"Progressly: Smart LMS"

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ABSTRACT

Due to the pandemic, ways of learning changed drastically, especially in higher education. Hence, it was very important to design and implement a system that is capable of providing access to education in a very easy and efficient way. The system was designed in such a way that it would provide easy access to aggregate learning materials to learners. The system was designed in a way that it would generate a well-organized and structured repository of learning materials. Furthermore, the system was designed to take into account the different needs of each student and to provide an interface that would be very easy to use.

The system consists of a web application, which is the front end, and a backend, which is responsible for the management of the data. The web application is responsible for the user interface and the backend is responsible for the management of the data. Progressly: Smart LMS is a project that helps users to organize learning material, track progress, and browse resources from other users. It is completely open source and built on open-source technologies.

Keywords: learning management system, education, smart lms, web application, backend

INTRODUTION

This project presents the design of a Learning Management System (LMS), a full stack web development project. It specifically focuses on the collection and sharing of freely available resources available on the internet and to share it with other users. In this project, we designed a site on which some users would input the resources they used about a topic and users who want to study the specific topic can access them. There is also a closed version of this functionality which is useful for institutions. We've used python web framework Django, NoSQL database MongoDB. There's Google authentication for easy onboarding of users. The collection of resources is called a Roadmap. Roadmaps flagged as public can be accessed from any device without login. This project is designed so that learners don't have to reinvent the wheel and can follow paths or modify them according to their needs.

AIM

To build a learning management system using modern web technologies. A system where anyone can follow roadmaps created by experts. The sources would be completely free of cost, so there are no requirements other than internet and a system.

OBJECTIVES

Make Roadmaps for Specific topic

To make a collection of resources, users need to add sources they find useful about a topic and flag it as a public roadmap. Resource can be a link to any article, content which is freely available. These can be accessed by anyone even without login and gain insights.

Make it easy for beginners to find resources
Beginners can search for their topic of interest and use the best resources available. Since there's no need for login, there's no entry barrier in using this project.

Track individual progress
When a user logs in and imports a roadmap to their account, they can follow and mark individual sources and complete. This helps tracking progress and shows on the dashboard.

Customize roadmap according to user's need
Once a user imports a roadmap, they can modify their version of the sources and follow it instead, instead of the old one. This is particularly useful if certain parts are outdated or not available.

Closed version for Institutions
Institutions can use this for remote teaching. Instructors can keep their roadmaps private and share the provided id with students. Students use this id and follow a specific roadmap. Instructor can also see a list of all the students in a certain course

SCOPE

The aim is to design a self-sustaining learning platform where users can meet their own goals along with sharing their path with other users. As exploring the roadmaps does not require sign in, everyone is free to get access to information which has been formatted.

As this system only allows free content links, it is very easy for users to just focus on their learning. There's no need to buy a special course for anything.

There is a special section for Institute users, which can be schools or colleges. Instructors can create a roadmap for a subject and give the id to students. Students can follow this roadmap by using id. Then, Instructor is able to view students enrolled in the roadmap.

There's no limitation to what can be shared on this platform. User can make roadmap for their personal use or make it public to share it with others with a single click.

LIMITATIONS OF EXISTING SYSTEM

The existing system does not provide an easy way for students to access learning materials. Existing system has both free and paid options, but we focus mainly on free content and user made roadmaps. Paid versions can cost a lot, and may contain outdated content. The existing system does not provide a well-organized and structured repository of learning materials for students. The existing system does not provide an interface that is very easy to use.

PROPOSED WORK

PROPOSED CONCEPT:

The proposed concept is a system that is designed to provide easy access to aggregate learning materials to students. The system is designed in a way that it would generate a well-organized and structured repository of learning materials for students. Furthermore, the system is designed to take into account the different needs of each student and to provide an interface that would be very easy to use.

