

Functional Document for SkillEdge-LMS

1. Objective:

SkillEdge is an online learning management system that facilitates learning through courses offered by instructors and coaching hubs. It supports four types of users: Admins, Students and Coaching Hubs. Admins create courses, manage subscriptions, upload videos & manage content; Students enroll in courses and track progress; and Coaching Hubs list their education subscriptions. The system also provides enhanced support features like ticketing, chat, mail, task management, and AI-powered functionalities.

2. Roles and Responsibilities:

Admin:

- Create and manage courses.
- Approve coaching hubs and their subscriptions.
- Manage student, instructor, and coaching hub accounts.
- Monitor and manage system-wide activities.
- Upload course videos and learning materials.
- Manage student engagement, queries, and support tickets.
- Create quizzes and assignments for students.
- Provide task support to students and instructors.
- Respond to chat and email support queries.
- Use AI tools to analyze course popularity, student engagement, and content optimization.

Student:

- Browse and enroll in courses.
- Watch course videos and complete quizzes/assignments.
- Track progress and earn certificates.
- Submit support tickets, chat with support, and request assistance via mail.
- Utilize AI-based personalized recommendations for courses.
- Submit tasks and view progress.

Coaching Hub:

- Register on the platform.
 - List and manage education subscription plans.
 - Monitor enrolled students and their progress.
 - Submit support tickets and manage student queries.
 - Use AI-powered tools for student performance insights and course optimization.
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3. Functionalities by Role:

Admin Functions:

1. **Course Creation and Management:**
 - Admin can create courses by adding details like title, description, duration, and pricing.
 - Add, edit, or delete courses and set prerequisites.
2. **Subscription Management:**
 - Manage and create subscription plans (monthly, yearly).
 - Approve and monitor subscription plans of coaching hubs.
3. **User Management:**
 - Approve new instructor accounts and suspend or delete user accounts.
 - View performance metrics for instructors and students.
4. **Support Management:**
 - **Ticket Support:** Manage support tickets raised by students, instructors, and coaching hubs.
 - **Chat Support:** Provide real-time support through chat integration.
 - **Mail Support:** Respond to user queries via mail.
5. **Task Management:**
 - Assign tasks to students or instructors.
 - Track the progress of assigned tasks and manage deadlines.
6. **AI-Powered Features:**
 - AI-based recommendations for course improvements, student performance analysis, and content insights.
 - Predict trends based on student engagement and course completion rates.
7. **Reporting:**
 - View system analytics, including student progress, instructor activity, course popularity, and subscription details.
 - Generate detailed reports on platform usage and performance.

Student Functions:

1. **Course Enrollment:**
 - Browse and search for courses.
 - Enroll in courses and access content after subscription payment.
2. **Progress Tracking:**
 - View individual course progress and earn certificates upon completion.
3. **Assessment Participation:**
 - Take quizzes and submit assignments.
 - Receive grades and feedback from instructors.
4. **Support Features:**
 - **Ticket Support:** Submit and track support tickets for issues.
 - **Chat Support:** Real-time communication with support teams.
 - **Mail Support:** Send emails for inquiries and requests.
5. **Task Management:**
 - Submit tasks assigned by instructors or admin.
 - Track progress and deadlines for assigned tasks.
6. **AI-Powered Features:**
 - Receive AI-based course recommendations.

- AI-generated insights on course progress and personalized learning suggestions.

Coaching Hub Functions:

1. **Subscription Management:**
 - Register and list subscription plans.
 - Manage student enrollment and offer online and offline learning subscriptions.
2. **Support Features:**
 - **Ticket Support:** Submit tickets for platform issues or student queries.
 - **Chat Support:** Communicate with platform admins and students in real time.
 - **Mail Support:** Manage queries via email support.
3. **AI-Powered Features:**
 - Use AI tools to generate reports on student performance and optimize course offerings.
4. **Task Management:**
 - Assign and track tasks related to their subscription offerings.
 - Monitor student task completion and provide feedback.

