

SKILLPRO WEBSITE

Introduction

Education plays a crucial role in empowering individuals and supporting national development, especially through Technical and Vocational Education and Training (TVET). SkillPro Institute aims to enhance its academic and administrative operations by introducing a dynamic, database-driven web application. The system is designed to provide course information, online student registration, instructor management, schedules, events, and inquiries through a centralized platform. Using web technologies such as PHP, MySQL, HTML, and CSS, the application ensures secure access, user-friendly interfaces, and efficient data management for administrators, instructors, and students.

Task 01: Planning and Designing a Web Application for SkillPro Institute

Analysis of Similar Web Systems

Three well-known educational platforms were examined: Coursera, TVEC Sri Lanka, and Udemy

Feature	Coursera	TVEC Sri Lanka	Udemy	Observations for SkillPro
User Roles	Student, Instructor	Student, Admin	Student, Instructor	SkillPro needs 3 roles: Admin, Instructor, Student
Course Catalog	Extensive courses with filters	Limited official courses	Extensive categories, rating system	SkillPro should allow category, duration, and mode filters
Registration Process	Online account creation & enrollment	Offline & partially online	Online enrollment	SkillPro should support full online registration
Instructor Profiles	Detailed bios, ratings, and reviews	Names & contact details	Detailed bios, ratings, certifications	SkillPro should include specialization, credentials, and contact info
Schedule & Timetable	Calendar view for course sessions	Manual schedule updates	Interactive calendar for live courses	SkillPro should provide a timetable for both students and instructors
Notifications / Notices	Emails and dashboards for updates	Limited email alerts	Push notifications, updates	SkillPro should implement a noticeboard with recent events

Feature	Coursera	TVEC Sri Lanka	Udemy	Observations for SkillPro
Events / Seminars	Integrated in course timelines	Few listed events	Featured on dashboards	SkillPro should include workshops, job fairs, and exam schedules
Search Functionality	Advanced search with filters	Basic search	Keyword search with filters	SkillPro should provide search by category, mode, duration, branch, and instructor

The comparison demonstrates that a successful web application must balance **informative content, interactive features, and ease of navigation**. SkillPro should aim to combine the professionalism of TVEC with the interactive, student-centered approach of Coursera and Udemy.

Design Considerations for SkillPro Web Application

To meet the institute's needs, the web system must be **database-driven**, secure, and scalable. The following elements were considered:

1. User Interface (UI) & User Experience (UX)

- **Intuitive navigation:** Clear menus for Admin, Instructor, and Student dashboards.
- **Responsive design:** Mobile-friendly layouts to support students accessing the site via smartphones or tablets.
- **Visual appeal:** Use of institute branding, course thumbnails, and color-coded categories.

2. Backend Database Structure

The database should efficiently manage multiple data types, including course details, student registrations, instructor profiles, schedules, and inquiries.

Example tables for SkillPro:

Table Name	Key Fields	Purpose
users	user_id, full_name, email, password, role	Store login credentials and role info
courses	course_id, course_name, category, duration	Store course details
instructors	instructor_id, user_id, specialization	Link instructors to user profiles
enrollments	enrollment_id, student_id, course_id	Track student course registrations
schedules	schedule_id, course_id, day, time	Store class schedules for students & instructors

Table Name	Key Fields	Purpose
notices	notice_id, title, message, created_at	Display events, holidays, and announcements
events	event_id, title, description, event_date	Maintain event calendar
feedback	feedback_id, student_id, message	Allow instructors to provide student feedback
inquiries	inquiry_id, name, email, category, message	Manage queries submitted by students

3. Functional Features

- **Student Portal:** Account registration, course enrollment, view schedules, fees, and notices.
- **Instructor Portal:** View assigned courses, upload materials, view enrolled students, provide feedback.
- **Admin Panel:** Manage courses, instructors, schedules, registrations, and view inquiries.
- **Search & Filter:** Students can filter courses by **category, location, duration, and instructor**, ensuring they find the most suitable programs.

4. Security & Data Integrity

- Implement secure login systems with hashed passwords.
- Use role-based access to restrict pages (e.g., instructors cannot access admin functionalities).
- Validate all inputs to prevent SQL injection and ensure clean data entry.

User Flow & Interaction

Example: Student Registration & Enrollment Flow

Step	Action	Result
1. Registration	Fill in name, email, password	Account created in <code>users</code> table
2. Login	Use credentials	Access to student dashboard
3. Browse Courses	Search/filter by category or duration	List of available courses
4. Enroll	Select a course and submit	Enrollment recorded in <code>enrollments</code> table
5. View Schedule	Access timetable	Classes appear based on <code>schedules</code>
6. Feedback Submission	Submit feedback to instructor	Stored in <code>feedback</code> table
7. Event Notification	View latest events	Populated from <code>events</code> table

This flow ensures a **smooth, engaging experience**, encouraging students to actively participate in SkillPro's programs.

Task 01b: UI Design and Site Map for SkillPro Institute Web Application

Designing the user interface for SkillPro Institute involves balancing aesthetics, functionality, and user experience for three distinct roles: students, instructors, and administrators. The goal is to create an interactive, intuitive, and visually appealing system that enhances learning and administration processes.

Design Philosophy and Theme Selection

The UI design revolves around **clarity, consistency, and accessibility**. Given the diversity of users—from young students to professional instructors—the interface must be simple yet professional.

- **Color Palette:**
 - **Primary color:** Blue (#007BFF) to convey trust, professionalism, and energy.
 - **Secondary color:** White (#FFFFFF) for clean backgrounds and readability.
 - **Accent color:** Soft gray (#F4F6F9) for subtle separation of sections and cards.
 - **Error/Notification color:** Red (#DC2626) for alerts and green (#16A34A) for success messages.
- **Typography:**
 - A clean sans-serif font such as **Arial** or **Roboto** ensures readability across devices.
 - Headings use a slightly bolder weight to emphasize structure, while body text remains legible and consistent.
- **Layout and Responsiveness:**
 - A flexible grid system allows the site to adjust to desktops, tablets, and smartphones.
 - Interactive cards are used for courses, events, and notices to make content visually digestible.

These choices ensure that SkillPro's website reflects the institute's professionalism while remaining **inviting and easy to navigate** for all users.

Wireframe and Mockup Decisions

The website is divided into **role-based dashboards** with specific functionalities:

User Role	Key Pages / Features	UI Decisions / Justifications
Student	Dashboard, My Courses, Profile, Events, Materials	Dashboard highlights enrolled courses, notices, and upcoming events in cards; profile page allows photo upload; search bar placed at top for course filtering
Instructor	Dashboard, My Courses, Schedule, Upload Materials, Feedback	Dashboard shows assigned courses, schedule calendar, and pending feedback; upload page uses clear buttons and progress indicators; feedback page lists students in table format
Admin	Dashboard, Manage Courses/Instructors/Students/Events/Schedules	Uses a table-driven UI with edit/delete buttons; color-coded alerts for pending tasks; sidebar menu allows quick navigation

Example wireframe layout for student dashboard:

[Header]
SkillPro Institute Logo | Dashboard | Courses | Events | Profile | Logout

[Main Section]
- Welcome message: "Hello, [Student Name]"
- Enrolled Courses (Card Layout)
- Latest Notices (Card/List)
- Upcoming Events (Calendar Widget)

Profile picture

This modular card-based approach allows students to **quickly scan and interact** with information without overwhelming them. Similarly, the instructor dashboard uses **tables and progress bars** for schedules and feedback to give clear at-a-glance insights.

