Tribhuvan University

Faculties of Humanities and Social Sciences

"E- Learning System (Hamro Siksha)"

A PROJECT PROPOSAL

Submitted to

Department of Computer Application

Ratna Rajyalaxmi College

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In partial fulfillment of the requirements for the Bachelors in Computer Application

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1. INTRODUCTION

Hamro Siksha is an online learning platform of the new generation that seeks to change the face of online learning, making high-quality education accessible to all. For students, professionals, and lifelong learners, the platform offers a comprehensive range of courses in multiple fields to design a captivating and fruitful learning experience. With a user-friendly interface, rich content, and teaching by subject matter experts, Hamro Siksha helps learners enhance their skills, acquire new knowledge, and achieve educational or professional objectives at their own time and pace—whenever and wherever possible.

What sets Hamro Siksha apart is the way technology is blended with education to provide a personalized and interactive learning space. Covering a broad spectrum of subjects from science, technology, business, and arts, the platform is crafted to provide high-quality, well-organized, and engaging course material to students of all skill levels. Interactive elements such as quizzes, assignments, and projects with real-life applications aid in enhancing understanding and application, rendering learning efficient and enjoyable.

Beyond offering learning material, Hamro Siksha creates an interactive learning platform that is supportive to learners at all stages. With its ability to track, certify, and provide a learning community, motivation and long-term progress are assured. As a supplementary learner, as a professional seeking skills, or as a passionate believer in lifelong learning, Hamro Siksha has at its disposal what one requires for success in this fast-evolving age of digital times.

2. PROBLEM STATEMENT

In spite of growing use of e-learning, there are various issues with existing e-learning sites that users face. Learning is outdated since students can only watch and take notes, thereby reducing participation and relevance. Delays in certification also frustrate learners even after successfully completing courses.

The second major issue is the payment process, which is tiresome and frustrating. After making the payment, students are not immediately allowed access to live classes, creating unnecessary delays in learning. Such inefficiencies negatively impact the entire learning process, making it difficult for students to get the most out of online education.

Hamro Siksha addresses such issues by offering a seamless, interactive, and efficient learning platform that enhances user engagement, streamlines certification, and facilitates course access for a better learning experience.

3.OBJECTIVES

- Enhance Learning Engagement
- Offer Timely Certification
- Simplify Payment and Access to Courses
- Personalized Learning Paths
- Increase Accessibility and Flexibility
- Create a Supportive Learning Community
- Keep Current Course Content

4.METHODOLOGY

4.1. Requirement Identification

Hamro Siksha online learning platform must support a secure user registration mechanism, interactive course management, and easy payment integration for seamless enrollment. It must support live and recorded sessions, automated certification, progress tracking, and multilingual support. The key functionalities are quizzes, discussion forums, and notifications for improved engagement. The system must be scalable, secure, mobile-friendly, and high-performance-optimized to offer a reliable and flexible learning environment to all users.

4.1.1. Study of Existing System

Current e-learning platforms have numerous problems that impact the overall learning experience. Most platforms follow passive learning where students simply watch videos and take notes, reducing engagement and practical application. Certification also takes forever even after course completion, which frustrates the learners. Payment gateways are also cumbersome, and students do not get immediate access to live classes after enrollment.

Existing platforms also fail to offer personalized learning trajectories, making it difficult for learners to look for courses aligned to their competency and professional goals. Limited interactivity, slow revision of content, and absence of community support also reduce the effectiveness of online learning. All these shortcomings create opportunities for Hamro Siksha to offer a more interactive, convenient, and seamless learning experience by addressing these issues.

Problems of Existing System

- Limited Interaction – Most of the platforms implement passive learning, wherein students simply view videos and take notes without much interaction and practical application.
- Delays in Certification – Even upon successful completion of a course, the students need to wait for extremely long times to get their certificates.
- Difficult Payment Process – Payment for the courses is typically inconvenient, and students do not gain instant access to live classes when they sign up.
- No Personalized Learning – The existing systems don't offer individualized learning routes based on the skill level, interest, or career goals of a student.

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- Less Interaction & Support – Most platforms lack components like discussion forums, Q&A sessions, and live instructor support, making learning less interactive.
- Inefficient Content Updates – Course content is not updated regularly, which leads to outdated content that is not based on industry trends today.
- Accessibility Issues – Some sites are not completely mobile-friendly, limiting access for those students who like to learn on other devices.

