

ENTERPRISE RESOURCE PLANNING

Submitted in partial fulfilment of the required for the award of

Bachelor of Computer Science

By

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MAY 2023



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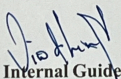
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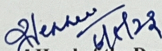
DEPARTMENT OF COMPUTER SCIENCE

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **VAISHALI R (40290105)** who carried out the project entitled **ENTERPRISE RESOURCE PLANNING** under our supervision from JANUARY 2023 TO MAY 2023.

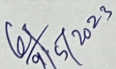

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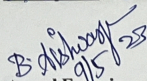
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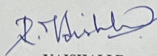
I am, **VAISHALI R (40290105)** hereby declare that the Project Report entitled "ENTERPRISE RESOURCE PLANNING" done by us under the guidance of **Ms.VINODHINI.K, M.Sc., Assistant Professor** Department of Computer Science at **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY**, Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai-600119 is submitted in partial fulfilment of the requirements for the award of Bachelor of Science degree in Computer Science.

I would like to express my sincere and deep sense of gratitude to my project guide **MS. VINODHINI.K, M.Sc., Assistant Professor** Department of Computer Science for their valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff member of the Department of Computer Science who were helpful in many ways for the completion of the project.

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ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr. REKHA CHAKRAVARTHI M.E., Ph.D. Dean of Arts and Science** for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my project guide **MS. VINODHINI K, M.Sc.**, Assistant Professor Department of Computer Science for their valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non- teaching staff member of the Department of Computer Science who were helpful in many ways for the completion of the project

VAISHALI R

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ABSTRACT

Enterprise Resource Planning (ERP) systems it have been widely implemented by numerous firms throughout the industrial world. While success stories of ERP implementation abound due to its potential in resolving the problem of fragmented information, a substantial number of these implementations fail to meet the goals of the organization.

Some are abandoned altogether and others contribute to the failure of an organization. This paper seeks to identify the critical factors of ERP implementation and uses statistical analysis to further delineate the patterns of adoption of the various concepts. A cross-sectional mail survey was mailed to business executives who have experience in the implementation of ERP systems. The results of this study provide empirical evidence that the theoretical constructs of ERP implementation are followed at varying levels. It offers some fresh insights into the current practice of Enterprise Resource System implementation. In addition, this study fills the need for Enterprise resource system implementation constructs that can be utilized for further study of this important topic.

Keywords: Enterprise Resource Planning (ERP), Project Implementation, Success Factors, Mail survey.

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CHAPTER 1

1. INTRODUCTION

ERP is an acronym that stands for Enterprise Resource Planning. ERP software saw phenomenal interest from the corporate sector during the period 1995- 2000. The ERP market is estimated to be in excess of USD 80 Billion in the year 2000. Many analysts feel that today's global business environment - products and services customized to suit the individual needs of millions of customers, deliver time-lines in a 24X7 basis - would have been impossible without such enterprise software. Undoubtedly ERP represents one of the most complex and demanding application software in the corporate environment. ex:- SCM, CRM, Manufacturers, Service sectors, Marketing Researchers.

1.1.1 OVERVIEW OF ERP SOFTWARE SOLUTIONS:

Enterprise resource planning is now gaining lots of importance among the business economy. It is now being seen as an important tool for managing resources of a company both internally and externally. It is being used both for many business applications and also for many manufacturing industries.

Previously, enterprise resource planning was used only of large business companies. It required lots of money to be invested. Small scale and medium sized companies were not ready to invest a large amount for buying software and employing staffs formanaging ERP software.

Keeping this in mind, ERP vendors started diversifying their enterprise resource planning software by releasing many versions of the software which could assist small companies too.

Also, small sized companies might not require all the tools and customizations available for the big companies. The ERP software got tailored particularly to meet the small sized companies and for increasing the productivity. After this, small sized business people also started buying ERP software which matched their investment amount.

From the early 1990,,s ERP helped the companies in driving down their cost and also helped them in operating more efficiently. Effective data management also helped streamlining the business process effectively. Planning, manufacturing, marketing, sales and quoting services kept on improving. Stock control, financial tracking and customer service also got better with ERP. processes were eliminated by the small business with the usage of enterprise resource planning software

1.1.2 WHAT IS ERP

ERP is a package software solution that addresses the enterprise needs of an Organisation by tightly integrating the various functions of an organization using a process view of the organization.

- A. ERP software is ready-made generic software; it is not custom-made for a specific firm. ERP software understands the needs of any organization within a specific industry segment. Many of the processes implemented in an ERP software are core processes such as order processing, order fulfilment, shipping, invoicing, production planning, BOM (Bill of Material), purchase order, general ledger, etc., that are common to all industry segments.
- B. ERP does not merely address the needs of a single function such as Finance, Marketing, Production or HR; rather it addresses the entire needs of an enterprise that cuts across these functions to meaningfully execute any of the core processes.
- C. ERP integrates the functional modules tightly. It is not merely the import and export of data across the functional modules. The integration ensures that the logic of a process that cuts across the function is captured genuinely. This in turn implies that data once entered in any of the functional modules (whichever of the module owns the data) is made available to every other module that needs this data. This leads to significant improvements by way of improved consistency and integrity of data.
- D. ERP uses the process view of the organization in the place of function view, which dominated the enterprise software before the advent of ERP. PLAYERS:- JD EDWARDS, ORACLE, SAP

1.1.3 NEED FOR ENTERPRISE RESOURCE PLANNING

Organizations today face twin challenges of globalization and shortened product life cycle. Globalization has led to unprecedented levels of competition. To face such competitions, successful corporations should follow the best business practices in the industry. Shortened life cycles call for continuous design improvements, manufacturing flexibility, super-efficient logistics control and better management of the entire supply chain. All these need faster access to accurate information, both inside the organization and the entire supply chain outside. The organizational units such as finance, marketing, production, human resource development etc.

need to operate with a very high level of integration without losing flexibility. ERP system with an organization-wide view of business processes, business need of information and flexibility meet these demands perfectly. One of the developments in computing and communication channels is providing right integration among them.

1.2 LITERATURE REVIEW

1.2.1 ENTERPRISE RESOURCE PLANNING

Moller (2005) defines ERP as “a standardized software packaged designed to integrate the internal value chain of an enterprise. An ERP system is based on an integrated data base and consists of several modules aimed at specific business functions.”

This concept is illustrated in the following diagram (figure 1)

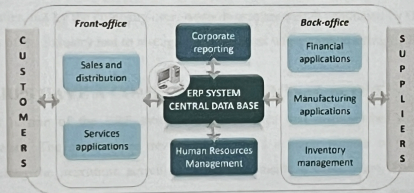


FIGURE 1 — ERP systems concept. Source: Hossain et al., 2002 (adapted).

