**Scolaris Pay - Backend Requirements**

**Overview**

Scolaris Pay is a mobile application where parents can select schools and make payments for school fees, transportation, and event charges. The backend will handle role-based access, transaction management, school management, notifications, and analytics. Schools will register via the website, and the Super Admin will approve the registrations. Sub Admins will be associated with individual schools.

**High-Level System Workflow**

1. **School Registration**:
   * Schools submit their registration via the website.
   * The Super Admin approves or rejects school registration requests.
   * Upon approval, Sub Admin accounts are created for each school.
2. **Fee Management**:
   * Admin defines fee structures for different grades/classes.
3. **Payment Process**:
   * Parents select a school, pay the fees, and make payments for transportation and events.
4. **Transaction Management**:
   * Admin monitors transactions, generates reports, and handles refunds.
5. **Notifications & Communication**:
   * Super Admin or Sub Admin sends notifications or personalized messages to parents.
6. **Analytics & Reporting**:
   * Admin accesses reports on payments, school statistics, and user activity.
7. **School Dashboard**:
   * Schools track payments, student status, and manage pending invoices.

**1. Backend Panel Features**

**1.1 Role Management**

* **Super Admin**:
  + Can assign, revoke, and modify Sub Admin roles.
  + View and manage all user roles and permissions.

**1.2 Fee Structure Management**

* Define and manage fee structures for different schools and grades/classes.

**1.3 Transaction Management**

* Monitor and manage all transactions:
  + Log transaction details.
  + Filter and export transaction records (by Name, School Name, Amount, Start Date, End Date).
  + Generate financial reports (daily, weekly, monthly).
  + Breakdown payments by schools.
  + Track refunds and disputes.
  + Download payment receipts.

**1.4 Communication Module**

* Send bulk or personalized notifications to parents about payments, school events, and updates.

**1.5 Data Analytics & Dashboard**

* **Admin Dashboard**: Insights on payment trends, overdue accounts, and user activity.
  + Track total schools and registered parents.
  + View payment statistics (daily, weekly, monthly).
  + Most-used payment methods (e.g., Mobile Money, bank cards).

**1.6 Security Features**

* Implement Role-Based Access Control (RBAC) to limit access based on roles.
* Data encryption to protect sensitive payment information.

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**2. Role-Based Functionalities**

**2.1 Super Admin Panel**

* **School Management**:
  + Approve/reject schools registering
  + Manage school records (create, edit, delete).
  + Assign Sub Admins to each school.
* **Student Management**:
  + View, edit, create, and delete student records.
* **Transaction Management**:
  + View and filter transactions.
  + Export transaction logs with details (Username, School Name, Student Name, etc.).
* **Notification Management**:
  + Create and send notifications to parents.

**2.2 Sub Admin Panel**

* **School Management**:
  + View, edit, and delete school-specific records.
* **Student Management**:
  + View student lists by class.
* **Transaction Management**:
  + View and filter transactions.
  + Export transaction records.
* **Payment Breakdown**:
  + Add breakdown by school and service (tuition, transportation, events etc.)
* **Class Management**:
  + Define and manage school types and class names.

**Sub Admin Fee Management**

* **Fee Management Rights for Sub Admins**:
  + Sub Admins will have the ability to define and update the fee structure for their respective school.
  + This includes updating fees for:
    - **School Fees** (tuition, annual charges, etc.)
    - **Transportation Fees**
    - **Event Charges** (if applicable)
  + Sub Admins can modify these fee structures at any time, and updates will automatically reflect in the payment system for parents.

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**3. Administrator Dashboard**

**3.1 General Statistics**

* View total payments processed (daily, weekly, monthly).
* Track the total collected amount and commission.
* Monitor total number of registered schools and parents.
* View most-used payment methods.

**3.2 Payment Management**

* **Transaction History**:
  + View payment history with details (ID, Amount, Date, School, Student).
* **Payment Statuses**:
  + Monitor transaction statuses (Successful, Pending, Failed).
* **Refund & Dispute Management**:
  + Manage refunds and disputes.
* **Receipts**:
  + Download payment receipts.

**3.3 School Management**

* View and manage school details (name, location, contact info).
* Track amounts collected by each school.
* Monitor fund transfers to schools (status, date).

**3.4 User Management**

* **Parents**:
  + List registered parents with associated schools.
  + Track parent payment history.
  + Handle customer support and complaints.

**3.5 Settings & Configurations**

* Configure transaction commission rates.
* Enable/disable payment methods.
* Manage notification settings (reminders, alerts).
* Manage administrator accounts and their access rights.

**4. School Dashboard**

**4.1 Overview**

* View payments received (monthly, quarterly, yearly).
* Track unpaid invoices and pending payments.
* Monitor students with full, partial, or overdue payments.
* Breakdown payments by service (tuition, transportation, events, cafeteria).

**4.2 Payment Tracking**

* View detailed transaction list (Student Name, Class, Parent Name, Payment Amount).
* Monitor payment statuses (Successful, Pending, Failed).
* Download payment receipts.
* Add payments manually in case of technical issues.

**5. System Flow (Detailed Sequence)**

1. **School Registration**:
   * Schools register via the website.
   * Super Admin approves or rejects the school registration.
   * Sub Admin account is created for each approved school.
2. **Fee Structure Setup**:
   * Admin defines the fee structure for each grade/class in the school.
3. **Parent Registration & Fee Payment**:
   * Parents register and choose a school.
   * Parents make payments for school fees, transportation, and events.
   * The system processes the payment and updates the transaction logs.
4. **Transaction Management & Reporting**:
   * Admin monitors transactions, applies filters, and generates reports.
   * Reports show detailed information about payments, refunds, disputes, and breakdowns by school and service.
5. **Notification Management**:
   * Admin sends notifications regarding upcoming payment deadlines, events, or updates to parents.
6. **Analytics & Insights**:
   * Admin accesses payment trends, overdue accounts, and payment methods used.
7. **School Monitoring**:
   * Schools track total payments, student statuses, and pending invoices.
   * Schools can manually add payments if there are issues with the transaction.

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NOTE: We need to take care this from payment gateway or backend panel, need to check.

**Payment Commission**

* **Commission Structure**:
  + The system will apply a fixed commission rate (e.g., 2%) for every payment processed.
  + **Example**: If a parent pays $100 for the school fee, the system will deduct $102 (which includes $100 for the school and $2 for the client’s commission).
  + The $100 will be transferred to the school’s account, and the $2 commission will be transferred to the client’s account.
* **Configuration**:
  + The commission rate (e.g., 2%) will be configurable by the Super Admin.
  + The commission will automatically be applied to all payments made through the platform, whether for school fees, transportation, or other services.