

ENTERPRISE RESOURCE PLANNING

FOR DISTRIBUTION COMPANIES

Final Defense Presentation On Enterprise Resource Planning

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Enterprise Resource Planning

- Process by which a company manages and integrate important parts of business organization
 - Integrates internal and external management Information System
 - Business management software that allows an organization to use a system of integrated applications to manage the business.
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Distribution Companies

- Acts as a bridge between manufacturers and customers
 - Provides goods and services to customers
 - Distributed over different geographic regions
 - Deals with different manufacturers to better product
 - Keep track of local dealers and customers
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Objectives

- Improve business efficiency with the use of ERP system
 - Provide module based ERP system flexible to adapt with existing business
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Features

- Master repository database of all the business activities.
 - Fluent business workflow management.
 - Elegant and interactive end user interface.
 - Flexible to adapt changes with changing business plans and Master repository database of all the business activities.
 - Divided into modules and integrated as per need of enterprise.
 - Easy visualization of all the inventories in different warehouses.
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Functional Requirements

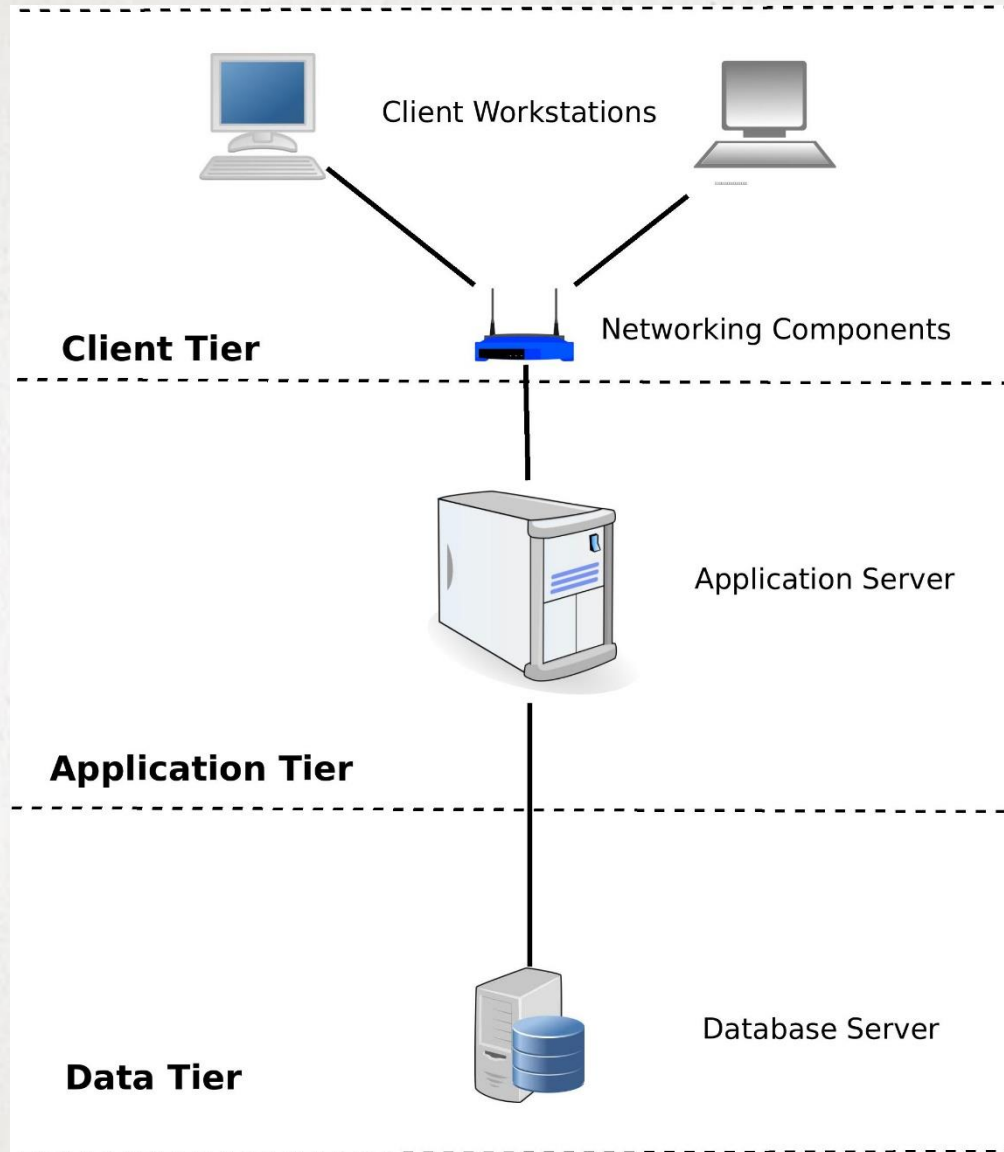
- Elegant User Interface for user friendly experience
 - Quick response to user activities
 - Realtime update to all the clients
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Non-Functional Requirements