4. Inputs and Outputs:

1. **Course Creation (Admin):**
 - **Input:** Course title, description, pricing, duration, instructor assignment.
 - **Output:** New course added to the platform and visible to students for enrollment.
2. **Support Ticket Creation (Student/Instructor/Coaching Hub):**
 - **Input:** Ticket description and issue details.
 - **Output:** Support ticket created and assigned to the appropriate admin for resolution.
3. **AI Recommendations:**
 - **Input:** Course data, student progress, and platform analytics.
 - **Output:** AI-generated insights for course improvement and student recommendations.
4. **Task Submission (Student):**
 - **Input:** Task file submission.
 - **Output:** Task progress and feedback from the instructor.

5. Rules:

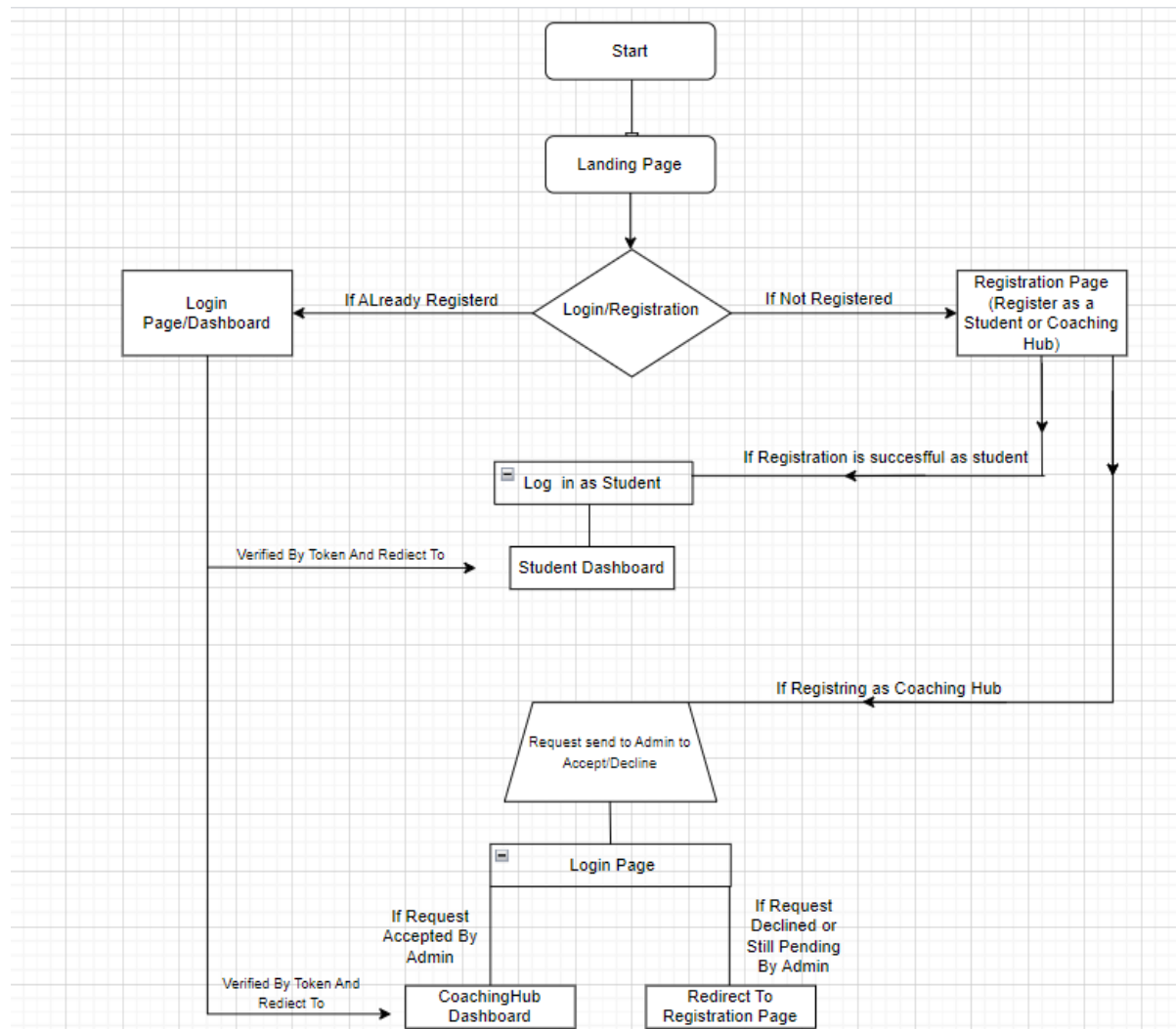
- A student can only enroll in courses if their subscription is active.
 - Instructors can only upload content after admin approval.
 - Admins must approve coaching hubs before they can list subscriptions.
 - AI recommendations are personalized based on user activity and engagement.
 - Coaching hubs can only see data related to their own subscription plans and students.
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6. Assumptions:

