**Introduction to PHP & Setup Topics: Day - 1**

1. PHP Introduction

2. XAMPP/WAMP Installation

3. First PHP Program (echo, print)

4. Basic Syntax & Comments Tasks

**Theoretical Questions:**

1. What is PHP?

2. What is a PHP File?

3. Key Features of PHP.

4. Uses of PHP.

5. History of PHP.

**Variables & Data Types , Operators Day -2**

**Task**

1. Convert temperature.

2. Write a PHP program to check if a variable is of type integer.

3. Write a PHP program that takes a string number like "123abc" and adds it to an integer. Display the result and its data type.

1. Add / sub / mul / Div / Mod of Two Number.

2. Simple Calculator. 3. Area Of Rectangle.

4. Area of Triangle.

5. Swap Two Number Using Third Variable.

6. Swap Two Number Without Using Third Variable.

7. Find the Maximum Number of Three Numbers Using Ternary Operator.

**Conditional Statements , Loop Control Day - 3 - 4**

**Topics Covered**

1. If-Else Statement.

2. Nested If-Else.

3. While loop

4. For loop

5. For Each loop

**Task**

1. Find the Largest of Three Numbers.

2. Check if a number is Even or Odd.

3. Check if a person is Eligible to Vote (Age >= 18).

4. Find whether a Year is a Leap Year or Not.

5. Create a login authentication script using if conditions (dummy credentials).

1. Print Numbers from 1 to 10 Using While Loop.

2. Print Numbers from 10 to 1 Using For Loop.

3. Reverse a Number Using Loop.

4. Print All Even Numbers from 1 to N Using For Loop.

5. Print Multiplication Table of a Given Number Using For Loop.

6. Print the Factorial of a Number Using Loop.

7. Write a PHP program to print the Fibonacci sequence up to n terms using a loop.

**Arrays in PHP Day - 5**

**Topics Covered**

1. Indexed Arrays

2. Associative Arrays

3. Array Function

**Task**

1. Create an Indexed Array and Print All Elements.

2. Create an Associative Array and Print All Key-Value Pairs.

3. Create a Multi-Dimensional Array and Access Its Elements.

4. Merge Two Arrays Using PHP Functions.

5. Find the Length of an Array Using the count() Function.

6. Sort an Array in Ascending & Descending Order.

7. Remove Duplicate Elements from an Array.

**Introduction to Functions in PHP Day - 6**

**Topics Covered**

1. Creating & Calling Functions

2. Function Arguments & Return Values

**Task**

1. Create a Function to Print a Greeting Message.

2. Create a Function to Return the Sum of Two Numbers.

3. Create a Function to Check if a Number is Even or Odd.

4. Create a Function to Find the Square of a Number.

5. Function with a Default Argument for Greeting Message.

6. Function to Convert Temperature from Celsius to Fahrenheit.

**Super Global Variable Day - 7**

**Topics Covered**

1. **$\_POST**
2. **$\_GET**

**Task**

1. Use $\_GET to retrieve and display a user’s name passed via the URL. Example: example.php?name=John

2. Create an HTML form that submits data using GET and handle the form data using $\_POST. Form will be the submitted through the action attribute and fetch the data in the next page .

1. Make a 20 fields data and submitted this form . and fetch this data to another page . task to student .

**Introduction to Database & SQL Basics Day - 8- 11**

**Topics Covered**

1. Introduction to Database
2. SQL Introduction
3. Creating Table & Basic INSERT ,UPDATE , READ , DELETE , DROP , TRUNCATE Queries.
4. Where clause
5. Order by
6. Primary Key , Auto increment
7. COUNT(), SUM(), AVG(), MAX(), MIN() Functions

**Task**

2. Create a Students Table with columns: ID, Name, Age, Grade.

3. Insert a Single Record into the Students Table.

4. Insert Multiple Records into the Students Table.

5. Create an Employees Table with columns: ID, Name, Department, Salary.

6. Insert Multiple Employee Records into the Employees Table

**MySQL Database & Connection with php Day 12**

**Topic Covered:**

1. Connection with database and check the database connect or not
2. Insert data with th 4 fields of form . DB table should have be the 4 extra field in every table (id auto increment , created at , updated at , status).
3. Insert Data with the radio button and checkbox.

