

ERP FOR GROCERY SHOP

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ABSTRACT

ERP is the integrated management of core business processes, often in real-time and mediated by software and technology. It can be used to collect, store, manage and interpret data from all business activities. This work focuses to develop an ERP for a grocery store. This ERP provides a package comprising different modules, such as accounting, purchase, inventory and sales. We develop web based ERP for Grocery store where all the important information like product availability, daily monthly sale, profit & loss are stored and access through web application.

Index Terms: ERP, software and technology

Introduction

Enterprise resource planning (ERP) is business process management software that allows an organization to use a system of integrated applications to manage the business. It includes product planning, development, manufacturing, sales and marketing. Some of the most common ERP modules include those for product planning, material purchasing, inventory control, distribution, accounting marketing and finance.

Literature Survey:

Now a day's, people are using internet as one of the basic need. Online is the new big thing. Everything from a small pin to large home furnishings items are available online for the transaction. People are having eased to buy everything they want. Buying things online is beneficial in so many ways. First of all it saves time, it is convenient. Shopping online saves logistics for you. The e-Commerce people deliver the product to your door steps. You have a lot of options to choose from. When you shop normally you have some constraints like brands, location, pricing. Shopping online gives you freedom to shop from anywhere throughout the country. All the brands are available, no location barriers, various options.

In paper [1] a review of the articles and business reports related to consumers' grocery shopping decision making process, in both offline and online retail channels. The intent was to acquire a

general as such the focus relies mostly on the decisional phase and influencing pre-decisional phase of the grocery shopper decision making process. Based on the outcome of the literature review performed, a conceptual framework that guided the design and performance of the empirical studies, aiming at providing answers to the proposed research questions, is also presented.

In paper [2] a prospect about online grocery shopping is shown where we can see that it has becomes more and more popular in recent years. To facilitate the purchase process, many online stores provide a shopping recommendation system for their consumers. So far, the generic recommendation systems mainly consider preferences of a consumer based on his/her purchase histories. Nevertheless, it is noted that there is nothing to do with the right timing to purchase a product from the view point of product replenishment or economic purchasing. Hence, we develop a new recommendation scheme especially for online grocery shopping by incorporating two additional considerations, i.e., product replenishment and product promotion. We believe that such a new scheme should be able to provide a better recommendation list which fit consumer desires, needs, and budget considerations and finally boost transactions.

In paper [3] we can learn about 3D shopping. Generally we can see that the online shopping has normal text and pictures but this website

www.easygrocery.co.uk has developed an innovative way of displaying the products in 3D manner. This 3D system follows the mental model of the user as opposed to that of the developer.

Existing System:

- Most of the grocery shops running on-premises ERP software.
- Trained personal is required to work with ERP software.

Disadvantages:

- Need dedicated Server/Workstation to install and configure.
- Need to work only from the shop premises and cannot work on the go.
- Additional cost is required for customization, upgrade and maintenance of software.
- To maintenance of computer hardware is required (which requires additional cost).

- Very less chance of upgrading to the latest technology and is very expensive.

Proposed System:

- Develop ERP software using deploy in Cloud Server.
- ERP helps in streamlining your Business Process and Workflows.

Advantages:

- Work from anywhere and also from any devices such as Mobile, Tablet and Laptop on the go.
- No need to maintain servers, ERP software and forget about the data loss and maintaining backup of data.
- Customization, upgrade and maintenance of software is free and always with latest technologies.
- Trained personal is not required and the implementation/maintenance cost is less.