Sitemap

The site's structure is designed to reduce cognitive load while ensuring all functionalities are easily accessible.

Level	Page / Feature	Description
1	Home / Landing	Introduction to SkillPro, CTA buttons for login/register
2	Auth: Login / Register	User account creation and authentication

Level	Page / Feature	Description
3	Student Dashboard	Overview of enrolled courses, notices, and events
3	My Courses	List of enrolled courses with progress, timetable, and materials
3	Profile	Edit personal info, photo, password
3	Events	Calendar view with upcoming classes, seminars, and job fairs
3	Materials	Access downloadable course materials
2	Instructor Dashboard	Overview of assigned courses, schedules, and pending feedback
3	My Courses	List of courses they teach, with enrolled students
3	Schedule	Calendar for assigned classes and sessions
3	Upload Materials	Upload PDFs, videos, and other resources
3	Feedback	Submit feedback to students, view submitted feedback
2	Admin Dashboard	Overview of all operations
3	Manage Courses / Instructors / Students	CRUD operations via tables
3	Manage Schedules	Assign courses to time slots
3	Manage Events / Notices	Add/update upcoming events and announcements
3	View Registrations / Inquiries	Monitor student activity and queries

Justifications for Design Decisions

- 1. Role-Based Dashboards:**
Segregating dashboards prevents information overload and allows users to focus on tasks relevant to their roles.
- 2. Card and Table Layouts:**
Cards provide visual appeal and a clear summary, while tables are ideal for structured data like schedules, enrollments, and feedback.
- 3. Responsive Design:**
Students and instructors often access the system from mobile devices; a responsive layout guarantees usability across screens.
- 4. Consistent Colors and Typography:**
Using a consistent palette and typography enhances recognition, professionalism, and reduces visual fatigue.
- 5. Interactive Elements:**
Search bars, filters, buttons, and hover effects make the site dynamic and intuitive, improving engagement.

Student Dashboard Wireframe

SkillPro Institute

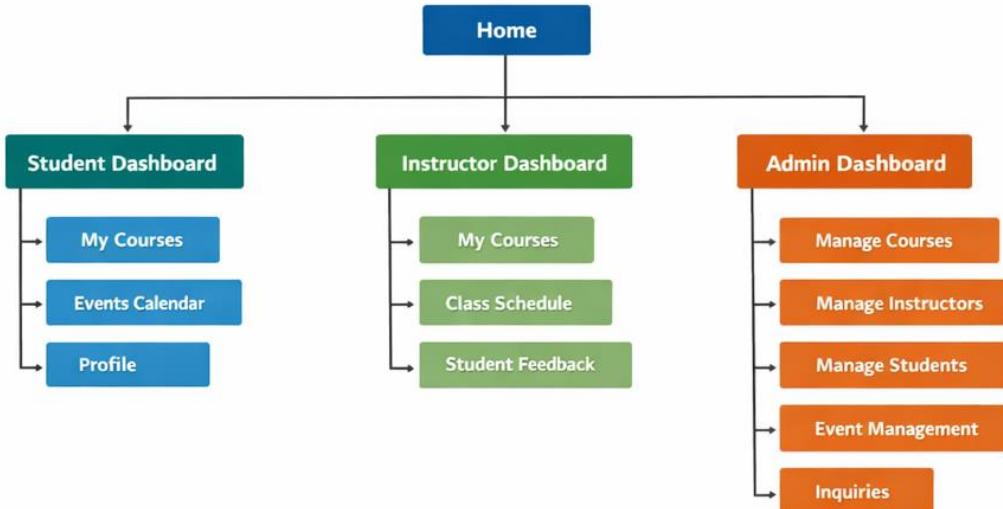
- Dashboard My Courses Events Profile
- Welcome, John!
- Enrolled Courses**
- | | |
|--|--|
|  ICT Fundamentals
Online 4 Weeks View Course |  Plumbing Basics
On-Site 6 Weeks View Course |
|--|--|
- Latest Notices**
- | |
|---|
| <ul style="list-style-type: none"> New Batch Starting Soon! Holiday Notice - Institute Closed on May 1st. |
|---|
- Upcoming Events**
- | April 2024 + April 2024 < > | | | | | | | | | | | | | | | | | | | | | |
|--|-----|---------------------------|-----|-----|-----|-----|-----|---|---|----------------------|--|---|--|--|---|---|---------------------------|--|---|--|--|
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Mon</th> <th>Tue</th> <th>Tue</th> <th>Wed</th> <th>Thu</th> <th>Fri</th> <th>Sat</th> </tr> <tr> <td>1</td> <td>1</td> <td>10:00 AM – ICT Class</td> <td></td> <td>1</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>3</td> <td>2:00 PM – Plumbing Basics</td> <td></td> <td>4</td> <td></td> <td></td> </tr> </table> | Mon | Tue | Tue | Wed | Thu | Fri | Sat | 1 | 1 | 10:00 AM – ICT Class | | 1 | | | 2 | 3 | 2:00 PM – Plumbing Basics | | 4 | | |
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| 2 | 3 | 2:00 PM – Plumbing Basics | | 4 | | | | | | | | | | | | | | | | | |

Instructor Dashboard Wireframe

SkillPro Institute

- Dashboard My Courses Schedule Student Feedback
- My Courses**
- | | |
|--|---|
| Web Design Course Manage | Welding Techniques Manage |
|--|---|
- My Schedule**
- | | | | | | | | | | | | | | | | | | | | | |
|---|-----|---------------------------|-----|-----|-----|--|--|--|--|--|--|--|----------------------|--|--|--|--|---------------------------|--|--|
| Weekly Calendar > | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | |
| | | 10:00 AM – ICT Class | | | | | | | | | | | | | | | | | | |
| | | 2:00 PM – Plumbing Basics | | | | | | | | | | | | | | | | | | |
- Student Feedback**
- | |
|--|
| Anna: Needs improvement in HTML. View |
| Samith: Excellent progress! View |

Site Map



Task 02a: Implementation of Attractive User-Friendly Interfaces

The SkillPro Institute web application was designed with a focus on usability, clarity, and aesthetic appeal.

Design Principles and Choices

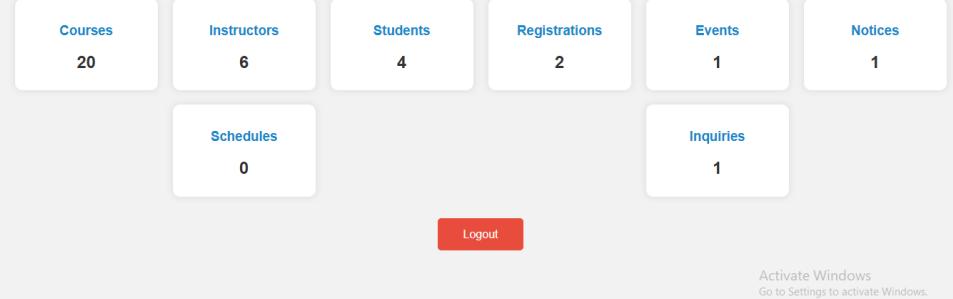
Aspect	Implementation
Color Scheme	Modern combination of blue (#007BFF), dark gray (#1E293B), and white (#FFFFFF). Blue highlights actions; white and gray improve readability.
Typography	Arial and sans-serif fonts for readability. Clear hierarchy with larger headers and 1.1em body text for scanning.
White Space	Padding and margins prevent clutter and highlight key content.
Responsive Layout	Flexbox and media queries allow smooth resizing for desktops, tablets, and mobiles. Cards, tables, and dashboards adjust proportionally.
User Feedback	Hover effects, button feedback, and form validations guide users and improve engagement.
Loading Performance	Optimized images, minimal CSS, and structured files reduce load times.