ERP system has numerous characteristics that assist an organization to administrate their business, communicate between the customer, internal departments and supplier; control its finances and costs and, trace the manufacturing of its products, among many others. Based on Monk and Wagner (2009) those characteristics are described below:

i. ERPS ARE COMMERCIAL SOFTWARE PACKAGES:

It means that the ERP are software packages previously written and codified, ready to be acquired and used by companies, eliminating the need to develop specific software. These software packages are systems composed by many modules. Each module basically meet the usual departmental divisions and common practices of an organization.

ii. ERPS INCORPORATE STANDARDIZED BUSINESS PROCESSES:

One essential characteristic of the ERP system is that it is a generic solution comprised with the best management practices available in the market, developed to match to any businesses segment. During the implementation of the system, the integrated logic of the ERP will somehow impose its logic into the organization's logic. This logic here refers the information flow inside a company according to the businesses processes established. It is just possible because, once the ERP system is generic, its design reflects a series of affirmations concerning the manner organizations, in general terms, conduct their business. Thus, on the contrary of the traditional software that were developed according to companies' specific requirements, the ERPs are broad; creating an imposition of standardized processes under the company's strategy, culture and structure. Therefore, through the ERP use, businesses processes management are shaped by the ERP systems' supplier, not by the company user. According to a search conducted by Oliveira (2006), 56% of the industry had to re-engineer its process when implementing ERP systems. iii.

iii. ERPS HAVE A COMPLETE FUNCTIONAL SCOPE:

This is one of the ERP systems characteristics that distinguishes it from traditional software. The systems are developed to attend a major number of business functions, covering the maximum activities as possible inside a value chain. These functions are generally corresponding to departments divisions such as sales, purchasing, finance, planning, production, quality, maintenance, logistics, human resources and so on. The composition of each of these process functions and activities is available in specific modules and transactions in the ERP. The sum of all modules and transactions turns into the complete system.

iv. ERPS INTEGRATE THE MANY ORGANIZATIONAL AREAS

The system integrates the diverse organizational areas by sharing its unique information flow through a unique database. The information of every activity performed in each department is launched in the system, being registered in its database and propagated in an integrated way throughout the entire company, enabling a better control of all processes. For example: one user sells a determined product through the sales module of the system, which will generate a sales order number that is registered in the database. This transaction will generate other records in other ERP modules, such as in the production module, enabling the planning and manufacturing of the demanded products; logistics module,

enabling the inventory control and transportation planning; financial module, enabling the control of revenue and expenses generated, and so on. Because of this the ERP is an integrated system, which will integrate the entire company.

v. EPRS ELIMINATE REDUDANT DATA AND COMMUNICATION LAGS:

ERP systems allow the user to enter with the data just once and this same data will be available and used in the whole company. In the traditional software, many errors occur due to the interaction between the employees and the programs, which generally allow the employees to change the records. Another issue of those software is that once it is not integrated throughout the company, different users from the same or different departments can launch the same record more than once. As in the ERP system the data is just entered once, are more likely to be accurate, avoiding redundant data and communication mistakes. Every department will work with the same, correct data.

vi. ERPS ARE ADAPTABLE:

As it was mentioned before, the ERPs are generic solutions developed to attend the larger number of organizations as possible. However, this generic solution will rarely attend completely the needs of the companies, creating some points of incompatibility between the system and the practical operation. To diminish these incompatibilities and to make the best use of the ERP, the suppliers provide means to adapt and customize the system to some extent. These customizations consist in change and parameterize the transactions and functionalities of the system or even create new ones.

CHAPTER 2

SYSTEM ANALYSIS

EXISTING SYSTEM

ERP applications also allow the different departments to communicate and share information more easily with the rest of the company. It collects information about the activity and state of different divisions, making this information available to other parts, where it can be used productively.

ERP applications can help a corporation become more self-aware by linking information about production, finance, distribution, and human resources together. Because it connects different technologies used by each part of a business, an ERP application can eliminate costly duplicates and incompatible technology. The process often integrates accounts payable, stock control systems, order-monitoring systems, and customer databases into one system.

ERP has evolved over the years from traditional software models that made use of physical client servers and manual entry systems to cloud-based software with remote, web-based access. The platform is generally maintained by the company that created it, with client companies renting services provided by the platform.

Businesses select the applications they want to use. Then, the hosting company loads the applications onto the server the client is renting, and both parties begin working to integrate the client's processes and data into the platform.

Once all departments are tied into the system, all data is collected on the server and becomes instantly available to those with permission to use it. Reports can be generated with metrics, graphs, or other visuals and aids a client might need to determine how the business and its departments are performing.

2.2 DISADVANTAGES OF EXISTING SYSTEM:

- An ERP system doesn't always eliminate inefficiencies within a business or improve everything. The company might need to rethink how it's organized or risk ending up with incompatible technology.
- ERP systems usually fail to achieve the objectives that influenced their installation

because of a company's reluctance to abandon old working processes. Some companies may also be reluctant to let go of old software that worked well in the past. The key is to prevent ERP projects from being split into smaller projects, which can result in cost overruns.

2.3 PROPOSED SYSTEM:

Further developments in the enterprise resource planning system concept have led to evolution of extended ERP (E- ERP) or web - enabled ERP. With globalization on one hand and massive development in the internet technology on the other, need for web-based IT solution was felt. Thus E- ERP is development in the field of ERP which involves the technology of Internet and World Wide Web (WWW) to facilitate the functions of an organization around the web.

2.4 BENEFITS OF ERP:

- (a) **BUSINESS INTEGRATION:** The reason ERP packages are called integrated is the automatic data up gradation between related business components. In the case of ERP packages the data of related business functions is also automatically updated at the time a transaction occurs. With this reason, managers at different roles and designations are able to grasp business details in real time, and carry out various types of management decisions in a timely manner and with more accurately based on this information.
- (b) **FLEXIBILITY:** Diverse multi-functional environments such as language, currency, accounting standards and so on are covered in one system and functions that comprehensively managed multiple locations of company branches can be implemented automatically. To cope with company globalization and system unification, this flexibility is essential, for development and maintenance, but also in terms of management.
- (c) **BETTER ANALYSIS AND PLANNING CAPABILITIES:** By enabling the comprehensive and unified management of related business and its data, it becomes possible to fully utilize many types of decision support systems and stimulation systems. It becomes possible to carry out flexibility and in real time the feeling and analysis of data from a variety of dimensions, decision makers able to the information whatever they want in time, thus enabling them to make better and informed decisions.

(d) USE OF LATEST TECHNOLOGY

The ERP vendors were very quick to realize that in order to grow and to sustain that growth: they have to implement the latest developments in the field of information technology. So they quickly adopted their systems to take advantages of the latest technologies like open systems, client server technology, internet/ intranet, computer aided acquisition and logistics support, electronic commerce etc. It is this quick adaptation to the latest changes in information technology that makes the flexible adaptation to changes to future business environments possible. It is this flexibility that makes the incorporation of the latest technology possible during the system customization, maintenance and expansion phases.

