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Cust-Flex Mac and Sale-Ware based on Three-Tier Architecture

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Abstract: ***In this cust-flex mac and sale-ware (customer flexible manufacturing activity control and sales software) makes industrial companies to change radically, becoming more flexible, customer oriented and agile in manufacturing. Consequently, the enterprise software system applications have become a lot of complicated, exploiting distributed object technology in multi-tier architectures. The aim of the project is to gift the look specification for associate in nursing enterprise application that integrates the erp thought in three-tier design, containing modularized, distributed subsystems in configurable and rectifiable software system. Ranging from the client order, to planned order dispatch, the erp main elements and therefore the data flow at intervals the system is given.***
Keywords-three tier architecture, manufacturing, activity control.

I. INTRODUCTION

Customer versatile producing activity management and sales software package because of increasing inter-organizational production and management, a brand new management dimension happens that focuses on each producing activities and therefore the provide chain. Its demands area unit the value management, has to analyze costs/revenues on a product or client basis, flexibility to reply to ever-changing business necessities, additional au fait management higher cognitive process and changes within the approach of doing business. The enterprise data systems and therefore the business software package applications have unendingly followed the new social control ideas, evolving from systems while not call support towards advanced applications, as well as help within the call taken method. ERP system is associate overall company thought that has capabilities for quality management, field service, maintenance management, distribution, marketing, and provider management. software package solutions implementing this idea could address the enterprise wants, creating the method read of associate enterprise to fulfil the structure goals by group action all functions of associate enterprise. within the same time, it should concentrate on the external provide chain sanctioning the firm to deal directly with suppliers and to assess the supply of their resources. Consequently, with the support of software package technology, ERP becomes a distributed application in a web surroundings, developed and able to communicate directly with suppliers and customers, sharing e-markets in associate e-business surroundings. For these functions enterprise applications generally need the power to handle an oversized variety of users and huge quantity of information, flexibility to expand quickly, security services so as to forestall unauthorized access, advanced dealings process and information access. The advances in laptop communication and databases beside the emergence of latest software package technologies, supported climbable, practical and reconfigurable data architectures enabled business applications to be designed, build and enforced quicker, cheaper and with fewer resources. The multi-tiered application model for enterprise application could be a client-server design during which the user interfaces, purposeful method logic, knowledge storage, meets these necessities. The 3-tier design is distributed in three locations: consumer machine, server machine and therefore the information machine, the design extending the two-tier client/server applications to three-tier applications.

II. LITERATURE REVIEW

A. Existing System

ERP is typically brought up as class of business-management software—typically a collection of integrated applications—that a corporation will use to gather, store, manage and interpret information from these several business activities. ERP provides Associate in nursing integrated and incessantly updated read of core business processes exploitation common databases maintained by a direction system. ERP systems track business resources—cash, raw materials, production capacity—and the standing of business commitments: orders, purchase orders, and payroll. The applications that conjure the system share information across varied departments (manufacturing, purchasing, sales, accounting, etc.) that give the info. ERP

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facilitates info flow between all business functions and manages connections to outside stakeholders.

B. Disadvantages

1) Not suitable for those organization where there is large quantity of product and different level of warehouse.
2) Customer ordered product unique raw materials are placed in separate pack for each and every product.
3) Whole package of the ERP software are stored in single server. Much user access at a time some calculation errors occurred.

III. PROPOSED SYSTEM

In this Customer Flexible Manufacturing Activity Control and Sales Software is fully based on three- tier architecture that's why we can access large size of data in fast updating. We can use large size manufacturing industries. Industries can access multiple users at a time because of this fully developed by code optimization technique.

A. Advantages

1) Tiered architecture based ERP software only manage large size Manufacturing and sales companies.
2) Customer ordered product unique raw materials are placed in a single pack for each and every product.
3) We can easily find and place the raw materials.
4) Using tiered architecture to store each tier in distributed environment. Because to access many user at a time without any interceptions and fast access with security.

B. Modules

1) User Management
2) Product
3) Raw Materials
4) Invoice
5) Report
6) *Sales Portal:*
a) *User Management:*
i) Supplier
ii) Branch Supervisor
iii) Admin
iv) Super Admin
b) *Invoice:*
i) Invoice Delivery
ii) Invoice Return
c) Payment
d) Report

IV. SYSTEM ARCHITECTURE

Customer will place an order with required configuration based upon their needs to the manufacturing department. Manufacturing Admin make invoice with unique raw materials for all products. When the item was finished, after manufacturing work it will be delivered to the customer by sales department.