Key UI Components

Component	Features & Design Decisions
Header & Navigation	Fixed header with role-based links. Admins: manage courses/instructors/events. Students: My Courses, Dashboard, Profile. Quick access to relevant sections.
Dashboard Cards	Dynamic cards show enrolled courses, upcoming events, and notices. Hover effects indicate interactivity. Instructors see course management and feedback cards.
Tables	Clean, bordered tables with alternating row colors. Edit (blue) and Delete (red) buttons for clarity.
Forms	Registration, profile update, and course assignment forms with labels, placeholders, validation, and prominent submit buttons. Errors highlighted in red.
Event Calendar	Interactive calendar showing course dates, workshops, and seminars. Events clickable for details.
Course Cards	Display course name, mode, duration, fees. Responsive design; action buttons for details or registration.
Feedback Interface	Instructors submit feedback; students view it in a chronological table on the dashboard.

Screenshot

Screenshot	Description / Purpose	Screenshot
Homepage	<p>Shows overall design, color scheme, and first impression. Includes navigation, banners, and featured courses.</p>	
Student Dashboard	<p>Highlights enrolled courses, event calendar, and latest notices. Shows dynamic data and interactive cards.</p>	
Instructor Dashboard	<p>Shows course management, schedule overview, and feedback panel. Demonstrates actionable elements and responsive tables.</p>	

Screenshot	Description / Purpose	Screenshot
Admin Dashboard	Illustrates management interfaces for courses, instructors, and events. Include tables with action buttons.	<p>SkillPro Admin Dashboard Courses Instructors Assign Instructor Students Registrations Events Notices Schedules Inquiries</p> <p>Welcome, Admin User</p>  <p>Courses: 20 Instructors: 6 Students: 4 Registrations: 2 Events: 1 Inquiries: 1</p> <p>Logout</p> <p>Activate Windows Go to Settings to activate Windows.</p>
Registration Form	Shows validation messages, placeholders, and input structure. Highlight responsive form design.	<h3 style="background-color: #007bff; color: white; padding: 5px;">SkillPro Institute</h3> <h4 style="background-color: #f2f2f2; padding: 5px;">Student Registration</h4> <p>Full Name Email Password -- Select Course --</p> <p>Register</p> <p>Already have an account? Login</p>
Profile Update Form	Demonstrates profile picture upload, editable fields, and submit feedback.	<p>My Profile</p>  <p>Amana 23456786543 bla bla amna@gmail.com New Password <input type="file"/> Choose File No file chosen Update Profile</p> <p>Activate Windows Go to Settings to activate Windows.</p>
Course Cards / Details	Captures interactive cards with course details, including hover effects and buttons.	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Duration: 4 months Fees: LKR 80,000 Mode: On-site</p> <p>View Details</p> </div> <div style="text-align: center;"> <p>Duration: 2 months Fees: LKR 50,000 Mode: On-site</p> <p>View Details</p> </div> <div style="text-align: center;"> <p>Category: Plumbing Duration: 3 months Fees: LKR 65,000 Mode: On-site</p> <p>View Details</p> </div> <div style="text-align: center;"> <p>Duration: 2 months Fees: LKR 55,000 Mode: On-site</p> <p>View Details</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <p>Advanced Welding Techniques Category: Welding Duration: 3 months Fees: LKR 70,000 Mode: On-site</p> <p>View Details</p> </div> <div style="text-align: center;"> <p>Hotel Management Basics Category: Hospitality Duration: 4 months Fees: LKR 75,000 Mode: Online</p> <p>View Details</p> </div> <div style="text-align: center;"> <p>Food & Beverage Operations Category: Hospitality Duration: 3 months Fees: LKR 65,000 Mode: On-site</p> <p>View Details</p> </div> <div style="text-align: center;"> <p>Front Office Management Category: Hospitality Duration: 2 months Fees: LKR 55,000 Mode: Online</p> <p>View Details</p> </div> </div> <p>Activate Windows Go to Settings to activate Windows.</p> <p>© 2025 SkillPro Institute. All Rights Reserved.</p>

Screenshot	Description / Purpose	Screenshot						
		<p>Advanced Excel & Data Analysis</p> <p>Duration: 2 months Fees: LKR 60,000 Mode: Online Description: Excel and data analysis techniques Back to Course List</p>						
Event Calendar	Show interactive calendar view with clickable events.	<p>← Dashboard</p> <p>Events</p> <table border="1"> <thead> <tr> <th>Title</th> <th>Date</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>New year</td> <td>2026-01-01</td> <td></td> </tr> </tbody> </table>	Title	Date	Type	New year	2026-01-01	
Title	Date	Type						
New year	2026-01-01							
Feedback Panel	Displays instructor feedback for students, showing structured layout and clarity.	<p>← Dashboard</p> <p>My Feedback</p> <table border="1"> <thead> <tr> <th>Course</th> <th>Feedback</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Graphic Design Basics</td> <td>good not bad</td> <td>2025-12-31</td> </tr> </tbody> </table>	Course	Feedback	Date	Graphic Design Basics	good not bad	2025-12-31
Course	Feedback	Date						
Graphic Design Basics	good not bad	2025-12-31						

Technologies Used

Technology	Purpose / Role
HTML5 & CSS3	Structure and style the website. CSS Flexbox and Grid were used for responsive layouts.
PHP	Server-side logic for dynamic content generation and database interaction.
MySQL	Backend database storing courses, users, schedules, registrations, feedback, and events.
JavaScript	Used for interactive features like form validation, modals, and calendar navigation.
Responsive Design	Media queries ensure usability on tablets and mobile devices.

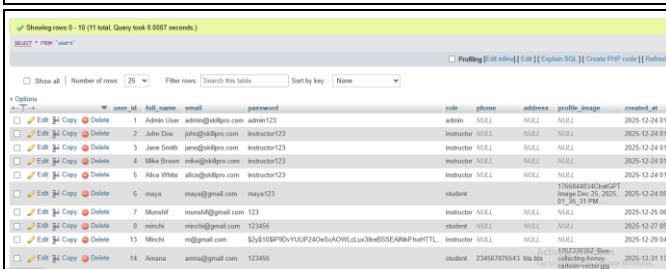
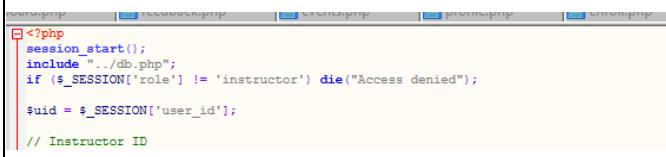
Technology	Purpose / Role
Optimized Assets	Compressed images and minified CSS/JS to improve load times.