(e) REDUCED INVENTORY AND INVENTORY CARRYING COST:

ERP system allows customers to obtain information on cost, revenues and margins, which allow it to better, manage its over-all material cost structure and lead to inventory reductions to the order of 20 per cent or better. This provides not only a onetime reduction in assets (cost of the material stocked), but also provides ongoing savings of the inventory carrying costs, costs of warehousing, handling, obsolescence, insurance, taxes, damage and shrinkage.

- (f) REDUCED MANPOWER COST:** Improved manufacturing practices lead to fewer shortages and interruptions and to less rework and overtime allow 10 per cent reduction in direct and indirect labor costs. By minimizing rush jobs and parts shortages, less time is needed for expediting, material handling, extra setups, disruptions and tracking splits lots odd jobs that have been set aside. Production supervisors have better visibility of required work and can adjust capacity or loads to meet schedules. Supervisors have more time for managing, directing and training people.

- (g) REDUCED MATERIAL COSTS:** Improves procurement practices lead to better vendor negotiations for prices, typically resulting in cost reductions of 5 per cent or better. Valid schedules permit purchasing people to focus on vendor negotiations and quality improvements rather than spending their time on shortages and getting material at premium prices. ERP systems provide negotiation information, such as projected material requirements by commodity group and vendor performance statistics. Giving suppliers better visibility of future requirements help them achieve efficiencies that can be passed on as lower material costs.

(h) **IMPROVES SALES AND CUSTOMER SERVICE:** Sales people can focus

on selling instead of verifying or apologizing for late deliveries. In custom product environment, configurations can be quickly identified and prices, often by sales personnel or even the customer rather than the

together, these improvements in customer service can lead to fewer lost sales and actual increase in sales, typically 10 per cent or more. Corrective actions can be taken early such as determining shipment priorities, notifying customers of changes to promise delivery dates, or altering production schedules to satisfy demand.

(i) **EFFICIENT FINANCIAL MANAGEMENT:** Improves collection procedures can reduce the number of days of outstanding receivables, thereby providing additional available cash. Credit checking during order entry and improved handling of customer inquiries further reduces the number of problem accounts. Improved credit management and receivable practices typically reduce the days of outstanding receivables by 18 per cent or better. Trade credit can also be maximized by taking advantage by supplier discounts and cash planning, and paying only those invoices with matching recipients. This can lead to lower requirements for cash-on-hand.

The benefits from ERP come in three different forms i.e. in the short-term, medium-term and long-term.

- This benefit is in form of „automating“ the transactions which promises accuracy, reliability, availability and consistency of data.
- Gives Accounts Payable personnel increased control of invoicing and payment processing and thereby boosting their productivity and eliminating their reliance on computer personnel for these operations.
- Reduce paper documents by providing on-line formats for quickly entering and retrieving information.
- Improves timeliness of information by permitting posting daily instead of monthly.
- Greater accuracy of information with detailed content, better presentation, satisfactory for the auditors.
- Improved cost control.
- Faster response and follow-up on customers.
- More efficient cash collection, say, material reduction in delay in payments by customers.

CHAPTER-3

SYSTEM REQUIREMENTS

3.1 REQUIREMENT ANALYSIS:

The analyses must be generic without reaching excess detail on the part of both, specifying what we want the software to do, including printed documents that have paper in the circuit and we can even help ourselves with some screenshot to clarify what processes we want the software to do.

When it is validated by both parties, we proceed to program and deliver (we will explain in future blogs). The client reviews the development and proposes its improvements. On the part of the implementer, the delivery is scheduled and made again. For the second time the client checks again and indicates new improvements or changes. (sometimes this second review is not necessary). 2 revisions should be enough to close the development. Working in this way we will not find surprises or the phrase "this was not in the analysis", since the analysis has been written at a generic level

3.2 DOT NET (.NET):

.NET is an open-source platform for building desktop, web, and mobile applications that can run natively on any operating system. The .NET system includes tools, libraries, and languages that support modern, scalable, and high-performance software development. An active developer community maintains and supports the .NET platform.

In simple terms, the .NET platform is a software that can do these tasks:

- Translate .NET programming language code into instructions that a computing device can process.
- Provide utilities for efficient software development. For example, it can find the current time or print text on the screen.
- Define a set of data types to store information like text, numbers, and dates on the computer.

3.2.1 WHY .NET:

EASE OF DEVELOPMENT

Developers like to use .NET because it includes many tools that make their work easier. For example, using the Visual Studio suite, developers can write code faster, collaborate efficiently, and test and fix their code efficiently. The ability to reuse code between implementations reduces the cost of development.

HIGH-PERFORMING APPLICATIONS

.NET applications provide faster response times and require less computing power. They have strong built-in security measures and efficiently perform server-side tasks like database access.

COMMUNITY SUPPORT

.NET is open source, which means that anyone can get access to use, read, and modify it freely. An active community of developers maintains and improves the .NET software. The .NET Foundation is an independent non-profit organization established to support the .NET community. It provides learning resources, open-source .NET projects, and various events for .NET developers.

3.2.2 TYPES OF .NET IMPLEMENTATION:

Various implementations of .NET allow .NET code to execute on different operating systems like Linux, macOS, Windows, iOS, Android, and many others.

.NET FRAMEWORK

.NET Framework is the original .NET implementation. It supports running websites, services, desktop apps, and more on Windows. Microsoft released .NET Framework in the early 1990s.

.NET CORE

Microsoft launched .NET Core in late 2014 to enable cross-platform support for .NET developers. The company released the newest version of the .NET Core, .NET 5.0, in November 2020 and renamed it .NET. The term .NET in this article refers to .NET 5.0. .NET Core is open-source on GitHub

.NET STANDARD

.NET Standard is a formal specification of different functions (called APIs). Different .NET implementations can reuse the same code and libraries. Each implementation uses both .NET standard APIs and unique APIs specific to the operating systems it runs on.

3.2.3 FEATURES IN .NET:

1. COMMON EXECUTIVE ENVIRONMENT:

All .NET applications run under a common execution environment, called the Common Language Runtime. The CLR facilitates the interoperability between different .NET languages such as C#, Visual Basic, Visual C++, etc. by providing a common environment for the execution of code written in any of these languages.

2. COMMON TYPE SYSTEM:

The .NET framework follows types of systems to maintain data integrity across the code written in different .NET compliant programming languages. CTS ensures that objects of the programs that are written in different programming languages can communicate with each other to share data.

CTS prevents data loss when a type in one language transfers data to its equivalent type in one language transfer data to its equivalent type in other languages. For example, CTS ensures that data is not lost while transferring an integer variable of visual basic code to an integer variable of C# code.

The common type system CTS defines a set of types and rules that are common to all languages targeted at the CLR. It supports both value and reference types. Value types are created in the stack and include all primitive types, structures, and enums. In contrast, reference types are created in the managed heap and include objects, arrays, collections, etc.

3. MULTI-LANGUAGE SUPPORT:

.NET provides multi-language support by managing the compilers that are used to convert the source to intermediate language (IL) and from IL to native code, and it enforces program safety and security.