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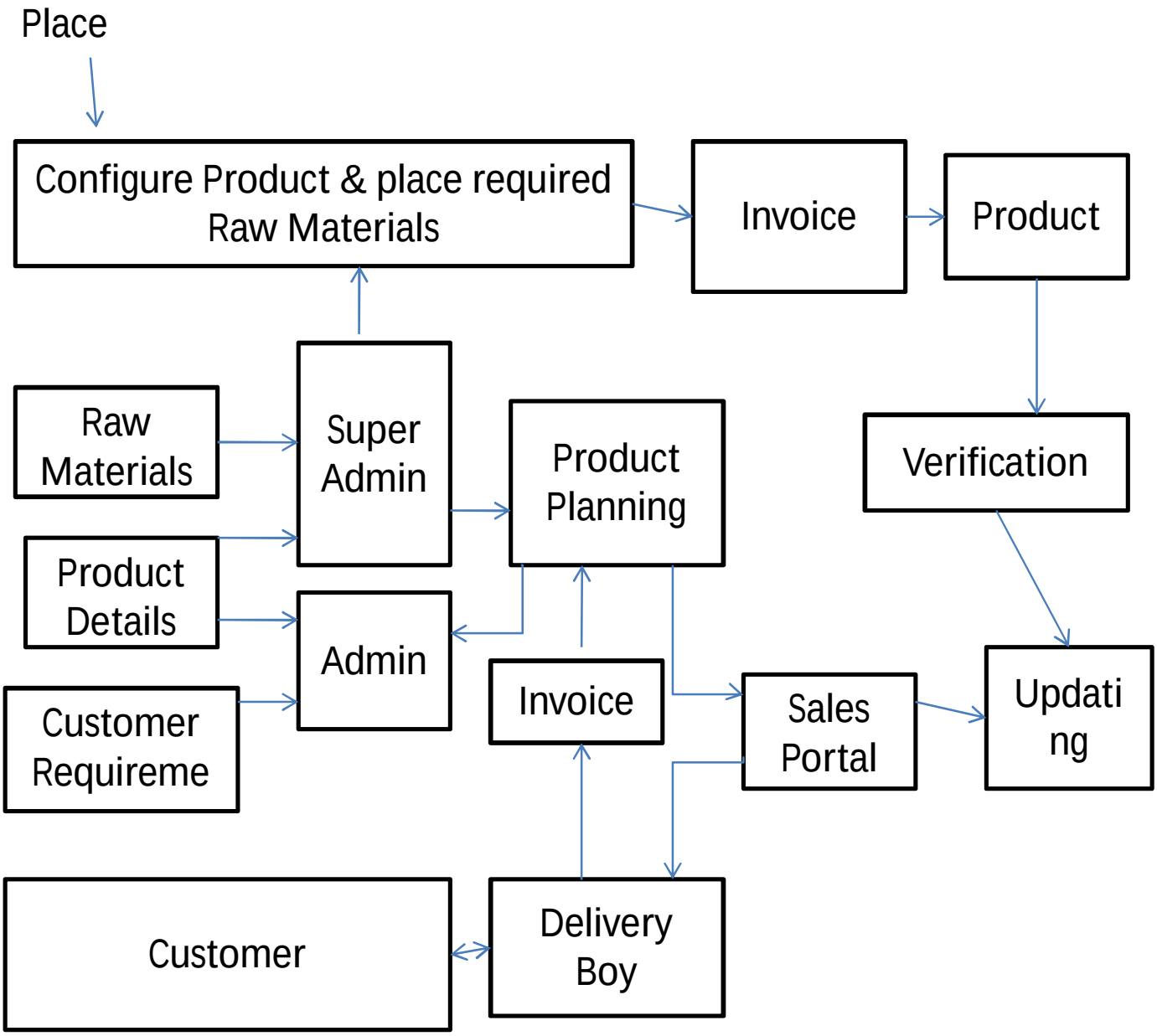

Fig. 1 Information flow for Cust-Flex MAC and Sale-ware architecture

A. Three-Tier Architecture

This desktop based application is based on 3-tier architecture of .Net Framework. The 3-tier includes the three hierarchy of the flow of programming logic from user interface to database and again database to user interface with the desired information requested by the clients. In between there involves the logic layer for effectively and correctly manipulating the request. The 3-tier includes the following:

1) *Client Tier:* The visual part is implemented using all kinds of swing components, which does not make database calls. The main function of this tier is to display information to the user upon user's request generated by user's inputs such as firing button events. For example, inventory list will display when user click "display" button if he or she wants to know the list of stock remaining in the organization.
2) *Business Tier:* The middle tier, business logic, is called by the client to make database queries. It provides core function of the

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system as well as connectivity to the data tier, which simplify tasks that were done by the clients tier.