4.1.2. Requirement Collection

To develop a successful e-learning platform, it's essential to gather a comprehensive list of requirements based on user needs, technical specifications, and system constraints. The following requirements have been collected for **Hamro Siksha**:

- **User Registration & Authentication:**
  - Secure sign-up and login functionality for students, teacher, and administrators.
  - Role-based access control to ensure appropriate access for each user type (students, teacher, admins).
- **Course Management:**
  - Admin should be able to create, edit, and manage courses, including videos, quizzes, assignments, and downloadable materials.
  - Support for uploading multimedia content (videos, audio, presentations) and course materials.
- **Interactive Learning Tools:**
  - Quizzes, coding challenges, assignments, and live discussions to enhance student engagement and learning.
- **Payment System:**
  - Integration with payment gateways (e.g., credit/debit cards, mobile payments) for smooth course enrollment.
  - Option to provide subscription-based or one-time payment models.
- **Certification:**
  - Automated certificate generation upon course completion.
  - Certificates should include course details, student name, and date of completion.
- **Live Sessions & Recorded Content:**
  - Support for live classes, webinars, and one-on-one sessions.

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- o Easy access to recorded content and lectures.
- **Multilingual Support:**
  - o Platform should support multiple languages for a diverse user base.
- **Community Engagement:**
  - o Discussion forums, peer-to-peer collaboration, and instructor interaction.
  - o Allow learners to share projects, ideas, and feedback.

4.2. Feasibility Study

A feasibility study for developing an e-learning platform like EduSpark involves evaluating the technical, operational, economic aspect to determine whether the project is viable and worth pursuing. Below is a detailed feasibility study covering these critical dimensions:

4.2.1. Technical

This system is technically feasible because it used technologies like HTML, CSS, JavaScript, and PHP. These tools provide a strong foundation for implementing features like user authentication, content management, and secure backend operations, ensuring the system can be developed and scaled efficiently.

4.2.2. Operational

This system is operationally feasible because the website is easy to use, offer good support, and provide training to ensure everyone can adopt it without issues. It should also match the organization's goals and work processes, so it can grow and be maintained without causing problems.

4.2.3. Economic

It involves looking at the costs of creating, maintaining, and running the website compared to the expected benefits, like more students signing up or saving money on physical resources. This website will have no cost for maintenance, developing, as well as managing resource which make this website economically feasible.

4.3. High Level System Design

4.3.1. System Flowchart

The system flowchart of music streaming platform is shown as follows:
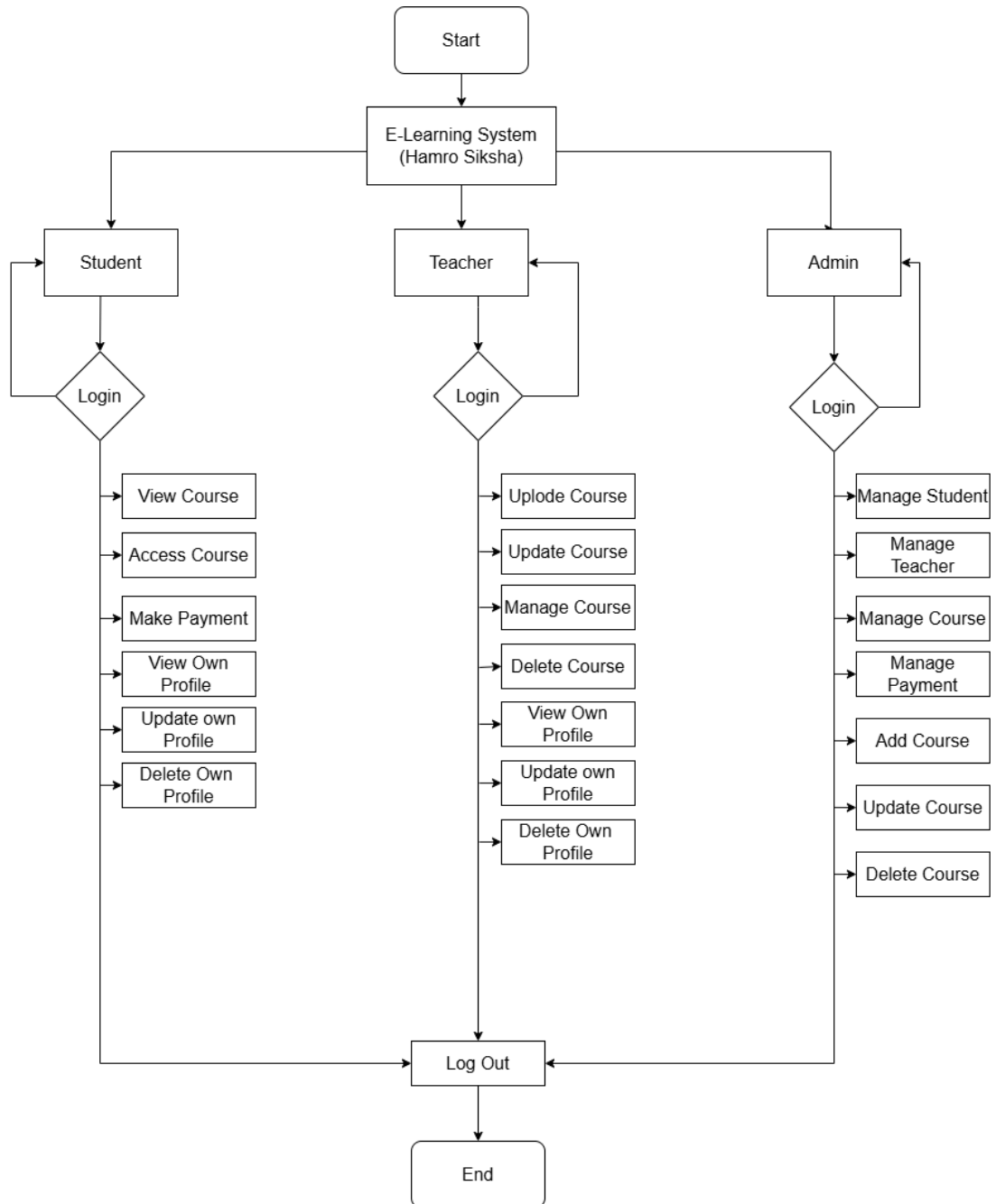
Figure 1: System Flowchart of E-learning System (Hamro Siksha)

