

Project: Yan Koltuk – Requirements Document

OVERVIEW	This document defines the requirements of the service tracking system to be developed for schools. The system aims to make the process of students getting on and off school buses traceable by families. It will be designed to be usable on both mobile and web-based platforms.
GOAL	To ensure that students registered in school services can be monitored in real time by their families. Thus, the safety of students will be increased and service processes will be made more transparent.
TARGET GROUP	<ul style="list-style-type: none">- Families of primary and secondary school students- School bus drivers and stewardesses- School bus drivers' administration

User Roles and Features

ADMIN (Web)	<ul style="list-style-type: none">- Login: Login via the web with the ID and temporary password given when applying for the product. The password must be changed at the first login.- Service Management:<ul style="list-style-type: none">○ Service registration:<ul style="list-style-type: none">▪ License plate▪ Capacity▪ Route (point of departure)▪ Departure time▪ Driver's name-surname▪ Driver's phone number▪ Driver's Turkish ID number▪ Stewardess' name-surname▪ Stewardess' phone number▪ Stewardess' Turkish ID number○ Edit service information:<ul style="list-style-type: none">▪ Driver's name-surname
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	<ul style="list-style-type: none"> ▪ Driver's phone number ▪ Driver's Turkish ID number ▪ Stewardess' name-surname ▪ Stewardess' phone number ▪ Stewardess' Turkish ID number ○ Delete service information - Service Management: <ul style="list-style-type: none"> ○ Can view the registered service list. ○ When a service is clicked, it will show the registered student list in that service. - Reporting: <ul style="list-style-type: none"> ○ Can view the registered service list. ○ When a service is clicked, it will show the movements of that service. - Interface: 3 main buttons on the web page (Add Service, View Service List, Service Reports)
PARENT (Mobil)	<ul style="list-style-type: none"> - Registration and Login: <ul style="list-style-type: none"> ○ Registers with phone number and password. ○ During registration this information is entered: <ul style="list-style-type: none"> ▪ Name - surname, ▪ Turkish ID number, ▪ Address - Home Page: <ul style="list-style-type: none"> ○ Includes a button to add a student with: <ul style="list-style-type: none"> ▪ Name-surname ▪ School number ▪ Turkish ID number ▪ Selecting the student's service. ○ Includes a side bar to: <ul style="list-style-type: none"> ▪ View the parent's info: <ul style="list-style-type: none"> • Name-surname • Phone number • Address ▪ Edit the parent's info: <ul style="list-style-type: none"> • Phone number • Address - Student Tracking:

	<ul style="list-style-type: none"> ○ The names of the listed students, service plate information, and boarding/getting off status are displayed. ○ If he is not going to school the next day, he can mark it as "not coming". ○ Can delete the student from the system. ○ Can change the service information of a student. <ul style="list-style-type: none"> - Interface: <ul style="list-style-type: none"> ○ User-friendly, simple navigation. ○ Ease of adding and managing students.
SERVICE DRIVER (Mobile)	<ul style="list-style-type: none"> - Login: Logs into the mobile application with the license plate and automatically generated password. - Home Page: <ul style="list-style-type: none"> ○ The name-surname of students registered to the service are displayed. ○ Status update: <ul style="list-style-type: none"> ▪ Each student has a "Get on/get off" switch. ▪ Status changes are logged with timestamp. ○ Can see "will" or "will not come" status with color codes. "Will not come" ones will be displayed with a red row. - Route Management: <ul style="list-style-type: none"> ○ Possibility to sort and organize the list of students by driver. ○ Can take notes (max. 50 chars) for each student, and these notes are displayed on the home page. - Interface: <ul style="list-style-type: none"> ○ Easy-to-use, quick-access design. ○ Drag-and-drop or similar functions for route management.

Functional Requirements

Admin Module	<ul style="list-style-type: none"> - Adding A Service Record: <ul style="list-style-type: none"> ○ Entering and saving service information via the form.
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	<ul style="list-style-type: none"> - Edit/Delete Service: <ul style="list-style-type: none"> o Update or delete existing service information. - Service/Student List View: <ul style="list-style-type: none"> o Access to the list of all services and students registered to the service. - Reporting: <ul style="list-style-type: none"> o View time-stamped logs of service movements.
Parent Module	<ul style="list-style-type: none"> - Registration and Login: <ul style="list-style-type: none"> o Secure registration and login processes. - Adding A Student: <ul style="list-style-type: none"> o Service selection and entering student information. - Student Tracking: <ul style="list-style-type: none"> o View boarding/disembarking statuses. - Updates: <ul style="list-style-type: none"> o Marking a student who will not come, editing the address, deleting a student or changing the service.
Service Driver Module	<ul style="list-style-type: none"> - Login: <ul style="list-style-type: none"> o Secure login mechanism. - Student List View: <ul style="list-style-type: none"> o View the list of students registered to the service. - Status Update: <ul style="list-style-type: none"> o Updating and logging the get-on/land status. - Route Management: <ul style="list-style-type: none"> o Organizing the student list according to the route. o Adding useful memo to the students.

Non-Functional Requirements

Performance	<ul style="list-style-type: none"> - The system must respond quickly and user transactions must occur without delay. - It must be resistant to high number of users.
Security	<ul style="list-style-type: none"> - User data must be encrypted.

	<ul style="list-style-type: none"> - Role-based access controls should be implemented. - There must be data backup and recycling mechanisms.
Availability	<ul style="list-style-type: none"> - User-friendly interfaces should be designed. - It must be compatible on mobile and web platforms.
Scalability	<ul style="list-style-type: none"> - Additional schools or services may be added in the future. - The system must be open to expansion.
Compatibility	<ul style="list-style-type: none"> - It should be compatible with different browsers and devices. - Android and iOS support should be considered for the mobile application.

Technical Requirements

Platforms	<ul style="list-style-type: none"> - Web Application: <ul style="list-style-type: none"> o Frameworks such as HTML, CSS, JavaScript, React. - Mobile App: <ul style="list-style-type: none"> o Flutter
Database	<ul style="list-style-type: none"> - MySQL
Server & Hosting	<ul style="list-style-type: none"> - Backend: <ul style="list-style-type: none"> o Node.js, Asp Net Core - Hosting: <ul style="list-style-type: none"> o Heroku, Azure, AWS
Other	<ul style="list-style-type: none"> - Real Time Data: <ul style="list-style-type: none"> o WebSockets o Socket.io - Map Integration: <ul style="list-style-type: none"> o Google Maps API o OpenStreetMap