- Students will use SkillEdge via both desktop and mobile devices.
 - Admins have necessary resources for video uploads and AI feature integration.
 - Coaching hubs are responsible for managing their own subscriptions and student progress.
 - AI features will require ongoing data collection to provide accurate recommendations.
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Technical Document for SkillEdge-LMS

Flow Chart:-



Field Decision:-

Student Registration Form Field Decisions

Field Name	Data Type	Rule
1. Name	String	NA
2. Contact No.	Number	Min 10 digit
3. Email Id	String	Valid Email Format
4. Password	String	Min 8 characters& Must include special characters

Coaching Hub Registration Form Fields

1. **Coaching Hub Details:**
 - **Coaching Hub Name:** *(Required)*
 - Text input for the official name of the coaching hub.
 - **Type of Institution:** *(Required)*
 - Dropdown with options like "Online," "Offline," or "Hybrid."
 - **Registration Number:** *(Optional)*
 - Text input for any official registration number (for verification purposes).
2. **Contact Information:**
 - **Primary Contact Person Name:** *(Required)*
 - Text input for the full name of the person responsible for handling the coaching hub's registration.
 - **Email Address:** *(Required)*
 - Text input for a valid email address (used for login and communication).
 - **Phone Number:** *(Required)*
 - Numeric input for a valid phone number.
 - **Alternate Contact Number:** *(Optional)*
 - Numeric input for a backup phone number.
3. **Address Information:**
 - **Coaching Hub Address:** *(Required)*
 - Text input for the street address.
 - **City:** *(Required)*
 - Text input for the city.
 - **State/Province:** *(Required)*
 - Text input for the state or province.
 - **Postal/ZIP Code:** *(Required)*
 - Numeric input for postal code.
 - **Country:** *(Required)*
 - Dropdown for country selection.
4. **Course Offerings:**
 - **Courses Offered:** *(Required)*

