A Minor Project Proposal Report on

Online Learning System

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Abstract

Considering todays need in the field of Education System and other learning System, we the student of BEIT VI 'M' have planned to develop the website named "Online Learning System" which meets almost all the demands required in the field of online Learning System. An online learning system is a web-based platform that provides a virtual environment for students and teachers to engage in learning and teaching activities. The system offers a range of courses and educational programs that can be accessed anytime, anywhere, and at the learner's own pace.

To achieve the goal of preparation of website it is very necessary to choose appropriate programming language which can meet the goal in given time and budget. Taking all this in mind we have to choose IDE (Integrated Development Environment) of Visual Studio 2017 with Language HTML, CSS, Bootstrap, JS, PHP, MYSQL, Django for develop our website. It provides features such as course creation and management, student enrollment and management, download course material and interact with lectures online, learning analytics and security and privacy. Instructors can create, edit, and manage courses, while students can browse and enroll in courses and track their progress. The platform supports a variety of multimedia resources and tools, such as videos, interactive simulations to enhance the learning experience.

Keywords: Online Learning System, web-based platform, IDE, Visual Studio 2017, HTML, CSS, JS, PHP, MYSQL, Django.

Introduction

An online learning system is a digital platform that enables students to access educational resources and receive instruction remotely. With the advancements in technology and the widespread use of the internet, online learning has become increasingly popular as a mode of education. Online learning systems can range from basic video lectures to sophisticated interactive courses that include quizzes, assignments, and discussion forums. They can be accessed from anywhere at any time, making education more accessible to individuals who are unable to attend traditional brick-and-mortar schools or who prefer to learn at their own pace. Online learning systems offer numerous benefits, including flexibility, convenience, and cost-effectiveness. They also allow for personalized learning experiences and enable students to interact with a diverse range of learners from all over the world. Despite the advantages, online learning systems also come with some challenges, such as the need for self-motivation and discipline, potential technical issues, and the lack of face-to-face interaction with instructors and peers.

Problem Statement

Accessibility: Online learning systems must provide learners with a flexible and accessible platform for learning, especially for those who may face geographic, economic, or other barriers to traditional classroom-based education.

Engagement: Online learning systems must be designed in a way that promotes active learning, interaction, and collaboration among learners and instructors to ensure that learners stay engaged and motivated throughout the course.

Quality of content: Online learning systems must ensure that the content provided is accurate, up-to-date, and relevant to the learner's needs, and must have mechanisms in place for content curation, quality assurance, and continuous improvement.

Technical challenges: Online learning systems must be designed to handle technical issues such as system crashes, slow loading times, or incompatible devices that can disrupt the learning experience and hinder the adoption of online learning.

Assessment and evaluation: Online learning systems must offer a range of assessment and evaluation tools that align with learning objectives, provide meaningful feedback to learners, and ensure academic integrity.

Cost: Online learning systems must be cost-effective for learners, but the system may still face additional costs such as purchasing software or hardware, or paying for internet access.

Equity: Online learning systems must be designed in a way that promotes equity and addresses systemic barriers to learning, ensuring that the system is accessible to learners with disabilities and does not disadvantage learners from low-income backgrounds.

Instructor training: Online learning systems must provide adequate training and support to instructors to ensure that they can effectively deliver online courses, especially for those who may be used to traditional classroom-based teaching.

Course design: Online courses must be designed in a way that promotes effective learning outcomes, incorporating multimedia resources, interactive simulations, and collaborative activities to enhance the learning experience.

Adaptability: Online learning systems must be able to adapt to changing needs and circumstances, such as changes in technology or changes in the workforce, to ensure that the system remains flexible enough to accommodate different learning styles and needs.

Project Objectives

- To provide an online learning system which can be accessed all the time.
- To enable student to study via distance learning.
- To enable Students enroll Subjects, download course material and interact with lectures online.

Significance of the Study

Addressing the need for flexible and accessible education: Online learning systems provide a platform for learners who may face geographic, economic, or other barriers to traditional classroom-based education to access high-quality education.

Encouraging active learning: Online learning systems can be designed to promote active learning, interaction, and collaboration among learners and instructors, which has been shown to lead to better learning outcomes.

Enhancing the quality of education: Online learning systems can provide a range of courses and educational programs that are accurate, up-to-date, and relevant to the learner's needs, and offer mechanisms for content curation, quality assurance, and continuous improvement.

Supporting lifelong learning: Online learning systems can provide opportunities for learners to acquire new skills and knowledge throughout their lives, which is essential in today's rapidly changing economy.

Increasing access to education for underserved populations: Online learning systems can help to promote equity in education by providing access to learners with disabilities and those from low-income backgrounds.

Facilitating the adoption of online learning: By developing an online learning system, students and instructors can become more familiar with the benefits and challenges of online learning, which may facilitate the adoption of online learning in other educational contexts.

Contributing to the field of education technology: Developing an online learning system can contribute to the broader field of education technology by exploring new approaches to teaching and learning and identifying best practices for online learning design and delivery.

Scope and Limitations

Scope:

- Provide a platform for learners and instructors to engage in learning and teaching activities.
- Offer a range of courses and educational programs that can be accessed anytime, anywhere, and at the learner's own pace.
- Support a variety of multimedia resources and tools, such as videos, interactive simulations, and collaborative activities.
- Provide features such as course creation and management, student enrollment and management, and learning analytics.
- Facilitate communication and interaction among learners and instructors.

Limitations:

- Limited access to physical resources such as labs or equipment.
- Limited face-to-face interaction and personalized support from instructors.
- May require a reliable internet connection and compatible devices for access.
- May not be suitable for all types of learning, such as hands-on or experiential learning.
- May face technical issues such as system crashes, slow loading times, or incompatible devices that can disrupt the learning experience.