5.GANTT CHART

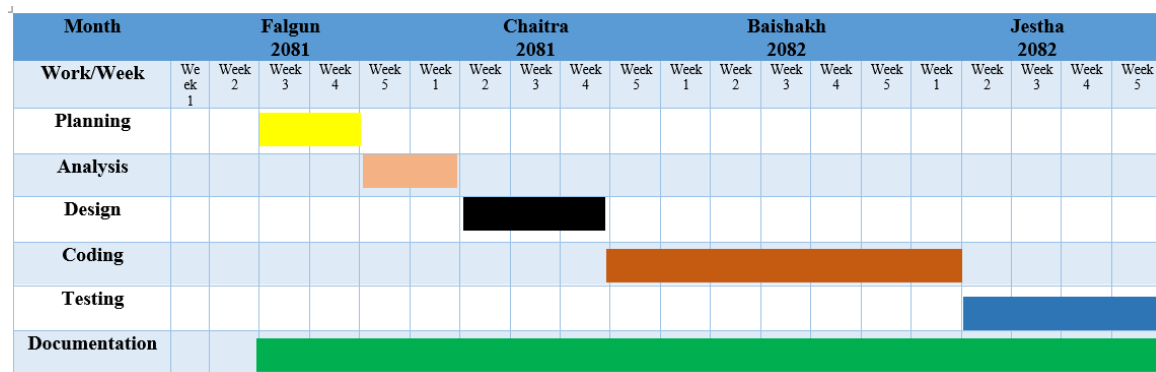| Month	Falgun 2081					Chaitra 2081					Baishakh 2082					Jestha 2082				
Work/Week	Week 1	Week 2	Week 3	Week 4	Week 5	Week 1	Week 2	Week 3	Week 4	Week 5	Week 1	Week 2	Week 3	Week 4	Week 5	Week 1	Week 2	Week 3	Week 4	Week 5
Planning			███																	
Analysis					███	███														
Design							███	███	███											
Coding											███	███	███	███	███					
Testing																	███	███	███	
Documentation			███	███	███	███	███	███	███	███	███	███	███	███	███	███	███	███	███	███

Figure 2: Gantt Chart of E-learning System (Hamro Siksha)

The project is scheduled to commence in the third week of Falgun 2081, beginning with the Planning phase. This phase will last for one week, establishing a structured foundation for subsequent stages. Following this, the Analysis phase will take place from the fourth week of Falgun to the first week of Chaitra 2081, during which the system's requirements will be thoroughly examined and defined.

Upon completion of the analysis, the project will proceed to the Design phase, spanning from the second to the fourth week of Chaitra 2081. During this stage, the system's architecture, interface, and database structure will be developed to ensure a coherent and functional design.

The Coding phase will begin in the first week of Baishakh 2082 and continue through the entire month. This stage will focus on implementing the system based on the established design. Once the coding phase is completed, the Testing phase will commence in the second week of Jestha 2082, ensuring system reliability and functionality.

In parallel, the Documentation process will be conducted continuously, beginning in the third week of Falgun 2081 and extending through the end of Jestha 2082. This will ensure comprehensive records of each phase of development, facilitating future maintenance and improvements.

By the conclusion of Jestha 2082, the project is expected to be fully developed, tested, and documented, ready for deployment or further refinement.

6.EXPECTED OUTCOME

After the completion of the project, we expect the subsequent outputs which can minimize the issues likewise as solve the prevailing problem.

- Enhanced User Engagement
- Timely Certification
- Improved Accessibility and Convenience
- Personalized Learning Experience
- Community Collaboration and Support
- Continuous Learning and Skill Development

7.REFERENCES

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2. https://www.elearningindustry.com/

3. https://app.diagrams.net/