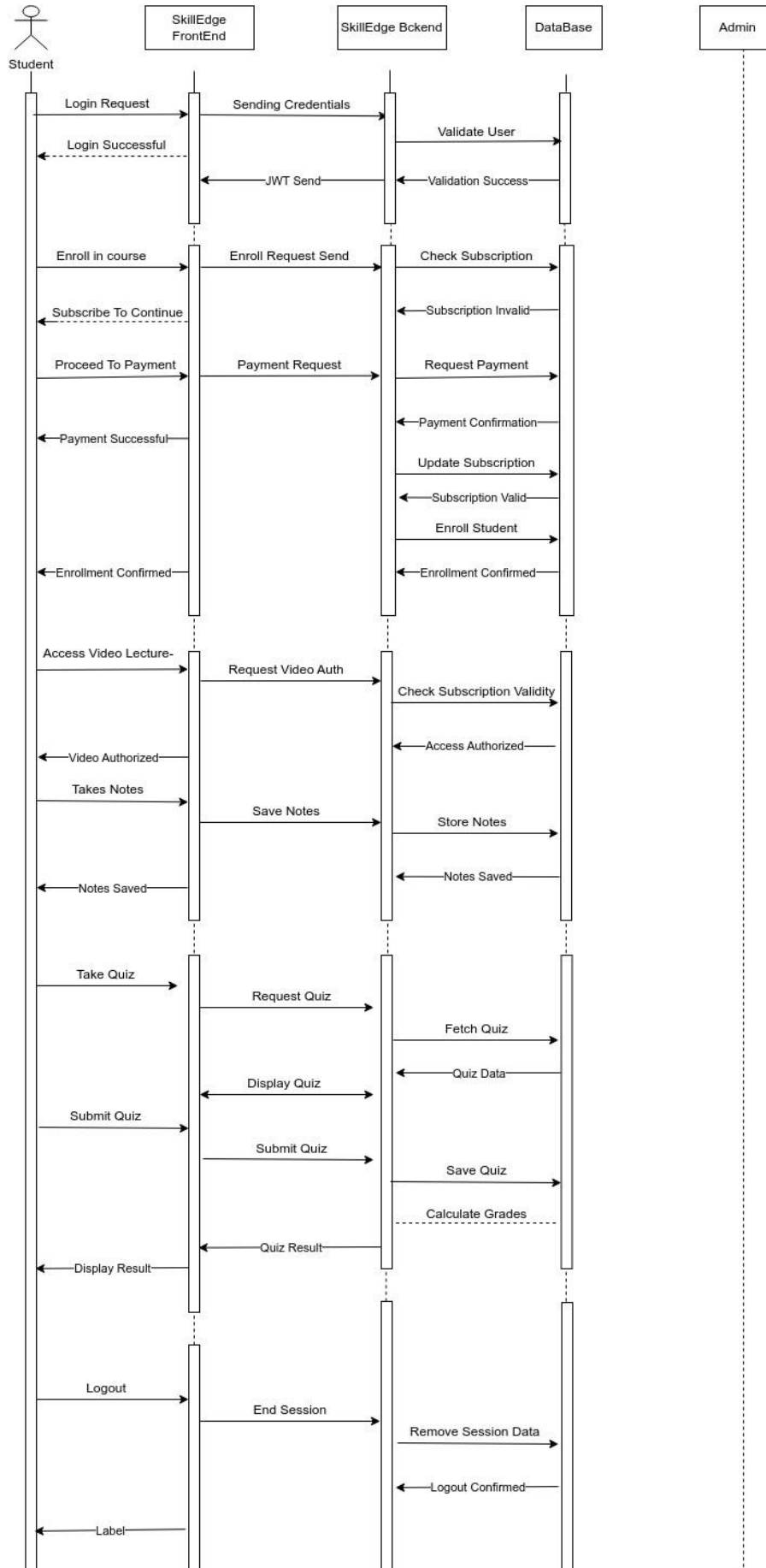
- Text area where the coaching hub lists the courses they will offer to students.
 - **Mode of Teaching:** *(Required)*
 - Dropdown with options such as "Online," "Offline," or "Blended."
 - 5. **Documents for Verification:**
 - **Upload Coaching Hub Logo:** *(Optional)*
 - File upload for the coaching hub's logo.
 - **Upload Proof of Accreditation/Registration (PDF):** *(Required)*
 - File upload for documents that verify the coaching hub's legitimacy (e.g., registration certificate).
 - 6. **Payment Information:**
 - **Bank Account Details:** *(Optional)*
 - Text input for the bank account information for receiving payments (could be asked later during setup).
 - **Tax Identification Number (TIN):** *(Optional)*
 - Text input for tax-related information, depending on regional requirements.
 - 7. **Terms and Conditions:**
 - **Agree to Terms & Conditions:** *(Required)*
 - Checkbox for agreeing to the platform's terms and conditions.
 - **Privacy Policy Consent:** *(Required)*
 - Checkbox for agreeing to the privacy policy.
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Field Validation:

