Enterprise Resource Planning Module for Textile Industry

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ABSTRACT

In Textile Industries, several entities and departments are present. If all these departments are not maintained properly then it is very difficult to handle the textile organization. For maintaining textile industry (ERP) solution can help, making your textile company more profitable by strengthening the collaboration within the organization and increasing its efficiency and adaptability. The ERP solution lays a solid foundation for textile companies to continuously review, benchmark, and optimize their business processes based on their corporate business strategy making the right business decisions becoming easier. A comprehensive ERP solution also makes it easier for a textile organization's business partners to engage productively within the company. The main objective of this application is that there are several textile organizations where this system is a must to be used because with the help of this system textile companies can provide outstanding service to customers, maximize their return on investments in assets, optimize enterprise processes, mitigate operational risks, facilitate environmental compliance, and streamline the merger and acquisitions process.

Keywords :- ERP, Cotton, textile, module.

I. INTRODUCTION

Computer applications used in today's business world are generating and collecting data in a multitude of ways. The data originates from multiple input points and multiple inputs, it has many sources and consists for example of orders, invoices, purchases, manufacturing data, measurements, and anything else that is linked to running the business of a company. This information is stored in massive databases but is mostly used in day-to-day operations without largely analyzing the data and finding additional value from it. This is because extracting usable statistics is difficult due to the vast number of data or the quality of the data, which may render simple statistical research unlikely. Enterprise Resource Planning (ERP) is a solution, which facilitates company-wide integrated information systems covering all functional areas and performs core corporate activities, and increases customer service augmenting Corporate Image. ERP module integrates all the departments of an enterprise to increase productivity. ERP is used for better management so that it is known what is happening

inside the company. it is the one solution for managing company resources. ERP is also used to achieve cost control and low working capital. ERP is used to satisfy customers' high expectations. There are many software that helps organizations to communicate. One certain system that does this is the Enterprise Resource Planning System, also known as ERP with technology. The ERP solution lays a solid foundation for textile companies to continuously review, benchmark, and optimize their business processes based on and in line with their corporate business strategy. Making the right business decisions for management becomes easier. A comprehensive ERP solution also makes it easier for a textile organization's business partners to engage productively with the company. There are many parts of an ERP system, including manufacturing, financial, human resources, and plenty more. The system has saved organizations time and money in various ways. ERP systems allow for integration between business organizations to be accomplished effectively and without making mistakes. Because of this, a productive ERP system needs the different features of businesses to be connected with one another. The ERP system allows for communication and the exchange of valuable data between departments to be done in a more continuous and orderly fashion. Its main function is to assist the flow of information between all business activities inside the organization and to administer the connections to outsiders. By integrating parts of business and technology into one, ERP allows for effective performance with all departments that are connected. Some commonly known examples of ERP systems are SAP, Baan, MFG/Pro, Oracle E-Business Suite, and Microsoft Dynamics. ERP systems always store their data in a database which makes it a viable target for data mining activities, but many times companies use diverse systems together to form complete ERP functionality and their data is scattered across multiple databases. In these cases, it is sometimes necessary to gather the scattered data into a single database called a Data Warehouse (DW), before submitting it to data mining activity.

II. RELATED WORK

Enterprise Resource Planning (ERP) is a solution, which facilitates company-wide integrated information systems covering all functional areas and performs core corporate activities, and increases customer service augmenting Corporate Image. ERP is used for improved control so that we can know what's going on within the organization. It is the one solution for managing company resources. ERP is also used to achieve cost control, lower the working capital and satisfy customer's high expectations. It is a desktop-based and live project implementing for the company located in Hingna, district Nagpur. This ERP application covers all basic and advanced features of inventory, production, and account departments. In this application, there are various advanced features like Automation and calculations. Using this feature there may be fewer chances of misinterpretation and error cause. Using the better searching and sorting technique, one can search the data using any attributes. This software is fully customizable, user-friendly, and easy to use. The admin and the employee directly interact with the software. The employee will be provided a familiar background to use the overall software. He will be provided a user guide so that he should not face any difficulties while handling the software.
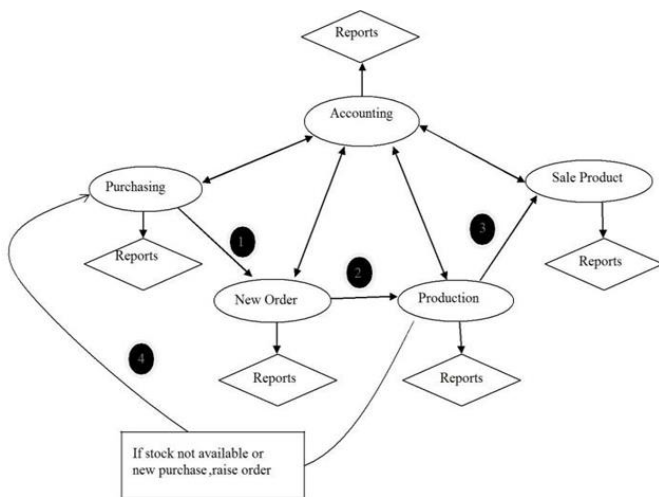
SYSTEM ARCHITECTURE

