A Mini Project Report

On

College Bus Live Tracking

Submitted By

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BHIMAVARAM-534204

(2024-2025)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

S. R. K. R ENGINEERING COLLEGE BHIMAVARAM

CERTIFICATE

This is to certify that this is a Bonafide work on **"College Bus Live Tracking"** for and has been submitted by Mr. M.CHENNA KESAVA RAO (24B95A6111), Mr. S.AJAY KUMAR (24B95A6116),Ms. V.SARVANI(23B91A61I8) as a **Web Application Development Using Full Stack** laboratory report, in partial fulfilment of the requirements for the award of the Degree of Bachelor of Technology in Computer Science and Engineering, during the academic year 2022-2023. The candidate worked right under my Supervision and guidance.

Lecturers In-Charge

K .D.V.PAVAN KUMAR VARMA

CH Vinod Varma   **Head of the Department**

S Suryanarayana Raju   Dr. V. CHANDRA
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Assistant professor,   Head of the Department,

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S.R.K.R. Engineering College,   S.R.K.R. Engineering College,

Bhimavaram.   Bhimavaram.

ACKNOWLEDGEMENT

I take immense pleasure in thanking **Dr. M. Jagapathi Raju,** beloved principal of S.R.K.R Engineering College, Bhimavaram, and **Dr. V. Chandra Shekar,** esteemed **Head of the Department** (C.S.E), for having permitted me to carry out this Web Application Development Using Full Stack mini project work.

I wish to express my deep sense of gratitude especially to my project Guide**, Sri. K D V PAVAN KUMAR VARMA, Assistant Professor, Sri Ch Vinod Varma, Assistant Professor, Sri S Suryanarayana Raju, Assistant Professor,** for their guidance and useful suggestions, which helped me in completing the project work, on time.

Finally, yet importantly, I would like to express my heartful thanks to my beloved parents, faculty, my friends/classmates for their help, and my wishes for the successful completion of this project.

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ABSTRACT

This project is a user-friendly website that helps students track their college buses in real time. It has three main users: Admin, Driver, and Student.

- The admin can add buses, assign drivers, and set the bus stops.
- The driver can update their current location using their phone's GPS.
- The student can log in, select their village, and see which bus is nearest to them. They can also track the bus live on Google Maps.

The project is built using **HTML, CSS, and JavaScript**, and it uses the **Geolocation API** and **Google Maps** for location tracking. It makes college travel easier and smarter for students by showing live bus locations and routes.

MODULES

1. **Home Page**
   - Welcoming interface with options to choose: Admin, Driver, or Student login.
2. **Login Page**
   - Secure login for Admin (with ID and password).
   - Driver login with Bus Number and Mobile Number.
   - Student login with Register ID and optional village selection.
3. **Sign-Up Page (Optional for future enhancement)**
   - Can be added to allow driver or student registration .
4. **Admin Dashboard**
   - Manage buses and assign drivers.
   - Secure login with credentials.
   - View all bus and driver data.
5. **Driver Panel**
   - View assigned bus.
   - Update live location using GPS.
   - Simple interface for mobile devices.
6. **Student Panel**
   - View nearby college buses based on village.
   - Track bus live location on Google Maps.
   - See driver and bus details.
7. **Bus Data Management**
   - Predefined bus data with stops and drivers stored in buses.json.
8. **Live Tracking Map**
   - Integrated with Google Maps to show real-time bus location.
9. **Logging Out**
   - Option for all users to securely log out and return to home page.

SOFTWARE REQUIREMENTS

1. Text Editor:
- Visual Studio Code
- Notepad or Notepad++

2. **Front-End Technologies**:
- HTML (Hypertext Markup Language)
- CSS (Cascading Style Sheets)
- JavaScript

3. **Browser Compatibility**:
- Google Chrome
- Mozilla Firefox
- Microsoft Edge or any modern browser

4. **APIs Used**:
- Geolocation API
- Google Maps Embed API

HARDWARE REQUIREMENTS

1. Processor-Intel Core I5
2. RAM-8GB
3. Storage-512MB of free disk space

TECHNICAL STACK

HTML (Hypertext Markup Language)

HTML is used to create the structure and layout of the web pages. It defines the content such as login forms, buttons, and panels for admin, driver, and students.