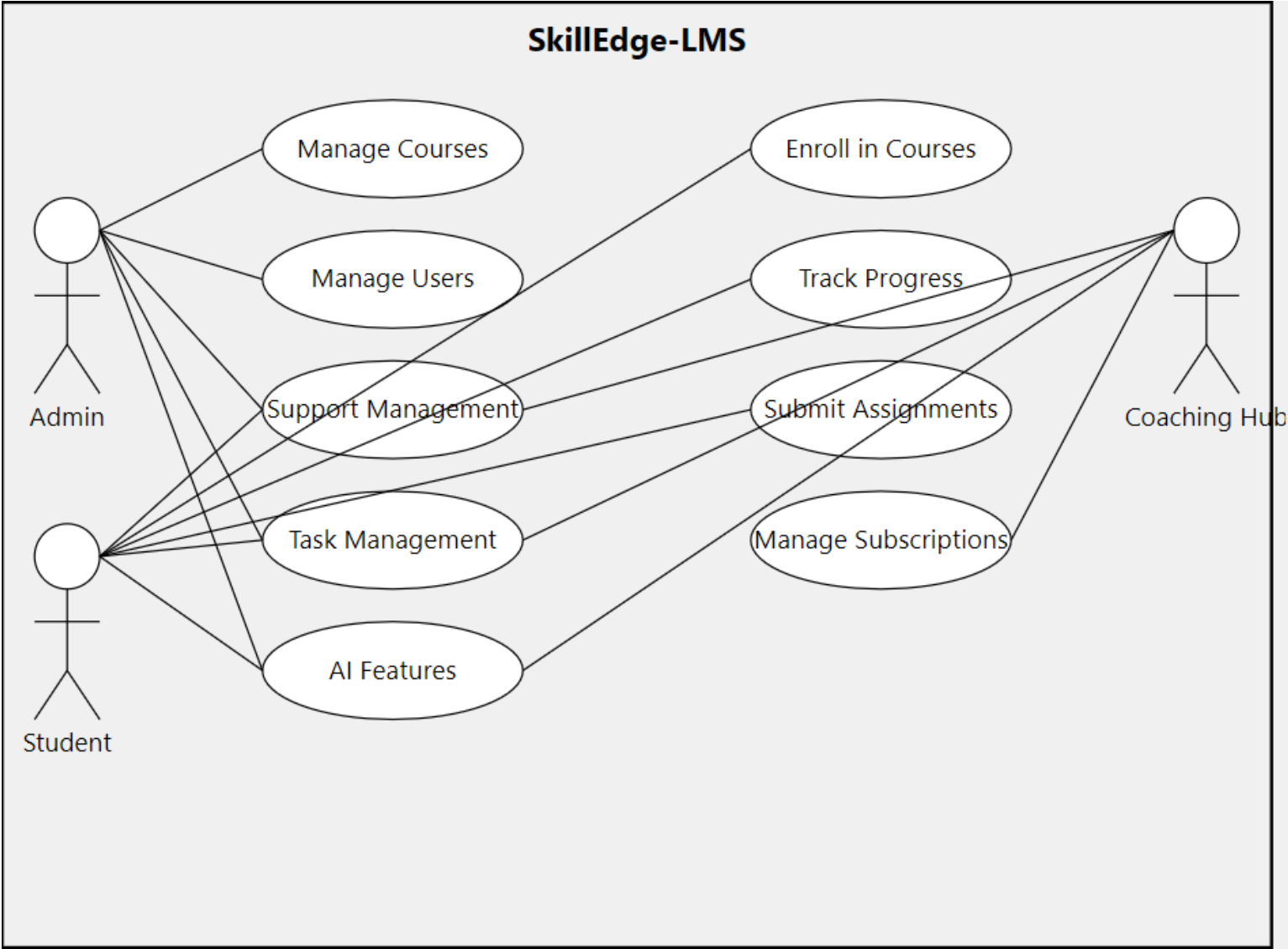
- **Required Fields:** All required fields must be completed for the form to be submitted.
 - **Email Validation:** Email addresses should follow a valid format (e.g., example@domain.com).
 - **Phone Number Validation:** Only numeric values are allowed, and country code should be auto-filled or selectable if necessary.
 - **Address Validation:** Postal code must match valid formats for the chosen country.
 - **Document Uploads:** File formats should be restricted to .pdf for accreditation documents and .jpg/.png for logos, with size limits (e.g., max 5 MB).
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Sequence Diagram:-