Fig 1. Data flow diagram

The above Data flow diagram, describe the scenario of the project in which there are different modules as follows:

i. **Purchase Module:**
- Add New Company / New Distributor.
- Purchase raw material like cotton, yarn, etc.
- Notification panel for new orders and out of stock
- materials.
- Searching for stock according to date, month, and year.
- Add, Modify and Delete facility in every module.

ii. **Production Module:-**
- Adding new company for new production.
- Reordering for previously registered companies.
- Raising order to purchase module.

iii. **Sales Module:**
- Releasing Product to Customer.
- Invoice creation.
- Stock management of all sold-out products.
- Separate panel for a new sale.
- Add, modify, and delete facility.

iv. **Accounting Module:**
- List of Account
- Active parties
- Non-Active parties
- General Voucher
- Voucher Receipt
- Voucher Payment
- Vouchers tally
- List of Post-dated cheque
- Account ledger
- Profit & Loss statement
- Balance sheet

v. **Reports:**
- Stock Reports
- Order Reports
- Purchase Reports
- Sales Reports
- Reports of Item issued
- Reports of Trial Balance
- Reports of Balance Sheet

vi. **Additional Features:**
- Safe and Secured Backup
- Backup Restore
- Reports by Email
- Modify Facility
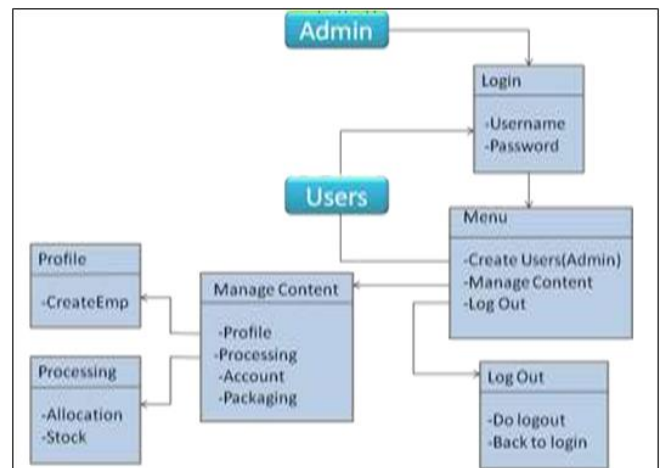- Customizable

III. IMPLEMENTATIONS

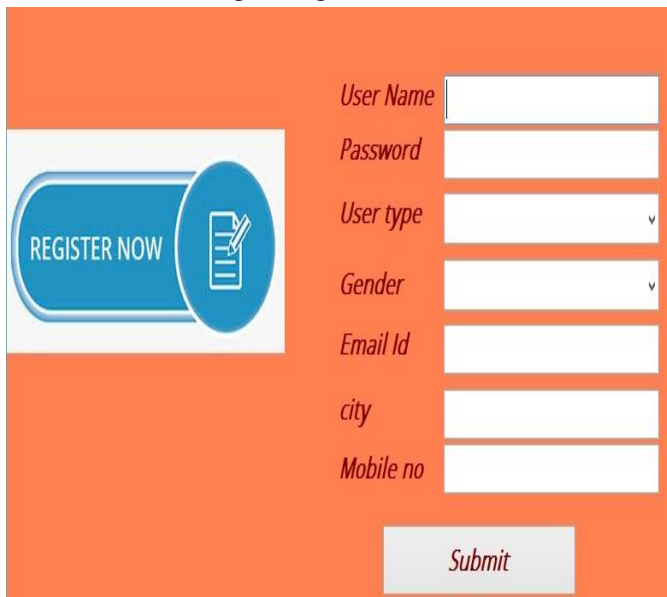Fig 2. Class diagram of admin and user

Fig 3. Login Window

Fig 4. Registration Window

IV. RESULTS AND DISCUSSIONS

The snapshot of Implementation design with Login Window and Registration Window for the textile industry is given above. This ERP is designed for the desktop implementation. Since our application is desktop-based, it is tested on multiple operating systems such as Windows, Linux, etc, and the result is matched with the predicted one. For the front end, dot net technology is used which makes the ERP easy to use. And for the back end, Microsoft SQL Server is used. From testing, it is clear that this application runs smoothly on multiple operating systems and it gives better results and accuracy and our validations are working properly.

V. CONCLUSION

There are several textile organizations where this system is a must to be used because with the help of this system, textile companies can provide outstanding service to customers, maximize their return on investments in assets, lower total cost of procurement through improved efficiency, optimize enterprise processes and enhanced productivity, mitigate operational risks, facilitate environmental compliance, and streamline the merger and acquisitions process, while providing the best customer service experience. This system helps textile companies meet changing market requirements, achieve operational excellence, and drive sustainable growth

VI. ACKNOWLEDGEMENT

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