CSS (Cascading Style Sheets)

CSS styles the HTML elements to make the website visually appealing and user-friendly. It includes layout design, animations (inspired by Instagram), responsive buttons, and themes for different panels.

JAVA SCRIPT

JavaScript powers the functionality and interactivity of the website. It handles:

- **Login validation**

- **Real-time location updates via Geolocation API**

- **Displaying nearby buses to students**

- **Managing and displaying data for buses and drivers**

OTHER TECHNOLOGIES

- **Geolocation API**: Used by drivers to share their current location.
- **Google Maps Embed API**: Used by students to view real-time tracking of buses.
- **LocalStorage (Web Storage)**: Stores data like login credentials, bus details, and tracking info directly in the browser without a database.

SAMPLE CODE

1.login.html:

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0"/>
  <title>SRKR Engineering College</title>
  <style>
    * {
      margin: 0;
      padding: 0;
      box-sizing: border-box;
      font-family: 'Segoe UI', sans-serif;
    }
    h1, h2 {
      text-align: center;
    }
    body {
      font-family: 'Segoe UI', sans-serif;
      margin: 0;
      padding: 0;
      background-color: #f9f9f9;
      background: linear-gradient (rgba (0, 0, 0, 0.7), rgba (0,0,0,0.7)),
       url('https://www.srkrec.edu.in/img/campus.jpg') no-repeat center center fixed;
      background-size: cover;
      color: white;
      animation: fadeInBody 1s ease-in-out;
    }
```

```css
@keyframes fadeInBody

 from {opacity: 0; }

 to {opacity: 1; }

}


h1, h2 {

 text-align: center;

}


 header {

 background-image: url("https://encrypted-
tbn0.gstatic.com/images?q=tbn:ANd9GcTLv0TFwNh_yOb2WapJT3ILe-A6mtORxg9r5A&s");

 background: #003366;

 color: white;

 padding: 1rem;

 display: flex;

 align-items: center;

 justify-content: space-between;

 box-shadow: 0 5px 10px rgba (0,0,0,0.3);

 text-align: center;

}


header img {

 height: 50px;

 border-radius: 10px;

}


header h1 {

 font-size: 22px;

 font-weight: bold;
```

```css
    color: #fff;

    margin-left: 20px;

    flex: 1;


  }
  nav a {
    color: white;
margin: 0 10px;

    text-decoration: none;

    margin: 0 15px;

    font-weight: 500;

    transition: color 0.3s;

  }
  nav a: hover {
    color: yellow;

  }


  main {
    padding: 40px 20px;

    background: rgba (255, 255, 255, 0.07);

    backdrop-filter: blur(6px);

    min-height: 90vh;

    animation: fadeInMain 1.2s ease-in-out;

  }


  @keyframes fadeInMain {
    0% {opacity: 0; transform: translateY(20px); }

    100% {opacity: 1; transform: translateY (0);}

  }
```

```css
section {
  max-width: 900px;

  margin: 0 auto;

  background: rgba (0, 0, 0, 0.5);

  padding: 25px;

  border-radius: 10px;

  box-shadow: 0 0 15px rgba (0,0,0,0.6);

  animation: fadeInSection 2s ease;

}


@keyframes fadeInSection {
  from {opacity: 0; transform: scale (0.98);}

  to {opacity: 1; transform: scale (1);}

}


section h2 {
  font-size: 28px;

  color: yellow;

  margin-bottom: 20px;

  text-align: center;

}


h3 {
  color: #ffd700;

  margin-top: 20px;

  font-size: 20px;

}


p {
  font-size: 16px;
```

```css
  line-height: 1.7;

  margin-top: 10px;

  color: #eee;

}


footer {

  text-align: center;

  padding: 25px 10px;

  background: rgba (0, 0, 0, 0.6);

  color: #bbb;

  font-size: 15px;

  animation: fadeInFooter 2s ease-in;

}


@keyframes fadeInFooter {

  from { opacity: 0; }

  to { opacity: 1; }

}


footer b {

  color: #fff;

}


@media (max-width: 768px) {

  header {

    flex-direction: column;

    align-items: flex-start;

