OpenLab

(Lab Reservation System)
Group name #: dom
Members:
REYES, IVAN KENNETH C.
SANTOS, JOHN BENEDICT G.
YU, CHRISANDER JERVIN C.

Introduction

In DLSU, students sometimes find themselves wanting to use the computer labs. One of the many reasons could be that their laptop's battery is dead and they need a computer immediately. Checking the Gokongwei building, then Andrew, and maybe even Velasco, hoping to find an open computer, only to waste precious time that could have been spent actually working. It gets worse during week 7 and week 12 or during midterms and finals week, when almost everyone suddenly needs lab access at the same time, and even during enlistment season. In the meantime, some reserved seats stay unfilled because students either failed to show up or forgot to cancel, while others who actually need the seat are unaware that a slot has recently opened. By enabling students to check real-time seat availability across various lab rooms, reserve slots up to seven days in advance, and manage their bookings from their devices without ever having to physically search for open computers, the proposed Lab Reservation System aims to address this issue. Lab technicians can even accept walk-in students, ensuring that available seats actually get used. This also helps in one situation where a student forgot their laptop charger and needed a computer due to it having no battery to finish his/her assignments. It is a simple idea, know before you go, but one that could save students a lot of stress and make lab access fairer for everyone.

Description of the Web Application

The proposed solution is a centralized Lab Reservation System that aims to optimize the search and reservation process of computer workstations in De La Salle University. The proposed system will optimize the management of seating capacity in major computer facilities, particularly in the Gokongwei, Andrew, and Velasco buildings, by reducing the time students spend physically searching for available seating. The system's main goals are to cut down on time wasted, lessen anxiety during busy academic times (such as midterms, final exams, and enlistment), and make sure that the lab's facilities are used effectively and fairly.

Once the web application is accessed, the users are asked to log in using their legitimate DLSU account for security and accountability purposes. After the login process, the user is directed to a dashboard where the real-time occupancy status of the different computer labs is shown. The users can engage with the application by

choosing a particular building and floor, which will show an interactive graphical representation of the lab layout. From there, the user can choose the available seats (color-coded for easy identification) to view the details and book a time slot. Users can also manage their current bookings through a profile page, which allows for extensions or cancellations to accommodate other users.

- **User Account (Log-in, Log-out, Register)** – The proposed web application will allow the user to create a user profile. This feature enables personalized reservation management and ensures accountability for bookings. *[Addresses: Register, Login, Logout]*

- **User Profile (Create, Read, Update, Delete)** – The users are also given their own user profile page. From here, they have the option to write and edit their own bio for other users to see, users can click a reservee's name to view their profile and search for specific users, and have the option to delete their account. *[Addresses: View/Edit User Profile, Delete User Account, Search for users]*

- **Remember Me** – When logging in, users can opt to be "remembered" by the website. Selecting this option extends the remember period by 3 weeks with every subsequent login or visit. *[Addresses: Login]*

- **Real-Time Lab Seat Availability** – The page displays the current availability of the computer labs across different buildings. Availability updates automatically as reservations are made, canceled, or filled by walk-ins. *[Addresses: View Slot Availability, Search for free slots]*

- **Reservations** – Students can reserve available 30-minute lab slots (optionally anonymous, multiple slots per reservation), view their reservation details, and edit their bookings; lab technicians can make reservations for walk-in students, edit any reservation, and cancel entire reservations for no-shows after 10 minutes. *[Addresses: Reserve, Reserve for a student, Remove reservation, Edit reservation, See reservations]*

- **Automated Notifications** – The system sends reminders via email or dashboard notification 15 minutes before the start of a reservation and alerts the user as their time approaches expiration. *[Additional feature]*

- **Admin Dashboard** – A specialized interface for lab technicians to mark PCs as "Under Maintenance," track usage analytics, and override reservations in situations of emergencies or academic priorities. *[Additional feature]*

- **General** – The web application prioritizes good user experience with intuitive navigation, easily accessible information, and a cohesive visual design consistent with the lab reservation theme throughout the application. *[Addresses: General]*