Literature Review

We take those system for literature review which has already implemented and related to our project. The some system are:

Moodle

Moodle is a free software, a learning management system providing a platform for e-learning and it helps the various educators considerably in conceptualizing the various courses, course structures and curriculum thus facilitating interaction with online students. Moodle was devised by Martin Dougiamas and since its inception, its primary agenda has been to contribute suitably to the system of e-learning and facilitate online education and attainment of online degrees. Moodle is an Open Source, free, online learning management system. In fact, it's the most widely used e-learning platform in the world. It enables people just like you to create engaging, and utterly personal, online learning courses for the people who matter the most whether that's students, team members, partners, affiliates, recruits, or even volunteers. That's the beauty of Moodle-you decide. It's truly scalable, and it's used by tens of millions of people worldwide.

Digital Chalk

Digital Chalk LMS is a robust, flexible online training software with an excellent support team. It provides a learning experience for both academic and corporate organizations. Additionally, Digital Chalk LMS also provides the option to sell online learning courses.

Digital Chalk is a time-saving, efficient, learning management system (LMS) that empowers our customers to design and launch their course products, their way. Digital Chalk is designed to handle the needs of small organizations to large enterprises, supporting course sales and internal course delivery to both employees and customers alike. With Digital Chalk, our customers receive the benefits of online training without having to worry about the hassles and high cost of developing and maintaining a software platform.

Black Board

The Blackboard Learning System is software that allows educational institutions to create and host courses on the Internet. Courses created with this software can serve as entire online courses or as a supplement to traditional classroom courses. To use Blackboard Learning System software, you need an Internet connection. You must know how to use an Internet browser, have basic word processing skills and have basis computer file management skills.

You are not required to know HTML or computer programming. Depending on your role, you will use this program in different ways.

Brightspace

Brightspace LMS is ranked number 1 for next-gen online teaching and learning, according to Ovum. It delivers amazing an adaptive learning experience with comprehensive tracking and analytics. It also offers features for corporate learning environments as well. The new "Daylight" experience is a much-improved user interface that should delight its users. The Brightspace Online and Blended Learning solution for higher education starts with D2LLearning Environment, seamlessly bringing together the best in analytics, mobile, collaboration, and media tools and an award-winning accessibility approach. The Brightspace platform includes a robust set of built-in mobile feature, such as web support across multiple platforms and responsive HTML 5 layouts and content and a growing range of native mobile apps that can enhance productivity for both students and instructors.

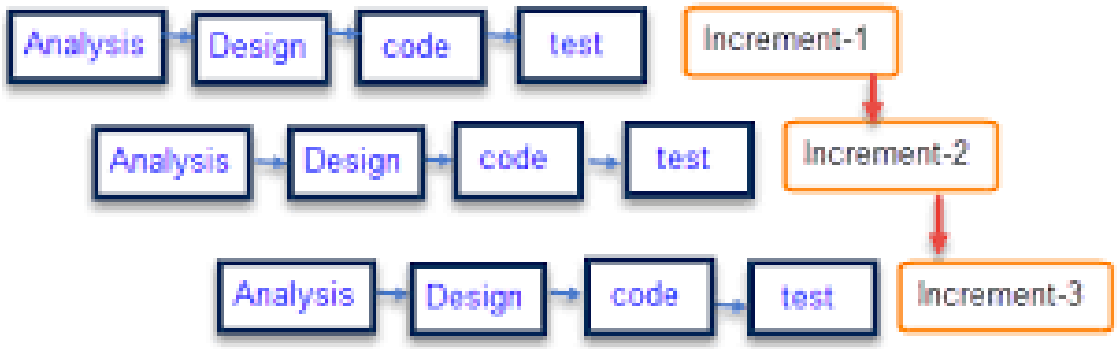
Proposed Methodology

All the ideas for the project were first noted down and compiled. Then we looked at what was possible within the given timeframe and the final product is being produced.

Tools used:

- 4 laptops
- Ms Word (for documentation)
- Visual Studio (for the HTML, CSS, Bootstrap, JS, Django and PHP)
- Xampp (for backend)
- Web browser and internet resource (for research, testing and debugging)

We used the incremental software process method in this project. Incremental Model is a process of software development where requirements are divided into multiple modules of the software development cycle. In this model, each module goes through the requirements, design, implementation and testing phases. We have used this model as we have many ideas we want to add and we will slowly incorporate them on the base model we have prepared.



Incremental Model

Deliverables

After the completion of this project, we expect to deliver the following as the output of this project:

A fully functional online learning platform: This is the core product, which includes all the features and functionalities necessary for an effective online learning experience. The platform should allow instructors to create and manage courses, and students to enroll in courses, access course content, and interact with instructors and other students.

Course content: The online learning system may require specific course content, such as video lectures, multimedia resources, assessments, and other educational materials. The course content should be developed and integrated into the platform.

Training materials: Training materials such as videos, tutorials, and webinars can be developed to help users get started with the online learning system. These materials can be customized for different user groups, such as instructors, students, and administrators.

Project Task and Time Schedule

The project is scheduled and performed as according to requirements and constraints given by our project management. Analysis and Requirements gathering is mainly focused. Research is done prior to our development to implement new and better ways of creating an effective system and documentation alongside. Whereas, debugging and testing is done at the final stage of each iteration. This project is scheduled to be completed in 2 months. Requirement analysis has been given more emphasis. Research and database management is to be done first and well documented. Debugging and Testing is to be done prior to the completion of the project.

Time period / Process	**1st month**	**2nd month**	**3rd month**
Analysis	✓		
Design		✓	
Coding		✓	
Implementation			✓

Fig: Work Schedule

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