  }


  nav {
```

```
      margin-top: 10px;

    }


    header h1 {

      margin-left: 0;

      font-size: 18px;

      margin-top: 10px;

    }

  }

 </style>

<link rel="stylesheet" href="css/style.css" />

</head>

<body>

 <header>

   <img src="C:\Users\kesav\OneDrive\Desktop\srkrlogo.jpeg" alt="SRKR Logo" style="height:
60px;" />

   <h1>Welcome to SRKR Engineering College</h1>

   <nav>

    <a href="admin.html"> 😀 🖥 Admin</a> |

    <a href="driver.html">🚗Driver</a>|

    <a href="student.html">🎓Student</a>

   </nav>

 </header>

<marquee behaviour="scroll" direction="left">

<div class="scroll-text">🚌 SRKR College Bus Live Tracking - Welcome!
🚌</div></marquee>


<style>

. scroll-text {

 width: 100%;
```

```css
  white-space: nowrap;

  overflow: hidden;

  box-sizing: border-box;

}


.scroll-text::after {

  content: attr(data-text);

  display: inline-block;

  padding-left: 100%;

  animation: scroll-left 10s linear infinite;

}


@keyframes scroll-left {

  0% { transform: translateX(0); }

  100% { transform: translateX(-100%); }

}
</style>
```

```html
  <main style="background-image:
url("C:\Users\kesav\OneDrive\Desktop\srkrbackground.jpeg"); background-size: cover; height:
500px;">

    <section>

    <h2>Explore Campus Features</h2>

    <h3><b>Infrastructure</b></h3>

      <p>Established in 1980, SRKR Engineering College boasts a sprawling campus equipped
with modern facilities. The college provides a conducive environment for learning, with well-
maintained classrooms, seminar halls, and e-classrooms. The campus also features dedicated
buildings for various departments, ensuring specialized infrastructure for each field of study</p>

<h3><b>Laboratories</b></h3>

<p>SRKR places a strong emphasis on practical learning, evident from its extensive laboratory
facilities. For instance, the Computer Science & Engineering department houses 11 well-
equipped laboratories, 3 research labs, and 4 e-classrooms. These labs are designed to provide
hands-on experience and support research initiatives</p>
```

\<h3\>\<b\>Faculty\</b\>\</h3\>

\<p\>The college prides itself on its experienced and qualified faculty members. In the Computer Science & Engineering department alone, there are 69 faculty members, including 16 Ph.D. holders, with several others pursuing doctoral studies. This blend of academic expertise and ongoing research involvement ensures that students receive quality education and mentorship\</p\>

\<h3\>\<b\>Placements\</b\>\</h3\>

\<p\>SRKR Engineering College has a dedicated Training & Placement Cell that actively facilitates student placements. In the 2022-2023 academic year, the college achieved 1,866 placement offers. Notably, the highest package offered was ₹29.5 LPA by Morgan Stanley for the role of Technology Analyst. The average package stands around ₹3.5–4 LPA, with prominent recruiters including Cognizant, Accenture, TCS, Infosys, and Wipro.\</p\>

  \</section\>

 \</main\>

\<footer\>

  ⚲ \<strong\>SRKR Engineering College\</strong\> — Chinna-Amiram, Bhimavaram, Andhra Pradesh 534204\<br\>

  ☎ Phone: +91 8816-223332; ✉ Email: principal@srkrec.ac.in\<br\>\<br\>

  © 2025 SRKR Engineering College. All rights reserved.

  \</footer\>

 \</body\>

 \</html\>

2.Admin.html:

```html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8" />
 <title>Admin Panel - SRKR</title>
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <style>
 * {
  box-sizing: border-box;
  scroll-behavior: smooth;
 }
 body {
  font-family: 'Segoe UI', sans-serif;
  margin: 0;
  padding: 0;
  color: #333;
```