The basis for multiple language support is the common type system and metadata. The basic data types used by the CLR are common to all languages. There are therefore no conversion issues with the basic integer, floating-point and string types.

All languages deal with all data types in the same way. There is also a mechanism for defining and managing new types.

4. TOOL SUPPORT:

The CLR works hand-in-hand with tools like visual studio, compilers, debuggers, and profilers to make the developer's job much simpler.

5. SECURITY:

The CLR manages system security through user and code identity coupled with permission checks. The identity of the code can be known and permission for the use of resources granted accordingly. This type of security is a major feature of .NET. The .NET framework also provides support for role-based security using windows NT accounts and groups.

3.3 VISUAL STUDIO:

Visual Studio is a powerful developer tool that you can use to complete the entire development cycle in one place. It is a comprehensive integrated development environment (IDE) that you can use to write, edit, debug, and build code, and then publish your app.

Beyond code editing and debugging, Visual Studio includes compilers, code completion tools, source control, extensions, and many more features to enhance every stage of the software development process.

With the variety of features and languages support in Visual Studio, you can grow from writing your first "Hello World" program to developing and deploying apps. For example, you can build desktop and web apps with .NET, Mobile and gaming apps with C++.

USAGE OF VISUAL STUDIO:

- Feature rich IDE
- Code quickly and accurately
- Diagnose and stop problems before they happen
- Identify and resolve performance issues

- Build cross-platform apps
- Develop and deploy any type of application
- Work together in real time
- Source code version control

3.4 OLAP: ONLINE ANALYTIC PROCESSING:

It is a computing approach that answers multi-dimensional analytical queries at a much faster pace and in a smoother manner. OLAP is a unit of business intelligence (BI). It holds the relational database and data mining and reporting features within or in other words, OLAP encompasses RDBMS and data mining & reporting.

OLAP tools give capacity to the user to analyse multidimensional data from multiple perspectives.

All of the OLAP tools are built upon three Basic analytical operations

- Consolidation: Also called roll-up operation performs data aggregation that can be computed in many dimensions. For example, all the retail offices rolled up to a retail department to forecast retail trends.
- Drill down: Drill down is a contrasting technique to consolidation that allows users to navigate through data details in a reverse approach to consolidation. For example, users can view retail patterns of individual products.
- Slicing and dicing: Slicing and dicing are a technique in which users take out (slice) a set of data called OLAP cube and then further dice the data cube (slice) from different viewpoints.

OLAP is a category of software technology that enables analysts, managers, and executives to gain insight into data through fast, consistent, interactive access to a wide variety of possible views of information that has been transformed from raw data to reflect the dimensionality of the enterprise as understood by the user

3.5 DATA WAREHOUSE INTRODUCTION:

A data warehouse is a collection of data marts representing historical data from different operation in the company. This data is stored in a structure optimized for querying and data analysis as a data warehouse. Table design, dimensions and organization should be consistent throughout a data warehouse so that reports or queries across the data

warehouse are consistent. A data warehouse can also be viewed as a database for historical data from different functions within a company.

3.5.1 BENEFITS OF A DATA WAREHOUSE:

1. DELIVERS ENHANCED BUSINESS INTELLIGENCE:

By having access to information from various sources from a single platform for like a business processes, for instance, market segmentation, sales, risk, inventory, and financial management.

2. SAVES TIME A DATA WAREHOUSE STANDARDIZES, PRESERVES, AND STORES DATA FROM DISTINCT SOURCES:

The consolidation and integration of all the data. Since critical data is available to all users, it allows them to make informed decisions on key aspects. In addition, executives can query the data themselves with little to no IT support, saving more time and money.

3. ENHANCES DATA QUALITY AND CONSISTENCY:

A data warehouse converts data from multiple sources into a consistent format. Since the data from across the organization is standardized, each department will produce results that are consistent. This will lead to more accurate data, which will become the basis for solid decisions.

4. GENERATES A HIGH RETURN ON INVESTMENT (ROI):

Companies experience higher revenues and cost savings than those that haven't invested in a data warehouse.

5. PROVIDES COMPETITIVE ADVANTAGE:

Data warehouses help get a holistic view of their current standing and evaluate opportunities and risks, thus providing companies with a competitive advantage.

6. STREAMLINES THE FLOW OF INFORMATION:

Data warehousing facilitates the flow of information through a network connecting all related or non-related parties.

- Data warehouses are designed to perform well with aggregate queries running on large amounts of data.
- The structure of data warehouses is easier for end users to navigate, understand and query against unlike the relational databases primarily designed to handle lots of transactions.

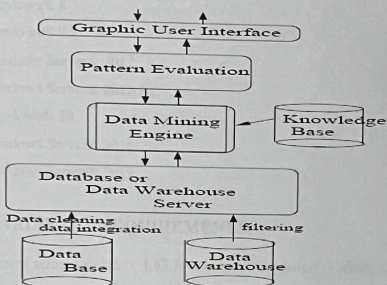
3.6 DATA MINING:

Data mining refers to extracting or mining knowledge from large amounts of data. There are many other terms related to data mining, such as knowledge mining, knowledge extraction, data/pattern analysis, data archaeology, and data dredging. Many people treat data mining as a synonym for another popularly used term, Knowledge Discovery in Databases. Data mining is a process that is useful for the discovery of informative and analyzing the understanding of the aspects of different elements.

3.6.1 ARCHITECTURE OF A TYPICAL DATA MINING SYSTEM/MAJOR COMPONENTS:

- A database, data warehouse, or other information repository, which consists of the set of databases, data warehouses, spreadsheets, or other kinds of information repositories containing the student and course information.
- A database or data warehouse server which fetches the relevant data based on users' data mining requests.
- A knowledge base that contains the domain knowledge used to guide the search or to evaluate the interestingness of resulting patterns. For example, the knowledge base may contain meta-data which describes data from multiple heterogeneous sources.

FIGURE (2) ARCHITECTURE OF DATA MINING SYSTEM



Architecture of a typical data mining system.

