SCHOOL TRANSPORT MANAGEMENT CROSS PLATFORM MOBILE APPLICATION

This is a mobile application for school transport management. The purpose of this application is to help school administration to manage the transport processes more efficiently by streamlining the transport experience for both bus drivers/attendants and parents. The application will work on both iOS and Android Operating Systems.
Below are the expected features of the application:

A) Drivers/Attendants Interface:
   a) Authentication (login, forgot password, reset password)
   b) Route Trips Dashboard: Management and Notifications (View/Read, Update):
      i) AM Notifications: START Button to start a trip. The application to beep, warning the driver/attendant to start the trip incase the bus starts moving and driver/attendant have not clicked the start button, an automated HERE notification on arrival at pickup point with a HERE Button for manual action, an automated LATE notification with a LATE Button for manual action if missed departure time by more than 15 minutes and also by use of route traffic, END Button to finish a trip.
      ii) PM Notifications: START Button to start a trip. The application to beep, warning the driver/attendant to start the trip incase the bus starts moving and driver/attendant have not clicked the start button, an automated HERE notification with a HERE Button for manual action on arrival at drop off point, an automated LATE notification with a LATE Button for manual action if missed departure time by more than 15 minutes and also by use of route traffic, END Button to finish a trip.
      iii) Attendance Checklist: Students list with these details: List Number, Student name, Parent Phone Number, Checkbox/Not Going (In red color incase a student is not going to school).
      At each point/stopover the checklist should show only the list of students who should be picked or dropped at that particular point.
      The driver/attendant checks in students by clicking the checkbox against students names then submits the list of a particular point immediately.
      The names of the students who have been checked in should disappear from the list immediately they are submitted. This is applicable for both pickup and dropoff.
      For PM trips, drivers/attendants will use the AM list of present students as the checklist for evening bus check in at school, so that they can confirm all students who checked into the bus morning have all checked into the bus for drop off.

c) Term Dates:
   - TERM: Start Date and End Date
   - MID TERM: Start Date and End Date
   - TERM HOLIDAYS: Holiday name and Date
d) School Trips:
   Will display a list of trips with trip destination as a trip name and other details: Destination, Responsible Teacher, Trip Date, Departure Time, Return Time, Show Route Button, Start Trip Button. On Clicking the **Show Route button** the driver gets a Map View showing the route to use and its traffic, and an option to change the route to the best route at that particular time. The change of route has to be approved by the head of transport before departure.
   The **Start Trip Button** and **Change trip route option** will be available **only on the trip date**. On clicking the start button the parents will receive a notification that the students have left for the trip, and the driver's view will change to a map view showing the route to use.
e) Bus Route (View): Map view showing the bus daily pick up and drop off route.
f) Route Pickup/Drop off Point Confirmation: List of students with their pick up and drop off points for confirmation by the driver and parents on the first day of the term.
   List details: List Number, Student name, Parent Phone Number, Pick Up point (Buttons: Confirmed/Change), Drop off point (Buttons: Confirmed/Change). Get a map view to select a new point on clicking the CHANGE button.
g) Bus assigned students information (View): Students list with these details: List Number, Student name, Parent Phone Number
h) In-app chat/messaging platform where bus driver/attendant can chat with parents with an option to call.
i) The mobile app to automatically check the route traffic to get the final stopover point time and compare it with the planned time, and if the time due to the traffic is greater than planned time, send "Please note that we will experience some delays in picking up/dropping off (depending on the time of the day) our pupils due to unexpected traffic but we will be there by APP ESTIMATED TIME. We kindly request for your patience and apologize for any inconveniences caused" message.
j) Daily/Routine maintenance management: with 3 tabs for Daily bus condition, Off Routine Maintenance Repairs, and Routine Maintenance.
   - Daily bus condition: Record bus condition after every shift (AM and PM Trips) and the transport management will be alerted in case of any issues and easily prioritize the repairs of the vehicles. Display the previous records for the current term: Date, Shift (AM/PM), Condition Description where you can click the description to see the full details including photos. New Record Button at the top to add a new record, where a new interface will be displayed to add notes, alert management in case a repair is required and attach photos showing defects to support the case.

