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Business Software Craftsmen (Pty) Ltd

Email: info@bsc.africa

Website: www.bsc.africa

Connect (Pty) Ltd – Business Software Craftsmen JV

RollCall

Functional System Specification

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1. INTRODUCTION

1.1. PURPOSE

This specification defines the functional requirements of the RollCall system—a cloud-based SaaS platform for school attendance and student monitoring. It supports mobile and web-based access for school administrators and teachers and provides automated notifications to parents.

1.2. SYSTEM CONTEXT

RollCall serves schools through secure web and mobile interfaces. Parents receive alerts via SMS or email, while students are tracked within the system but do not log in. A multi-tenant architecture supports multiple schools under centralized control.

2. FUNCTIONAL REQUIREMENTS

2.1. MOBILE APPLICATION

Function	Description
Mark Attendance	Teachers can mark students as present, absent, or late via the mobile app.
Record Homework	Teachers can indicate if homework was completed or not for each student.
View Dashboard Metrics	Teachers can view summaries such as attendance trends and homework stats.

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2.2. WEB APPLICATION

Function	Description
System Admin Interface	System administrators can manage the creation, editing, and disabling of school accounts and have full data access across all schools.
Admin Interface	School administrators manage users, classes, school data, and permissions within their school only.
View Dashboard Metrics	Teachers can view summaries of attendance and homework trends.
Mark and Manage Attendance	Teachers and administrators can log and update both Class Attendance and School-Wide Attendance records.
Record and Review Homework	Teachers can input homework completion and review historical data.
Generate and Export Reports	Reports (attendance, homework, etc.) can be exported in formats such as PDF or Excel.
Manage Notification Rules	Admins define when and how notifications are sent via SMS or email.
Manage Profiles	Admins can create, update, or disable teacher, student, and parent profiles. Profiles cannot be deleted.
View Teacher Profiles	Shows classes taught, absentee logs, homework activity, and attendance tracking completeness per class.
View Student Profiles	Displays attendance %, absentee %, lateness %, and homework submission rates per student.
User Authentication	Users can log in, reset their password, or request password recovery via email.

3. USER ROLES AND PERMISSIONS

Role	Access Level
System Administrator	Full access across all schools. Can create, disable, and configure school accounts and users.
School Administrator	Full access within their assigned school to manage users, classes, reports, and notifications.
Teacher	Access to mark attendance/homework, view dashboards, and generate reports within assigned classes.
Parent/Guardian	Receives notifications only—no login required.
Student	No access—monitored as a data subject.

4. NOTIFICATIONS AND COMMUNICATION

- **Notification Triggers:** Absenteeism, lateness, and incomplete homework.
 - **Channels:** SMS and Email.
 - **Setup:** Rules configured by administrators in the web portal.
 - **Consent Management:** POPIA-compliant consent required for parent communication.
-

5. DATA STRUCTURES (OVERVIEW)

Entities:

- Schools
- Users (System Admins, School Admins, Teachers, Parents)
- Students
- Classes
- Attendance Records (Class & School-wide)
- Homework Records
- Notification Logs

Each student links to:

- Class enrollments
- Attendance and homework records
- Associated parent/guardian

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6. FUNCTIONAL WORKFLOWS

6.1. ATTENDANCE WORKFLOW (MOBILE/WEB)

1. Login
 2. Select class or school-wide view
 3. Mark student status: Present / Absent / Late
 4. Save records
 5. Notifications sent if applicable
-

6.2. HOMEWORK WORKFLOW (MOBILE/WEB)

1. Select class
 2. Enter homework status per student
 3. Submit and review historical logs
-

6.3. AUTHENTICATION WORKFLOW

- **Login:** Users enter email and password. On success, redirected to dashboard.
 - **Forgot Password:** Users submit email to receive password reset link.
 - **Reset Password:** Via link in email, users define a new secure password.
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7. REPORTING REQUIREMENTS

Report	Description
Class Attendance Report	Daily/weekly summaries per class
Student Attendance Summary	Attendance, lateness, and absenteeism percentages
Homework Submission Compliance	Overview of homework compliance across classes
Teacher Performance Logging	Frequency and completeness of attendance/homework marking

Export options: [PDF](#), [Excel](#)

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8. USER STORIES

8.1. AS A TEACHER:

- I want to mark attendance quickly via my phone so I can complete it in the classroom.
 - I want to log homework submissions for my students after each session.
 - I want to view attendance summaries for my class to monitor student performance.
-

8.2. AS A SCHOOL ADMINISTRATOR:

- I want to manage teacher and student profiles so I can keep records accurate.
 - I want to disable user profiles when users leave the school to retain data history.
 - I want to generate reports to present trends to school leadership.
-

8.3. AS A SYSTEM ADMINISTRATOR:

- I want to create and configure new schools in the system to onboard clients.
 - I want to view and support any school from a single dashboard.
 - I want to deactivate schools that are no longer in use.
-

8.4. AS A PARENT:

- I want to receive SMS alerts if my child is absent so I can follow up.
 - I want to get notified when homework is not submitted regularly.
-

8.5. AS A USER:

- I want to log in using my secure credentials to access system features.
- I want to reset my password if I forget it.
- I want to request a reset link when I can't remember my password.

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9. SECURITY AND COMPLIANCE

- **Authentication:** Secure login with password reset and recovery
 - **Encryption:** HTTPS for data in transit; AES-256 for data at rest
 - **Compliance:** POPIA-aligned handling of personal information
 - **Audit Trails:** All administrative and system-level actions logged
-

10. NON-FUNCTIONAL REQUIREMENTS

- **Performance:** ≤ 2 seconds response time for standard operations
- **Scalability:** Multi-school and high-concurrency support
- **Availability:** 99.9% uptime annually (excluding maintenance)
- **Maintainability:** Modular, well-documented codebase for upgrades
- **Support SLAs:**
 - Critical issue acknowledgment within 2 hours
 - Target resolution within 1 business day
- **Training:** Onboarding provided to system and school administrators

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