3.6.2 CLASSIFICATION OF DATA MINING SYSTEMS:

- Classification according to the type of data source mined
- Classification according to the data model drawn on
- Classification according to mining techniques use

3.7 SOFTWARE REQUIREMENTS:

The current aGora version (v.4.63.790) requires to its proper working, any of the following OS to be installed in the system:

- Windows® XP SP1
- Windows Server® 2003
- Windows® Home Server
- Windows Vista®
- Windows® 7

- Windows Server® 2008
- Windows Server® 2008 R2
- Windows® Home Server 2011
- Windows® 8
- Windows® 8.1
- Windows Server® 2012
- Windows Server® 2012 R2
- Windows® 10
- Windows Server® 2016
- Windows Server® 2019

3.8 HARDWARE REQUIREMENTS:

The current aGora version (v.4.63.790) needs, to its proper working, the following hardware:

MINIMUM

- Intel/AMD 1.5 GHz processor
- 2 GB RAM memory
- 1 GB free in the hard disk
- 1.024 x 768 screen resolution
- Internet connection

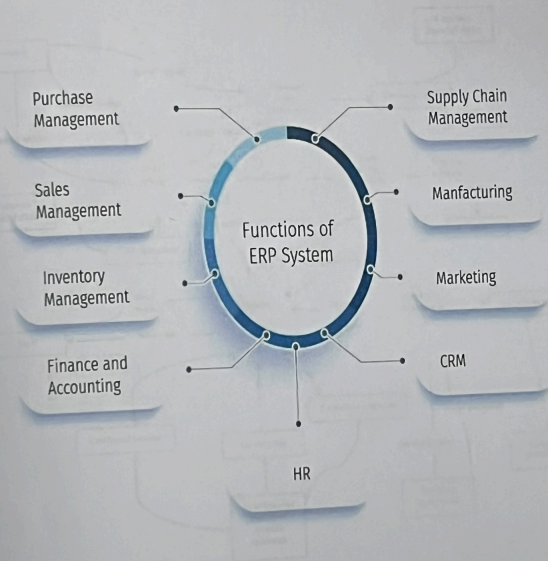
RECOMMENDED

- Intel/AMD 2.6 GHz processor
- 4 GB RAM memory
- 4 GB free in the hard disk
- 1.280 x 1.024 screen resolution or higher
- Internet connection

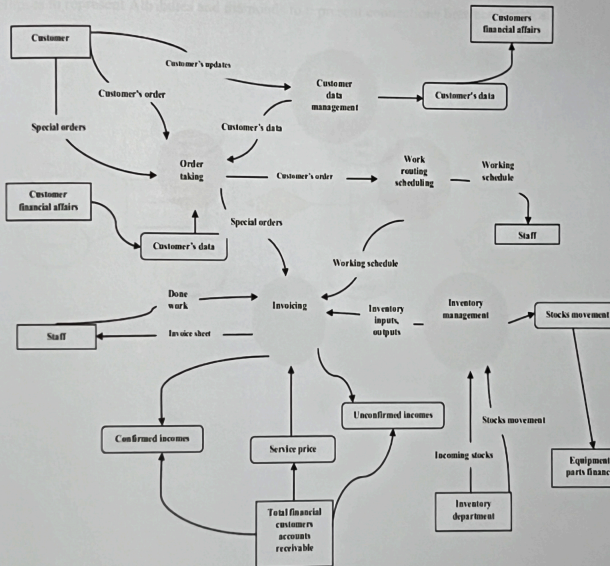
CHAPTER- 4

SYSTEM ARCHITECTURES

4.1 SYSTEM ARCHITECTURE DIAGRAM:

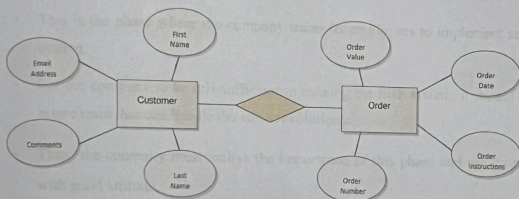


4.2 DATA FLOW DIAGRAM:



4.3 ENTITY DIAGRAM:

The Entity Relationship diagram is a visual device used to model information or data and is used as a schema that is a precursor to database modelling. There are a number of different representations that can be used but the style used in Enterprise Architect uses rectangles to represent Entities, ellipses to represent Attributes and diamonds to represent connections between Entities.



CHAPTER- 5

SYSTEM IMPLEMENTATION

5.1 ERP Implementation

IMPLEMENTATION TEAM TRAINING

- Synchronously when the configuration is taking place, the implementation team is being trained.
- This is the phase where the company trains its employees to implement and later, run the system.
- For the company to be self-sufficient in running the ERP system, it should have a good in-house team that can handle the various solutions.
- Thus, the company must realise the importance of this phase and selects right employees with good attitude.

TESTING

- This is the point where you are testing real case scenarios.
- The test cases must be designed to specifically to find the weak links in the system and these bugs should be fixed before going live.
- Going Live.
- This is the phase where all technicalities are over, and the system is officially declared operational.
- In this phase all data conversion must have been done, and databases are up and running; and the prototype is fully configured and tested.

GOING LIVE

The implementation team must have tested and run the system successfully for some time.

Once the system is „live“ the old system is removed and the new system is used for doing business.

END-USER TRAINING

- This is the phase where the actual users of the system will be trained on how to use the system. The employees who are going to use the new system are identified and their skills are noted. Based on their skill levels are divided into groups.
- Then each group is given training on the new system.
- This training is very useful as the success of the ERP system is in the hands of end-users. The end-user training is much more important and much more difficult than implementation team training since people are always reluctant to change.

POST-IMPLEMENTATION

- This is the very critical phase when the implementation phase is over.
- There must be enough employees who are trained to handle the problem that might occurred when the system is running.
- There must be technical people in the company who have the ability to enhance the system when required.
- Living with ERP systems will be different from installing them.
- Projects for implementing the ERP systems get a lot of resources and attention.
- However, an organisation can only get the maximum value of these inputs if it successfully adopts and effectively uses the system.

5.2 BUSINESS MODULES IN ERP PACKAGE:

5.2.1 FNCTIONAL MODULES OF ERP SOFTWARE:

Common ERP modules include modules for product planning, parts and material purchasing, inventory control, product distribution, order tracking, finance, accounting, marketing, and HR. Organizations often selectively implement the ERP modules that are both economically and technically feasible.

FIGURE:3 FUNCTIONAL MODULE



5.2.2 ERP PRODUCTION PLANNING MODULE:

In the process of evolution of manufacturing requirements planning (MRP) II into ERP, while vendor have developed more robust software for production planning, consulting firms have accumulated vast knowledge of implementing production planning module. Production planning optimizes the utilization of manufacturing capacity, parts, components and material resources using historical production data and sales forecasting.

5.2.3 ERP PURCHASING MODULE:

Purchase module streamline procurement of required raw materials. It automates the processes of identifying potential suppliers, negotiating price, awarding purchase order to the supplier, and billing processes. Purchase module is tightly integrated with the inventory control and production planning modules. Purchasing module is often integrated with supplychain managements of ware.

5.2.4 ERP INVENTORY CONTROL MODULE:

Inventory module facilitates processes of maintaining the appropriate level of stock in a warehouse. The activities of inventory control involves in identifying inventory requirements, setting targets, providing replenishment techniques and options, monitoring inventory control module with sales, balances, and reporting inventory status. Integration of inventory control module with sales, purchase, finance modules allows ERP systems to generate vigilant executive level reports.

5.2.5 ERP SALES MODULE:

Revenues from sales are live blood for commercial organizations. Sales module implements functions of order placement, order scheduling, shipping and invoicing.

Sales module is closely integrated with organizations' ecommerce websites. Many ERP vendors offer online storefront as part of the sales module.