3) *Data Tier:* Data layer is also the class which gets the data from the business tier and sends it to the database or gets the data from the database and sends it to business tier. This is the actual DBMS access layer or object layer also called the business object.

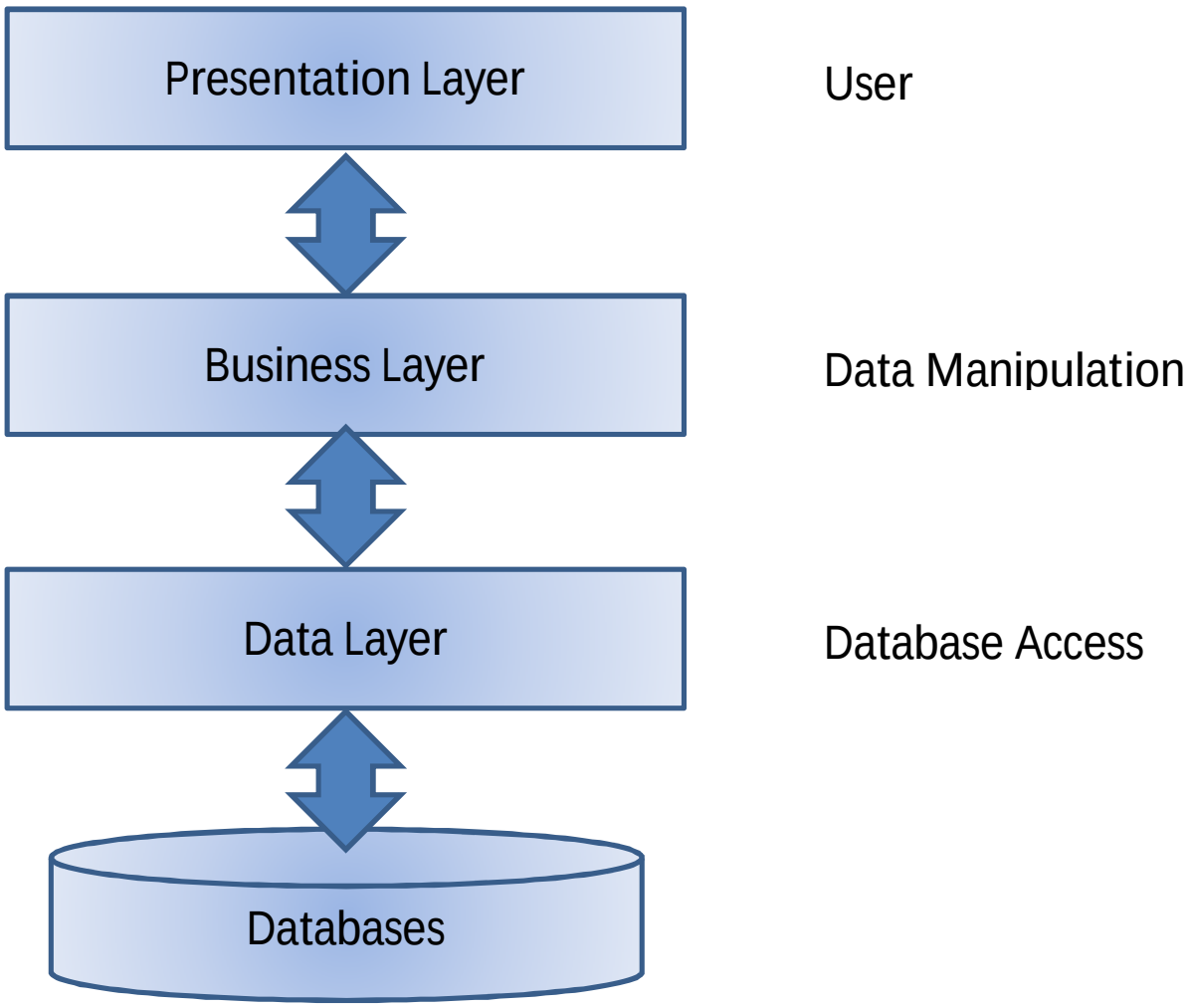

Fig 2: Tier Architecture

V. CONCLUSION

In this Cust-Flex MAC and Sale-ware (Customer Flexible Manufacturing Activity Control and Sales Software) project development process is currently going on for futures enhancements but its trial version are successfully running in some small scale manufacturing industries. Some future ideas also implemented side by side. Finally in this project are suited for any type of large scale manufacturing companies.