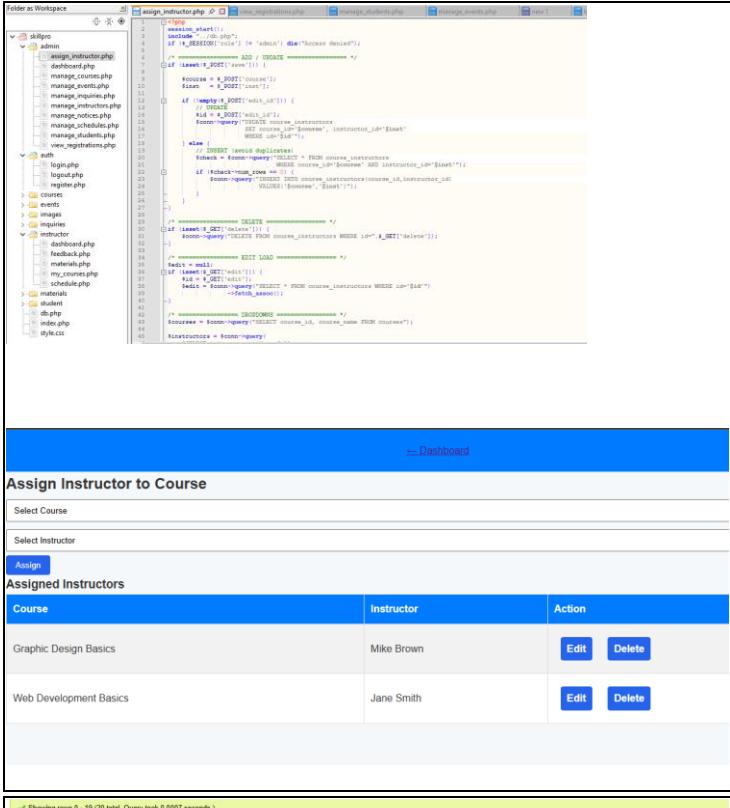
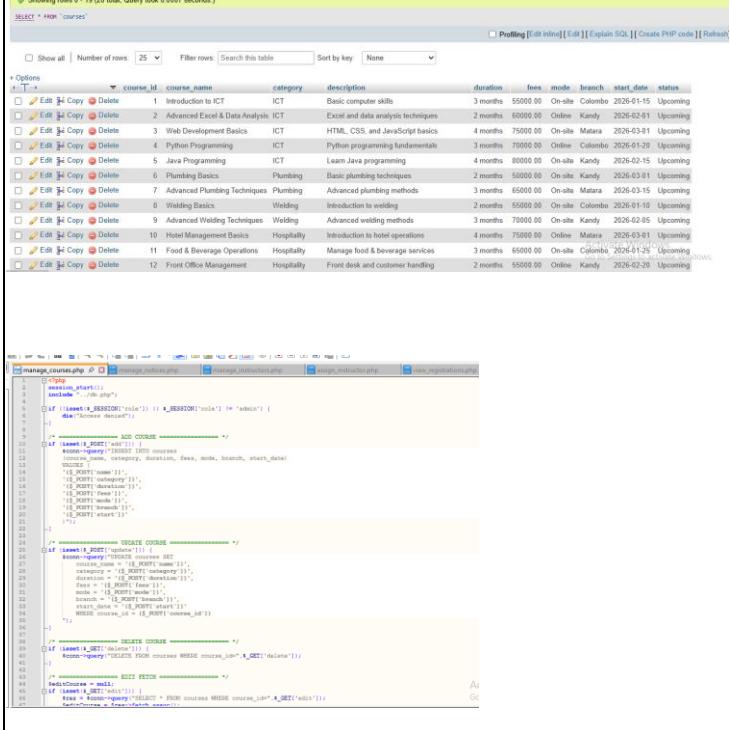
Summary of UI Strengths

Strength	Explanation
Clarity & Intuitiveness	Users can easily navigate without confusion; action buttons are visible and consistent across pages.
Consistency	Colors, fonts, and spacing are uniform throughout all pages, reducing cognitive load.
Accessibility	Adequate contrast and form validation support accessibility for diverse users.
Interactivity	Hover states, clickable cards, and modals provide feedback and enhance engagement.
Responsiveness	Smooth adaptation to mobile and tablet screens ensures usability across devices.

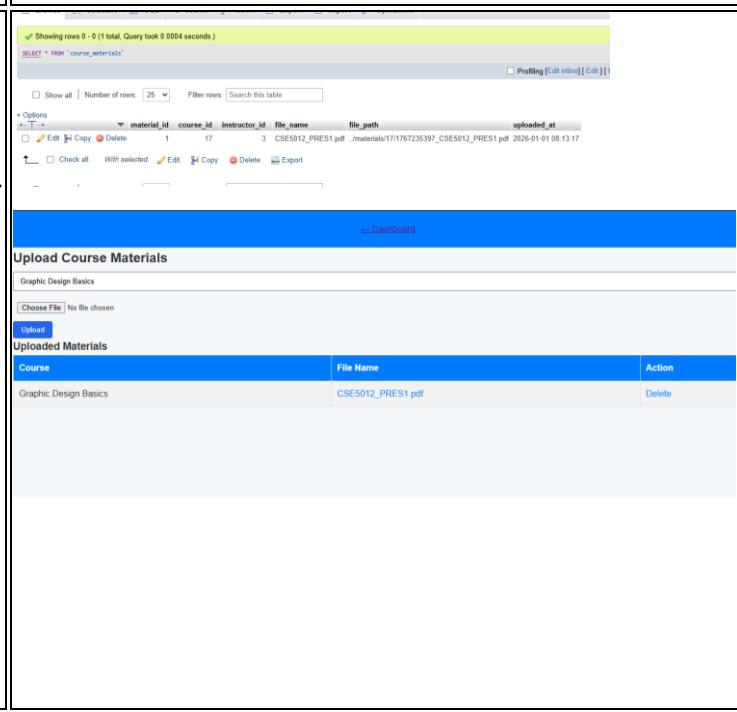
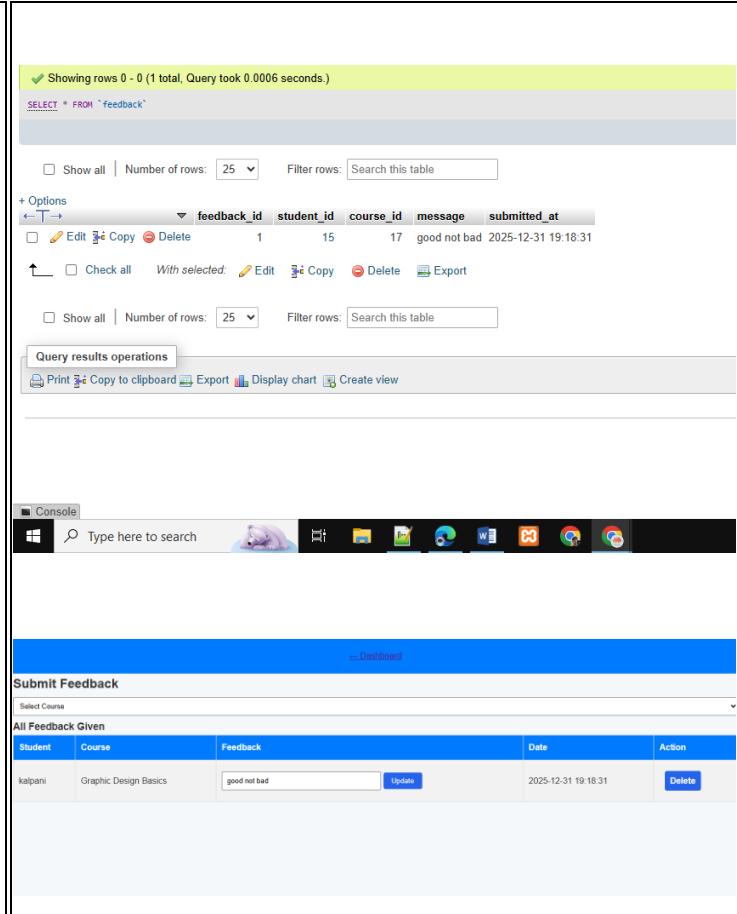
Task 02b: Backend Functionalities Implementation for SkillPro Institute Web Application