```css
}

::-webkit-scrollbar {
  width: 10px;
}
::-webkit-scrollbar-track {
  background: #f0f0f0;
  border-radius: 5px;
}
::-webkit-scrollbar-thumb {
  background: #003366;
  border-radius: 5px;
}

header {
  background: rgba(0, 0, 0, 0.85);
  color: white;
  padding: 15px 30px;
  display: flex;
  justify-content: space-between;
  align-items: center;
  box-shadow: 0 2px 10px rgba (0,0,0,0.4);
}

header img {
  height: 55px;
  border-radius: 10px;
}

nav a {
  color: white;
  text-decoration: none;
  margin-left: 18px;
  font-weight: 600;
  font-size: 16px;
  transition: color 0.3s ease;
}
nav a: hover {
  color: #ffcc00;
}

marquee {
  font-weight: bold;
  font-size: 18px;
  background: rgba (255, 255, 255, 0.9);
  color: #003366;
  padding: 8px 0;
  box-shadow: 0 4px 10px rgba(0,0,0,0.1);
}
```

```css
.login-box {
  max-width: 420px;
  margin: 120px auto;
  background: rgba(255, 255, 255, 0.95);
  padding: 35px 30px;
  border-radius: 16px;
  box-shadow: 0 8px 25px rgba(0,0,0,0.25);
  text-align: center;
  animation: fadeIn 1s ease;
}

.container {
  max-width: 900px;
  margin: 50px auto;
  background: rgba(255, 255, 255, 0.94);
  padding: 35px;
  border-radius: 16px;
  box-shadow: 0 10px 30px rgba(0,0,0,0.25);
  display: none;
  animation: slideFade 1s ease forwards;
}

h2 {
  color: #002244;
  margin-top: 30px;
}

input, button {
  padding: 12px 15px;
  width: 100%;
  margin-top: 12px;
  border-radius: 10px;
  font-size: 16px;
  border: 1px solid #ccc;
  outline: none;
}

input:focus {
  border-color: #005fa3;
  box-shadow: 0 0 6px rgba(0, 95, 163, 0.4);
}

button {
  background-color: #003366;
  color: white;
  border: none;
  cursor: pointer;
  transition: background 0.3s, transform 0.2s;
```

```css
}
button:hover {
  background-color: #005fa3;
  transform: scale(1.02);
}

ul {
  list-style: none;
  padding-left: 0;
  margin-top: 20px;
  animation: fadeIn 1s ease;
}
ul li {
  background: #e9f5ff;
  padding: 12px 16px;
  margin-bottom: 12px;
  border-radius: 10px;
  box-shadow: 0 2px 6px rgba(0,0,0,0.12);
  transition: transform 0.2s;
}
ul li:hover {
  transform: translateY(-2px);
}

table {
  width: 100%;
  border-collapse: collapse;
  margin-top: 20px;
  animation: slideUp 1s ease;
  background: white;
  border-radius: 10px;
  overflow: hidden;
}

th, td {
  padding: 12px 14px;
  border: 1px solid #ddd;
  text-align: center;
}

th {
  background: #003366;
  color: white;
  font-weight: 600;
}

#errorMsg {
  color: red;
  font-weight: bold;
```

```css
   margin-top: 10px;
   }

   @keyframes fadeIn {
    from { opacity: 0 }
    to { opacity: 1 }
   }

   @keyframes slideFade {
    from { opacity: 0; transform: translateY(20px); }
    to { opacity: 1; transform: translateY(0); }
   }

   @keyframes slideUp {
    from { opacity: 0; transform: translateY(40px); }
    to { opacity: 1; transform: translateY(0); }
   }
</style>

</head>
<body>
  <header>
    <img src="C:\Users\kesav\OneDrive\Desktop\srkrlogo.jpeg" alt="SRKR Logo" style="height:
60px;" />
<h1>Welcome to SRKR Engineering College</h1>
    <nav>
     <a href="index.html">🏠 Home</a>
     <a href="driver.html">🚗 Driver</a>
     <a href="student.html">🎓 Student</a>
    </nav>
  </header>
<marquee behaviour="scroll" direction="left">
<div class="scroll-text">🚌 SRKR College Bus Live Tracking - Welcome! 🚌</div></marquee>
 <div class="login-box" id="loginBox">
    <h2>🔑 Admin Login</h2>
    <input type="text" id="username" placeholder="Username (e.g., admin@srkr)">
    <input type="password" id="password" placeholder="Password">
    <button onclick="login()">Login</button>
    <p id="errorMsg"></p>
  </div>

