GDC MEMORIAL COLLEGE
BAHAL (BHIWANI)-127028

Lab Manual

E-Commerce (B.Com Vocational 3rd year)

Department of Computer Science

Index

1. ERP Introduction

Enterprise resource planning (**ERP**) is a business management software—usually a suite of integrated applications—that a company can use to collect, store, manage and interpret data from many business activities, including:

- Product planning, cost
- Manufacturing or service delivery
- Marketing and sales
- Inventory management
- Shipping and payment

ERP provides an integrated view of core business processes, often in real-time, using common databases maintained by a database management system. ERP systems track business resources—cash, raw materials, production capacity—and the status of business commitments: orders, purchase orders, and payroll. The applications that make up the system share data across the various departments (manufacturing, purchasing, sales, accounting, etc.) that provide the data. ERP facilitates information flow between all business functions, and manages connections to outside stakeholders.

Enterprise system software is a multi-billion dollar industry that produces components that support a variety of business functions. IT investments have become the largest category of capital expenditure in United States-based businesses over the past decade. Though early ERP systems focused on large enterprises, smaller enterprises increasingly use ERP systems.

The ERP system is considered a vital organizational tool because it integrates varied organizational systems and facilitates error-free transactions and production. However, ERP system development is different from traditional systems development. ERP systems run on a variety of computer hardware and network configurations, typically using adatabase as an information repository

Characteristics

ERP (Enterprise Resource Planning) systems typically include the following characteristics:

- An integrated system that operates in (or near) real time without relying on periodic updates
- A common database that supports all applications
- A consistent look and feel across modules

- Installation of the system with elaborate application/data integration by the Information Technology (IT) department, provided the implementation is not done in small steps[15]

Functional areas

An ERP system covers the following common functional areas. In many ERP systems these are called and grouped together as *ERP modules*:

- Financial accounting: General ledger, fixed asset, payables including vouchering, matching and payment, receivables cash application and collections, cash management, financial consolidation
- Management accounting: Budgeting, costing, cost management, activity based costing
- Human resources: Recruiting, training, rostering, payroll, benefits, 401K, diversity management, retirement, separation
- Manufacturing: Engineering, bill of materials, work orders, scheduling, capacity, workflow management, quality control, manufacturing process, manufacturing projects, manufacturing flow, product life cycle management
- Order Processing: Order to cash, order entry, credit checking, pricing, available to promise, inventory, shipping, sales analysis and reporting, sales commissioning.
- Supply chain management: Supply chain planning, supplier scheduling, product configurator, order to cash, purchasing, inventory, claim processing, warehousing (receiving, putaway, picking and packing).
- Project management: Project planning, resource planning, project costing, work breakdown structure, billing, time and expense, performance units, activity management
- Customer relationship management: Sales and marketing, commissions, service, customer contact, call center support - CRM systems are not always considered part of ERP systems but rather Business Support systems (BSS).
- Data services : Various "self–service" interfaces for customers, suppliers and/or employees

Slide 1: What is ERP?

What is ERP?

- An ERP system is an attempt to integrate all functions across a company to a single computer system that can serve all those functions' specific needs.
- "Integration" is the key word for ERP implementation.

Slide2: What is ERP?

What is ERP?

- It may also integrate key customers and suppliers as part of the enterprise's operation.
- It provides integrated database and custom-designed report systems.
- It adopts a set of "best practices" for carrying out all business processes.

Slide 3: Graphical View

Slide 4: Example of ERP for student database

Slide 5: Major reasons for adopting ERP

Major Reasons for Adopting ERP

- Integrate financial information
- Integrate customer order information
- Standardize and speed up operations processes
- Reduce inventory
- Standardize Human Resources information

Slide 6: Potential benefits of ERP

Potential Benefits of ERP

- Internal Benefits
  - Integration of a single source of data
  - Common data definition
  - A real-time system
  - Increased productivity
  - Reduced operating costs
  - Improved internal communication
  - Foundation for future improvement

Slide 7: Potential benefits of ERP

Potential Benefits of ERP

- External Benefits
  - Improved customer service and order fulfillment
  - Improved communication with suppliers and customers
  - Enhanced competitive position
  - Increased sales and profits

Slide 8: ERP implementation approaches

ERP Implementation Approaches

- The big bang – install a single ERP system across the entire organization
- Franchising – Independent ERP systems are installed in different units linked by common processes, e.g., bookkeeping.
- Slam dunk – install one or several ERP modules for phased implementation of key business processes.

Slide 9,10: Major phases of ERP implementation

**Major Phases of ERP Implementation
(Kent Sandoe, Enterprise Integration)**

- Initiation – develop business case, project scope, and implementation strategy
- Planning – establish implementation team, determine goals and objectives, establish metrics
- Analysis and process design – analyze and improve existing processes, map new processes to be adopted by the system

**Major Phases of ERP Implementation
(Kent Sandoe, Enterprise Integration)**

- Realization – install a base system, customization, and test the system
- Transition – replace the formal system with the new system, data conversion
- Operation – monitor and improve system performance, provide continued training and technical support

Slide 11: Major challenges to ERP implementation

Major Challenges to ERP Implementation

- Limitations of ERP technical capabilities
- Inconsistency with existing business processes
- Costs - implementation (hardware, software, training, consulting) and maintenance
- Impact on organizational structure (front office vs. back office, product lines, etc.)
- Changes in employee responsibilities