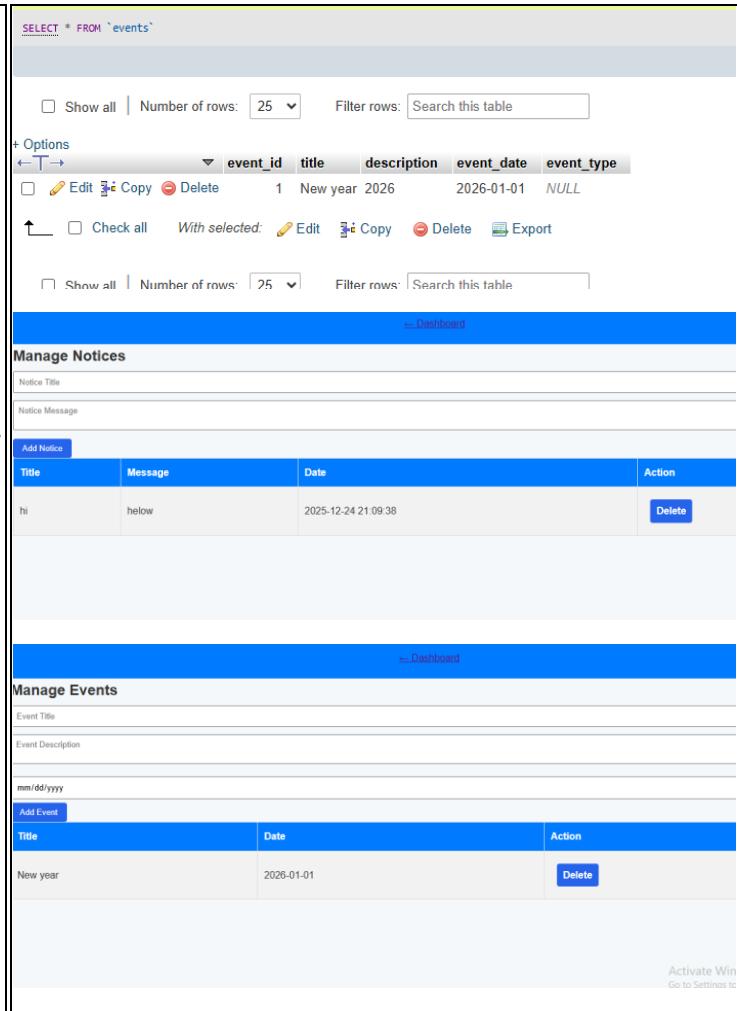
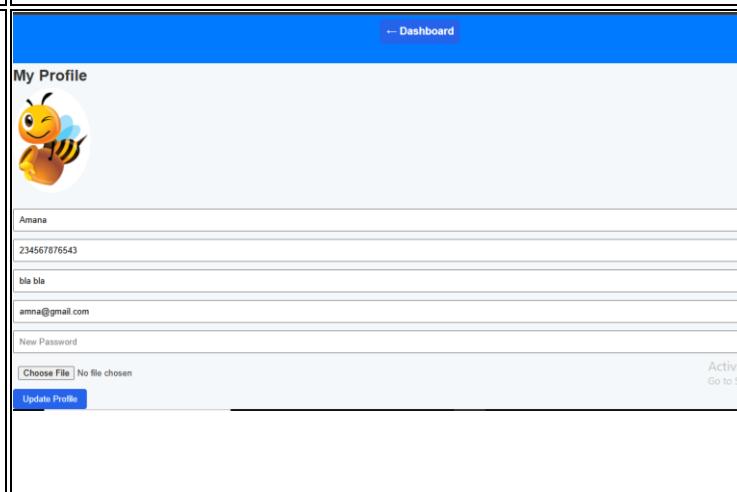
Key Backend Functionalities

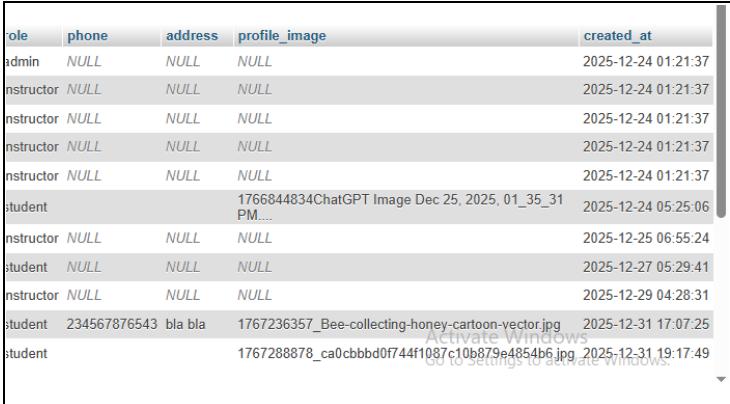
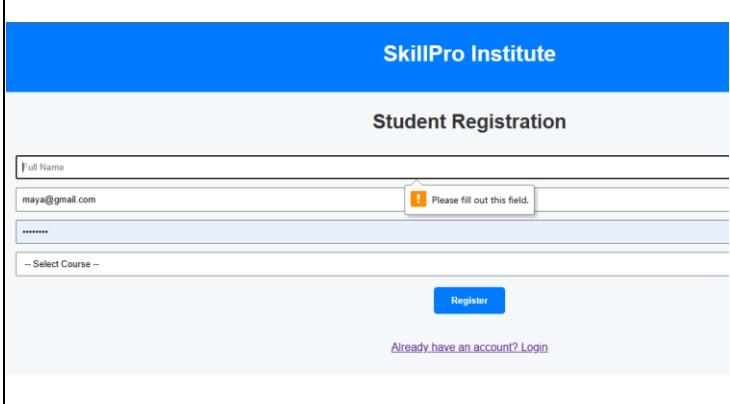
Functionality	Description	Technical Implementation	Screenshot
User Authentication	Handles login/logout for students, instructors, and admin.	PHP sessions store user_id and role. Passwords are verified with SQL queries. Role-based redirection implemented.	  <pre> <?php session_start(); include("../db.php"; if (\$_SESSION['role'] != 'instructor') die("Access denied"); \$uid = \$_SESSION['user_id']; // Instructor ID </pre>