**Task**

1. Student make the 20 field form and insert them

**Day - 13**

**Topic Covered**

1. Insert the form data again and show (READ) using $\_REQUEST .
2. Delete the particular data .

**Task**

1. Student insert the data again and show them twice.
2. Student insert again and show them than perform delete

**Day - 14**

**Topic Covered**

1. Revise all the crud topics with get and post methods .
2. File uploading and downloading .
3. Make a login form and Authenticate the user and validate them using $\_SESSION

**Day - 15**

Make the complete form with authentication and authorization from the student . form will be the 20 field with file uploading.

**Day 16 -**

**Topic**

Project understanding and Distributing to each student .

**Day 17 - Day 29**

Project Development and guidance

**Day 30**

Project Demonstration and Presentation

| **Day** | **Topics Covered** | **Tasks / Assignments** |
| --- | --- | --- |
| **Day 1** | Introduction to Laravel - What is Laravel? - Installation via Composer - Laravel folder structure - Artisan CLI basics | Install Laravel & run first project (php artisan serve). Write a note on Laravel features vs PHP. |
| **Day 2** | MVC Architecture - Model, View, Controller flow - Routes introduction | Create a simple route returning text and a Blade view. |
| **Day 3-4** | **Routing & Controllers** - Route types (GET, POST, PUT, DELETE) - Route parameters, Named routes - Creating Controllers | Build routes for calculator operations using controllers. |
| **Day 5** | **Blade Templating** - Blade syntax ({{ }}, @if, @foreach) - Layouts & Sections | Create a master layout and extend it in child pages. Make a student list using Blade. |
| **Day 6** | **Database Setup** - Configuring .env - Migration basics | Create a migration for students table. Run migration. |
| **Day 7** | **Eloquent ORM Basics** - Models - Insert, Retrieve, Update, Delete | Perform CRUD on students table using Tinker. |
| **Day 8-9** | **CRUD with Forms** - Blade Forms - CSRF protection - Validation | Create student registration form (10+ fields) with validation and insert into DB. |
| **Day 10** | **CRUD – Display & Delete** - Fetch records - Pagination - Delete record | Show student list with pagination & delete option. |
| **Day 11** | **CRUD – Edit & Update** - Edit form - Update record | Add edit/update functionality in student module. |
| **Day 12** | **Request & Response** - Request object ($request) - Redirects & Flash messages | Add success/error messages for CRUD operations. |
| **Day 13** | **Authentication (Laravel Breeze/Jetstream)** - Login, Register, Logout | Implement authentication system using Breeze. |
| **Day 14** | **Middleware** - Creating & using middleware - Route protection | Create AdminMiddleware and restrict access to admin pages. |
| **Day 15** | **File Uploading** - Handling file uploads - Storage in public | Add profile picture upload in student form. |
| **Day 16** | **Relationships** - One-to-One, One-to-Many, Many-to-Many | Create courses table and assign multiple students to courses. |
| **Day 17** | **Advance Eloquent** - Query builder methods - Joins & Relationships | Display students with their course details. |
| **Day 18** | **Form Validation (Advanced)** - Custom rules - Error messages | Add custom validation for email & file type. |
| **Day 19** | **Sessions & Cookies** - Store/retrieve session data - Flash session | Create a shopping cart demo using sessions. |
| **Day 20** | **Email & Notifications** - Mail setup (Mailtrap/Gmail) - Sending notifications | Send welcome mail to new registered user. |
| **Day 21** | **API Development (Part 1)** - REST API basics - Routes for API - Returning JSON | Create API for fetching students. |
| **Day 22** | **API Development (Part 2)** - API authentication with Passport/Sanctum | Create secure student API with token auth. |
| **Day 23** | **Ajax & Laravel** - jQuery Ajax calls - Fetch & insert data using Ajax | Implement live search for students. |
| **Day 24** | **Advanced Topics** - Laravel Events & Listeners - Queues | Queue email sending process. |
| **Day 25** | **Laravel Collections & Mutators** - Accessors - Mutators - Casting | Format student names using Accessors. |
| **Day 26** | **Testing in Laravel** - PHPUnit basics - Feature tests | Write a test case for student CRUD. |
| **Day 27** | **Laravel & Frontend Integration** - Bootstrap integration - Vue/React intro | Add Bootstrap to student module. |
| **Day 28** | **Revision & Mini Project** - Build a small CRUD project (Library Management) | Library system with book/student CRUD. |
| **Day 29** | **Major Project Development** - Work on assigned project | Guide students on their chosen projects. |
| **Day 30** | **Final Project Presentation** - Project demo - Q&A | Students present projects for evaluation. |