**Artifact 1.3.1 Systemic Textual Analysis (Level 1)**

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| **Non-Functional Implementation Requirements** | **Functional Requirements** | **Non-Functional Performance Requirements** | **MoSCoW** | **Comments** |
| 1.  Secure login and account management. | Enable user registration, login, and password reset options. Allow users to view and edit personal information. | Must respond to login requests and save changes within 5 seconds. | **M** | Ensures role-based access, secure authentication, and easy modification of user account details. |
| 2.  Handle reservations efficiently. | Allow customers to book, modify, and cancel reservations. Send email confirmation and reminders to customers. | Must confirm bookings within 3 seconds. Should notify within 5 seconds. | **M** | Provides seamless interaction for customers with real-time updates while improving engagement through notifications. |
| 3.  Real-time order management. | Enable waitstaff to input and update orders with special requests and kitchen staff to manage statuses. | Must save orders and update statuses within 2 seconds. | **M** | Facilitates real-time communication between waitstaff and kitchen staff for efficient service. |
| 4.  Inventory monitoring and reporting. | Track stock levels and alert staff on low inventory. Generate daily usage reports for managers. | Must alert on low stock within 3 seconds. Should generate reports within 5 seconds. | **M** | Prevents service interruptions, ensures resource availability, and aids in inventory planning. |
| 5.  Staff scheduling and time-off management. | |  |  | | --- | --- | | Enable managers to create and assign staff schedules. Allow staff to submit and managers to approve time-off requests. |  | | Must update schedules and approval statuses within 3 seconds. | M | Ensures optimal workforce distribution, enhances transparency, and improves staff satisfaction. |
| 6. Integrate chatbot for customer inquiries. | Automate answers to common customer questions. | Should respond within 3 seconds. | S | Enhances customer interaction but is not essential for system functionality. |
| 7. Create mobile application for staff and customers. | Optimize features for mobile use. | Should load within 2 seconds. | **C** | Adds accessibility for on-the-go usage but is a non-essential enhancement because it is going to be web based |
| 8. Predict table availability based on patterns. | Use historical data for reservation trends. | Must respond within 5 seconds. | **W** | A sophisticated feature for advanced analysis, not included in this implementation phase. |