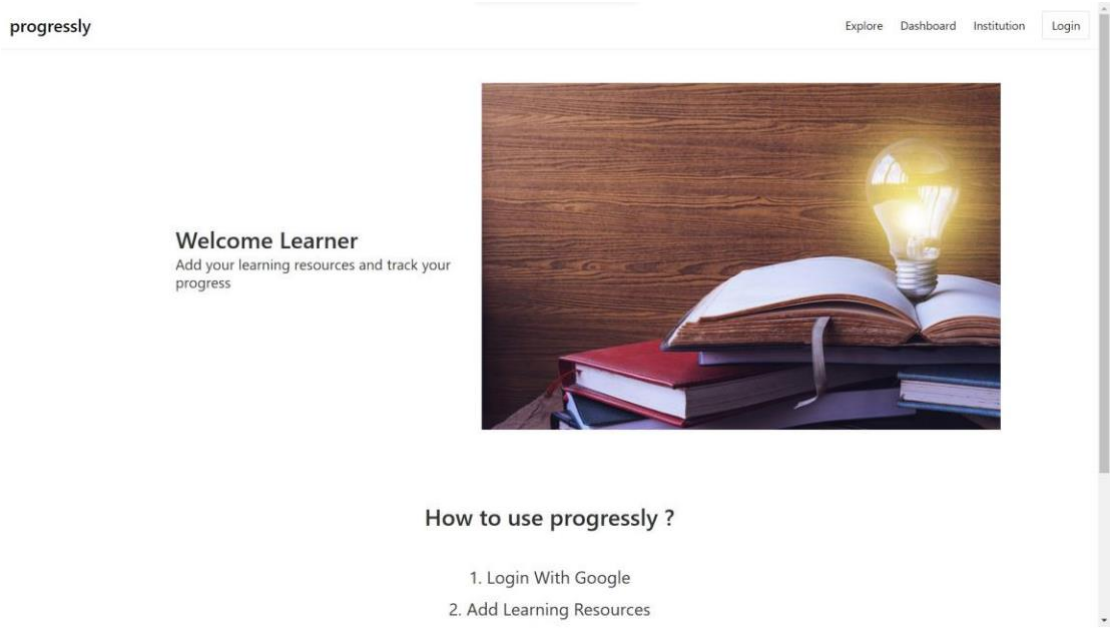
The system consists of a web application, which is the front end, and a backend, which is responsible for the management of the data. The web application is responsible for the user interface and the backend is responsible for the management of the data. The system is designed to provide a number of

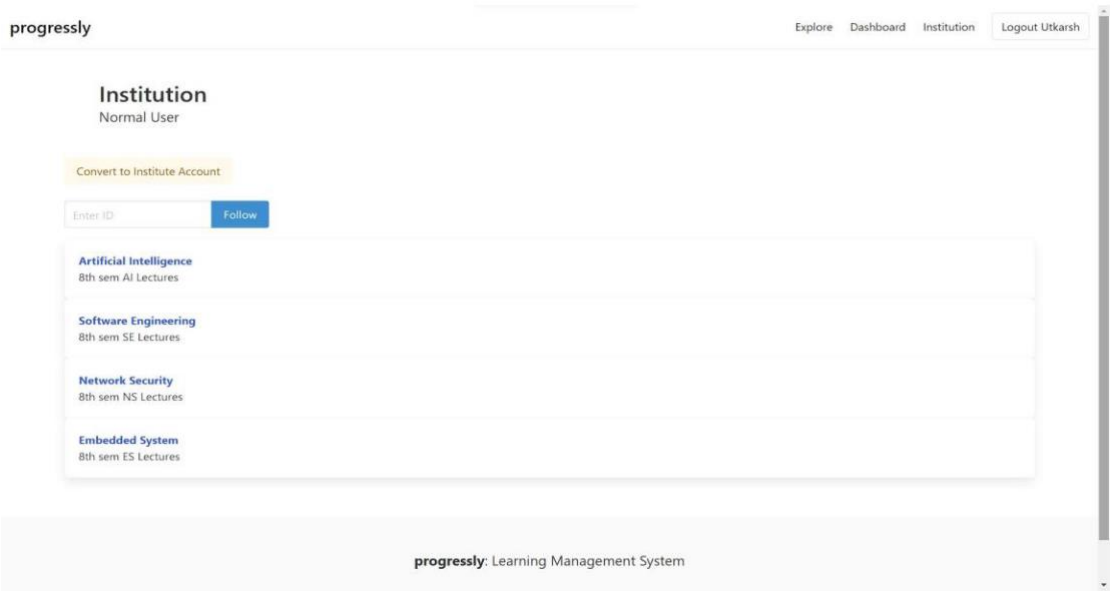
features, which include the ability to add new videos, the ability to login, the ability to track progress, and the ability to provide feedback.

SYSTEM DESIGN:

FRONTEND	BACKEND	AUTHENTICATION
○ Django ○ Bulma CSS Framework ○ JavaScript	○ Django (Python) ○ MongoDB (NoSQL)	Django All-auth

WORKING OF PROPOSED SYSTEM:





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ADVANTAGES

- The system is designed to provide easy access to aggregate learning materials to students.
- The system is designed to generate a well-organized and structured repository of learning materials for students.
- The system is designed to take into account the different needs of each student.
- The system is designed to provide an interface that would be very easy to use.
- The system is designed to provide a number of features, which include the ability to add new videos, the ability to login, the ability to track progress, and the ability to provide feedback.

DISADVANTAGES

- The system is in early stages and lacks the user base needed for better functioning.
- The system is not suitable for learners who are not comfortable with using computers.
- The system is not suitable for learners who do not have a good internet connection.

CONCLUSION

In this report we have analysed the pros and cons of the system that is proposed in this paper is a system that is designed to provide easy access to aggregate learning materials to students. The system is designed in a way that it would generate a well-organized and structured repository of learning materials for students. Furthermore, the system is designed to take into account the different needs of each student and to provide an interface that would be very easy to use.

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