

BCSE203E - Web Programming

Mini Project

Winter Semester 2024 – 2025

Topic: Night Slip Tracker

Project Title: Night Slip Tracker

Team Name: out of ctrl

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Introduction

The Night Slip Tracker (NS Tracker) is a web-based application designed to support the diverse clubs and chapters within VIT by providing an efficient system for managing attendance and night slip applications. Clubs and chapters play an integral role in student life, and managing attendance and night slip requests can often be a time-consuming and disorganized process. This application aims to streamline these tasks, making it easier for club members to apply for night slips and for secretaries to monitor these requests.

Through this platform, secretaries can efficiently track how many members have applied for night slips, ensuring accurate records are kept. Members will receive timely reminders for submitting their night slips and be informed about important announcements regarding the process. This system fosters a more organized and transparent approach to managing attendance and night slip applications, enhancing the experience for both students and club authorities across VIT.

Problem Statement

In VIT, the process of managing night slip requests and attendance for various clubs and chapters is often carried out manually, leading to inefficiencies such as missed deadlines, unclear tracking, and lack of proper record-keeping. Secretaries face challenges in keeping track of who has applied for night slips, while members may struggle to remember deadlines or navigate multiple platforms for submitting their requests.

This application aims to replace outdated manual processes, offering a more streamlined, transparent, and efficient way of managing attendance and night slip requests within the vibrant club and chapter culture at VIT.

Objective

The objective of NS Tracker is to digitally manage night slip requests through a centralized system where:

- Students can apply for night slips online and receive timely reminders and important announcements.
- Board members can track how many members have applied for night slips ,generate a new night slip and post announcements for the members.

Key Features of the NS Tracker Web App

1. Role-Based Access

- Club Members: Apply for night slips, confirm applications, and view important announcements.
- Secretaries: Track night slip applications, post and manage announcements, and post night slip application procedure details.

2. Night Slip Application Tracking

- Club members receive timely reminders when a night slip is required.
- Members can confirm once they've submitted their night slip applications.
- Real-time updates for secretaries on which members have applied.

3. Announcements Management (Secretary Only)

- Secretaries can post important announcements regarding night slip procedures and deadlines.
- Ability to add or delete announcements.

4. Attendance Tracking (Secretary Only)

- Secretaries can monitor and manage attendance records.
- View the list of members who have applied for night slips in an organized table format.

5. Minimalistic Dashboard

- Clean, intuitive, and easy-to-navigate dashboards for both club members and secretaries.
- Clear sections for night slip status, announcements, and application reminders.

6. User-Friendly Forms with Validation

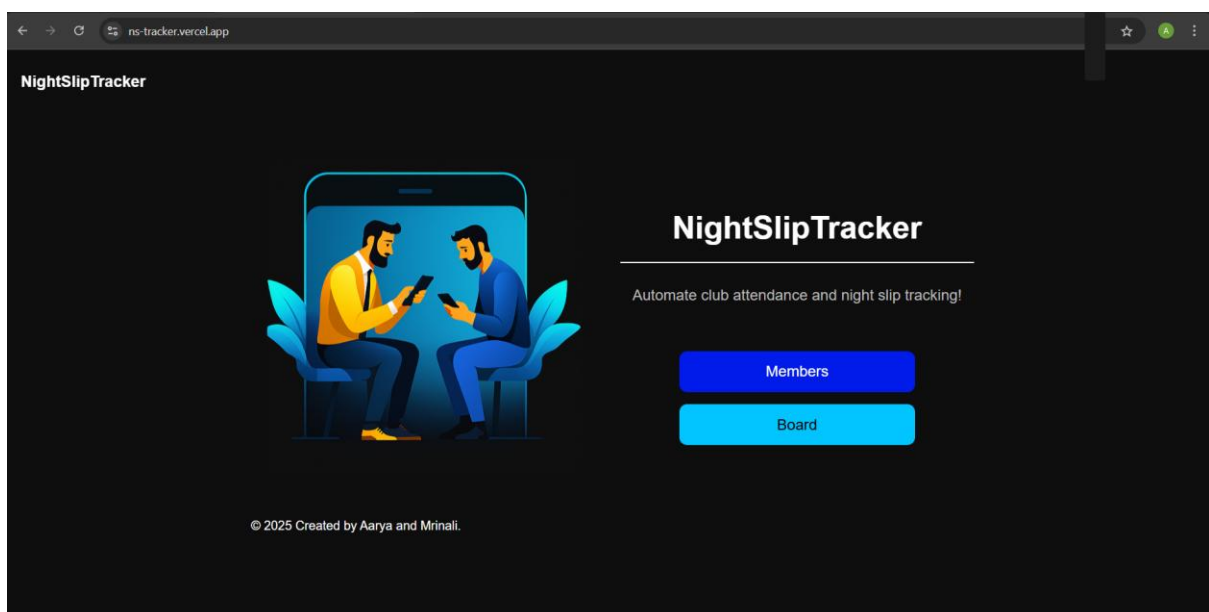
- Forms for night slip application and announcements are easy to use, with built-in validation to ensure data accuracy.
- Clear error messages and form validation to guide users during submission.