- Off Routine Maintenance Repairs: Display the past 5 repairs, and new/authorized repair (Authorized by transport department). Will display a list of repairs: Date, driver, authorized by, view details button to see details of the repair: Defects to be repaired or defects repaired (depending if new or past), photos of defects/repairs, garage used/to be used, name of the mechanic used to repair.
For new repair, on the service date the driver should be able to record service details and attach photos of the repaired defects but the form will be geolocked to open only when the bus is within the service garage. The approved garages will be mapped and each bus will be assigned a garage.
- Routine Maintenance: Show when the next service is due (Dates) at the top of the interface and display list of the previous 5 services with an option to see details/notes of each service.
On service date the driver should be able to record service details and attach photos but the form will be geolocked to open only when the bus is within the service garage. The approved garages will be mapped and each bus will be assigned a garage.

B) Parents Interface
   a) Authentication (login, forgot password, reset password)
   b) Bus tracking. The landing page of the parents interface will be a list of their children: Student Name, Grade, View Map button. When a parent clicks the View Map button they should be able to see the location of their student's bus in a map view.
No-Pickup Button at the top, for parents to indicate/notify a bus driver/attendant when a student is not going to school. When a parent clicks the button they should enter the reason for their child's absence. This means that a parent can flag off their student for pickup (AM Trip) by sending absent notification with a brief reason.
   c) Attendance Report: This will show the days a student has not attended school. It will list a parent children showing these details: Student Name, Grade, term, Absent (Number of days) with ability to drill down to see the dates and reason the student was absent (Reasons from both parent: like sickness and also from school: like school fee payment)
   d) Term Trips: Will display a list of term trips showing these details: Student Name, Destination, Responsible teacher, Phone Number, Trip Date, Departure Time, Return Time, Amount (If its a paid Trip, Status (Paid/Unpaid, if its a paid trip). With notifications: Journey started, Reached Destination safely, Going Back to School, Reached School safely.
   e) Term Dates:
      - TERM: Start Date and End Date
      - MID TERM: Start Date and End Date

- TERM HOLIDAYS: Holiday name and Date

f) Term Events: Events outside School days and if requires pickup. Event name, Event location/venue, Event date, Event start time, Event end time

g) Child Pickup and Drop off Point Selection/Confirmation (Once before start of each term): List of students for parents to indicate their children pick up and drop off points. Parents will indicate/select a new location, incase of a new student, or confirmation/change location incase of continuing student.
The interface will display: List Number, Student name, Transport Office Phone Number, Pick Up point (Buttons: Select New Location or Confirm Location or Change Location), Drop off point (Buttons: Select New Location or Confirm Location or Change Location). Parents will see a map view to select a new location on clicking the SELECT NEW LOCATION or CHANGE LOCATION button but when they click Confirm Location button they will get an on-page message "Location confirmed successfully".

h) Students assigned driver/vehicle: Student Name, Bus Number, Driver Name, Driver Phone Number, Attendant Name, Attendant Phone Number, Pick Up Time, Drop off Time, Route Map (Display route on a map view)

i) Transport Billing/Payment: Tabs
   i) Pending invoice: Invoice number, Student name, Grade, Term, Amount, Due Date
   ii) Paid invoice: Invoice number, Student name, Grade, Term, Amount Paid, Date Paid

j) In-app chat/messaging platform where parents can chat with bus drivers/attendant and also Transport department.

k) In-app Notifications
   - All Pickup/Drop off notifications: AM/PM, Date, Student, Bus Number, pick up and drop off points (Map View), Message

NB:
   1. **Transport Billing/Payment feature can be enabled/disabled by the admin on the backend.**
   2. **All notifications to be automatically saved in the database.**