Functionality	Description	Technical Implementation	Screenshot
			
Course Management	Admin can add, update, delete courses.	<p>CRUD operations using PHP and MySQL. Validation ensures no missing fields.</p> 	<pre> 1 <?php 2 //include "db.php"; 3 4 if (!isset(\$_SESSION['role']) !\$_SESSION['role'] == "admin") die("Access denied!"); 5 6 if (isset(\$_POST['course'])) { 7 \$course = \$_POST['course']; 8 \$start = \$_POST['start']; 9 \$end = \$_POST['end']; 10 \$branch = \$_POST['branch']; 11 12 if (empty(\$course) empty(\$start) empty(\$end) empty(\$branch)) { 13 echo "All fields are required!"; 14 exit(); 15 } 16 17 \$query = "INSERT INTO courses (course_name, start_date, end_date, branch) VALUES (?, ?, ?, ?)"; 18 \$stmt = \$conn->prepare(\$query); 19 \$stmt->bind_param("ssss", \$course, \$start, \$end, \$branch); 20 \$stmt->execute(); 21 22 echo "Course added successfully!"; 23 24 // Fetch the last inserted course 25 \$last_course_id = \$conn->insert_id; 26 27 \$query = "SELECT * FROM courses WHERE course_id=\$last_course_id"; 28 \$stmt = \$conn->prepare(\$query); 29 \$stmt->execute(); 30 31 \$result = \$stmt->get_result(); 32 33 if (\$result->num_rows > 0) { 34 \$course = \$result->fetch_assoc(); 35 36 echo "Last course added: " . \$course['course_name']; 37 } 38 39 \$stmt->close(); 40 \$conn->close(); 41 42 header("Location: index.php"); 43 exit(); 44} </pre>

Functionality	Description	Technical Implementation	Screenshot																														
			<p>Fees Online Colombo mm/dd/yyyy Add Course</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Category</th> <th>Fees</th> <th>Mode</th> <th>Branch</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>Social Media Management</td> <td>Marketing</td> <td>55000.00</td> <td>Online</td> <td>Colombo</td> <td><button>Edit</button> <button>Delete</button></td> </tr> <tr> <td>Digital Marketing</td> <td>Marketing</td> <td>70000.00</td> <td>Online</td> <td>Matale</td> <td><button>Edit</button> <button>Delete</button></td> </tr> <tr> <td>Advanced Photoshop</td> <td>Design & Media</td> <td>60000.00</td> <td>Online</td> <td>Kandy</td> <td><button>Edit</button> <button>Delete</button></td> </tr> <tr> <td>Graphic Design Basics</td> <td>Design & Media</td> <td>55000.00</td> <td>Online</td> <td>Colombo</td> <td><button>Edit</button> <button>Delete</button></td> </tr> </tbody> </table>	Name	Category	Fees	Mode	Branch	Action	Social Media Management	Marketing	55000.00	Online	Colombo	<button>Edit</button> <button>Delete</button>	Digital Marketing	Marketing	70000.00	Online	Matale	<button>Edit</button> <button>Delete</button>	Advanced Photoshop	Design & Media	60000.00	Online	Kandy	<button>Edit</button> <button>Delete</button>	Graphic Design Basics	Design & Media	55000.00	Online	Colombo	<button>Edit</button> <button>Delete</button>
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Advanced Photoshop	Design & Media	60000.00	Online	Kandy	<button>Edit</button> <button>Delete</button>																												
Graphic Design Basics	Design & Media	55000.00	Online	Colombo	<button>Edit</button> <button>Delete</button>																												
Schedule Management	Admin creates schedules for courses.	schedules table stores course_id, day, time. Dropdowns used for course selection. Frontend displays schedule for students/instructors.	<p>Showing rows 0 - 0 (1 total, Query took 0.0004 seconds.)</p> <pre>SELECT * FROM `schedules`</pre> <p>Show all Number of rows: 25 Filter rows: Search this table</p> <p>+ Options <input checked="" type="checkbox"/> Edit <input checked="" type="checkbox"/> Copy <input checked="" type="checkbox"/> Delete schedule_id course_id day time</p> <p>Show all Number of rows: 25 Filter rows: Search this table</p> <p>Query results operations <input checked="" type="checkbox"/> Print <input checked="" type="checkbox"/> Copy to clipboard <input checked="" type="checkbox"/> Export <input checked="" type="checkbox"/> Display chart <input checked="" type="checkbox"/> Create view</p> <pre> 1 <?php 2 session_start(); 3 include "../db.php"; 4 if (\$_SESSION['role'] != 'admin') die("Access denied"); 5 6 /* ADD SCHEDULE */ 7 if (isset(\$_POST['add'])) { 8 \$course = \$_POST['course']; 9 \$day = \$_POST['day']; 10 \$time = \$_POST['time']; 11 12 \$conn->query("INSERT INTO schedules (course_id, day, time) 13 VALUES ('\$course', '\$day', '\$time')"); 14 } 15 16 /* DELETE SCHEDULE */ 17 if (isset(\$_GET['delete'])) { 18 \$id = \$_GET['delete']; 19 \$conn->query("DELETE FROM schedules WHERE schedule_id='\$id'"); 20 } 21 22 /* DATA */ 23 \$courses = \$conn->query("SELECT course_id, course_name FROM courses"); 24 25 \$schedules = \$conn->query(" 26 SELECT s.schedule_id, c.course_name, s.day, s.time 27 FROM schedules s 28 JOIN courses c ON s.course_id = c.course_id 29 "); 30 31 <!DOCTYPE html> 32 <html> 33 <head> 34 <link rel="stylesheet" href="../style.css"> 35 <title>Manage Schedules</title> 36 </head> 37 <body> 38 <header>Dashboard</header> 39 <div class="container"> 40 <h2>Manage Course Schedules</h2> 41 42 <form method="post"> 43 <select name="course_id" required> 44 <option value="">Select Course</option> 45 </select> 46 </form> 47 </body> 48 </html> 49 </pre> <p>Manage Course Schedules</p> <p>Select Course</p> <p>Monday</p> <p>09.00 AM - 12.00 PM</p> <p>Add Schedule</p> <table border="1"> <thead> <tr> <th>Course</th> <th>Day</th> <th>Time</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>Graphic Design Basics</td> <td>Monday</td> <td>09.00am- 12.30 pm</td> <td><button>Delete</button></td> </tr> </tbody> </table>	Course	Day	Time	Action	Graphic Design Basics	Monday	09.00am- 12.30 pm	<button>Delete</button>																						
Course	Day	Time	Action																														
Graphic Design Basics	Monday	09.00am- 12.30 pm	<button>Delete</button>																														

