The Admin side has more functionality compare to client First all, Admin can receive request of client invoice on his dashboard the if admin accept the request then only the invoice should be valid. Apart from that, admin can also generate invoice for other client how will not use the portal. Turning to the other functionality. Firstly, convenient user interface which allow to create invoice in few easy steps and gave option to print and download as Pdf format. Admin can add client details and manage as well as track the number of invoice generated by them by retrieve information in reports format.
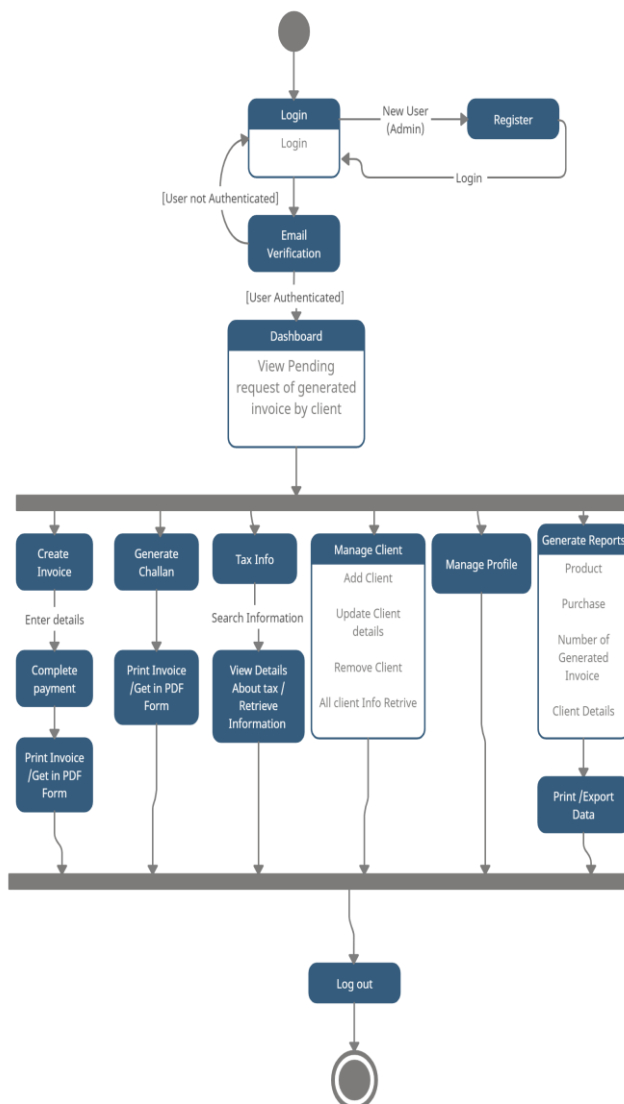

Fig. 3. State Diagram for Admin

The proposed system will be implemented as a web application based on dot net framework. The various tools a and technologies that will be used to developed the system are:

- **Microsoft Visual Studio-**This is the main framework which will be used to develop our system.The system is a web-based application made through ASP. NET.

ASP.NET is an open-source framework which is used for building modern web applications.

- **SQL server management studio-** Database is an integral part of any developed application as all the information about the users is stored in the database. SQL stands for Structured Query Language which lets us manipulate and access databases. SQL server management studio is an integrated environment for managing any SQL infrastructure. It is used to access, configure, manage, administer and develop all components of SQL server.

V. CONCLUSION

The proposed system helps the small unit of business Such as (Trading Business, rice, pulses mill, business of other seeds and raw foods items). This gives them a convenient and easy uncomplex way of generated invoice and making whole trading business simple and enhance them to grow more by avoiding the typical manually data entry and retrieve information from accounted books. Apart from that, all the tax amount calculation (IGST,CGST, SGST and TCS). This system also benefits the client (customer) as system has suitable and appropriate user interface so they can easily generate invoice and also track all details regarding Generated invoices. All in all this system make trading business more smoother, faster and timely.

REFERENCES

[1] A. Arsanjani. "Rule Object Pattern Language". Proceedings of PLOP2000.

[2] R.T.V. Braga, F.S.R. Germano, and P.C. Masiero, "A Pattern Language for Business Resource Management", Proceedings of the 6th Annual Conference on Pattern Languages of Programs (PLOP'99), v7, 1-33, Monticello, Illinois, USA, August 1999.

[3] Crowley Maritime Corporation, Definition of the term Invoice. http://www.crowley.com/

[4] E. B. Fernandez and X. Yuan, "Semantic analysis patterns", Proceedings of the 19th Int. Conf. on Conceptual Modeling, ER2000, Lecture Notes in Computer Science 1920, Springer 2000, 183-195. Also available from: http://www.cse.fau.edu/~ed/SAPpaper2.pdf

[5] E.B. Fernandez, B. Yuan, X. and S. Brey, "An Analysis Pattern for Order and Shipment of a Product," Procs. of the 7th Pattern Languages of Programs (PLoP) Conference. http://stwww.cs.uiuc.edu/~plop/plop00, August, 2000.

[6] E. B. Fernandez, Y. Liu, and R.Y. Pan, "Patterns for Internet shops ", Procs. of PLoP 2001, http://jerry.cs.uiuc.edu/~plop/plop2001/accepted_submissions/accepted-papers.html Invoice Payment create validate payment create receive payment prepare validate send make payment 12

[7] E.B.Fernandez and Y.Liu, "The Account Analysis Pattern", Procs. of EuroPLoP (Pattern Languages of Programs). http://www.hillside.net/europlop/EuroPLoP2002/

[8] E. B. Fernandez, D. L. laRed M., J. Forneron, V. E. Uribe, and G. Rodriguez G. A secure analysis pattern for handling legal cases", Procs. of the 6th Latin American Conference on Pattern Languages of Programming

(SugarLoafPLoP'2007), 178-187. http://sugarloafplop.dsc.upe.br/AnaisSugar2007_WEB.pdf

[9] M. Fowler, Analysis Patterns-Reusable Object Models, Addison-Wesley, 1997.

[10] Gamma, E., Helm, R., Johnson, R. and Vlissides, J.: Design patterns – Elements of reusable object-oriented software, Addison-Wesley 1995.

[11] D.Hay, Data model patterns-- Conventions of thought, Dorset House Publ., 1996. Chapter 7: Accounting.

[12] M.Netter and G.Pernul, "Integrating security patterns into the electronic invoicing process", accepted for the Third Int. Workshop on Secure System Methodologies using Patterns (SPattern 2009).

[13] John Pierce, Design patterns, Cal State University, San Jose, CA http://www.cs.sjsu.edu/faculty/pearce/oom/patterns/behavioral/strategy.htm

[14] SAP United States, http://www.sap.com/usa/solutions/solutionextensions/invoicemanagement/index.epx

[15] L. Silverston, The data model resource book (revised edition), Vol. 1, Wiley 2001, Chapter 7, vol. 1: Invoicing