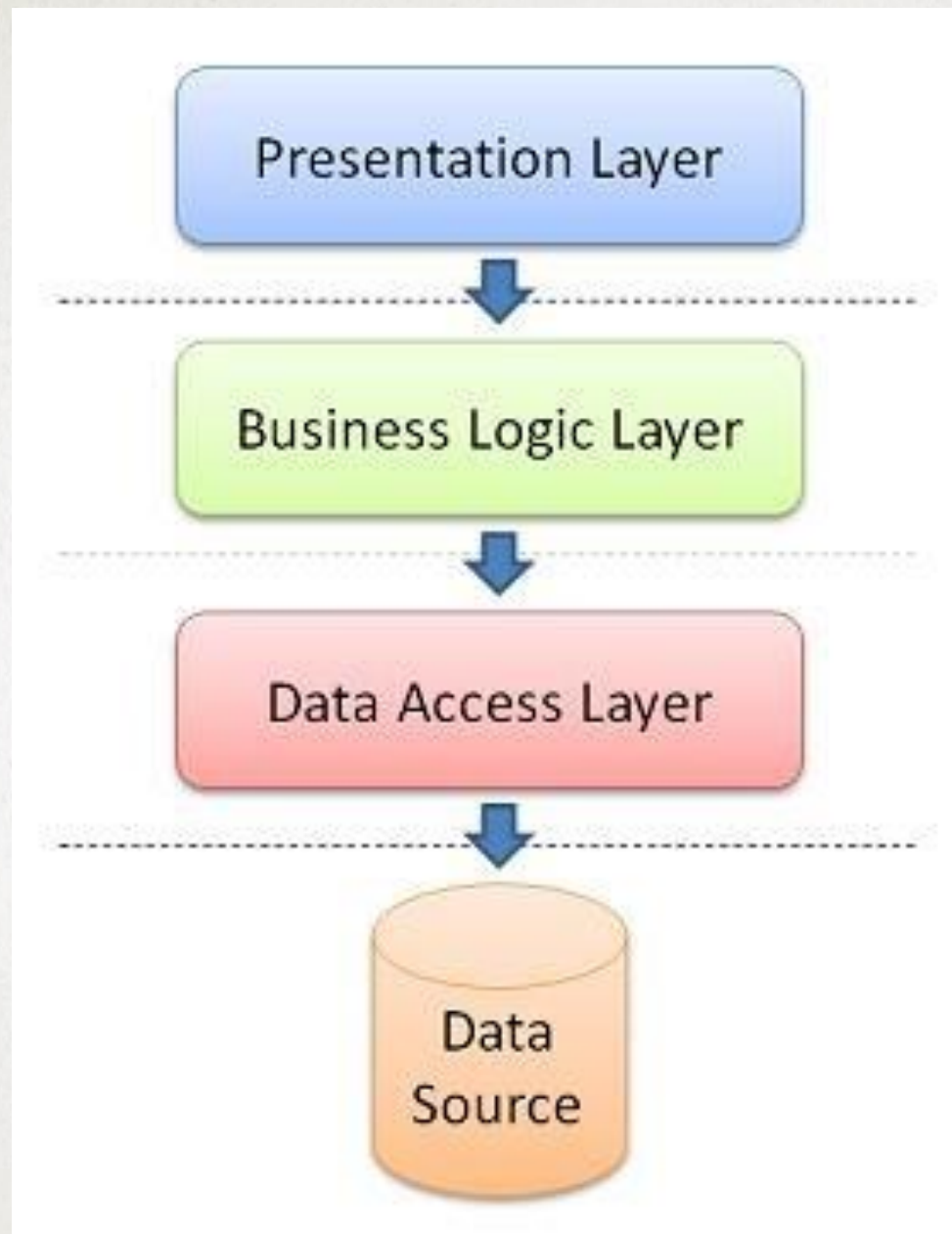
- The Application server should be high end computer and should be extended on the basis of work load.
 - There should be high speed Internetwork connection within the enterprise.
 - Transactional Process Management
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Feasibility Analysis