Functionality	Description	Technical Implementation	Screenshot
Course Materials Upload	Instructors upload PDFs, documents for students.	Files stored in /materials/course_id/. File names timestamped to prevent overwriting. Uploaded materials listed with delete options.	 <p>The screenshot shows two parts of a web application. The top part is a MySQL database query results page for the 'course_materials' table, showing one row with material_id 1, course_id 17, instructor_id 3, file_name 'CSE5012_PRES1.pdf', file_path '/materials/1/1767236397_CSE5012_PRES1.pdf', and uploaded_at '2026-01-01 00:13:17'. The bottom part is a 'Upload Course Materials' form with a file input field containing 'No file chosen', an 'Upload' button, and a table titled 'Uploaded Materials' showing one entry for 'Graphic Design Basics' with file name 'CSE5012_PRES1.pdf' and a 'Delete' link.</p>
Feedback System	Instructors provide feedback to students.	feedback table stores student_id, message, and timestamp. Instructors submit feedback via forms; students view in dashboard.	 <p>The screenshot shows two parts of a web application. The top part is a MySQL database query results page for the 'feedback' table, showing one row with feedback_id 1, student_id 15, course_id 17, message 'good not bad', and submitted_at '2025-12-31 19:18:31'. The bottom part is a 'Submit Feedback' form with fields for 'Select Course' (set to 'Graphic Design Basics'), 'All Feedback Given' table showing one row for 'kalpani' with feedback 'good not bad', and an 'Update' button. The status bar at the bottom indicates the date and time as '2025-12-31 19:18:31'.</p>

Functionality	Description	Technical Implementation	Screenshot
Event & Notice Management	Admin posts notices and events for students.	notices and events tables. Event calendar implemented in frontend using PHP loops and CSS cards.	 <p>The screenshot displays the 'Manage Notices' section with a table containing one row: 'hi' (Title), 'below' (Message), and '2025-12-24 21:09:38' (Date). It also shows the 'Manage Events' section with a table containing one row: 'New year' (Title), '2026-01-01' (Date), and a 'Delete' button. A blue header bar at the top contains links for 'Dashboard', 'Manage Notices', and 'Manage Events'.</p>
Profile Update & Security	Users can update personal information and password.	Update forms validate inputs. Passwords can be changed securely. Profile images stored in /images/profiles/.	 <p>The screenshot shows the 'My Profile' section with a user icon, the name 'Amana', and the email 'amna@gmail.com'. Below this is a form for updating the profile, including fields for 'New Password' and 'Upload Profile' (with a file input field showing 'No file chosen'). A blue header bar at the top contains links for 'Dashboard', 'My Profile', and 'Logout'.</p>

Functionality	Description	Technical Implementation	Screenshot
			
Error Handling & Validation	All forms have validation for empty fields, email formats, and duplicate entries.	Both server-side (PHP) and client-side (HTML5/JS) validations implemented. Error messages shown dynamically.	

Justification of Techniques

- Prepared Statements for Security:** Prevents SQL injection when handling user data (e.g., registration, login).
- Session Management:** Ensures secure role-based access and keeps users logged in without exposing sensitive info.
- File Upload with Timestamping:** Prevents overwriting files with same name, maintaining data integrity.
- Relational Database Design:** Separate tables for users, courses, enrollments, feedback, schedules, and materials ensures modularity and easier maintenance.
- Dynamic Data Rendering:** PHP fetches and displays data from MySQL tables, reducing manual updates and errors.
- Error Handling:** Immediate feedback for invalid data enhances user experience and prevents data inconsistencies.

Task 03 – Website Testing

Testing Overview

The SkillPro Institute web application was tested in a **localhost environment** using a browser-based setup to ensure all functionalities operate correctly before deployment. The main purpose of testing was to verify that the system is **stable, error-free, user-friendly**, and meets all functional requirements defined for Admin, Instructor, and Student roles.

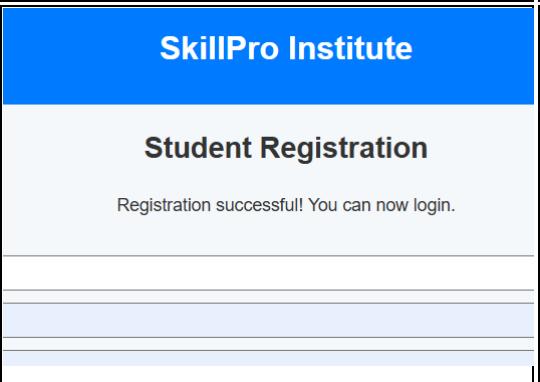
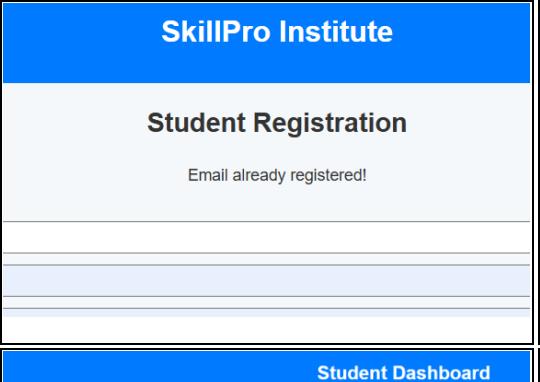
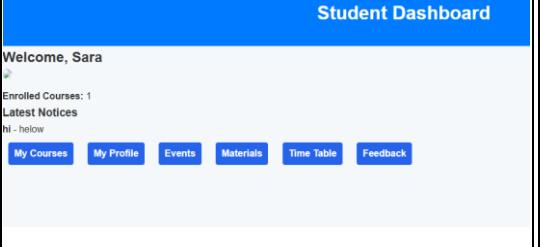
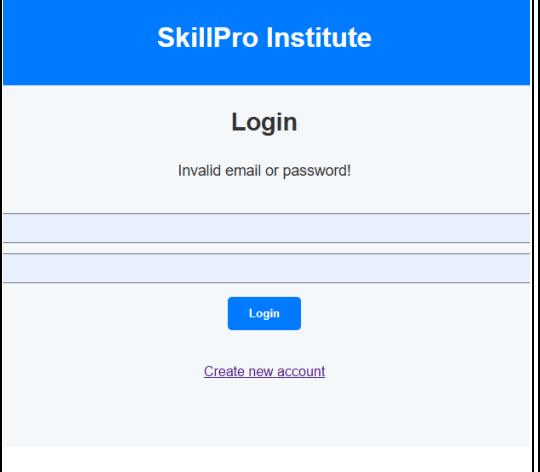
Multiple testing techniques were applied, including **functional testing, validation testing, usability testing, and acceptance testing**. Special attention was given to **online registration, course enrollment, search features, inquiry submission, and error handling**, as these are core features of the system.