5.2.6 ERP MARKET IN MODULE:

ERP marketing module supports lead generation, direct mailing campaign and more.

5.2.7 ERP FINANCIAL MODULE:

Both for-profit organizations and non-profit organizations benefit from the implementation of ERP financial module. The financial module is the core of many ERP software systems. It can gather financial data from various functional departments, and generates valuable financial reports such balance sheet, general ledger, trail balance, and quarterly financial statements.

5.2.8 ERP HR MODULE:

HR (Human Resources) is another widely implemented ERP module. HR module streamlines the management of human resources and human capitals. HR modules routinely maintain a complete employee database including contact information, salary details, attendance, performance evaluation and promotion of all employees.

5.2.9 SUPPLY CHAIN MANAGEMENT (SCM):

SCM can help you transform a traditional linear supply chain into an adaptive network with the following benefits.

- With the increased visibility into the supply chain and adaptive supply chain network, you can be more responsive. You can sense and respond quickly to changes and quickly capitalize on new opportunities.
- By offering a common information framework that supports communication and collaboration, SCM enables you to better adapt to and meet customer demands.
- Information transparency and real-time business intelligence can lead to shorter cash-to-cash cycle times.

Reduced inventory levels and increased inventory turns across the network can lower overall costs.

- With SCM, you can lower operational expenses with timelier planning for procurement, manufacturing and transportation. Better order, product and execution tracking can lead to improvements in performance and quality - and lower costs. You can also improve margins through better coordination with business partners.
- Tight connection with trading partners keep your supply chain aligned with current business strategies and priorities, improving your organization's overall performance and achievement of goals.

CHAPTER-6

CONCLUSION

Enterprise Resource Planning (ERP) is a system that integrates business functions by managing and organizing organizational data and information. ERP is the most reliable system for the management of data, ensuring its reliability, uniformity, transparency and visibility across the organization. It provides easy to the organizations in maintaining the business data and ensure the access to the integrated valuable business information to all the members of the organizations. ERP software manages important data in an efficient way, avoiding its redundancy and validating the entire process. The appropriate management of information helps the organization in saving the cost and increasing productivity. It also assists in integrating the organizational units which further fosters the communication process and prompt sharing of Enterprise Resource Planning System information among the organizational members leading to improved organizational process and better decision making at every level.

CHAPTER- 7

APPENDIX

7.1 SOURCE CODE

CUSTOMER CONTACT SAVE:

```
public bool CustomerContactSave(string CustomerCode,
List<EE::CustomerContact> CustomerContact, EzyRetailEntities DBModel =
default(EzyRetailEntities))
{

    bool Result = false;
    try
    {
        if (CustomerContact != null && CustomerContact.Count > 0)
        {
            CustomerContact.ForEach(item =>
            {
                if (item != null)
                {
                    var CCRResult = (from customercontact in
                    DBModel.Fn_AppsCustomerContactSave(item.CompanyCode, CustomerCode, item.SINo,
                    item.ContactNo, item.ContactPerson, item.ContactEmail)
                    select customercontact).FirstOrDefault();

                    if (CCRResult != null)
                    {
                        if (CCRResult.Result == CustomerCode)
                        {
                            Result = true;
                        }
                        else
                        {
                            Result = false;
                        }
                    }
                }
            });

            if (!Result)
```

```

{
    SupplierDS.SupplierName = SupplierData.SupplierName;
return; SupplierDS.Address1 = SupplierData.Address1; SupplierDS.Address2 = SupplierData.Address2; SupplierDS.Address3 = SupplierData.Address3;
}
SupplierDS.MobileNo = SupplierData.MobileNo;
}
SupplierDS.Email = SupplierData.Email;
});
SupplierDS.PanNo = SupplierData.PanNo;
}
SupplierDS.City = SupplierData.City;
else
    SupplierDS.State = SupplierData.State;
Result = true;
}
SupplierDS.InvoiceNo = SupplierData.InvoiceNo;
catch (Exception Ex)
{
    SupplierDS.Website = SupplierData.Website;
new
EzyRetail.Domain.Data.ExceptionDA<EE::ExceptionSchema>().TrackErrorData(InflateErrorMessage(Ex, "CustomerContactSave", "CustomerContact"),
CustomerContact[0].CompanyCode);
}
SupplierDS.TaxType = SupplierData.TaxType;
return Result;
}
SupplierDS.ChangedDate = SupplierData.ChangedDate;
SupplierDS.CreatedDate = SupplierData.CreatedDate;
SupplierDS.ModifiedDate = SupplierData.ModifiedDate;
SupplierData.ModifiedDate;

```

SUPPLIER DATA SAVE:

```

if (Supplier != null)
{
    tblSupplier _SupplierData = InflateSupplier(Supplier);
var SupplierDS = (from _SupplierGroup in EzyRetailEntities.tblSuppliers
    where _SupplierGroup.SupplierCode == Supplier.SupplierCode &&
    _SupplierGroup.CompanyCode == Supplier.CompanyCode select
    _SupplierGroup).FirstOrDefault();

if (SupplierDS != null)
{
    SupplierDS.SupplierCode = _SupplierData.SupplierCode;

```

```

SupplierDS.SupplierName = _SupplierData.SupplierName;
SupplierDS.Address1 = _SupplierData.Address1; SupplierDS.Address2 =
_SupplierData.Address2; SupplierDS.Address3 = _SupplierData.Address3;
SupplierDS.MobileNo = _SupplierData.MobileNo;
SupplierDS.Email = _SupplierData.Email;
SupplierDS.FaxNo = _SupplierData.FaxNo;
SupplierDS.City = _SupplierData.City;
SupplierDS.State = _SupplierData.State;
SupplierDS.ZipCode = _SupplierData.ZipCode;
SupplierDS.IsActive = _SupplierData.IsActive;
SupplierDS.HandPhoneNo = _SupplierData.HandPhoneNo;
SupplierDS.Website = _SupplierData.Website;
SupplierDS.CompanyRegNo = _SupplierData.CompanyRegNo; SupplierDS.Terms =
_SupplierData.Terms; SupplierDS.OpeningBalance = _SupplierData.OpeningBalance;
SupplierDS.ContactPerson = _SupplierData.ContactPerson
SupplierDS.HaveTax = _SupplierData.HaveTax;
SupplierDS.TaxCode = _SupplierData.TaxCode;
SupplierDS.TaxPerc = _SupplierData.TaxPerc;
SupplierDS.TaxType = _SupplierData.TaxType;
SupplierDS.CreateUser = _SupplierData.CreateUser;
SupplierDS.CreateDate = _SupplierData.CreateDate;
SupplierDS.ModifyUser = _SupplierData.ModifyUser; SupplierDS.ModifyDate =
_SupplierData.ModifyDate;
SupplierDS.CurrencyCode = _SupplierData.CurrencyCode;
SupplierDS.AccountNo = _SupplierData.AccountNo;
EzyRetailEntities.SaveChanges();