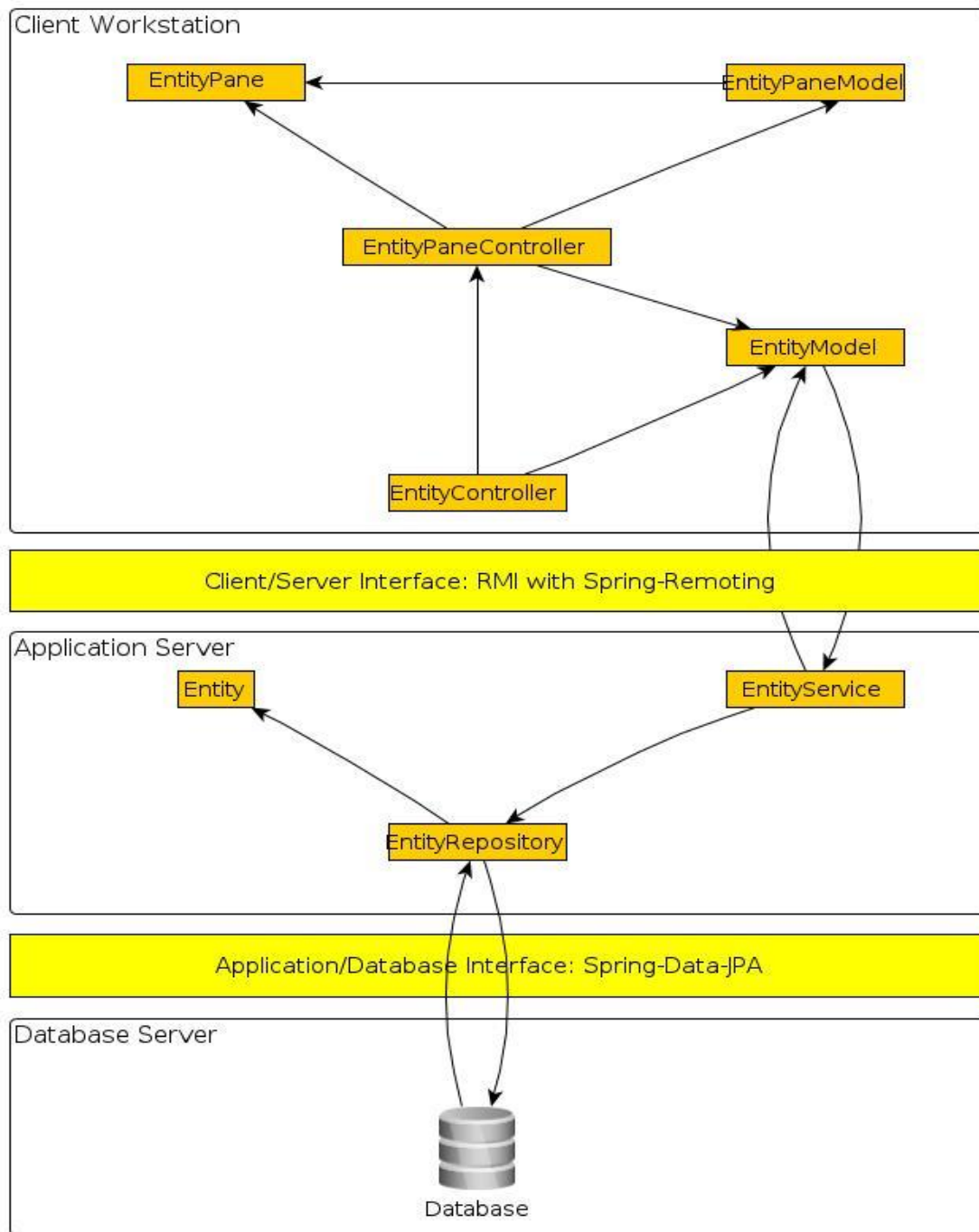
- Technical Feasibility
 - Operational Feasibility
 - Economic Feasibility
 - Schedule Feasibility
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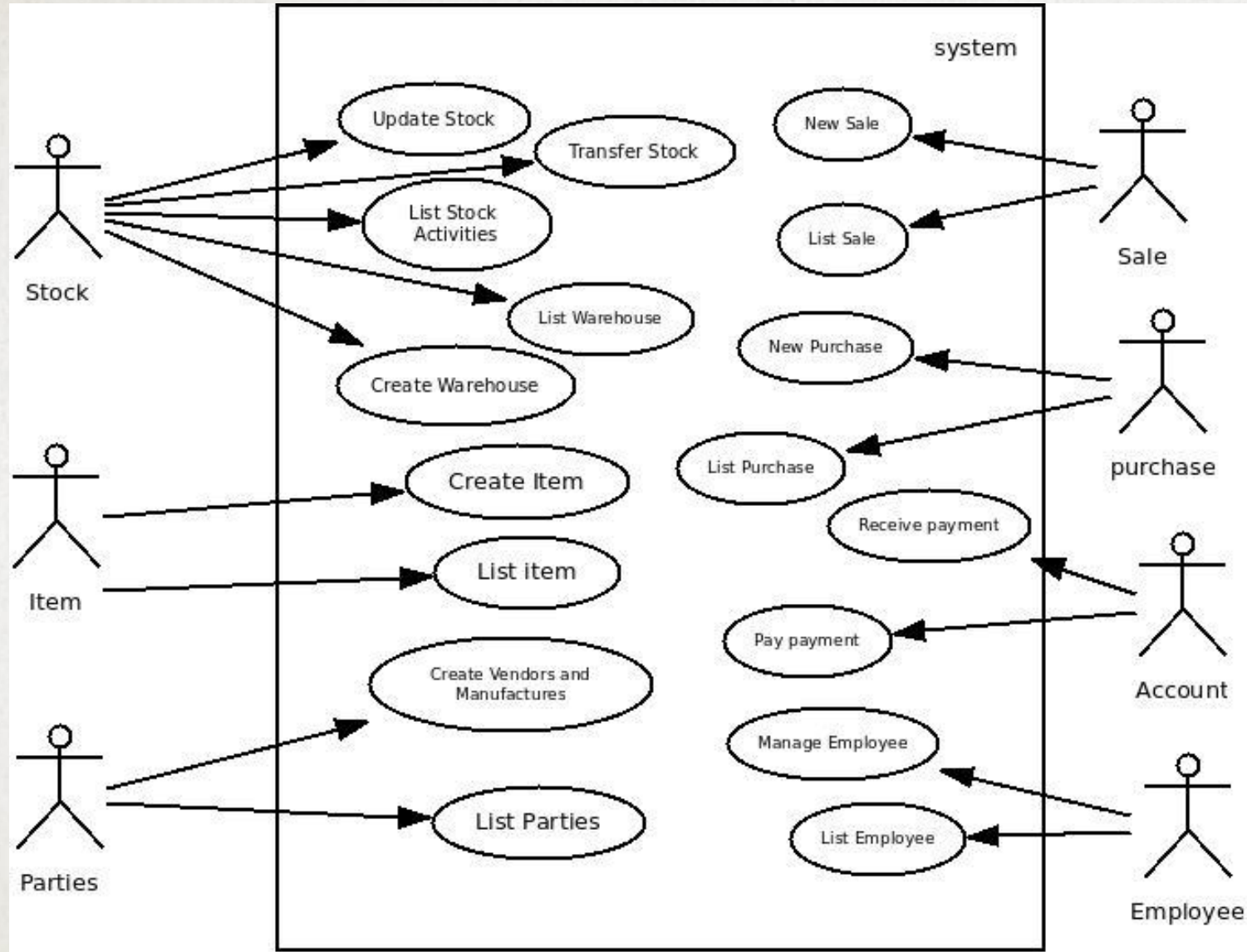
System Design



