

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Web Technologies (CIE 356T)

ASSIGNMENT -4

Total Marks: 20

(Last Date of Submission: 21st April 2025)

CASE STUDY: Training & Placement Management System (TPMS) using PHP & MySQL

Scenario: Develop a web-based Training & Placement Management System (TPMS) that allows students to register, track job opportunities, and apply for placements while enabling the Training & Placement Cell (TPC) to manage company listings, student applications, and placement records.

Core Features & Requirements :

1. Database Setup & Structure

- **Database Name:** tpms_db
- **Tables:**
 1. users – Stores login credentials & roles (Admin, Student, Recruiter).
 2. students – Stores student details (ID, name, email, course, CGPA, resume, etc.).
 3. companies – Stores recruiters' details (Company name, HR contact, job openings).
 4. jobs – Job postings (Job title, description, eligibility, salary package, etc.).
 5. applications – Stores job applications (Student ID, Job ID, Status - Applied/Selected/Rejected).
 6. placement_records – Stores placement history for analytics.

2. User Roles & Authentication

- **Admin (TPC Coordinator):** Manages companies, job postings, and student applications.
- **Students:** Register, upload resumes, view job postings, and apply for jobs.
- **Recruiters:** Post jobs, view student applications, and shortlist candidates.
- ♦ **Tasks:**
 1. Implement **secure login** using **sessions** and password hashing (bcrypt).
 2. Redirect users based on their roles (Admin, Student, Recruiter).

3. CRUD Operations with PHP & MySQL

- **Admin Panel:** Add, update, and delete **companies & job postings**. Approve or reject student job applications.
- **Student Portal:** View and apply for job listings. Upload & update resume.
- **Recruiter Dashboard:** Post jobs, shortlist students, and update application status.

4. Managing State in Web Applications

- **Session Management:** Maintain login sessions for users. Logout functionality with session destruction.

- **Query Strings & URL Parameters:** Pass job details using job_id in URLs (job_details.php?id=101).
- **Cookies for Personalization:** Save user preferences (e.g., dashboard theme, last visited job listing).
- **Serialization:** Store structured placement data (company-wise student selection) efficiently.

5. Security Enhancements

- **SQL Injection Prevention:** Use **prepared statements** for queries.
- **Cross-Site Scripting (XSS) Prevention:** Escape user inputs.
- **CSRF Protection:** Use **tokens** for form submissions.
- **File Upload Security:** Validate & restrict resume file uploads.

6. Real-Life Functionality Enhancements

- **Resume Upload & Download:** Students upload PDFs; recruiters download them.
- **Automated Email Notifications:** Send emails to students when selected.
- **Placement Report Generation:** Export data in Excel/PDF.

Deliverables:

- PHP Source Code (.php, .css, .js, .sql).
- Database Dump (tpms_db.sql).
- Project Report with Screenshots.