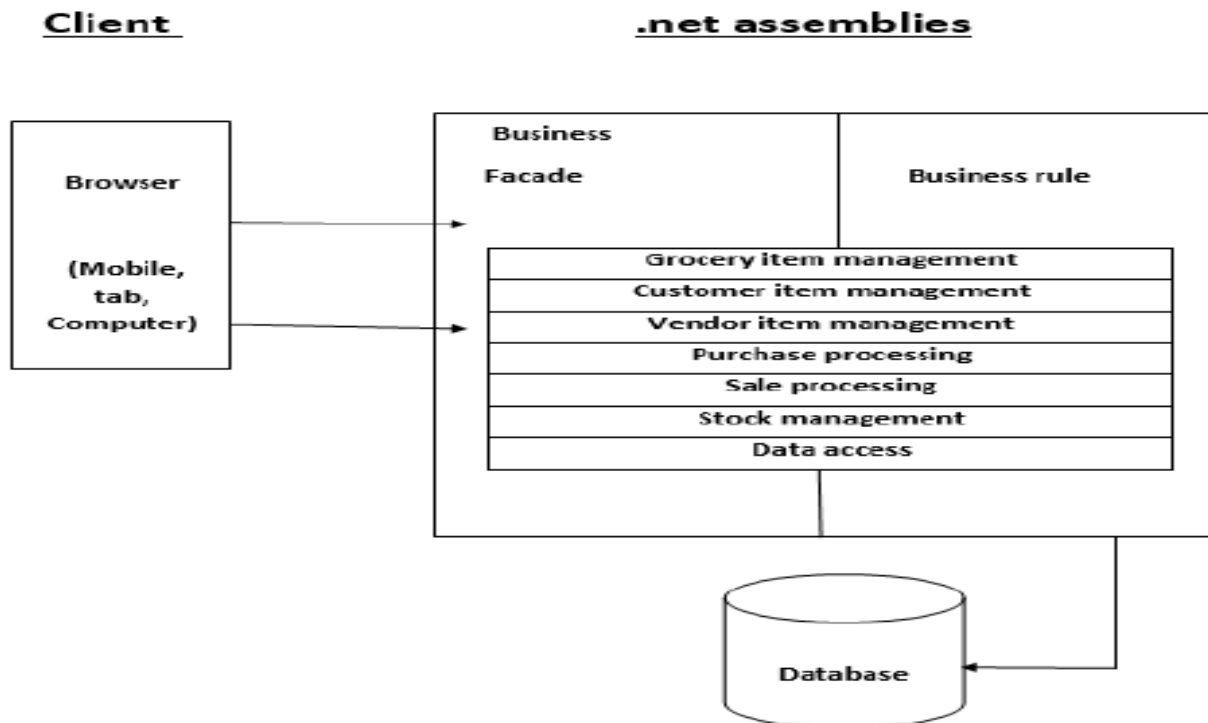


Figure 1: Architecture:

Business Facade Layer:

The Business Facade layer provides interfaces to the Presentation layer. This layer is implemented as the Business Facade project in the ERP.sln solution file. The Business Facade layer serves as an isolation layer, segregating the user interface from the implementation of the various business functions. Apart from low-level system and

support functions, all calls to database servers are made through this assembly.

Business Rules Layer:

The Business Rules layer, which is implemented as the Business Rules project in the ERP.sln solution file, contains the implementation of the various business rules and logic. Business rules do validation tasks.

Database:

A database management system (DBMS) is a computer software application that interacts with the user, other applications, and the database itself to capture and analyze data. A general-purpose DBMS is designed to allow the definition, creation.

Modules Description:

Account:

Whole inflow & outflow of money/capital is managed by account module. This module keeps track of all account related transactions like expenditures, Balance sheet, account ledgers, budgeting, bank statements, payment receipts, tax management etc. Accounting reporting is easy task for this module of ERP. Any Accounting data that is required for running business is available on one click in Account module.

Inventory:

The objective of inventory system is to provide uninterrupted production, sales, and/or customer service levels at the minimum cost. The inventory system strategy that companies use when they store a large amount of inventory because they are likely to run out of stock. Companies that use this strategy have higher costs initially, but it cuts down the number of lost sales that happen when there is not enough inventory. It involves the items, Unit of Measurement, item inward and stock.

The purchase department initiates the purchase process by raising the purchase order. Purchase orders are created when there is shortage of materials for production of finished products. The vendor supplies goods based on the purchase order. All purchase orders are treated as pending purchase orders till the time material is received from the vendors.