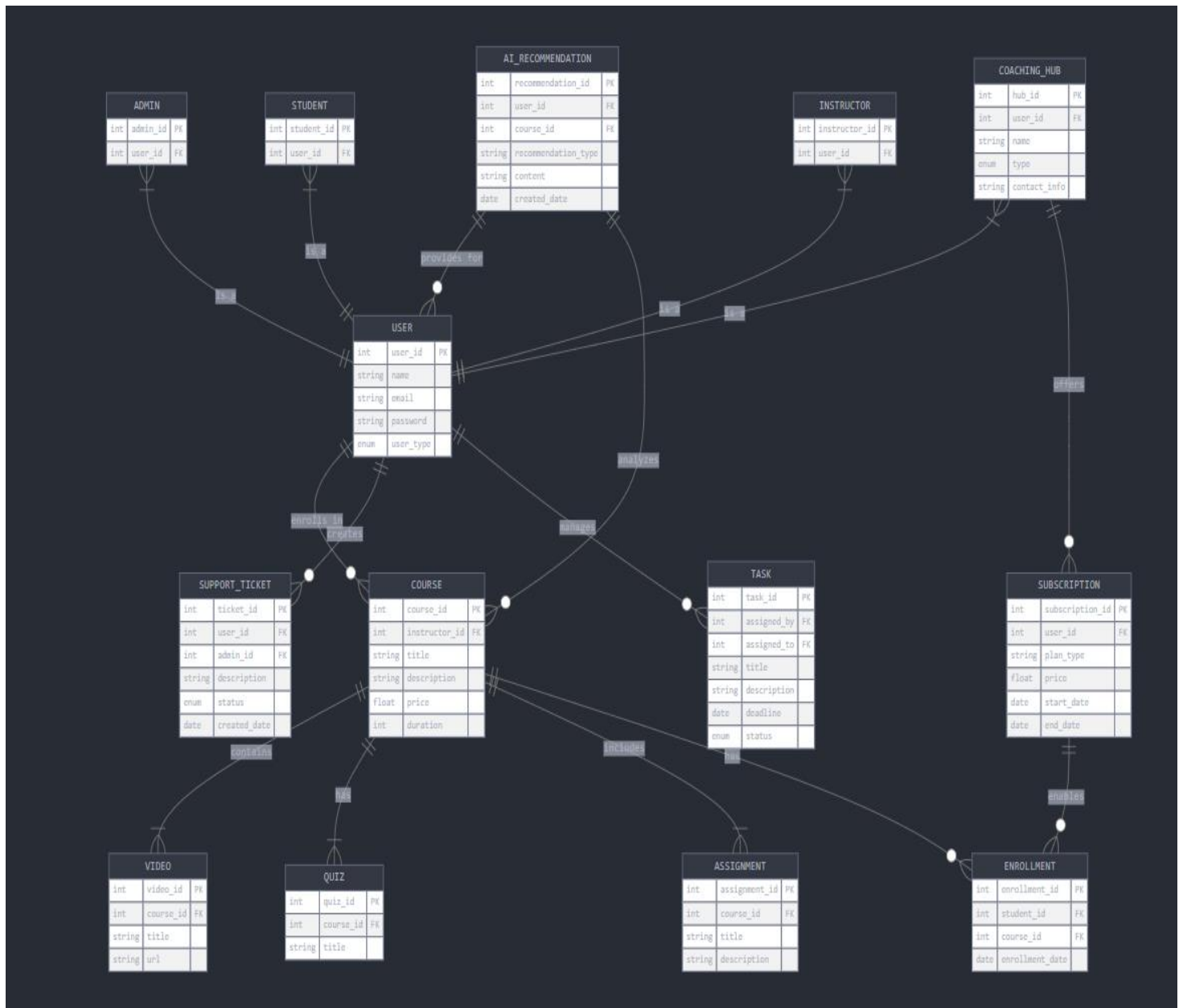
Students Sequence Diagram-



UseCase Diagram:-

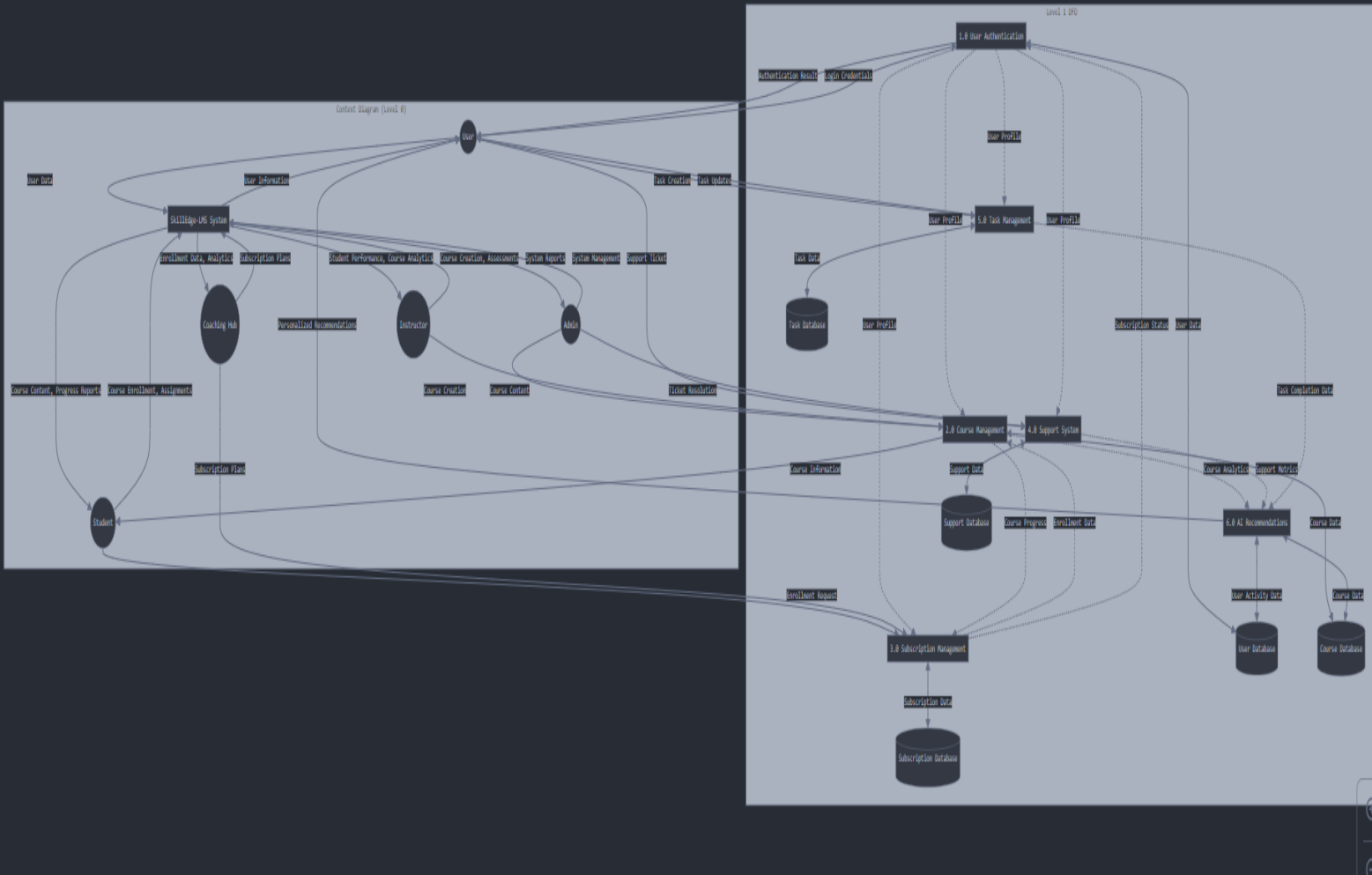


DFD Diagram:-



Link:- <https://claude.site/artifacts/Od47c68d-8b30-483b-af1d-1cb6d69c8f2d>

ER Diagram:-



Link:- <https://claude.site/artifacts/8dc827f6-93d9-4472-9653-c1bbca2b9b04>