



CSE471: System Analysis and Design
Assignment on Functional Requirements
Proposed Project Title: Smart Daycare Management and
Parent Monitoring System

Project Management Application

Group No: 01, CSE471 Lab Section: 12, Spring 2025	
ID	Name
22301556	Shoaib Mahmud
22301452	Fardin Ahmed Talha
22299315	Shahed Ahmed
23301336	Maria Sultana Samiya

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Tech Stack:

- Language: JavaScript
- Frontend Framework: React.js
- Backend Framework: Node.js with Express.js
- Database: MongoDB
- Styling: TailwindCSS
- Deployment: Vercel (Frontend), Render (Backend), MongoDB Atlas (Database Hosting)

Functional Requirements

Module 1: Parent & Child Profiles

1. [Feature-1] Parents can create accounts and register their children with details such as name, age, allergies, guardian information, and medical notes.
2. [Feature-2] Parents can securely log in and view their child's profile, attendance, and activity reports.
3. [Feature-3] Role-based authentication for parents, staff, and administrators.
4. [Feature-4] Parents can update contact information and manage emergency contacts.

Module 2: Staff & Activity Management

1. [Feature-1] Admins can register and manage staff accounts with roles such as caregiver, teacher, or cook.
2. [Feature-2] Staff can record daily updates: attendance, nap times, meals, and behavior notes for each child.
3. [Feature-3] Automatic assignment of children to available caregivers based on ratio and schedule.
4. [Feature-4] Staff performance and activity history can be viewed by the admin.

Module 3: Daily Routine, Notifications & Communication

1. [Feature-1] Staff can upload daily activity logs, photos, and short updates visible to parents.
2. [Feature-2] Parents receive notifications for important events: illness, pickup reminders, or emergencies.
3. [Feature-3] In-app chat or message board for parent-staff communication.
4. [Feature-4] Automated daily summary reports sent to parents via email or push notification.

Module 4: Billing, Reports & Analytics

1. [Feature-1] System automatically generates monthly billing statements based on attendance and extra services.
2. [Feature-2] Admin can manage payment status and generate receipts.
3. [Feature-3] Data visualization dashboard showing occupancy rates, staff workload, and resource usage.
4. [Feature-4] Analytics to identify busiest hours, average attendance per week, and meal consumption statistics.

Future Enhancements (Optional)

1. Mobile app integration for parents (React Native).
2. QR code check-in/check-out for children.
3. Real-time camera feed integration (IoT module).
4. AI-driven child mood/behavior tracking from staff reports.

Project Summary

The Smart Daycare Management and Parent Monitoring System is a web-based solution designed to digitalize and streamline daycare operations in Bangladesh. It connects parents, staff, and administrators under one unified platform. Parents can monitor their child's daily activities, receive real-time notifications, and ensure transparent communication with caregivers.