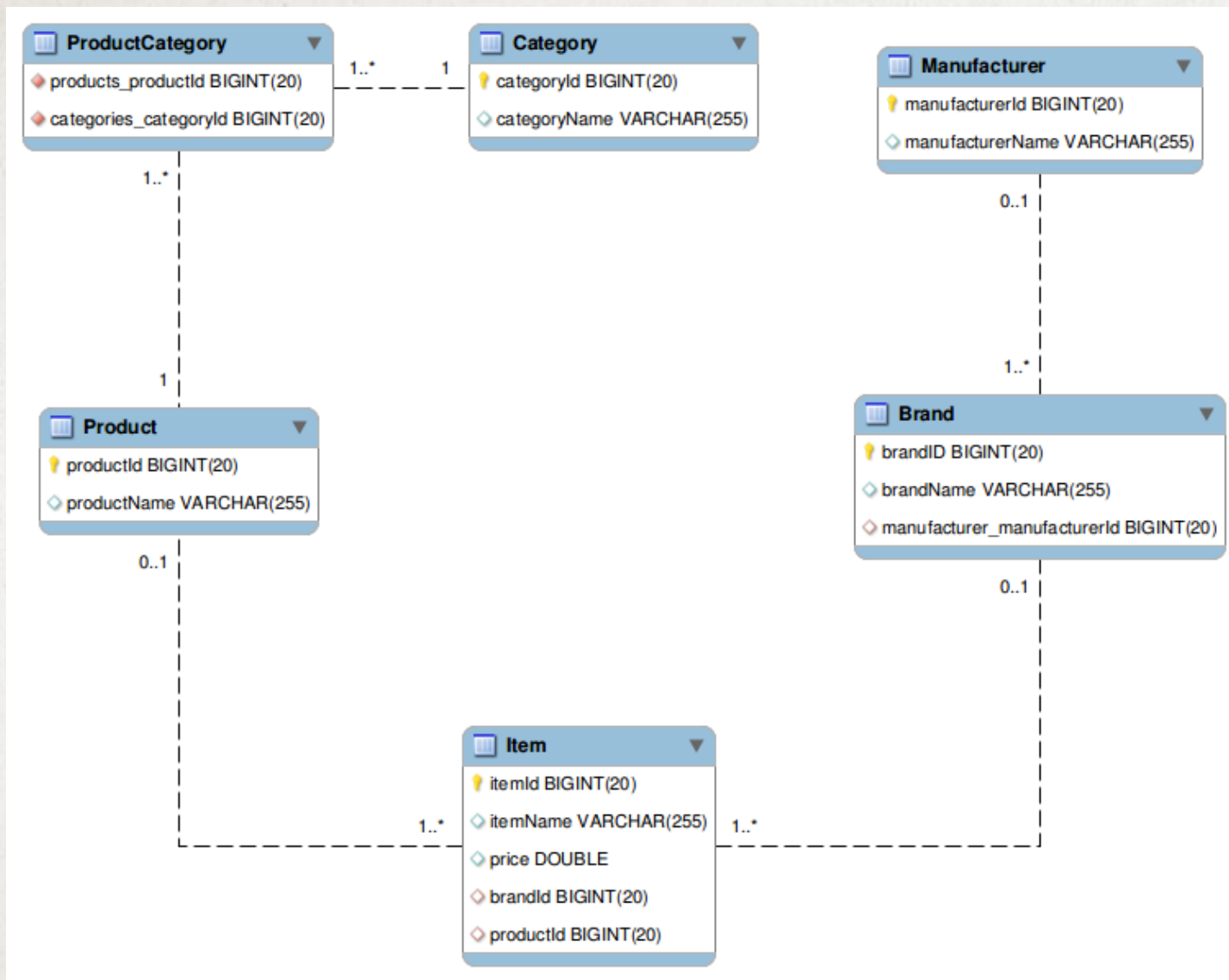
System Architecture



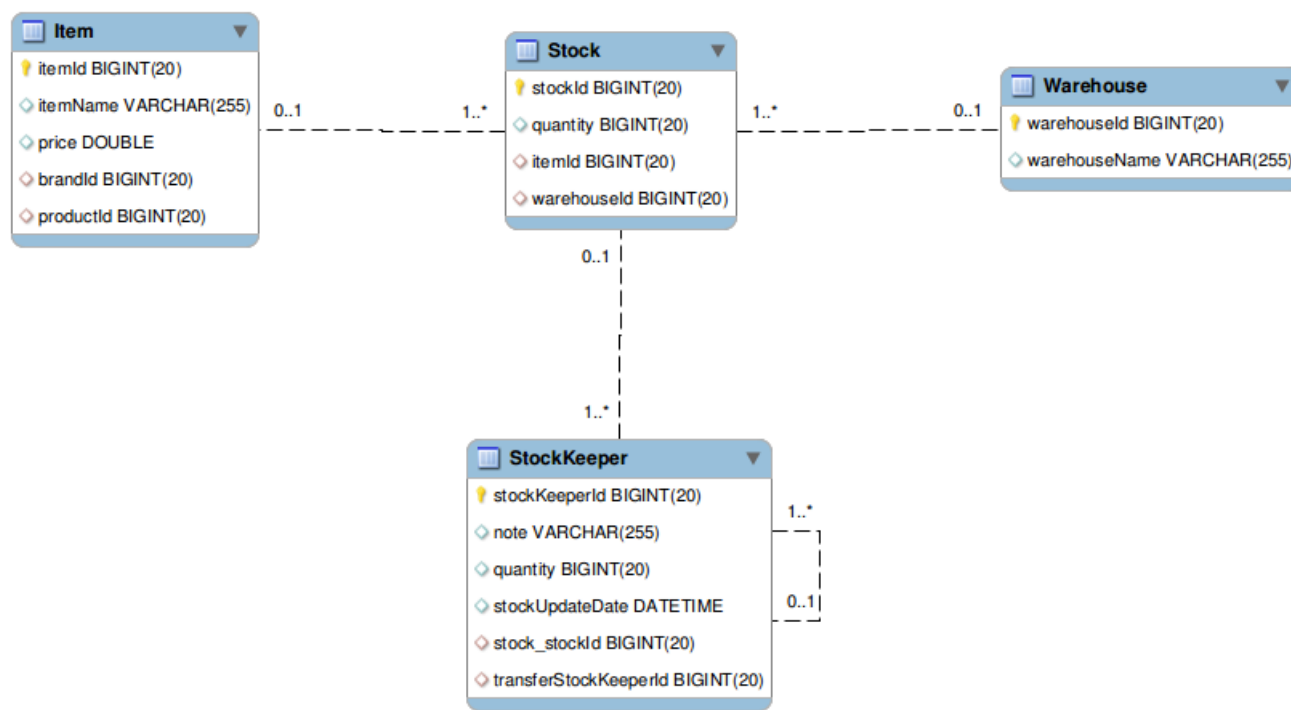
System Workflow



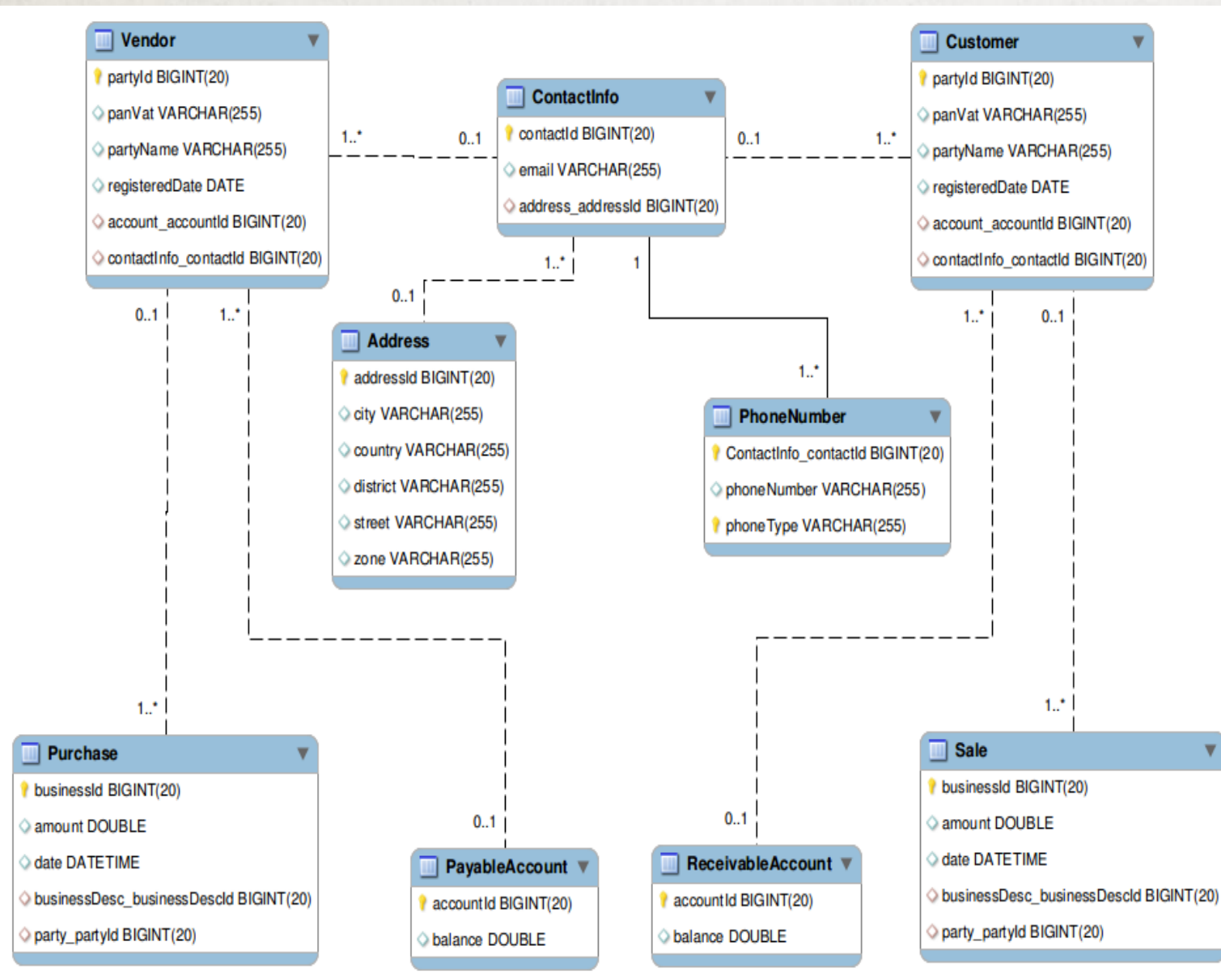
Use Case Diagram



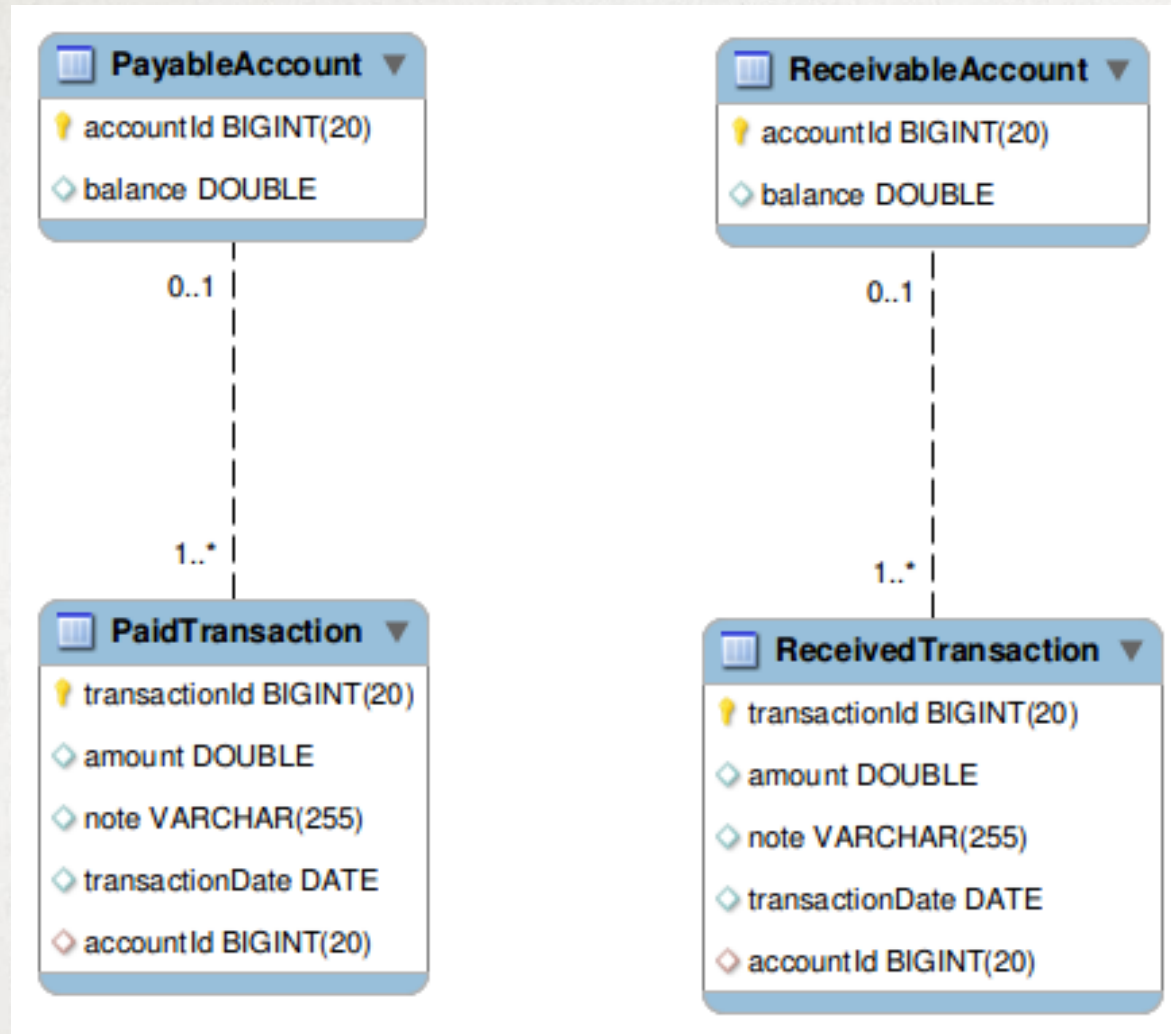
Item Module EER Diagram



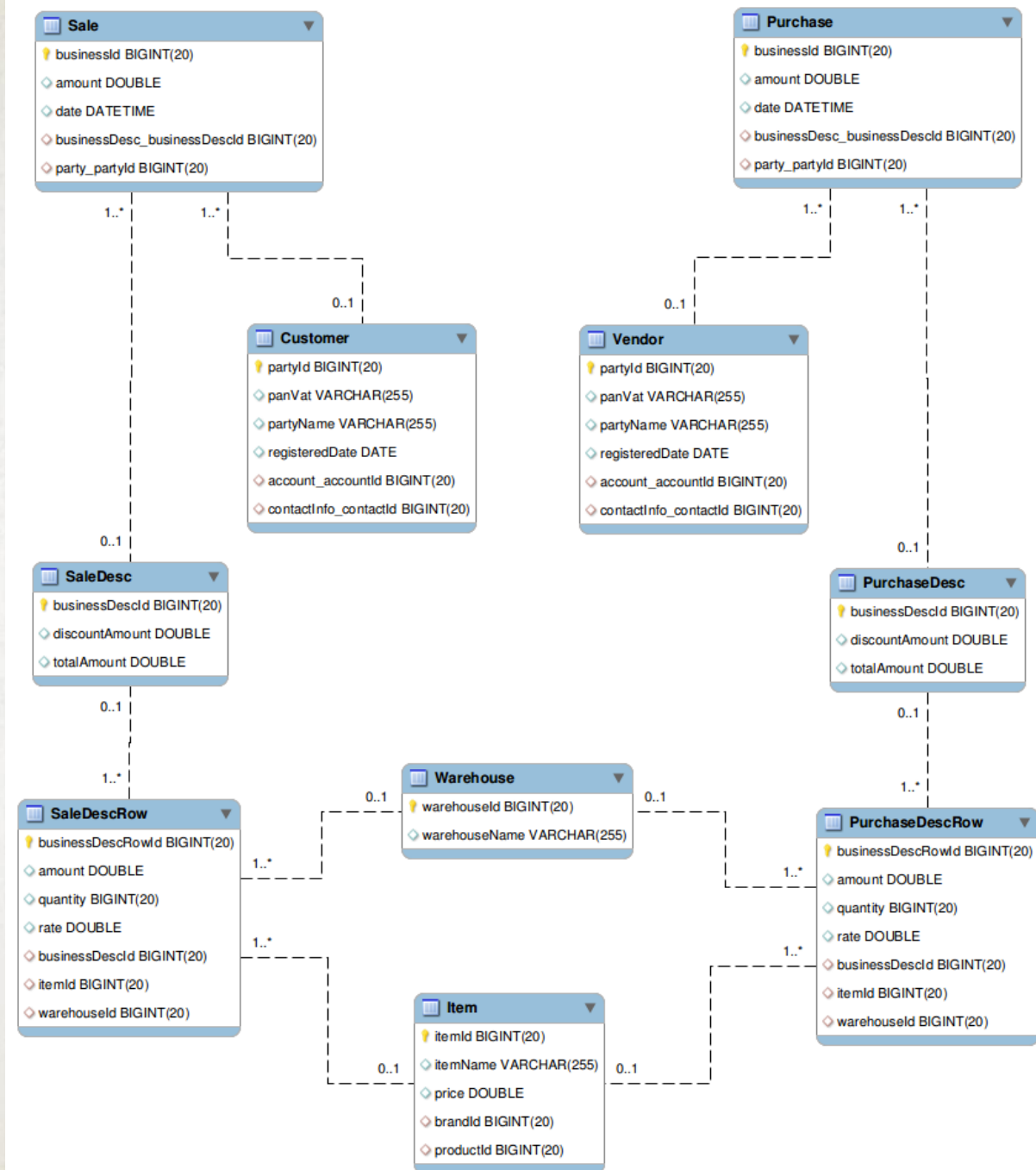
Stock Module EER Diagram



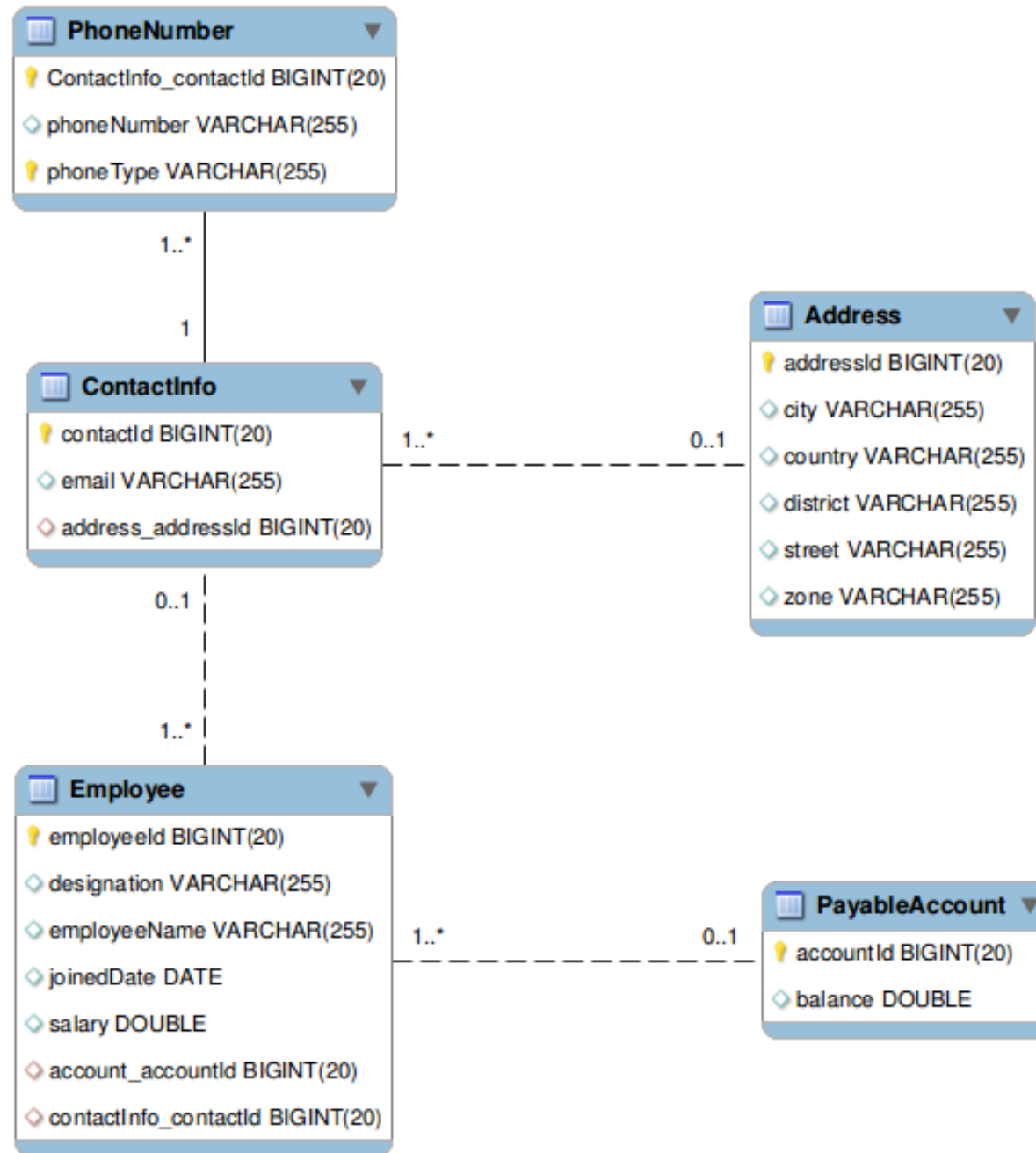
Party Module EER Diagram



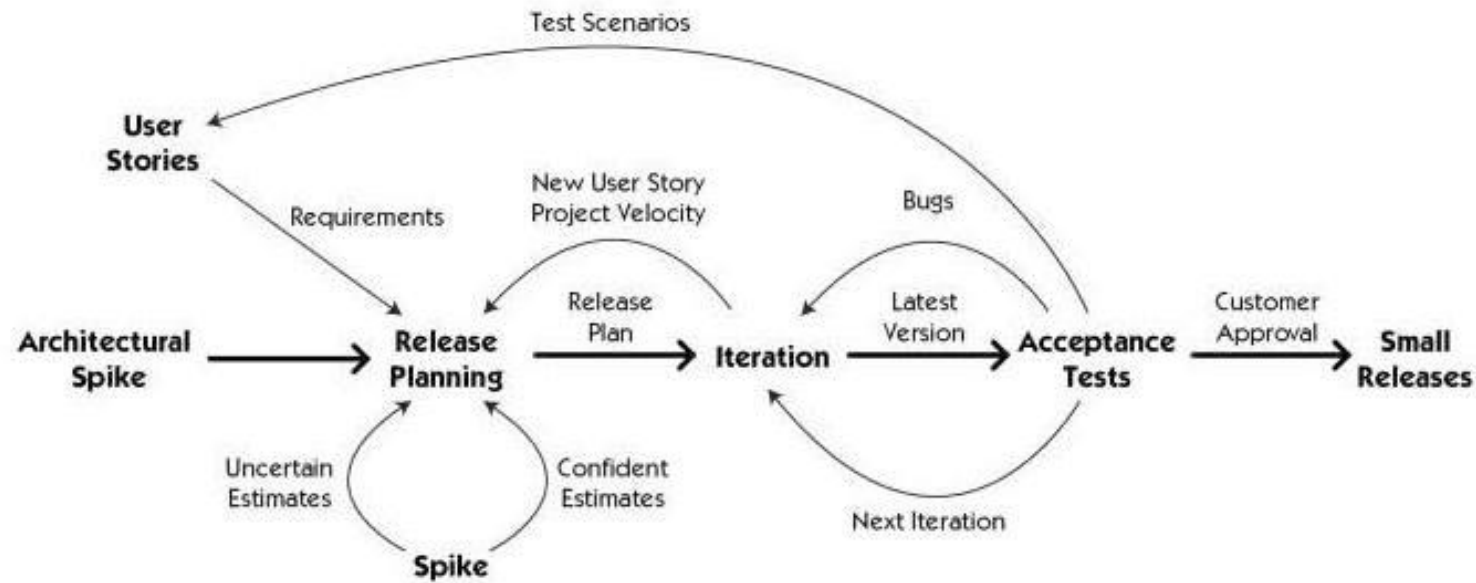
Account Module EER Diagram