Purchase invoice is created which is a reference for the finance department to make a payment. The stock updates are reflected in the stock ledger and the stock registers. General ledger account updates are reflected in the balance sheet, P / L statement and general ledger.

Sales:

This process facilitate billing functions such as issuing of invoices based on goods / services provided, generating perform invoices, issuing credit notes resulting corresponding entries in accounts receivable and control account of general ledger.

This process allows a company to manage sales operations quickly and efficiently. This process handles regular sales order, cost order, customer return and collect order. Through use of templates, the system allows quick data entry process to manage products ranging from standard to Engineering to Order (ETO). On time ATP helps in identifying when a product is available for delivery and making necessary commitment/allocation for the same.

Expected Outcome:

Login:

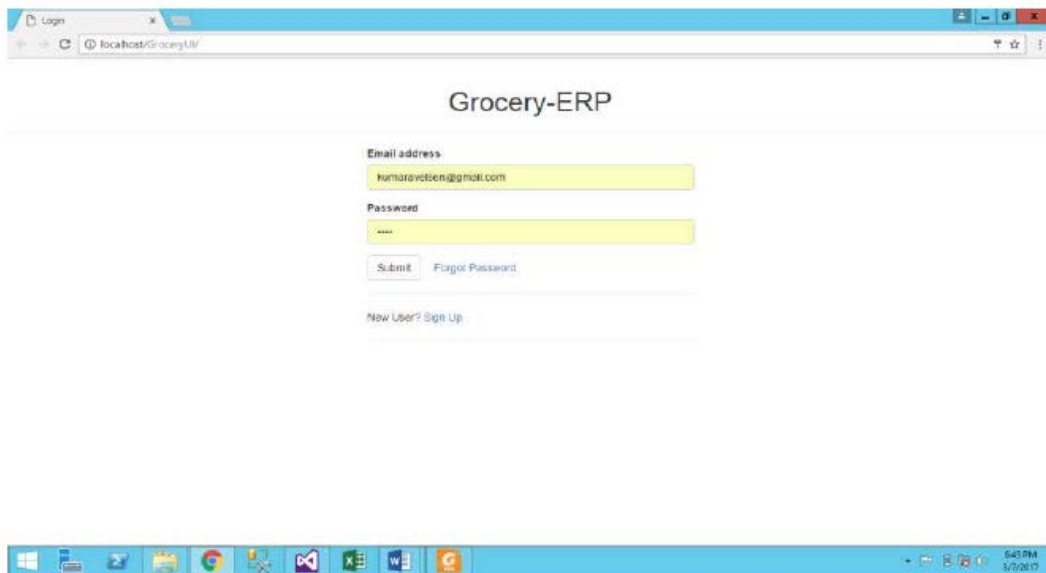


Figure 2: Purchase:

User Registration:

