System Specification

Quran Halaqat Management System

Document Version: 1.0
Last Updated: 2026-01-15

---

1. Introduction

The Quran Halaqat Management System is a web-based application designed to manage and organize Quran memorization circles (Halaqat) within educational centers. The system provides a unified dashboard for administrators, supervisors, and teachers to manage students, teachers, halaqat scheduling, attendance, subscriptions, assignments, grading, and reports.

This document serves as the official **System Specification**, defining the scope, functionality, roles, permissions, workflows, and technical architecture of the system.

---

2. Objectives

- Digitize and organize Quran halaqat administration.
- Provide accurate tracking of students' academic progress and attendance.
- Manage teachers, halaqat schedules, and capacity efficiently.
- Track subscriptions and payments with clear financial status.
- Offer real-time dashboards and reports for decision-making.
- Ensure secure, role-based access to all system features.

---

3. Scope of the System

3.1 In Scope

- Student management
- Teacher management
- Halaqat management and scheduling
- Student and teacher attendance
- Subscriptions and payments
- Assignments and grading
- Dashboards and reports
- Role-based access control

3.2 Out of Scope

- Native mobile applications
- External accounting system integrations
- Parent/guardian self-service portal (future enhancement)
- Online learning or video conferencing

---

4. User Roles

4.1 Roles Definition

- **Admin:** Full system control and configuration.
- **Supervisor:** Operational management without system-level settings.
- **Teacher:** Academic operations related to assigned halaqat only.

4.2 Roles Matrix

Feature	Admin	Supervisor	Teacher
Authentication	✓	✓	✓
Manage Students (Create/Edit/Delete)	✓	✓	✗
View Students	✓	✓	✓
Manage Teachers	✓	✓	✗
Manage Halaqat	✓	✓	✗
Assign Teachers to Halaqat	✓	✓	✗
Record Student Attendance	✓	✓	✓
Record Teacher Attendance	✓	✓	✗
Manage Subscriptions & Payments	✓	✓	✗
Create Assignments	✓	✓	✓
Grade Assignments	✓	✓	✓
View Student Academic Record	✓	✓	✓ (Assigned only)
View Reports & Analytics	✓	✓	✗
System Settings	✓	✗	✗

---

5. Functional Requirements

5.1 Students Management

- Add, edit, deactivate students.
- Search and filter by name, halaqa, or status.
- Store personal, contact, and academic data.

5.2 Teachers Management

- Add and manage teachers.
- Track specialization, status, and halaqat assignments.

5.3 Halaqat Management

- Create and manage halaqat.
- Assign teachers.
- Define schedules, capacity, and locations.

5.4 Attendance System

Students: - Daily attendance per halaqa. - Status: Present, Absent, Excused, Late.

Teachers: - Daily attendance with time-in and time-out.

5.5 Subscriptions & Payments

- Create subscription plans per student.
- Track total amount, paid amount, and remaining balance.
- Support multiple payment methods.

5.6 Assignments & Grading

- Create assignments per student/halaqa.
- Record submission status.
- Grade assignments with numeric and verbal evaluation.

5.7 Dashboard & Reports

- Aggregated statistics (students, teachers, halaqat).
- Attendance rates and trends.
- Financial summaries.
- Academic performance insights.

---

6. Non-Functional Requirements

- Web-based SPA (Single Page Application).

- Arabic language support (RTL).
- Average response time < 3 seconds.
- Secure authentication and authorization.
- Scalable to multiple centers.
- High availability and data reliability.

---

7. Workflow Overview

1. System initialization with mock or seeded data.
2. Users authenticate and access features based on role.
3. Data is created/updated through forms and modals.
4. Relationships are automatically maintained (students ↔ halaqat ↔ attendance).
5. Dashboards update dynamically without page reloads.

---

8. Technical Architecture

8.1 Frontend

- React (TypeScript)
- SPA architecture
- Role-based UI rendering

8.2 Backend & Database

- Supabase
- Authentication
- PostgreSQL database
- Row Level Security (RLS)

8.3 Hosting & Deployment

- Frontend hosting: Vercel
- Environment-based configuration

---

9. Security & Access Control

- Role-based permissions enforced at UI and database levels.
- Supabase RLS policies to prevent unauthorized access.
- Secure handling of environment variables.
- HTTPS enforced across all environments.

---

10. Acceptance Criteria

- All roles can access only permitted features.
- CRUD operations work correctly with validation.
- Attendance and subscriptions calculations are accurate.
- Dashboards reflect real-time data changes.
- System passes functional and security testing.

---

11. Future Enhancements

- Parent/guardian portal.
- Mobile application.
- Notifications (SMS/Email/WhatsApp).
- Multi-branch support.

End of Document