Business Module EER Diagram



Employee Module EER Diagram



A visual process model for XP

Development Approach

Extreme Programming

Testing

- Unit Testing
 - Integration Testing
 - System Testing
 - Acceptance Testing
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License, Release and Deployment

- MIT opensource License
 - Simple and Permissive
- Release
 - Two releases so far (v1.0 & v1.1)
- Deployment
 - Deployment instruction have been detailed in Project Website

Project Info Website: <https://devopsdistilled.github.io/OpERP>

Project Dev Website: <https://github.com/DevOpsDistilled/OpERP>



Development Platform



Development Tools

Problems Encountered

- Lack of support from the managers and employees made difficult to gather information and requirements
 - Integration of different modules was a difficult task.
 - Lack of knowledge about the ERP system as very less companies in Nepal is using it commercially.
 - Lack of knowledge about the commercial field made us difficult in generating reports.
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Future Enhancement

- Report generation and decision-making.
 - Extending the project as an web application.
 - Management hierarchy based application privilege.
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Conclusion

- The modules and components are well functioning.
 - The application is highly flexible.
 - The developed ERP system can be easily deployed in existing business with very little cost.
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References

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- [2] T. Srivardhana & S. D. Pawlowski, "ERP systems as an enabler of sustained business process innovation: A knowledge-based view", Journal of Strategic Information Systems, 2007
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Thank You