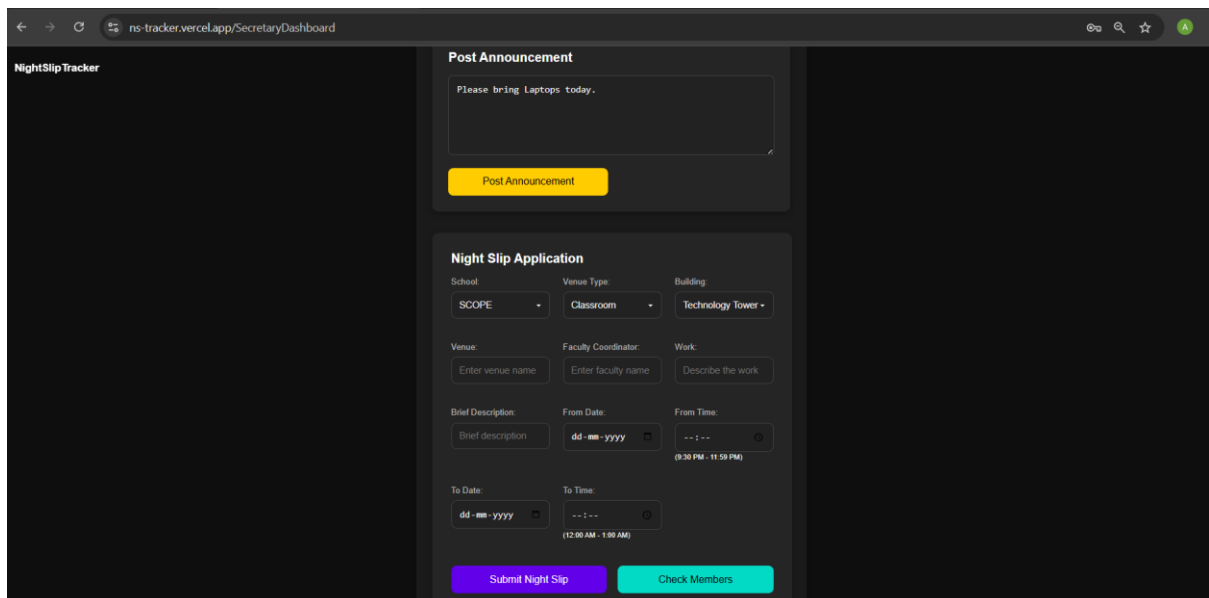
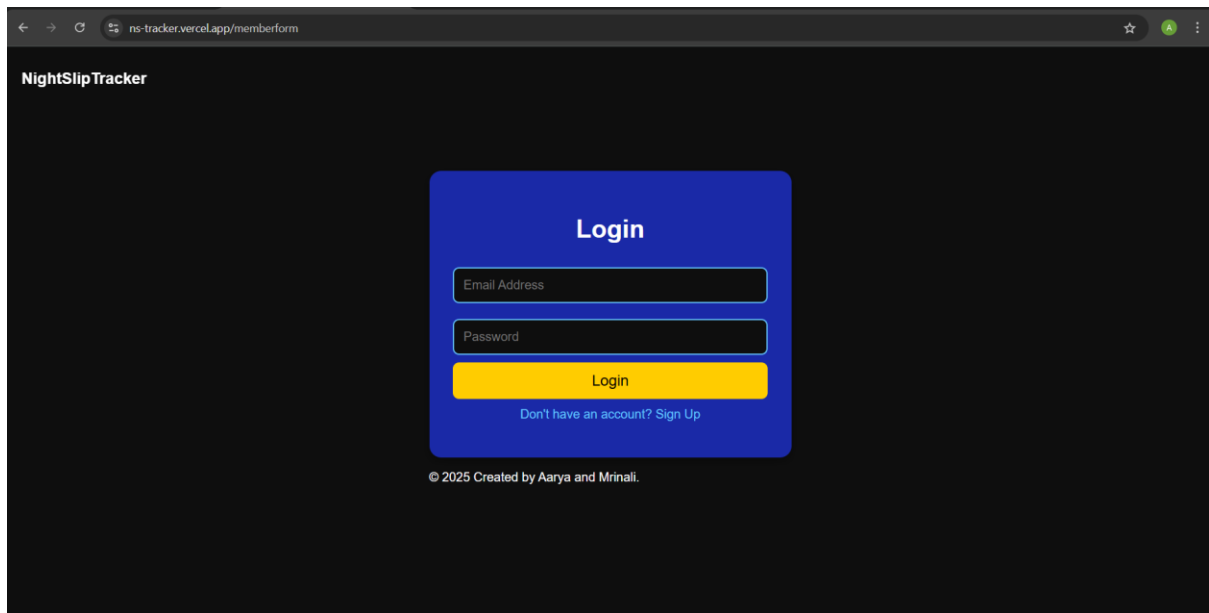
7. Real-Time Data Update

