**Financial analysis system documentation:**

**Functional Requirements**

1. **Data Integration**
   * **Point of Sale (POS) System Integration:** Integrate with the restaurant's POS system to automatically import sales data, including transaction details, payment methods, and order types (e.g., dine-in, takeout, delivery).
   * **Expenditure management system Integration:** Integrate with the restaurant's systems that track expenditure to automatically import payment data for employees, indigents/stock, maintenance, etc (e.g., dine-in, takeout, delivery).
2. **Data Storage**
   * **Analysis data storage:** Store data retrieved from different API’s that is requested by a specific user query
   * **Graphical representation information:** Store information used to generate graphical representations of financial analysis information and queries
3. **Sales analysis:**
   * **Daily/Weekly Sales Reporting:** Generate reports showing total sales, and sales trends over time.
   * **Menu Item Performance Analysis:** Analyse the profitability of individual menu items for a given time frame.
   * **Daily/Weekly Sales expenditure:** Generate reports showing total expenditure, and expenditure trends over time.
4. **Cost Analysis**
   * **Ingredient Cost Tracking:** Track costs of ingredients over time, allowing for analysis of price fluctuations and their impact on profitability.
   * **Labor Cost Analysis:** Monitor labour costs, including wages, overtime, and staffing levels relative to sales.
   * **Operating Expense Tracking:** Categorize and analyse fixed and variable operating expenses (e.g., rent, utilities, marketing).
   * **Daily/Weekly Sales expenditure:** Generate reports showing total expenditure, and expenditure trends over time.
5. **Reporting and Visualization**
   * **Querying:** Allow users to query (providing parameters) the financial information to generate new reports, spreadsheets and graphs
   * **Home dashboard:** A home page showing standard information such as the total sales, revenue and expenditure from the last week and month
6. **User Management**
   * **Role-Based Access Control:** Implement different access levels for staff (e.g., managers, accountants, waitstaff) to ensure data security.
   * **Activity Logging:** Maintain logs of user activities within the system for accountability and auditing – log what kinds of information the user is requesting

**Non-Functional Requirements**

1. **Performance**
   * **Fast Data Processing:** Ensure the system processes and analyses data efficiently, with reports generated in under a minute.
   * **Backend Pagination:** When tables/reports have enough entries it will be paginated and each the information from a page will only be requested when the user selects the page
2. **Scalability**
   * **Support for Multiple Locations:** The system should be able to handle data from multiple restaurant locations if applicable.
   * **Adaptable to Business Growth:** Allow for the addition of new features as the restaurant expands (e.g., new menu items, delivery services).
3. **Usability**
   * **Intuitive User Interface:** Design a user-friendly interface that simplifies navigation and minimizes the learning curve for restaurant staff.
4. **Security**
   * **Compliance with Regulations:** Adhere to relevant financial regulations and data protection laws, such as PCI compliance for payment processing.
   * **Integrate authentication:** Only give access to the system and financial information to users once it is verified that they have permission to access it
   * **Integrate security:** Implemented security checks to stop insecure devices from accessing the system
5. **Reliability**
   * **High Availability:** Aim for minimal downtime to ensure continuous access to the system during operational hours.
   * **Backup and Disaster Recovery:** Implement data backups (of the database) and a disaster recovery plan to protect against data loss.
6. **Maintainability**
   * **Modular Architecture:** Design the system with modular components to facilitate easy updates and maintenance.
   * **Documentation:** Provide thorough documentation for both users and developers for ongoing maintenance and feature enhancements.

By addressing these in-depth requirements, the financial analysis system will be well-equipped to provide valuable insights and support strategic decision-making for a pizza restaurant, ultimately enhancing profitability and operational efficiency.