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**Department of Electrical & Computer Engineering**

**CSE311:** Database Management System

**Semester:** Summer’24

**CSE:311L**

**Section:**10

**Project Proposal**

**Title:**   SkillPro - CS Knowledge Hub

**Submitted To:**

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**Group:** 08

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Group No.: 08

**Project Name: SkillPro - CS Knowledge Hub**

**Project Objective:**

SkillPro is an innovative online platform designed to empower both CS and non-CS students with comprehensive computer science skills. With over 10 experienced instructors and 50+ world-class courses, the platform offers a rich, structured learning environment. Our mission is to bridge the gap between aspiring learners and in-demand CS expertise, enabling users to master critical areas such as programming, data structures, algorithms, web development, and machine learning.

In an era marked by rapid technological advancement, SkillPro aims to stay at the forefront of the global IT revolution, while positioning itself as a leading exporter of skilled professionals from Bangladesh to the international market. By equipping users with job-ready skills and fostering global competitiveness, the platform seeks to contribute to a tech-driven future.

**Functionalities:**

1. **User Authentication and Profiles:**

* **Sign-up/Login**: If the user doesn't have an account, they should create one. If they already have an account, they can log in directly.
* **Profile Management:** Users (both instructors and students) can edit their profiles, set up avatars, update information, etc.
* **Roles Management**: Differentiate between instructors and learners. Admins should have special privileges.
* **Password Recovery:** Implement a password reset system via email.

2. **Course Creation & Management (Instructor-side)**

* **Course Creation Interface:** Instructors should be able to create courses by providing course titles, descriptions, and categories.
* **Upload Course Content:** Allow instructors to upload video lessons, documents (PDFs, slides), quizzes, and other resources.
* **Course Editing:** Instructors should be able to edit or delete courses, update content, and manage pricing (free/paid).
* Analytics for Instructors: Provide basic analytics such as student enrollment number, course progress, and reviews.

3. **Course Browsing & Search (User-side)**

* **Search & Filter:** Users should be able to search courses by category, price, difficulty level, or keywords.
* **Course Categories:** Organize courses into categories like Programming, Business, Design, etc.
* **Course Details Page:** Each course should have a page with a detailed description, syllabus, instructor bio, reviews, and enrollment button.
* **Course Enrollment:** Users can enroll in free or paid courses.

**4. Course Learning System (User-side)**

* **Video Player Integration:** Display video lectures with options to play, pause, and track progress.
* **Progress Tracking:** Save and display course progress so users can resume where they left off.
* **Quizzes & Assignments:** Add quizzes and assignments to courses to evaluate learners’ progress.
* **Certificate Generation:** After completing a course, issue a downloadable certificate of completion.

**5. Payment Gateway**

* **Paid Courses:** Integrate a payment system for users to purchase premium courses. Use a payment gateway like bkash or nagad to handle transactions.
* **Order History:** Provide a section where users can view past payments and enrolled courses.

**6. Course Reviews & Ratings**

* **Review System:** Allow users to leave reviews and rate courses.
* **Average Ratings Display:** Show the average rating for each course on the course listing and details page.

**7. Admin Panel**

* **Course Approval:** Admins should be able to review and approve courses before they go live.
* **User Management:** Admins can manage users, approve instructors, and view course activity.
* **Report Handling:** Handle any reports or issues related to courses or users.

**8. Community Features**

* **Q&A Section:** Add a section where students can ask questions and interact with instructors or peers within each course.
* **Discussion Forums:** Provide a forum for general discussions related to learning, where students can share knowledge.

**Expected Outcomes:**

1. Accessible Learning: **CS and non-CS students gain access to structured courses on essential skills like programming, web development, and machine learning. It helps students in Bangladesh acquire globally competitive skills.**
2. User-Friendly Platform: **Easy user sign-up, profile management, and course browsing with search and filter options. Students can quickly find and enroll in courses by category, price, and difficulty.**
3. Course Management for Instructors: **Instructors can create, edit, and manage courses with options to upload videos, quizzes, and documents. Course analytics help track enrollment and student progress.**
4. Interactive Learning: **Integrated video player with progress tracking, quizzes, and assignments. Students earn certificates after course completion.**
5. Payment Integration: **Simple payment system for purchasing premium courses using gateways like bkash or nagad. Users can view their purchase history and enrolled courses.**
6. Community Engagement: **Q&A sections and forums enable student-instructor interaction and peer learning.**
7. Feedback & Quality Control: **Students can rate and review courses, helping maintain high-quality content. Admins manage users, approve courses, and resolve issues.**

**Tools Used:**

1. HTML: Structure and content of the website.
2. CSS: Styling for visual presentation.
3. Tailwind CSS: Utility-first CSS framework for responsive design.
4. JavaScript: Client-side scripting for interactive features and dynamic content.
5. PHP: Server-side scripting for backend functionality.
6. MySQL: Database management for storing user and course data.

**Overall Impact:**

SkillPro will bridge the skill gap, empowering learners and producing job-ready professionals for both local and global markets.