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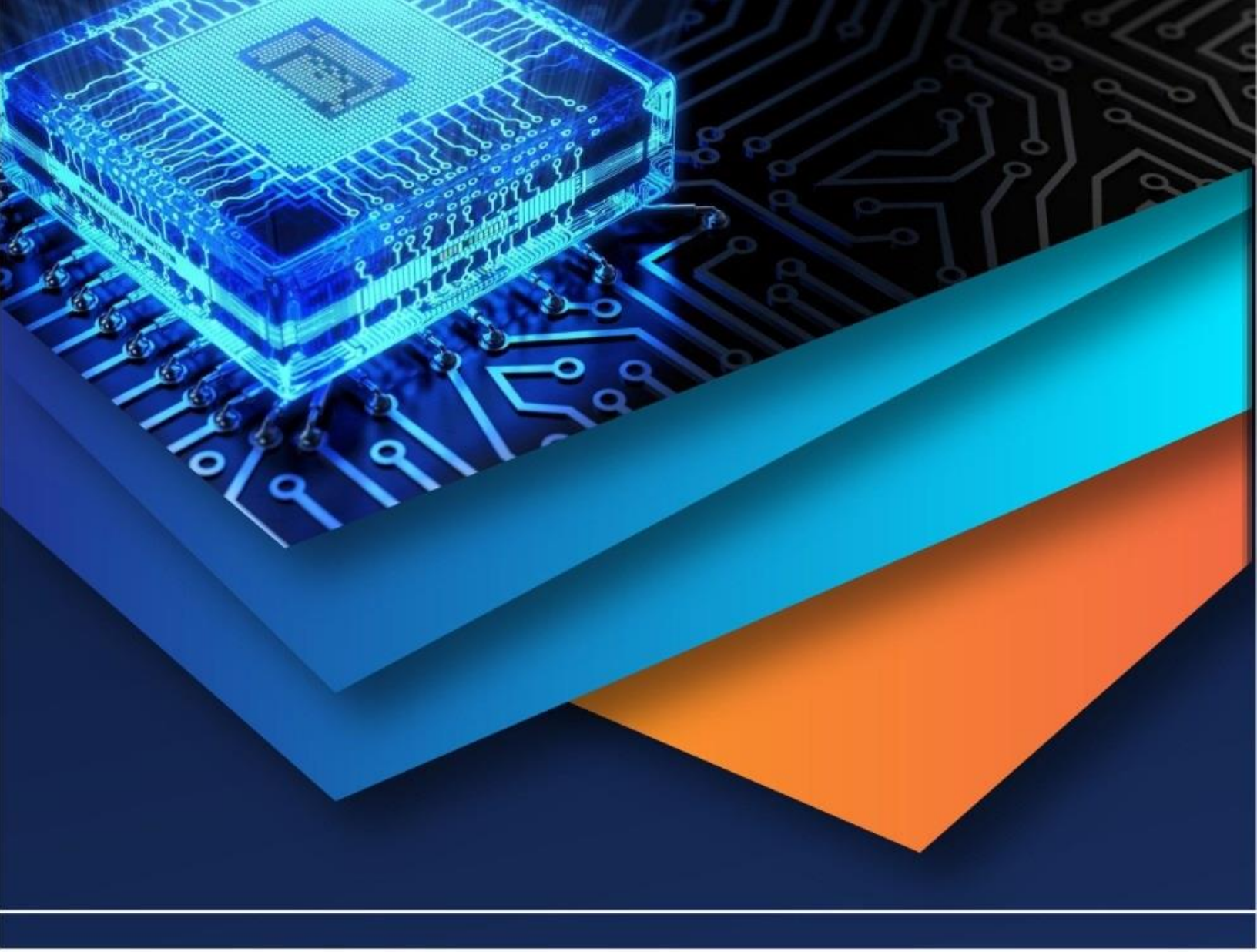

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