

School Transport Management System

The solution is designed to manage school transportation, offering real-time bus tracking, notifications, and user management features for super admins, school administrators, and parents. The core functionality focuses on improving communication and providing real-time information on bus routes and student safety.

The Product will have following three different views:

1. Super Admin (Product Owner)
2. Schools.
3. Parents.
4. Bus Staff.

The product will have the following users:

1. Super Admin and its users with different privileges.
2. School administrators and its users with different privileges.
3. Parents with the ability to see multiple kids (They can switch kids profiles)
4. Bus Staff, will be allowed to mark attendance and also update status in the app in case of any delays etc, to be sent to parents for notifications.

The product will have the following main features:

1. **User Access Management / Privilege Management**
 - a. Create Roles
 - b. Assign additional / Custom Privilege.
2. **School Management**
 - a. Add / Edit School Information.
 - b. Add / Edit / Update Users by Admin and Schools
 - c. Add / Update / Archive Students and parents
 - d. Update School Profile.
 - e. Add / Update Busses.
 - f. Bus Route Management.
 - g. Students Assignment to bus.
 - h. Students' assignment to other bus temporarily
 - i. Tracking of Buses
 - j. Notifications configuration
 - i. If Bus is Diverted from the route
 - ii. Bus is not moving
 - k. Add / Update Drivers and their profiles
 - l. Drivers Allocation to buses
 - m. Ability to send email notification to parents.
 - n. In app notifications to parents.
 - o. Password Reset
 - p. Password sent to parents / users using UI

- q. Send Registration email / invite to parents / users (Bulk upload should also work)
- r. Show status of invitation sent and registration completed
- s. School parent communication (One way, from School to Parents) – Schools can send notifications to parents of a bus or all parents- We can send email notifications/ bubble notifications in their phone.
- t. History of app such communication should be available in the platform.
- u. Bus tracking page.
- v. Reports for Schools and Super Administrators.
- w. Schools will be able to add helper and driver contact information and allow to show to parents in mobile app. (By default, it will be hidden)
- x. Schools will be allowed to add transport admin info, which will be visible to parents in mobile app.
- y. Schools will be allowed to switch the tracking devices for school Buses, which they can use in case of breakdown. Schools can keep a few preconfigured tracking devices and assign them to the buses when needed.
- z. Bus staff will see list of all students and will be allowed to mark students in and out using the mobile app, if bus staff does not mark a student present or absent post bus stop of the child then the app will continue to give notification every 10 seconds to bus staff. Parents will also be notified as soon as the child boarded or deboarded the bus.

3. Mobile App (Parents , Bus Staff & School)

School administrators can send an email to parents with a link to log into the app, along with a guide (PPT) outlining steps for signing up, logging in, and navigating the app. This can be done with a single click to notify all parents. The link will include a unique identifier for the school, so parents won't need to search for it manually.

If a parent already has one child registered and wants to add another, they can do so directly within the app without needing to go through the registration process again.

To ensure security and prevent unauthorized access, it is recommended that schools send the registration link directly to parents.

The mobile app will have the following features.

- a. Password Reset feature to parents.
- b. Parents can track multiple students.
- c. Parents can select the bus of their child. (We should show all buses to parents and they can select which bus to track, this way if some day due to any reason the bus is changed then they can track appropriate bus.).
- d. Tracking page for parents.
- e. Parents will see Estimate Time of Arrival (ETA) in the app.
- f. Notification configuration for parents.
 - i. Notify when bus leaves stop (parents can choose to be notified when the bus departs from a particular stop. By default, the notification will be set to trigger two stops before their child's stop. If the child's stop is the first on the route, the default notification will alert parents when the bus

leaves the school.). This will be done both ways i.e. when the bus is coming to pickup and when it is coming to drop.

- ii. Notify when bus reaches the school.
- iii. Notify when bus leaves from the school.
- iv. Notify if bus is not moving since last 10 minutes.
- v. Notify if bus changes its defined route.
- g. Transport Admin contact information to be available in app to make call or email.
- h. **Notes:** App for school user will have access to all the buses and students. Features will be same as we have for parents.
- i. App for school should show parents contact info to school users.
- j. Parents will be allowed to add multiple branches or multiple schools in case their kids are studying in different school / branches (Considering that those schools are using our services)
- k. The Driver will be allowed to add status in the bus which will be sent to the parents of kids traveling in the bus. Use cases could be
 - i. Delay due to Heavy Traffic.
 - ii. Accident on road is causing delays.
 - iii. Bus Breakdown may cause delays etc
- l. Bus staff will see list of all students and will be allowed to mark students in and out using the mobile app, if bus staff does not mark a student present or absent post bus stop of the child then the app will continue to give notification every 10 seconds to bus staff. Parents will also be notified as soon as the child boarded or deboarded the bus.

1 - There will be no registration page. Users / parents can only register through the registration email sent to them using UI by admin / school.

Deliverables

- 1- Web for Admin and Schools.
- 2- Mobile app built in React Native for iOS and Android. (For Parents Only)