  <div class="container" id="adminPanel">
   <h2>➕ Add Bus & Driver Details</h2>
   <input type="text" id="busNo" placeholder="🚌 Bus Number">
   <input type="text" id="driverName" placeholder="👨‍✈️ Driver Name">
   <input type="text" id="driverPhone" placeholder="📞 Driver Phone Number">
   <button onclick="addBus()">✅ Add Bus</button>
```

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```html
<h2>🗂 Bus List</h2>
<ul id="busList"></ul>

<h2>📝 Student Feedback</h2>
<table id="feedbackTable">
  <thead>
    <tr>
      <th>🎓 Register ID</th>
      <th>💬 Feedback</th>
      <th>📅 Date</th>
    </tr>
  </thead>
  <tbody></tbody>
</table>
</div>

<script>
 function login() {
   const username = document.getElementById("username").value.trim();
   const password = document.getElementById("password").value.trim();
   const errorMsg = document.getElementById("errorMsg");

   if (username === "admin@srkr" && password === "admin123") {
     document.getElementById("loginBox").style.display = "none";
     document.getElementById("adminPanel").style.display = "block";
   } else {
     errorMsg.innerText = "❌ Invalid credentials. Try again!";
   }
 }

 function addBus() {
   const busNo = document.getElementById("busNo").value.trim();
   const driverName = document.getElementById("driverName").value.trim();
   const driverPhone = document.getElementById("driverPhone").value.trim();

   if (!busNo || !driverName || !driverPhone) {
     alert("⚠ Please fill all fields");
     return;
   }

   const buses = JSON.parse(localStorage.getItem("srkrBuses")) || [];
   buses.push({ busNo, driverName, driverPhone });
   localStorage.setItem("srkrBuses", JSON.stringify(buses));
   alert("✅ Bus added successfully!");
   document.getElementById("busNo").value = ';
   document.getElementById("driverName").value = ';
   document.getElementById("driverPhone").value = ';
```
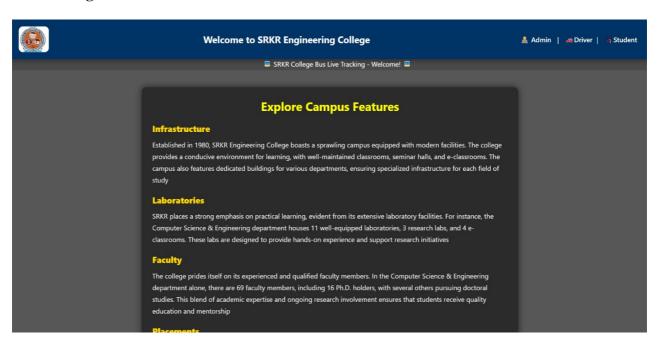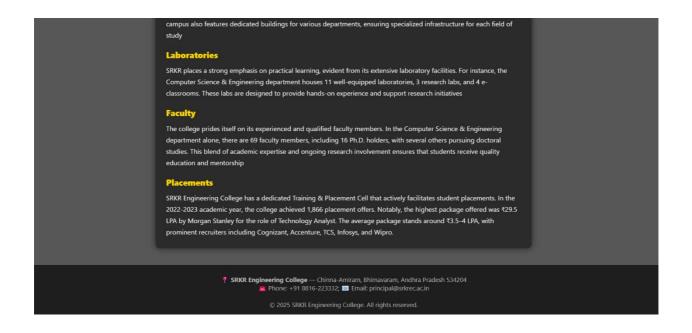
17

```
      loadBusList();
    }

    function loadBusList() {
      const buses = JSON.parse(localStorage.getItem("srkrBuses")) || [];
      const busList = document.getElementById("busList");
      busList.innerHTML = ";
      buses.forEach(bus => {
        const li = document.createElement("li");
        li.innerText = `🚌 ${bus.busNo} - 😊🛩 ${bus.driverName} (📞 ${bus.driverPhone})`;
        busList.appendChild(li);
      });
    }

    function loadFeedbacks() {
      const feedbacks = JSON.parse(localStorage.getItem("srkrFeedbacks")) || [];
      const tableBody = document.querySelector("#feedbackTable tbody");
      tableBody.innerHTML = ";
      feedbacks.forEach(fb => {
        const row = document.createElement("tr");
        row.innerHTML = `
          <td>${fb.regID}</td>
          <td>${fb.feedback}</td>
          <td>${fb.date}</td>
        `;
        tableBody.appendChild(row);
      });
    }

    window.onload = function () {
      loadBusList();
      loadFeedbacks();
    };

// Load buses on page load
document.addEventListener("DOMContentLoaded", loadBusList);

function loadBusList() {
  const buses = JSON.parse(localStorage.getItem("srkrBuses")) || [];
  const table = document.getElementById("busList");
  table.innerHTML = "";

  buses.forEach((bus, index) => {
    const row = document.createElement("tr");

    row.innerHTML = `
      <td>${index + 1}</td>
      <td>${bus.busNo}</td>
      <td>${bus.driverName}</td>
```

```
    <td>${bus.driverPhone}</td>
    <td>
      <button onclick="editBus(${index})" style="color: blue;">🖉 Edit</button>
      <button onclick="deleteBus(${index})" style="color: red;">🗑 Delete</button>
    </td>
  `;

    table.appendChild(row);
  });
}

function deleteBus(index) {
  if (confirm("Are you sure you want to delete this bus?")) {
    const buses = JSON.parse(localStorage.getItem("srkrBuses")) || [];
    buses.splice(index, 1); // remove the selected bus
    localStorage.setItem("srkrBuses", JSON.stringify(buses));
    loadBusList(); // reload UI
  }
}

function editBus(index) {
  const buses = JSON.parse(localStorage.getItem("srkrBuses")) || [];
  const bus = buses[index];

  const newBusNo = prompt("Enter new Bus Number:", bus.busNo);
  const newDriverName = prompt("Enter new Driver Name:", bus.driverName);
  const newDriverPhone = prompt("Enter new Driver Phone:", bus.driverPhone);

  if (newBusNo && newDriverName && newDriverPhone) {
    buses[index] = {
      busNo: newBusNo,
      driverName: newDriverName,
      driverPhone: newDriverPhone
    };
    localStorage.setItem("srkrBuses", JSON.stringify(buses));
    loadBusList();
  } else {
    alert("Update cancelled. All fields are required.");
  }
}

</script>
</body>
</html>
```
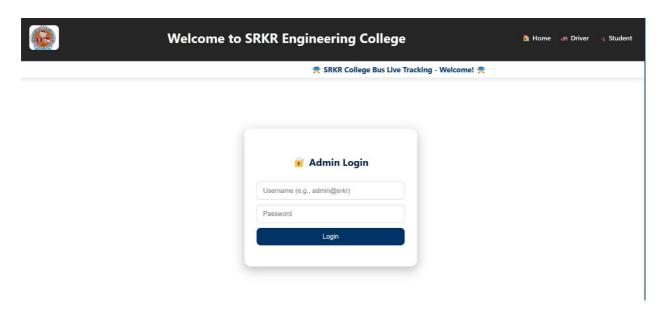
7.SCREEN SHOTS

