



PRELIMINARY LABORATORY EXAMINATION

ITP110 – Web Technologies

First Semester, Academic Year 2025-2026

Requirements:

1. Local Server (Apache or Nginx) installed on your computers.
2. Database Server (MySQL) installed on your computers.
3. Laravel application or installer.
4. Knowledge in Web Technologies, Responsive Web Design (RWD), Application Programmable Interface (API), Database

Instruction:

1. Create a Laravel Application, named it Lab_Exam_LibSys
2. Create a simple library system relational database with the following entities or features:
 - a. Students(Student_ID, Name, Email, Username, Password)
 - b. Books (Book_ID, Title, Author_ID, Publisher, Edition, ISBN, Category_ID)
 - c. Authors (Author_ID, Name, Email)
 - d. Book_Categories (Category_ID, Description)
 - e. Borrowed_Books(ID, Book_ID, Student_ID, Date_Borrowed, Date_Returned, Lib_ID)
 - f. Librarian(Lib_ID, Name, Email, Type_ID)
 - g. Additional table and table relationships (optional)
3. Make the following pages:
 - a. Dashboard
 - b. Students
 - c. Books
 - d. Authors
 - e. Categories
 - f. Borrow/Return Books
 - g. Librarian
4. Apply **Responsive Web Design (RWD)** for each page. Pages must show the core principles of RWD (Fluid Grids, Flexible Images and Media Queries). CSS Frameworks are allowed (Bootstrap, Tailwind, UIKit, Pure CSS, etc)
5. Dashboard Page must show the following:
 - a. Cards (Total Books, Total Students, No. of Borrowed Books, No. of Returned Books)
 - b. 1 **Public API** section (choose any of weather, news feed, etc)
6. Apply the **REST API** (GET, POST, PUT and DELETE)

Rules and Guidelines:

1. Save your Laravel Application + MySQL database in your Gdrive. Submit the GDrive link on your pinnacle (must be accessible or set access to "Anyone with Link".
2. Create and submit a PDF File (filename: Lab_Exam_110), paste/save a screenshot of each item in the instruction.



PRELIMINARY LABORATORY EXAMINATION RUBRICS

ITP110 – Web Technologies

First Semester, Academic Year 2025-2026

CRITERIA	BASIC	INTERMEDIATE	ADVANCED	POINTS
1. Database Design & Relationships	Tables created with required fields (5 pts)	Proper migrations + primary/foreign keys (10 pts)	Relationships defined (hasMany, belongsTo, pivot if needed) + sample data (15 pts)	15
2. Pages (Dashboard, Students, Books, Authors, Categories, Borrow/Return, Librarian)	At least 2 pages with basic layout (5 pts)	All required pages with CRUD working (12 pts)	Pages connected with relationships (e.g., Book shows Author/Category, Borrowed Book shows Student/Librarian) (20 pts)	20
3. Responsive Web Design (RWD)	Basic responsiveness (fluid grids) (5 pts)	Uses CSS framework (Bootstrap/Tailwind) + flexible images (8 pts)	Fully responsive using media queries, tested on mobile/tablet/desktop (10 pts)	15
4. Public API Integration (Dashboard)	API section placeholder (5 pts)	API data displayed (e.g., Weather/News widget) (6 pts)	API data dynamically updates and styled in dashboard cards/widgets (10 pts)	10
5. REST API (Custom Endpoints for Library System)	At least 1 endpoint (e.g., list books) returns JSON (5 pts)	Multiple endpoints for core entities (Books, Students, etc.) (10 pts)	Full REST API with CRUD, validation, and proper status codes (20 pts)	20
6.Documentation	Basic documentation (5 pts)	Partial and explained documentation (12 pts)	Complete and well explained documentation (20 pts)	20
			TOTAL	100