ERP System Requirements Analysis

**Operational Requirements**

1. Provide a unified platform for managing retail chain operations across 100+ stores and multiple warehouses
2. Enable real-time data flow and insights across all business functions
3. Support seamless integration between inventory, procurement, sales, HR, and finance operations
4. Facilitate data-driven decision making for management
5. Enable scalability for business growth and expansion
6. Support multi-location operations and data synchronization
7. Provide role-based access for different user types (store managers, procurement team, warehouse managers, etc.)

8. Support seasonal operations and promotional event management

9. Enable interdepartmental workflow management

**Functional Requirements**

*Inventory Control Module*

1. **FR-IC1:** Allow authorized users to create, read, update, and delete inventory records.
2. **FR-IC2:** Track real-time stock levels across all stores and warehouses
3. **FR-IC3:** Generate automatic purchase orders based on predefined thresholds
4. **FR-IC4:** Update inventory levels upon receiving shipments
5. **FR-IC5:** Record stock movements between locations
6. **FR-IC6:** Calculate reorder points for each product
7. **FR-IC7:** Monitor stock availability across locations
8. **FR-IC8:** Track product attributes (Product\_ID, Product\_Name, Category, Price, Stock\_Level, Supplier\_ID, Reorder\_Level, Last\_Purchase\_Date)
9. **FR-IC9:** Support seasonal inventory planning
10. **FR-IC10:** Manage promotional inventory allocations

*Procurement Module*

1. **FR-PM1:** Allow authorized users to create, read, update, and delete purchase orders and supplier records
2. **FR-PM2:** Manage supplier information and relationships
3. **FR-PM3:** Create and track purchase orders
4. **FR-PM4:** Record supplier contract terms and conditions
5. **FR-PM5:** Process supplier invoices
6. **FR-PM6:** Track delivery schedules
7. **FR-PM7:** Manage seasonal discount packages
8. **FR-PM8:** Generate supplier performance reports
9. **FR-PM9:** Manage supplier attributes (Supplier\_ID, Supplier\_Name, Contact\_Details, Location)
10. **FR-PM10:** Support contract negotiation and approval workflows
11. **FR-PM11:** Track contract expiration and renewal dates

*Sales Management Module*

1. **FR-SM1:** Allow authorized users to create, read, update, and delete sales transactions and customer records.
2. **FR-SM2:** Record sales transactions from all stores
3. **FR-SM3:** Generate sales forecasts based on historical data
4. **FR-SM4:** Track store performance metrics
5. **FR-SM5:** Process customer transactions
6. **FR-SM6:** Generate sales reports by store/region
7. **FR-SM7:** Monitor promotional event performance
8. **FR-SM8:** Manage store attributes (Store\_ID, Store\_Name, Location, Manager\_ID, Total\_Sales, Operating\_Hours, Contact\_Number)
9. **FR-SM9:** Track seasonal sales patterns
10. **FR-SM10:** Manage promotional pricing and discounts

*Human Resources Module*

1. **FR-HR1:** Allow authorized users to create, read, update, and delete employee records and payroll data.
2. **FR-HR2:** Process employee payroll
3. **FR-HR3:** Manage employee schedules
4. **FR-HR4:** Track employee performance metrics
5. **FR-HR5:** Maintain employee records
6. **FR-HR6:** Process leave requests
7. **FR-HR7:** Generate HR reports
8. **FR-HR8:** Manage employee attributes (Employee\_ID, Name, Role, Salary, Hire\_Date, Department\_ID)
9. **FR-HR9:** Support departmental transfers and promotions
10. **FR-HR10:** Track employee certifications and training
11. **FR-HR10:** Maintain department reference data (Department\_ID, Department\_Name, Manager\_ID)

*Finance Module*

1. **FR-FM1:** Allow authorized users to create, read, update, and delete financial transactions and reports.
2. **FR-FM2:** Process financial transactions
3. **FR- FM3:** Generate financial reports
4. **FR- FM4:** Track expenses across departments
5. **FR- FM5:** Manage budgets
6. **FR- FM6:** Process payroll payments
7. **FR- FM7:** Generate tax compliance reports
8. **FR- FM8:** Track department-specific budgets and expenses
9. **FR- FM9:** Manage financial approval workflows
10. **NFPR-10:** Support inter-department cost allocations

**Non-Functional Requirements**

*Performance Requirements -* *NFPR*

1. **NFPR-1**: Real-time data synchronization across all locations
2. **NFPR-2**: Response time for Create, Read, Update and Delete(CRUD) queries < 2 seconds
3. **NFPR-3**: Support concurrent access from all 100+ stores
4. **NFPR-4**: Process purchase orders within 5 seconds
5. **NFPR-5**: Generate reports within 10 seconds
6. **NFPR-6**: Handle peak transaction loads during promotional events
7. **NFPR-8**: Process inter-department workflows within 1 minute

*Implementation Requirements - NFIR*

1. Centralized database architecture
2. Scalable system design
3. Web-based user interface
4. Integration capabilities with legacy systems
5. Support for mobile access
6. Standard API interfaces
7. Version control system
8. Development, testing, and production environments
9. Support for entity attribute management
10. Workflow engine implementation

*System Requirements - NFSR*

1. System availability of 99.9%
2. Data backup and recovery capabilities
3. Secure data transmission between locations
4. Role-based access control
5. Audit trail for all transactions
6. Compliance with industry regulations
7. Data encryption for sensitive information
8. Regular system maintenance windows
9. Disaster recovery capabilities
10. Entity relationship management
11. Data archiving for historical records
12. Support for workflow approvals and notifications