ExamHub Project Idea

# Project Objective:

The objective of ExamHub is to create an interactive web-based platform for students of Grades 6 to 11. It will allow students to choose their grade, medium of instruction, subjects, and then dive into different modules and stages within those subjects. Successful completion of each stage will unlock the next, and students will receive a certificate upon finishing all stages of a module.

# Key Features & Descriptions

## 1. Logo and Homepage

• Logo: The application will start by showing a clean logo at the top of the page with the name 'ExamHub.' This logo will be accompanied by a brief welcome message or tagline such as 'Empowering students through interactive learning.'  
• Homepage Navigation: The homepage will feature clickable options for the grades: Grade 6, Grade 7, Grade 8, Grade 9, Grade 10, Grade 11. Each of these labels will be interactive and will guide the user to the next selection, such as medium and subjects.  
• User Interface: Clean, intuitive design with easy-to-navigate sections. Interactive buttons will guide users through the process.

## 2. Grade Selection

• After the user clicks on a grade (e.g., Grade 7), the system will display a list of available mediums: English or Sinhala. The medium selection will influence the content available in the subject selection and the quiz questions later.  
• Dynamic Medium Selection: Based on the selected grade, users can choose to study in their preferred language (English or Sinhala), which will affect the question content and difficulty levels for modules and stages.

## 3. Medium Selection

• Once a user selects a medium (e.g., Sinhala), they will proceed to subject selection.  
• The medium option will dynamically load available subjects for that medium. These subjects will include:  
 - Mathematics  
 - Science  
 - History  
 - Geography  
 - English Language  
 - Literature

## 4. Subject Selection

• Upon selecting a subject, such as History, the user will be directed to the modules for that subject.  
• Each subject will contain various modules, which are units within the subject matter. For example, the History subject will contain 5 clickable modules, each representing a different historical period or theme.

## 5. Modules

• Each subject (like History) will have a set number of modules. For instance, History will have 5 modules:  
 1. Module 1: Ancient Civilizations  
 2. Module 2: Medieval History  
 3. Module 3: Colonial History  
 4. Module 4: Modern History  
 5. Module 5: Post-Independence History  
• Each module will be clickable, and upon selecting a module, users will be directed to the stages for that particular module.

## 6. Stages

• Each module will be divided into 3 stages. The stages represent increasing levels of difficulty or depth in the module content.  
 - Stage 1: Basic introduction and quizzes related to the module.  
 - Stage 2: Intermediate-level questions and tasks.  
 - Stage 3: Advanced level with challenging quizzes or interactive tasks.  
• Unlocking Mechanism: To proceed to the next stage, users must complete the previous stage successfully. For example:  
 - If the user wins Stage 1, they will be able to access Stage 2.  
 - If they complete Stage 2, they can proceed to Stage 3.

## 7. Module Completion Certificate

• Upon successfully completing all stages of a module (i.e., Stage 1, Stage 2, and Stage 3), the user will receive a module completion certificate.  
• The certificate will be a digital certificate, accessible from the user’s profile or dashboard. The certificate will display the user’s name, the completed module, and a completion date.

## 8. User Progression

• Throughout the application, user progression will be tracked.  
• The user can always go back to previous stages or modules to review or retake them if needed.  
• The progress bar will show how much of the module or stage has been completed.

# User Flow Overview

1. Homepage: Displays the logo 'ExamHub' and clickable grade options.  
2. Grade Selection: User selects their grade (e.g., Grade 7).  
3. Medium Selection: User selects their medium (English or Sinhala).  
4. Subject Selection: Based on the grade and medium, subjects like Maths, Science, etc., are shown. User selects a subject (e.g., History).  
5. Module Selection: The user selects a module from the available list of modules in the subject.  
6. Stage Progression: The user completes Stage 1 → Stage 2 → Stage 3. Upon completion of Stage 3, the user receives a Module Completion Certificate.  
7. Certification: After finishing the final stage, the certificate is generated and available for download or viewing.

# Technology Stack

• Frontend: HTML, CSS, JavaScript  
 - HTML for structuring the web pages.  
 - CSS for styling and making the UI responsive.  
 - JavaScript for handling logic, progression, and interactivity.  
• UI/UX: Simple, easy-to-use navigation with a clean design.  
• Interactivity: Use of JavaScript functions to handle the flow (stage unlocking, question progression, certificate generation).

# Challenges to Implement

1. State Management: Tracking user progress across stages and modules without a database.  
2. User Authentication (Optional): While not required for this project, adding user authentication (using cookies or local storage) can allow users to save their progress across sessions.  
3. Dynamic Content Rendering: Content for different grades, mediums, and subjects will need to be dynamically rendered using JavaScript.  
4. Certificate Generation: Creating a downloadable certificate after completion of the module.

# Future Enhancements

• Leaderboard: Add a scoring system and a leaderboard to encourage competition among users.  
• Admin Panel: For teachers or administrators to manage grades, subjects, and modules.  
• Additional Subjects/Modules: Expand the content to include more subjects or advanced modules for higher grades.  
• Mobile Optimization: Ensure the app works seamlessly on mobile devices for better accessibility.