```

PRODUCT DATA:

```

public List<EE::Product> GetAll(string ProductCode, string IsActive, byte?
CompanyCode)
{
List<EE::Product> ProductList = new List<EE.Product>(); try
{
if (string.Compare(IsActive, "1", true) == 0)

```



```

{
var ProductSoure = (from _Customer in EzyRetailEntities.vw_ProductListing where
_Customer.CompanyCode == CompanyCode && _Customer.IsActive == true orderby
_Customer.ModifyDate descending select _Customer).ToList();

if (ProductSoure != null && ProductSoure.Count > 0)
{
if (!string.IsNullOrEmpty(ProductCode))
ProductSoure = ProductSoure.Where(o => o.ProductCode != null && o.ProductCode
== ProductCode).ToList();
if (ProductSoure != null && ProductSoure.Count > 0)
{
ProductSoure.ForEach(item =>
{
if (item != null)
{
ProductList.Add(new EE.Product()
{
ProductCode = item.ProductCode,
ProductName = item.ProductName,
CategoryCode = item.CategoryCode,
CategoryName = item.CategoryName,
SubCategoryCode = item.SubCategoryCode,
SubCategoryName = item.SubCategoryName,
SupplierCode = item.SupplierCode,
SupplierName = item.SupplierName,
UOMCode = item.UOMCode,
PcsPerCarton = item.PcsPerCarton,
Weight = item.Weight,
UnitCost = item.UnitCost,
AverageCost = item.AverageCost,
RetailPrice = item.RetailPrice,
WholeSalePrice = item.WholeSalePrice,
HaveBatch = item.HaveBatch,

```

```

HaveExpiry = item.HaveExpiry,
HaveMfgDate = item.HaveMfgDate,
IsActive = item.IsActive,
CreateUser = item.CreateUser,
CreateDate = item.CreateDate,
ModifyUser = item.ModifyUser, ModifyDate =
item.ModifyDate,
NonStockItem = item.NonStockItem,
TaxPerc = item.TaxPerc,
Specification = item.Specification,
ProductImage = item.ProductImage,
CompanyCode = item.CompanyCode,
MinimumSellingPrice =
item.MinimumSellingPrice,
MinimumRetailPrice =
item.MinimumRetailPrice, SaleAccountNo
= item.SaleAccountNo,
InventoryAccountNo =
item.InventoryAccountNo,
COGAccountNo = item.COGAccountNo,
ProductImageString = item.ProductImage
!= null ?
string.Format("data:image/jpeg;base64,{0}",
Convert.ToBase64String(item.ProductImage)) : string.Empty
});
}
});
}
}
}

```

PURCHASE ORDER:

```

public List<EE::POHeader> GetAll(string PONo, byte? CompanyCode)
{
    List<EE::POHeader> POList = new List<EE.POHeader>(); try
    {

```

```

var PurchaseOrderSoure = (from _POHeader in EzyRetailEntities.tblPoHeaders where
_POHeader.CompanyCode == CompanyCode orderby _POHeader.CreateDate
descending select _POHeader).ToList();
if (PurchaseOrderSoure != null && PurchaseOrderSoure.Count > 0)
{
    if (!string.IsNullOrEmpty(PONo))
        PurchaseOrderSoure = PurchaseOrderSoure.Where(o => o.PoNo != null && o.PoNo
        == PONo).ToList();
    PurchaseOrderSoure.ForEach(item =>
    {
        if (item != null)
        {
            POList.Add(new EE.POHeader()
            {
                CompanyCode = item.CompanyCode,
                PoNo = item.PoNo,
                PoDate = item.PoDate,
                DeliveryDate = item.DeliveryDate,
                LocationCode = item.LocationCode,
                SupplierCode = item.SupplierCode,
                SupplierName = item.SupplierName,
                Attention = item.Attention,
                Total = item.Total,
                ItemDiscount = item.ItemDiscount,
                TotalDiscount = item.TotalDiscount,
                SubTotal = item.SubTotal,
                Tax = item.Tax,
                NetTotal = item.NetTotal,
                Remarks = item.Remarks,
                Status = item.Status,
                CurrencyCode = item.CurrencyCode,
                CurrencyRate = item.CurrencyRate,
                QuotationNo = item.QuotationNo,
                CreateUser = item.CreateUser,
            });
        }
    });
}

```



```

CreateDate = item.CreateDate,
ModifyUser = item.ModifyUser, ModifyDate =
item.ModifyDate,
TaxCode = item.TaxCode,
TaxType = item.TaxType,
TaxPerc = item.TaxPerc,
FItemDiscount=item.FItemDiscount,
FTax=item.FTax,
FTotal=item.FTotal,
FNetTotal=item.FNetTotal,
FSubTotal=item.FSubTotal,
FBillDiscount=item.FBillDiscount,
BillDiscountPercentage=item.BillDiscountPercentage, BillDiscount=item.BillDiscount,
PoDateString = item.PoDate.HasValue ? item.PoDate.Value.ToString("dd/MM/yyyy") :
string.Empty,
DeliveryDateString = item.DeliveryDate.HasValue ?
item.DeliveryDate.Value.ToString("dd/MM/yyyy") : string.Empty,
));
}
));
}
else
{
POList.Add(new EE::POHeader() { ErrorMessage = Constant.PURCHASEORDER
});
}
}
catch (Exception Ex) { new
EzyRetail.Domain.Data.ExceptionDA<EE::ExceptionSchema>().TrackErrorData(Infla
teErrorMessage(Ex, "GetPoHeader", "PO"), CompanyCode);
}
return POList;
}

```

PRODUCT STOCK:

```
public class ProductStockDA : CommonDA
```

```
{
```

```
    #region PUBLIC
```

```
        public List<EE::ProductStock> GetAll(string ProductCode, string LocationCode,
byte? CompanyCode)
```

```
        {
```

```
            List<EE::ProductStock> ProductStockList = new List<EE.ProductStock>();
```

```
            try
```

```
            {
```

```
                var ProductStockSoure = (from _ProductStock in
```

```
EzyRetailEntities.vwProductWithStocks
```

```
                    where _ProductStock.CompanyCode == CompanyCode
```

```
&& _ProductStock.LocationCode == LocationCode
```

```
                    orderby _ProductStock.ModifyDate descending select
```

```
                    _ProductStock).ToList();
```

```
            if (ProductStockSoure != null && ProductStockSoure.Count > 0)
```

```
            {
```

```
                if (!string.IsNullOrEmpty(ProductCode))
```

```
                    ProductStockSoure = ProductStockSoure.Where(o => o.ProductCode
!= null && o.ProductCode == ProductCode).ToList();
```

```
                if (ProductStockSoure != null && ProductStockSoure.Count > 0)
```

```
                {
```

```
                    ProductStockSoure.ForEach(item =>
```

```
                    { if (item != null)
```

```
                    {
```

```
                        ProductStockList.Add(new EE.ProductStock()
```

```
                        {
```

```
                            ProductCode = item.ProductCode,
```

```
                            ProductName = item.ProductName,
```

```

        LocationCode = item.LocationCode,
        NoOfCarton = item.NoOfCarton,
        Qty = item.Qty,
        ModifyUser = item.ModifyUser,
        ModifyDate = item.ModifyDate,
        UnitCost = item.UnitCost,
        AverageCost = item.AverageCost,
        RetailPrice = item.RetailPrice,
        WholeSalePrice = item.WholeSalePrice,
        CompanyCode = item.CompanyCode,
    });
    }
    });
}
}
else
{
    ProductStockList.Add(new EE::ProductStock() { ErrorMessage =
Constant.PRODUCTSTOCK });
}
}
catch (Exception) { }

return ProductStockList;
}