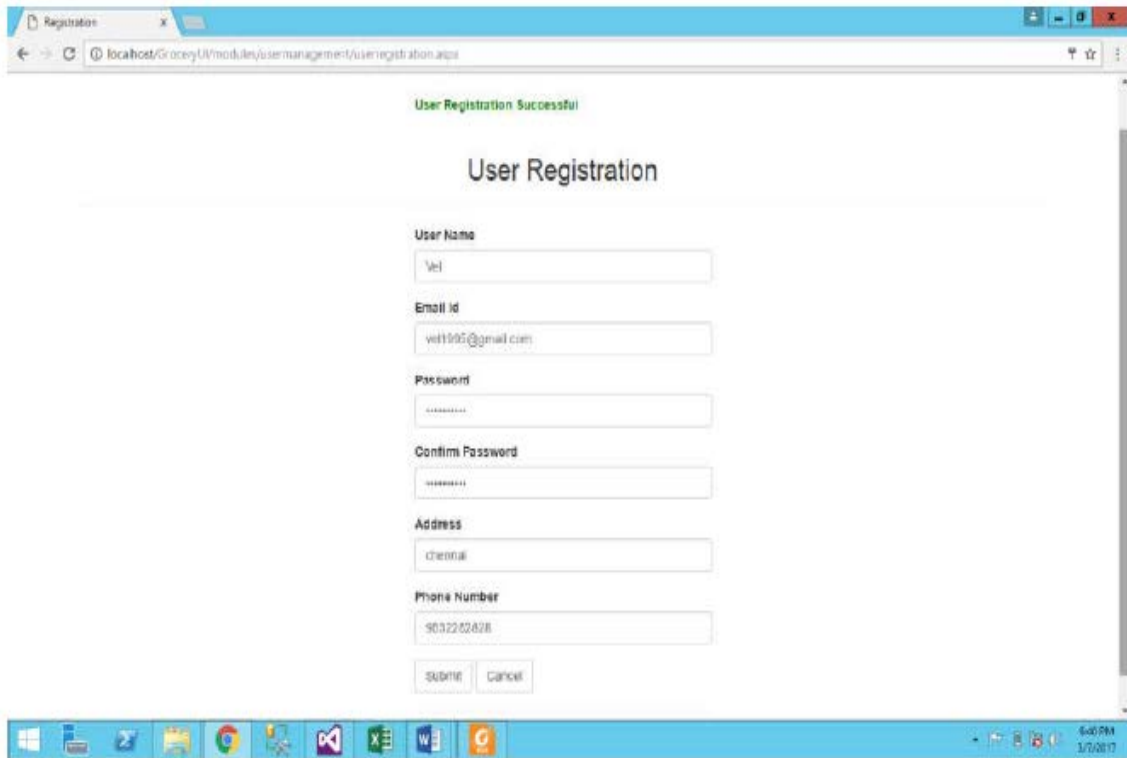


Figure 3:

Account:

