4. College Sports Resource Booking Platform

"**Most importantly, it taught me how impactful even a lightweight tool can be when built with empathy and a clear focus on user experience**."

"The project 'Sport Easy' - a web-based platform designed to streamline the booking and management of sports resources within our college. This project was driven by real feedback from students who often struggled to access courts, equipment, or schedule games due to lack of coordination and visibility."

"We approached this as a design thinking challenge. My focus was on empathizing with student pain points, such as double bookings, long wait times, and lack of awareness about available slots. Our goal was to build a system that was both intuitive and efficient essentially a centralized platform where students could book sports facilities based on real-time availability."

"The frontend was developed using HTML, CSS, and JavaScript, with an emphasis on responsive design and user-friendly interactions. I designed a clean interface that allowed students to log in, view availability, and make bookings in just a few clicks."

"Behind the scenes, we maintained structured data for different sports facilities, time slots, and user reservations. While this was primarily a frontend-focused MVP, we laid the groundwork for a scalable backend using JSON storage to simulate real-time slot updates."

"To validate the idea, we ran a pilot within our college campus, and over 70% of the intended users adopted the system during the initial phase. Students appreciated the simplicity and time-saving features, and faculty noted a reduction in manual coordination efforts."

"What made this project special for me was that it translated a very real, everyday student problem into a working tech solution. It gave me hands-on experience with user interface design, real-time scheduling logic, and usability testing."

"The project called Sport Easy, a web application we built to manage the booking of sports resources in our college. The idea stemmed from a common issue students faced-the manual process of booking equipment like cricket bats, footballs, or rackets was time-consuming. unorganized, and often led to double bookings or confusion."

"In this project, I worked on both the frontend and backend. I helped design the Android app Ul using Java and XML, and also integrated the app with a Flask-based REST API that handled the actual booking logic, user authentication, and fine management."

Functionality Overview:

-Students could log in, view available sports resources in real time, and book equipment directly from their phones.

-Bookings were auto-expired if the resource wasn't collected within 20 minutes

-The app also displayed booking history, allowed cancellation, and blocked users with unpaid fines until dues were cleared.

-An option to reset or update passwords was also included for better usability.

"The admin interface was built using Django. Admins could add or remove resources, view all active and historical bookings, and impose fines for late returns especially if items were not returned by 4:20 PM. The system automatically blocked users who failed to return resources and provided tools to unblock them after fine collection."

"The entire system was secured using JWT tokens, ensuring that only authenticated users could access endpoints like /bookResource, /cancelBooking, or /userDue. Admins had protected access to endpoints like /acceptResource and /blockUser, which helped maintain role-based control."

"From a results perspective, we deployed and tested the app with a group of students on campus, and it significantly reduced booking conflicts and saved time-both for students and sports staff. The Ul was simple, and real-time availability made it easy to plan sports sessions."

This project helped me solidify my skills in API design, Android development, and secure authentication flows, while also giving me hands-on experience in solving a real-world campus problem through full-stack development."