```

SALES ORDER:

```

public List<EE::SoHeader> GetAll(string SoNo, byte? CompanyCode)
{
    List<EE::SoHeader> ProductList = new List<EE::SoHeader>(); try
    {

```



```

var SoSource = (from _Customer in EzyRetailEntities.tblSoHeaders
where _Customer.CompanyCode == CompanyCode orderby
_Customer.ModifyDate descending select _Customer).ToList();

if (SoSource != null && SoSource.Count > 0)
{
    if (!string.IsNullOrEmpty(SoNo))
    SoSource = SoSource.Where(o => o.SoNo != null && o.SoNo == SoNo).ToList();
    SoSource.ForEach(item =>
    { if (item !=
    null)
    {
        ProductList.Add(new EE.SoHeader()
        {
            SoNo = item.SoNo,
            SoDate = item.SoDate,
            DeliveryDate = item.DeliveryDate,
            LocationCode = item.LocationCode,
            CustomerCode = item.CustomerCode,
            CustomerName = item.CustomerName,
            Total = item.Total,
            ItemDiscount = item.ItemDiscount,
            BillDiscount = item.BillDiscount,
            TotalDiscount = item.TotalDiscount,
            SubTotal = item.SubTotal,
            Tax = item.Tax,
            NetTotal = item.NetTotal,
            Remarks = item.Remarks,
            Status = item.Status,
            CurrencyCode = item.CurrencyCode,
            CurrencyRate = item.CurrencyRate,
            CreateUser = item.CreateUser,
            CreateDate = item.CreateDate,
            ModifyUser = item.ModifyUser, ModifyDate =
            item.ModifyDate,

```

```

CompanyCode = item.CompanyCode,
DeliveryCode = item.DeliveryCode,
OrderNo = item.OrderNo,
OrderDate = item.OrderDate,
TaxCode = item.TaxCode,
TaxType = item.TaxType,
TaxPerc = item.TaxPerc,
SoDateString = item.SoDate.HasValue ? item.SoDate.Value.ToString("dd/MM/yyyy") :
string.Empty,
OrderDateString = item.OrderDate.HasValue ?
item.OrderDate.Value.ToString("dd/MM/yyyy") : string.Empty, DeliveryDateString =
item.DeliveryDate.HasValue ?
item.DeliveryDate.Value.ToString("dd/MM/yyyy") : string.Empty,
PoNo = item.PoNo,
POStatus = item.POStatus,

});
}
});
}

else
{
ProductList.Add(new EE::SoHeader() { ErrorMessage = Constant.SALESORDER });
}
}

catch (Exception) { }

return ProductList;
}

```

7.2 OUTPUT:

LOGIN PAGE:



HOME PAGE:



ADD AND MODIFY CUSTOMER DETAILS:

Add Customer

Customer Code		Customer Name	
Customer Address Info Contact Info Delivery Info			
Address1	Address2	Customer Group	
Address3	Mobile No	Customer Type	
E-mail	Fax No	Vat	
City	State	Area	
House Code	Website	Terms	
House Phone No	Tax Pct	Tax	
Company Reg No	Remarks	Tax Type	
		Currency Code	
		Account No	

ADD PRODUCT AND DETAILS:

Add Product

Product Code		Product Name		☒ Is Active	
Product Info Additional Info Purchase History Recent History View Stock History					
Category	Pcs Per Carton	Sale Account No			
Sub Category	Weight	Inventory Account No			
Unit	Unit Cost	COG Account No			
Search on UOM	Whole Sale Price	☐ Have Batch ☐ Have Expiry ☐ Have Mfg Date ☐ From Stock Item			
Search on UOM	Minimum Selling Price				
CTN	Specifications				
Minimum Retail Price	Supplier				
Tax Pct	Select an supplier				

ADD USER MASTER:

Add User Master

User Name

First Name

Email

User Group

select on User Group

Pasword

Last Name

Phone Number

☒ IsActive

Cancel

Save

AND SUPPLIER:

USER ROLE MANAGEMENT:

User Roles Management

DRIVER

Select All

✓ Save

Capabilities	Have Add	Have Edit	Have Delete	Have Conversion
Master				
Company				
Customer				
Supplier				
Terms				
Bank				
Paymode				
Location				
CustomerType				
Employee				
Products				
Product				
Category				
SubCategory				
Unit				
ProductStock				
Purchase				

ADD SUPPLIER:

Add Supplier

Supplier Code		Supplier Name	
Supplier Additional Info Contact Info			
Address1	Address2	Tax Type	
Address3	Mobile No	Tax Perc	
Email	Fax No	Currency Code	
City	State	Account No	
Zip Code	Website	☒ Have Tax	
Hand Phone No	Company Reg No		
Terms	Tax Code		

Cancel

Save

ADD DEPOSIT:

Add Deposit

Deposit No		Deposit Date	27/04/2023					
Customer Code		Customer Name						
Ref No	<table border="1"> <thead> <tr> <th>Customer Code</th> <th>Customer Name</th> <th>Address</th> </tr> </thead> <tbody> <tr> <td>6001</td> <td>XYZ</td> <td>X</td> </tr> </tbody> </table>	Customer Code	Customer Name	Address	6001	XYZ	X	
Customer Code	Customer Name	Address						
6001	XYZ	X						
Account	<table border="1"> <thead> <tr> <th>Account</th> <th>Paymode</th> </tr> </thead> <tbody> <tr> <td>Select an Account</td> <td>select on paymode</td> </tr> </tbody> </table>	Account	Paymode	Select an Account	select on paymode			
Account	Paymode							
Select an Account	select on paymode							
Remarks								

[Cancel](#) [Save](#)

Cancel

Save

ADD SALES ORDER:

Add Sales Order

So No		So Date	27/04/2023	Order No	
Customer Code		Customer Name		Order Date	27/04/2023
Address1		Address2			
Tax Type	NO TAX	Remarks			

SLNo	Product Code	Product Name	Carton	Loose	Quantity	Price	Total	Action
Code	Name		Carton	Loose	Qty	Price	Discount	Total
To	Remarks		Uom	FoQty				
Per Unit Cost	Weight		Qty On Hand	Avg cost				

Summary

Local

Total	0.00000
Discount	0.00000

CHAPTER 8

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