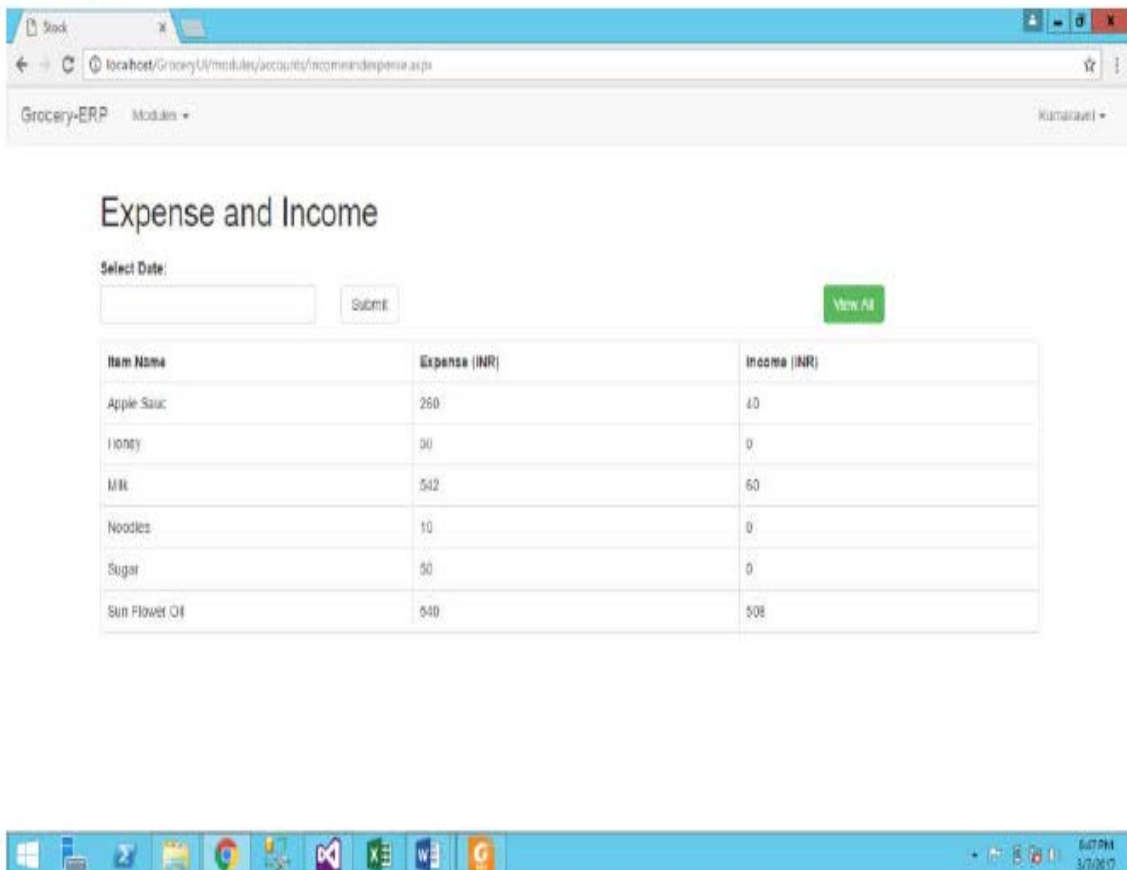


Figure 4:

Inventory:

The screenshot shows a web browser window titled 'Item List' with the URL 'localhost/GroceryUI/modules/inventory/masters/ItemList.aspx'. The page contains a table with the following data:

Item Code	Item Name	Unit Of Measurement	
ITM001	Apple Sauc	nos	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ITM002	Milk	lrs	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ITM003	Sun Flower Oil	lgs	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ITM004	Noodles	nos	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ITM005	Honey	gms	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ITM006	Tomatoes	lgs	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ITM007	Sugar	lgs	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ITM008	Salt	lgs	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ITM009	Rice	lgs	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ITM010	Peanut Butter	lgs	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ITM011	Dairy Milk	boxes	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

Figure 5:

Purchase:

The screenshot shows a web browser window titled 'Purchase Order' with the URL 'localhost/GroceryUI/modules/purchase/purchaseorder.aspx?id=2'. The page displays the 'Add Purchase Order' form with the following details:

Code: PURCOR001
Entry Date: 16/02/2017
Vendor: Britania Industries Limited
Requested Delivery Date: 22/02/2017
Reference Number: 123

S.No	Item Name	UCM	Ordered Qty	Spl. Remarks	Unit Price	Discount %	Discount Value	Amount	
1	Apple Sauc	nos	15	Test	300.00000	2.00000	280.00000	4200.00000	<input type="button" value="Remove"/>
2	Milk	lrs	80	Test 1	20.00000	0.00000	0.00000	800.00000	<input type="button" value="Remove"/>
3	select	select							

Buttons: Update, ListView, Add

Figure 6:

Sale:

The screenshot shows a web browser window with the address bar displaying 'localhost/GroceryUI/modules/sales/salesorder.aspx?id=5'. The page title is 'Grocery-ERP' and the user is 'Kumaravel'. The main content is a form titled 'Add Sales Order'.

Form fields include:

- Code:** SAL001
- Entry Date:** 07/03/2017
- Customer:** Chennai Traders
- Requested Delivery Date:** 07/03/2017
- Reference Number:** 456

Below the form is a table with the following data:

S.No	Item Name	UOM	Ordered Qty	Spl. Remarks	UNIT Price	Discount %	Discount Value	Amount	
1	Sun Flower C	kgs	100	Refined Sunf	89.50000	0.00000	0.00000	895.00000	Remove
2	Salt	kgs	500	powder salt	20.00000	0.00000	0.00000	1000.00000	Remove
3	Select	Select							

Buttons for 'Update' and 'Usview' are located below the table. An 'Add' button is at the bottom right of the table.

Figure 7:

Conclusion:

In this paper we are proposing an idea to create such as Grocery Shop Retail Management which will be a pure platform that will be used locally and will benefit the local vendors and give the ease of operation for both customers and the vendors by not getting into logistics and payment related transactions.

Reference:

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4. Delaney-Klinger, K., Boyer, K.K. & Frohlich, M. (2003)' The return of online grocery shopping: A comparative analysis of Webvan and Tesco's operational methods', *The TQM Magazine*, vol. 15, n^o 3, pp.187-196