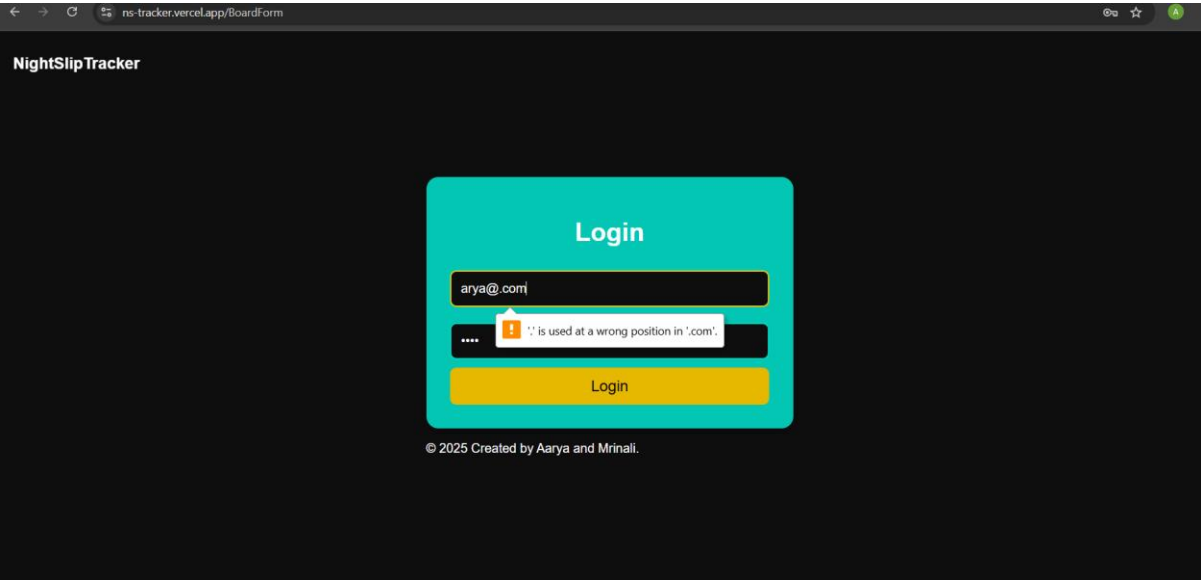
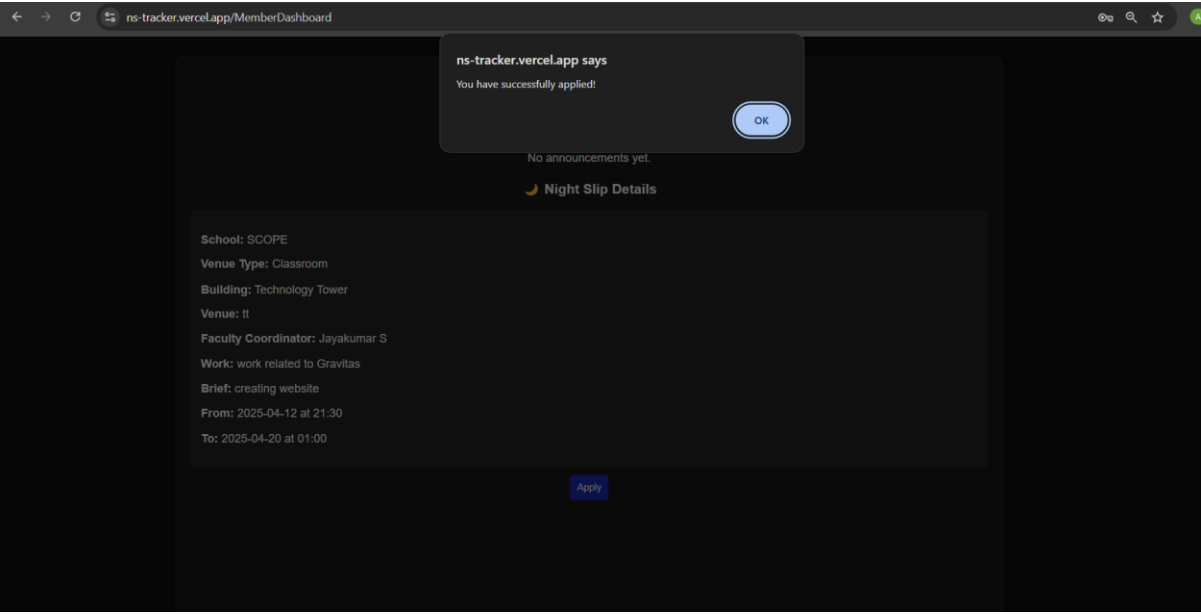
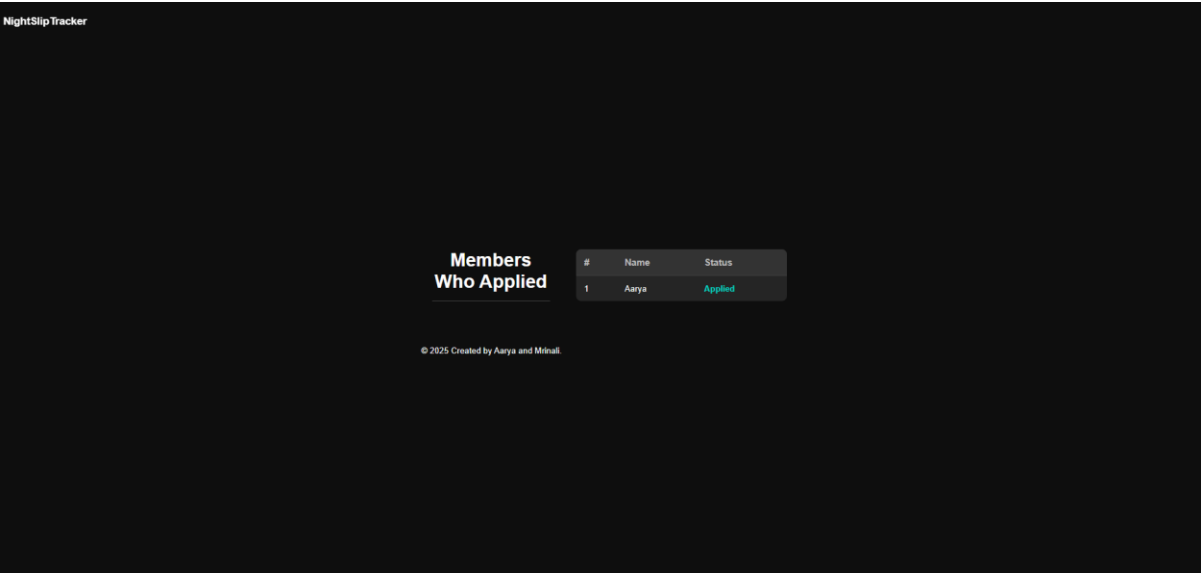
- Instant reflection of submitted applications, status updates, and any changes made to announcements.