1.Home Page Interface:
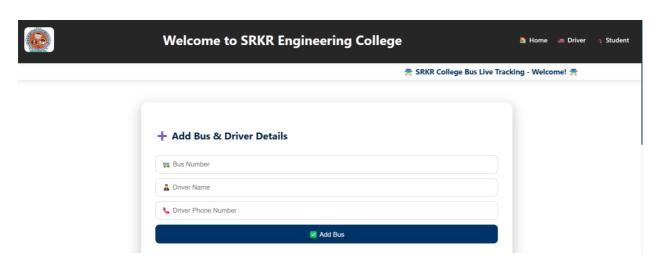
2.Admin Login Page:
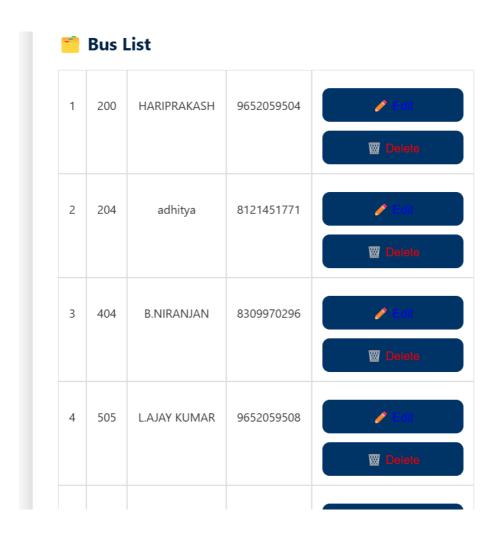
3.Admin Dashboard:

