

Planned Improvements and Full Dynamic Implementation

The website is now fully functional in terms of navigation and static content, but a few features are dependent on hard-coded or placeholder data. The next phase of development is significantly improving the website to encapsulate dynamic, real-time functionality with JavaScript, enabling all pages and interactions to be fully responsive, data-driven, and firmly integrated. These upgrades strive to establish a professional, cohesive, and interactive platform for students and administrators alike.

User Account Management

Student and Admin Accounts: All user accounts (students and administrators) will be tracked and monitored within the system. The System will store account usernames, passwords and associated account data for the benefit of managing the information personally. All password reset functionality will be implemented so email can be sent to the user, verifying secure password recovery. The updated System will track account creation in real time, allowing registration for new users and permission for them to access their dashboard immediately upon log in. Both student and admin account pages will also be updated, in real time, so the System can interactively communicate and reflect changes without the need to refresh the page.

Functions of Student Dashboard

The Student Dashboard will be completely dynamic. Students will be able to:

- **Access bookings:** All future bookings will be pulled from live data. Students can cancel or change a booking, and the change will be made directly to the database and in the web page
- **Submitting special requests:** Requests for bookings that are outside of the normal schedule will be submitted via the specialRequest.html page and will specify the desired admin, reason for the special request, and requested hours. The request will be submitted, and the request will appear in the approval page on the admin side.
- **Past appointments:** The pastAppointments.html page will show a dynamic list of all past bookings for logged in students instead of just placeholder data.
- **Account management:** Students will be able to reset their password and change their username directly with the dashboard. Any potential change will immediately reflect in the platform.
- **Booking view:** The daily booking schedule will dynamically show real time available rooms and time-slots to prevent double bookings and keep data in sync.

Admin Dashboard Features

Support will be acquired on the Admin's Dashboard to accommodate live, moving data for all administrative actions. The Admin will be able to:

- Manage resources: The webpage - resources.html will allow admins to create, edit and delete resources. Updates for those resources will create live data in the student booking interface allowing availability to reflect the recent resources.
- Manage schedules: The webpage - schedules.html will accept data entry for working hours, blackout dates, and exceptions, which will also create live data allowing any changes made to schedules to impact the availability of student bookings, also adjusting dynamically on the student scheduling dashboard.
- Manage approvals: All special booking requests submitted by students will show on the webpage - approvals.html. Admins can then approve or deny requests, and the results of those requests will show immediately on the student's dashboard.
- Manage blocking and unblocking resources: The webpage - blocks.html will also have real-time functions to block or unblock resources, and will once again automatically update the status on all the booking front-ends.
- Manage statistics: At the webpage - statistics.html, dynamic reports will be shown to include metrics such as peak hours of booking, most-booked resources, number of bookings per room, and any other analytics related to usage. Again, the statistics will be developed based on actual user activity versus having just static placeholders.

System Integration and Live Updates

- Any time students or administrators take action, always in real time, the system will reflect/update that action. For example:
- If someone creates an account, that user will register immediately and be able to log in without refreshing the webpage.
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- If someone adds a resource or edits a resource, the availability schedules will reflect that change automatically for all students.
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- If a booking is submitted, approved, or cancelled, schedules and the statistics page will adjust automatically.
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- Past and upcoming appointments will dynamically generate based on user-specific data.

These improvements will maximize integration of the user interface, data handling, and the logic you create in conjunction with the pivotal requirements. The website will function seamlessly as a unified system while maintaining data integrity and providing a user-friendly experience for all parties involved. Leveraging javascript will allow the system to meet student and administrator

requests in real time, ensuring every action taken by users whether it be a booking, schedule change, or simply looking at statistics is reflected in their appropriate areas immediately.

This dynamic implementation will elevate the current website from a static prototype to a dynamic interactive system that updates all appropriate areas in real time!

All essential features—including enrolling students, managing special requests, account management, resource management, schedule changes, approvals, and statistical reporting—will be created in JavaScript and connected to live data. These improvements will increase usability, maintain data integrity, and provide students and administrators with a professional, responsive, and trustworthy one-stop-shop for all scheduling and management activities.