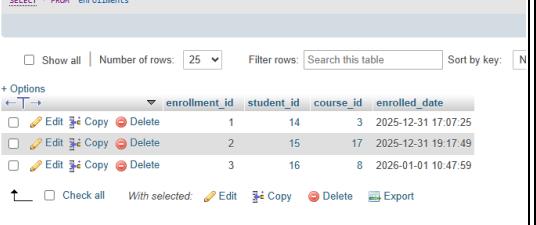
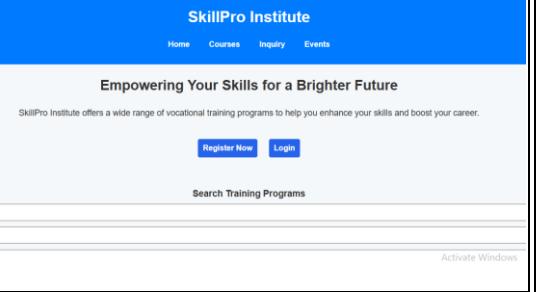
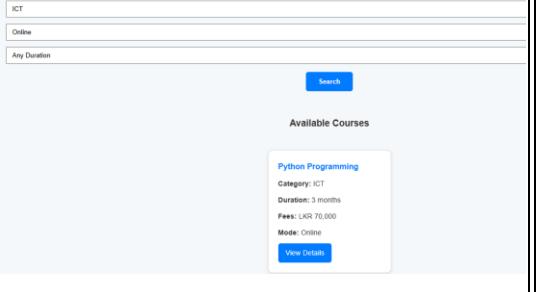
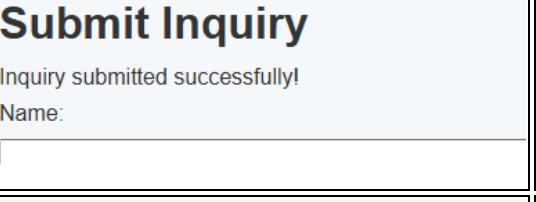
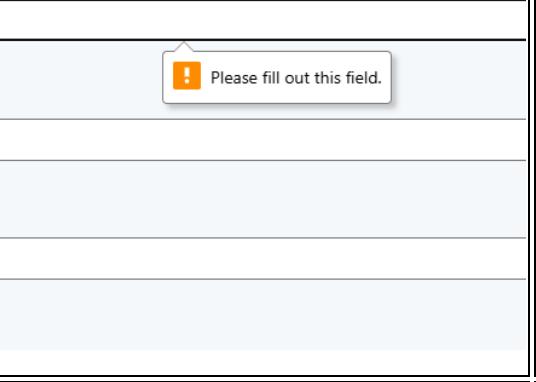
All tests were conducted using valid and invalid inputs to evaluate system behavior under real-world usage scenarios.

Test Plan Summary

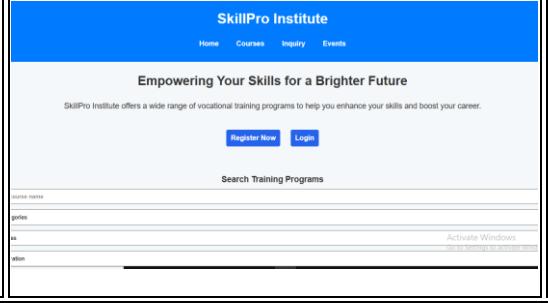
Test Area	Description
Environment	Localhost (XAMPP/WAMP), Chrome browser
Testing Type	Functional, Validation, Usability, Acceptance
User Roles	Admin, Instructor, Student
Focus Areas	Registration, Login, Enrollment, Search, Inquiries
Evidence	Screenshots taken for each successful test

Test Case Table

TC ID	User Role	Feature Tested	Test Action / Input	Expected Result	Screenshot Actual result	Status
TC 01	Student	Registration	Valid name, email, password	successfully	 <p>The screenshot shows the SkillPro Institute Student Registration page. It has a blue header with the institute's name. Below it is a form with fields for name, email, and password. A success message at the bottom reads: "Registration successful! You can now login." There are several empty registration entries below the message.</p>	Pass
TC 02	Student	Registration	Existing email	Error message shown	 <p>The screenshot shows the SkillPro Institute Student Registration page. It has a blue header with the institute's name. Below it is a form with fields for name, email, and password. An error message at the bottom reads: "Email already registered!" There are several empty registration entries below the message.</p>	Pass
TC 03	Student	Login	Valid email & password	Redirect to dashboard	 <p>The screenshot shows the SkillPro Institute Student Dashboard. It features a blue header with the user's name "Sara". Below the header is a summary section showing "Enrolled Courses: 1" and "Latest Notices". At the bottom is a navigation bar with links: My Courses, My Profile, Events, Materials, Time Table, and Feedback.</p>	Pass
TC 04	Student	Login	Invalid password	Login error message	 <p>The screenshot shows the SkillPro Institute Login page. It has a blue header with the institute's name. Below it is a form with fields for email and password. An error message at the bottom reads: "Invalid email or password!". A "Login" button is centered below the form, and a "Create new account" link is located at the bottom right.</p>	Pass
TC 05	Student	Course View	Browse courses	Courses displayed	 <p>The screenshot shows the SkillPro Institute Course View page. It has a blue header with the institute's name. Below it is a table titled "My Courses" with one row for "Welding Basics". The table includes columns for Name, Duration, Fees, and Mode.</p>	Pass

				Entered correctly		
TC 06	Student	Course Enrollment	Select course & mode	Enrollment saved in database		Pass
TC 07	Student	Enrollment Validation	Enroll without login	Redirect to login page		Pass
TC 08	Student	Search Courses	Filter by category/location	Filtered results shown		Pass
TC 09	Student	Inquiry Form	Submit valid inquiry	Inquiry stored successfully		Pass
TC 10	Student	Inquiry Validation	Submit empty form	Validation error shown		Pass
TC 11	Instructor	Login	Valid credentials	Instructor dashboard loads		Pass

TC 12	Instructor	View Schedule	Open timetable	Correct schedule displayed		Pass
TC 13	Instructor	Course Materials	Access materials	Relevant materials shown		Pass
TC 14	Admin	Login	Admin credentials	Admin panel loaded		Pass
TC 15	Admin	Add Course	Enter course details	Course added successfully		Pass
TC 16	Admin	Edit Course	Update course info	Changes saved correctly		Pass
TC 17	Admin	Delete Course	Remove course	Course removed from system		Pass
TC 18	Admin	Notices	Add notice/event	Notice visible to users		Pass
TC 19	System	Input Validation	Invalid email format	Error message displayed		Pass

TC 20	System	Logout	Click logout	Session ended correctly		Pass
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Feedback Evaluation and Acceptance Testing

During acceptance testing, sample users interacted with the system on localhost. Feedback indicated that the **registration and enrollment flow was simple**, course search was effective, and error messages were clear and helpful. Minor UI spacing improvements were suggested and applied.

Admin users confirmed that managing courses, notices, and schedules was efficient and intuitive. Instructors appreciated easy access to schedules and materials.

Lessons Learned

Testing highlighted the importance of **input validation**, **role-based access control**, and **clear user feedback messages**. Early localhost testing helped identify issues before deployment, reducing potential system failures. User feedback also reinforced the need for clean UI layouts and structured information presentation.

Conclusion

The development of the SkillPro Institute web application successfully addresses the needs of a modern Technical and Vocational Education and Training (TVET) institution. The system provides an integrated platform that allows administrators, instructors, and students to interact efficiently through role-based access. Core functionalities such as course management, online student registration, instructor assignment, scheduling, event management, and inquiry handling were implemented using PHP and MySQL, ensuring reliable backend performance and structured data storage.

The user interface was designed with simplicity and usability in mind, making the system accessible across different devices. Secure login mechanisms and validation checks helped maintain data integrity and system security. Extensive testing in a localhost environment confirmed that the application performs as expected under normal usage, with proper handling of invalid inputs and system errors.

Overall, this project demonstrates effective application of web development concepts, including database-driven design, session management, and modular coding practices. The SkillPro web system offers a scalable foundation that can be further enhanced with features such as online payments, certificate downloads, and advanced reporting tools. The experience gained through this development process significantly improved practical knowledge in full-stack web development and system testing.