

Development of a Lab Inventory Management System

Abstract

The project aims to develop a robust and user-friendly Lab Inventory Management System (LIMS) using the PHP Laravel framework. This system is intended for managing and tracking laboratory equipment, reagents, and other resources efficiently, ensuring accurate inventory control and minimizing human error.

Scope of Work

- * **Inventory Management:** The system will provide features for adding, updating, and deleting inventory items, along with real-time tracking of stock levels.
- * **Barcode Integration:** To enhance the speed and accuracy of inventory management, the system will integrate barcode-based recognition, enabling users to quickly scan and manage items using barcode scanners.
- * **LDAP/Active Directory (AD) Integration:** The project will incorporate LDAP/AD integration for secure user authentication, allowing institutions to manage user access through their existing directory services.
- * **User Roles and Permissions:** The system will support multiple user roles, each with specific permissions to ensure secure and controlled access to inventory management functions.
- * **Reports and Analytics:** The system will generate detailed reports and analytics on inventory usage, helping laboratory managers make informed decisions.

Learning Outcomes: An overview of enterprise client-server web application using PHP Laravel with a comprehensive understanding of full-stack web development. It offers an excellent opportunity for students to apply theoretical knowledge to a practical problem, preparing them for professional roles in software development and IT management.

Academic Project Requirements:

- 1) **Required No. of student(s) for academic project: 2**
- 2) **Name of course with branch/discipline: B.E./B.Tech. Computer Engineering/IT/MCA**
- 3) **Academic Project duration:**
 - (a) **Total academic project duration: 16 Weeks**
 - (b) **Student's presence at IPR for academic project work: 5 Full working Days per week**

Email to: sharad.jash@ipr.res.in[Guide's e-mail address] and project_cs@ipr.res.in [Academic Project Coordinator's e-mail address]

Phone Number: 079 -23962304 [Guide's phone number]