

Daycare Attendance System with RFID & SMS Technology

High-Level Requirements Document

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Project Identification

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Prepared By:	Daycare Buddy
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Contributors

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Referenced Documents

This document refers to the following materials

Version number	Title	Author	Date	Source / Location
1.0.0	The Possibility of using RFID System to Automate and Integrate the	Majid Meghdad i & Ahad Abbaszadeh Azar	September 23, 2016	Islamic Azad University, Zanjan, Iran

HIGH LEVEL REQUIREMENTS Daycare Attendance System with RFID & SMS Technology

	Attendance of Professors and Students in the classroom.			
0.1	Project Vision	Daycare Buddy	October 2, 2024	GBC Casa Loma Campus, Toronto, ON

Revision History

Version Number	Revision Date	Summary of Changes	Modified by
0.1	September 23, 2024	Updated some information in this document only.	Jam Furaque

[Note: It is recommended that drafts be numbered 0.1 to 0.9, and that the first approved version be numbered 1.0. Thereafter, new version numbers will depend upon changes: 1.01, 1.1, etc for minor updates, 2.0, 3.0 etc for major changes.]

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1. Business Context Diagram

<Insert Diagram> (Refer slides posted on Brightspace □ Lecture Review)

Requirement Scope Area	Description
Attendance Tracking	Automating check-in and check-out using RFID technology for each child in the Daycare.
SMS Notification	Automatically sending SMS notifications to the parents when their child arrives or leaves the daycare premises.
Attendance Record Management	Storing, viewing and reporting child's attendance data by the Daycare's Administrator.
Parent-Staff Communication	Sending automated and real-time updates to the parents for transparency and peace of mind.

External Entity	Description
Parents	Parents or guardians who receive SMS notifications when their child enters or leaves the daycare.
Daycare Administrator	Responsible for overseeing and managing the daycare's operations. Including monitoring attendance data and handling parent or guardian communication.
Daycare Owner	They do not engage with the day-to-day operational tasks but are involved in high-level monitoring and decision-making based on the system's data and performance.
Daycare Staff / Teachers	Teachers or caregivers who may assist with monitoring the system or ensuring RFIDs were scanned upon the entrance or exit.
RFID Reader	Device used to scan each child's RFID card when they enter or leave the daycare.
SMS Service Provider	Third-party service responsible for sending SMS notifications to parents.
Database	Receives and stores data from the RFID reader and the system. It provides data for reporting to the Daycare Administrator.

Information Flows	Description
Attendance Data Flow	When a child taps their RFID card, the reader sends the data including Child's ID and timestamp to the system. Then, it will record it in the database as a check-in or check-out event.
Notification Trigger	After recording a check-in or check-out event, the system triggers an SMS notification containing the child's name and timestamp to the SMS service provider and then sends it to their parent's or guardian's phone.
Parent SMS Notification	Parent / Guardian receives a text message notifying them that their child has entered or exited the daycare along with the specific time.

Information Flows	Description
Attendance Report	System generates attendance reports based on data stored in the database and provides this to the daycare administrator for tracking, reporting and auditing processes.
Attendance Monitoring	Daycare staff can monitor the attendance data in real-time via the system to ensure that all children are properly accounted for.

2. Requirements Scope Statements

HLR#	Description	Priority (H, M, L)
HLR01	RFID-Based Attendance Tracking Implement a system that tracks child attendance using RFID cards. Each child will have an RFID that they tap on entry and exit. With that, the system will record the timestamp.	H
HLR02	SMS Notification to Parents Automatically send SMS notifications to parents / guardians when the child checks in and checks out. Notification includes the name of the child and the timestamp of the event.	H
HLR03	Attendance Records Management Store and manage attendance records in a secure database, with the ability to view, edit and generate reports by the daycare administrator.	H
HLR04	User Interface for Staff and Admin Provide a user-friendly web interface for daycare staff and administrators to view real-time attendance, manage data and generate reports.	M
HLR05	Data Security and Privacy Ensure that the system complies with data privacy regulations and secures data transmission and storage	H
HLR06	Attendance Report Generation Enables daycare administrators to generate attendance reports for any specified period and export them in different formats.	M
HLR07	Alert System for Anomalies Implement an alert system that notifies staff and administrators if any RFID tap is missed or if there's any issue in recording attendance. With this, staff can manually record the check in or check out.	M
HLR08	System Scalability Ensure that system can easily scale to handle more children and staff.	L
HLR09	Parent Communication Portal Build a portal or dashboard for parents / guardians to log in and view their child's attendance history and notifications. Also good for them to know if there's some irregularities happening.	L

3. High Level Business Requirements Sign-Off

The undersigned acknowledge their agreement with the contents of Version 1.0.0 of the High-Level Requirements document for *Daycare Attendance System with RFID & SMS Technology*.

Following approval of this document, requirements changes will be governed by the project's change management process, including impact analysis and appropriate reviews and approvals, under the general control of the Project Plan and according to company policy. Approved Change Request Documents, if present, will be attached to this Requirements Document as updates.

Name	Project Role and Functional Area	Date Signed
Jam Furaque	Backend Developer	September 25, 2024
Andrew Stewart	Product Manager	September 25, 2024
Daniel Konjarski	SMS Integrator	September 25, 2024
Carl Trinidad	RFID System Integrator	September 25, 2024
Kei Ishikawa	Frontend Developer	September 25, 2024
Matthew Ciavaerlla	Quality Assurance / Tester	September 25, 2024

** Note: physical signatures are not required. Email approvals are acceptable and should be appended to project documents.*