

e-Byte Africa App Documentation

Super Admin

- The Super Admin has complete control over the entire platform. They can view the number of registered schools, monitor overall performance and reminders, track individual school payments (paid or unpaid), manage dashboard insights, and remotely enable or disable specific features for any school. Additionally, the Super Admin can adjust pricing plans for schools based on usage or subscription.

Admin

- Inventory Management: Schools can maintain an up-to-date digital catalog of physical materials such as textbooks, math sets, drawing books, etc., for different classes. Parents can view and purchase these materials from their own dashboard. Once a payment is made, a digital receipt is available for download. A notification is also sent automatically to the class teacher, informing them that the item should be delivered to the student during the next school day. The platform may charge a small transaction fee per purchase.

- File Management: A digital filing system that allows schools to store documents such as newsletters, reports, and administrative files. These can be classified into categories and accessed at any time from the admin portal.

- Admission Management: Parents complete an online admission form that includes essential student details and health information. Payments are processed online. Schools can review the submissions, save relevant data to the student database (excluding unnecessary fields), and create a temporary account for the applicant. The applicant may also take an online CBT entrance exam, with results displayed on a public leaderboard. Temporary accounts auto-expire within 24 hours.

- School Fees System: Schools can configure termly fees, display breakdowns, and track payments. While the backend functionality is already developed, the UI for the admin and parent interface will be redesigned to

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align with the updated app theme.

- Dashboard: A visually enhanced dashboard showing performance metrics, financial status, student trends, and system usage analytics for the school.
- Assessments: Admins can preview all CBT assessments set by staff before they go live, ensuring quality and appropriateness.
- Profile: A secure section with editable information about the school, such as address, email, phone number, and academic session settings. This replicates and enhances the current admin profile feature.
- Result: Admins can preview and verify student results across terms and sessions before publication.
- Settings: Configuration hub for subjects, class structures, grading systems, report templates, term dates, and school events.
- Notifications: Centralized notifications page to access all recent and past communications related to school operations.
- Students: Admins can create, update, archive, or delete student records. Includes functionality for temporary student account generation with expiry settings.
- Staff: Full control over staff records-add, edit, or remove teaching and non-teaching staff.
- Parents: Manage parent profiles, including the ability to link or unlink children, and update contact

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information.

Staff

- Each staff member is limited to only the class and subject(s) they are assigned. This restriction ensures focused access and security.
- Parent-Teacher Communication: Teachers can post updates for parents to view, such as announcements or academic updates. This is not a chat feature but a one-way communication feed.
- Notes: A structured module for teachers to upload digital notes categorized by topic, subject, term, and academic session. Students can view and download notes as needed.
- Assignments: Teachers can create and assign homework online, set deadlines, and collect submissions. If students miss a deadline, an automatic alert is sent to their parent via WhatsApp.
- CBT System: Teachers can set multiple-choice and theory-based assessments with timing and session settings. The system will include a review area to mark subjective responses and analyze objective answers. Security features like fullscreen browser mode will be enforced during exams.
- Timetable: Teachers can create or view structured timetables for tests, exams, and midterms, which are also visible to students and parents.
- Attendance: Teachers can mark daily attendance. If a student is absent without explanation, parents receive automated WhatsApp messages. If the absence is marked as 'explained', the message is skipped.

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- Result System: Teachers enter scores, and the system auto-calculates and grades based on predefined settings. Supports term-based result entry.
- Profile: Teachers can view and update their personal information including email, phone number, and subjects handled.
- Dashboard: Displays summarized information about class performance, assignment submissions, and attendance metrics.
- Notifications: All updates and announcements related to the teacher's role appear here in chronological order.

Student

- Dashboard: A personalized dashboard that displays academic progress, attendance records, recent activities, and upcoming tasks. Students get an overview of their performance trends in each subject.
- Timetable: View detailed daily and weekly class schedules including subject names, teachers, and times.
- Assignments: Receive and submit assignments through the platform. Each task displays the deadline and submission status.
- Notes: Access all uploaded teacher notes organized by term, subject, and topic for easy review.
- Result System: Students can view termly and sessional results along with individual subject breakdowns and class positions.

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- CBT System: Take computer-based tests (exams, midterms, or quizzes) in fullscreen browser mode. Once submitted, objective results are graded immediately.
- Leaderboard: Compare scores with classmates for OBJ questions only in a public scoreboard format. Encourages healthy academic competition.
- Teacher Updates: View non-interactive updates from teachers regarding the class or learning progress.
- School Activities: Access the list of official school events and activities planned for the term/session.
- Profile: View a read-only version of their bio-data including name, class, and academic history.
- Notifications: Display alerts about exams, assignments, updates, and school-wide announcements.

Parent

- Child Link: Parents link their account to a child using a unique ID and password provided by the school. This allows them to monitor the child's academic journey.
- Dashboard: Get a complete overview of the child's academic progress, assignments, and performance trends, similar to the student dashboard but with more analytics.
- Teacher Updates: Read notifications or updates posted by class teachers about academic or extracurricular matters.
- Timetable: Parents can view the full timetable of their child to keep track of academic schedules.

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- Exam/Test Review: See past CBT tests and the answers submitted by their child.
- Profile: View-only access to parent account details such as email, phone number, and linked children.
- Result: View detailed result sheets for each term or session, with access to comments and grading scales.
- Assignments: View their child's pending or submitted assignments but cannot make submissions themselves.
- Notes: Read-only access to digital notes provided by teachers.
- Attendance: Monitor the attendance record of their child, including days absent or explained absences.
- School Fees: View and pay school fees with a digital receipt system. Payment records are stored for all past terms.
- School Activities: Get informed about planned school events and sessions via a structured calendar.
- Notifications: Central alert center for announcements, fee updates, and assignment or result alerts.
- Inventory: Buy classroom materials for their child and receive receipts upon successful payment.

App Architecture

- The platform uses a multi-tenant architecture to support multiple schools within a single deployment. Each school has data isolation through schema or subdomain-based separation, allowing safe scaling to 300+

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institutions.

- Data tables have standardized columns with appropriate indexing strategies to ensure fast queries and performance under load.
- Laravel will be the primary backend framework hosted on AWS using Docker for containerization and scalability.
- The application will be published on both the Play Store and App Store to support Android and iOS users.
- A Progressive Web App (PWA) will be available for desktop and mobile browser access, providing offline capabilities and native app feel.
- PostgreSQL will serve as the main database, offering powerful schema and indexing features for tenant-based data management.
- PipeOps will manage website deployments, especially for the marketing and subdomain-based school websites.
- KudiSMS will be used for WhatsApp and email communication, providing parents and staff with timely alerts and updates.