8. Real-Time Clock and Date Display

- Dashboard displays current time and date to keep users informed.
- Helps members keep track of deadlines and encourages timely submissions.







Key Functions Used

- `handleSubmit`: Validates and handles login/signup form submission.
- `addMember`: Adds a new member during signup.
- `handlePostAnnouncement`: Posts a new announcement after validation.
- `handleApply`: Handles member's night slip application after validating availability.

Target Users

- VIT Club Members
- VIT Club Board Members

Technical Stack

- Frontend: React.js (with HTML, CSS, JavaScript)
- Styling: CSS
- Form Handling & Validation: Native React state and controlled components, input validation using Regular Expressions
- Hooks Used: `useState`, `useEffect`
- Version Control: Git & GitHub
- Deployment: Vercel

Technical Details

This React-based web application is built with modular and reusable components, ensuring maintainability and scalability. Below are the key technical components and features:

Core Components

- *Header & Footer*
 - Consistently displayed across all pages for seamless navigation and uniform user experience.
- *Member Form*
 - Manages both login and registration functionalities for club members, using form validation and secure handling of input data.
- *Board (Secretary) Form*

- Enables secure login functionality specifically for secretaries, providing role-based access to the dashboard.
- *Member Dashboard*
 - Displays announcements and allows members to confirm night slip applications using intuitive UI elements.
- *Secretary Dashboard*
 - Provides tools for secretaries to post/edit announcements and nightslip application procedure details and track night slip confirmations from members through a structured dashboard view.

Routing and Navigation

- *React Router* is used for managing client-side routing, enabling smooth transitions between pages without reloading the application.

State Management and Hooks

- Utilizes *React Hooks*:
 - *useState*: for managing local component states.
 - *useEffect*: for handling side effects such as data updates and real-time interactions.

Form Validation

- Forms across the app implement robust validation through:
 - *Regex patterns* for fields like email, registration number, etc.
 - Manual checks to ensure completeness and correctness of user inputs before submission.

Key Functionalities

- Handles **form submissions, posting announcements, and night slip confirmations** via clearly defined handler functions.

General Styles:

Defines a dark theme with white text, centered content, and a flexible layout for full-page display.

1. Header Styles: A fixed position header at the top with minimal text size and a white color scheme.

2. Note.jsx Specific Styles: Flexbox-based layout with a container for illustrations and content, with styling for headings, subtext, and buttons.
3. Secretary Dashboard: A styled container with background colors, shadows, and form inputs, focused on readability and structure for a dashboard.
4. Form Sections: Customizable input forms for announcements and night slips with focus states and responsive design.
5. Buttons and Actions: Defined button styles with hover effects and transitions for a more interactive UI.
6. Member & Board Dashboards: Separate containers for member and board roles with specific layout, form input, and button styles.
7. Form Validation & Error Messages: Styling for inputs with focus, error messages with a red color, and toggle text features.
8. Table & Status: Table for data display with alternating row colors, hover effect, and special status styling for certain data entries.

The overall style ensures a modern, clean, and functional layout with a focus on user interaction and responsiveness

❖ **GitHub Repository:** https://github.com/Red2Ninja/mini_project

❖ **Live Project Link (Deployed):** <https://ns-tracker.vercel.app/>

Challenges Faced

- **Hosting on GitHub**

We were not able to host the website on GitHub pages due to some error.