Student Feedback
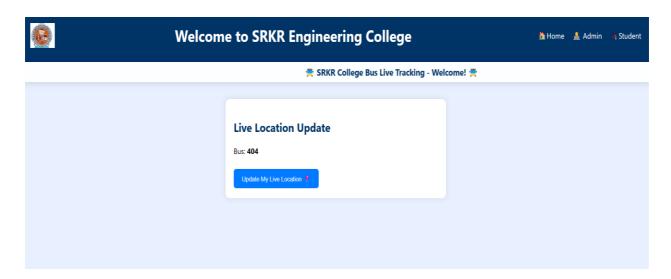
🔑 Register ID	💬 Feedback	📅 Date
24B95A6111	HELLOOO	4/11/2025, 10:41:17 PM
24b95a6112	not on time	4/13/2025, 4:14:16 PM
24b95a6111	good service	4/21/2025, 1:50:41 PM

📁 Bus List

1	200	HARIPRAKASH	9652059504	✏️ Edit 🗑️ Delete
2	204	adhitya	8121451771	✏️ Edit 🗑️ Delete
3	404	B.NIRANJAN	8309970296	✏️ Edit 🗑️ Delete
4	505	L.AJAY KUMAR	9652059508	✏️ Edit 🗑️ Delete

4.Driver Login Page:

Welcome to SRKR Engineering College   🏠 Home 👤 Admin 👤 Student

🚌 SRKR College Bus Live Tracking - Welcome! 🚌

Driver Login

404

8309970296

Login
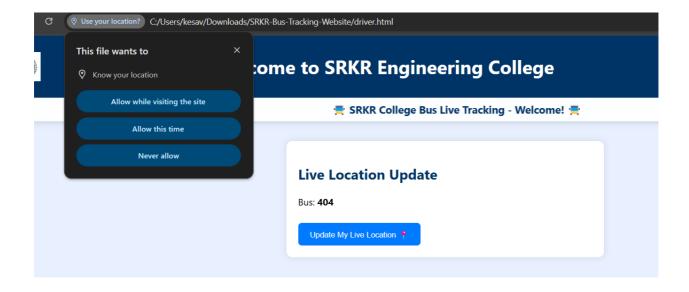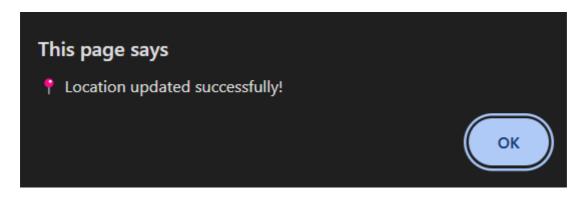
5.Driver Dashboard with Location Update:

This page says

📍 Location updated successfully!

OK

6.Student Login Page:

Welcome to SRKR Engineering College   🏠 Home   🚍 Driver

🚌 SRKR College Bus Live Tracking - Welcome! 🚌

🔑 **Student Login**

Enter Register ID (e.g., 21B95A6@@@)

Enter Bus Number

Track My Bus

SRKR Engineering College, Bhimavaram

Chinna-Amiram, Bhimavaram, Andhra Pradesh 534204

📞 08816-223332 | ✉ info@srkrec.ac.in

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Welcome to SRKR Engineering College   🏠 Home   🚍 Driver

🚌 SRKR College Bus Live Tracking - Welcome! 🚌

Your Bus Details

Bus Number: 404

Driver Name: B.NIRANJAN

Phone: 8309970296

Live Location:

13°32'23.1"N 78°54'07.4"E
GWQ2+VRW Ammagaripalle, Andhra Pradesh
View larger map

📝 **Give Your Feedback**

Write your feedback here...

Submit Feedback