Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

Learning Management System

Submitted in partial fulfillment of the requirements of

Third Year

in

Computer Engineering

By

Rishi Mule - 64

Shrutika Kadam - 59

Bhagyashri Purohit - 44

Supervisor

Prof.



Department of Computer Engineering

DATTA MEGHE COLLEGE OF ENGINEERING, AIROLI,NAVI MUMBAI -400 708 University of Mumbai (AY 2021-22)



Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

CERTIFICATE

This is to certify that the Mini Project entitled "LEARNING MANAGEMENT SYSTEM" is a bonafide work of Mule Rishi Niranjan (64), Kadam Shrutika Jayawant (59), Purohit Bhagyashri Gopal (44) submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of "Bachelor of Engineering" in "Computer Engineering".

(Prof. J. D. Sawarkar)

Supervisor

(Prof. A. P. Pande)

(Prof. S.D. Sawarkar)

Head of Department

Principal

Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

Mini Project Approval

Date:

Place:

Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

Abstract

The concept of traditional education has changed radically within the last couple of years. Being physically present in a classroom isn't the only learning option anymore, with the rise of the internet and new technologies. Nowadays, everyone should get access to quality education whenever and wherever they want, as long as we have access to a computer and other devices. We are now entering a new era of the revolution of online education. Unlike this. Tutors apply the method of teaching purely through the latest technology.

The purpose of this article is to present a conceptual model for learning management system. Through this Learning Management System we will try to revolutionize the conventional method of chalk and board style of learning imparted to the students. In this application there will be the whole information about the student's academics, semesters, classes joined, assignments, etc. It is an application in which teachers can share learning resources with students. Learning management system will make giving and receiving simpler, prolific, and productive in learning. One of the importance of application is that tutors and participants both can develop advanced learning skills. It will help towards bringing learners, tutors, experts, practitioners, and other interest groups to one place. Thus, it will try to follow the good practice of knowledge sharing. This is important in current times as competition is rising and the world is also growing. Hence, quick information helps in the better growth of an individual.

Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

Acknowledgments

We would like to take this opportunity to express our gratitude towards all the people who have in various ways, helped in the successful completion of our project.

We must convey our gratitude to Prof. Jayant Sawarkar for giving us the constant source of inspiration and help in preparing the project, personally correcting our work, and providing encouragement throughout the project.

We also thank all our faculty members for steering us through the tough as well as easy phases of the project in a result-oriented manner with concerned attention.

We would also like to appreciate our colleagues who were our backbone and helped us in collecting the requirements for our project. At last we would like to thank all the other people who were involved directly or indirectly in the process of project completion.

Thank You.

Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

INDEX

- 1 Introduction
 - 1.1 Introduction
 - **1.2** Problem Statement
 - 1.3 Objectives
- 2 Hardware and Software Requirements
- 3 Proposed Methodology
 - 3.1 Introduction
 - **3.2** Methodology
 - **3.3** Description of cloud service model used
- 4 Implementation and Results
 - **4.1** Results with Output
- 5 Conclusion and Future Work
 - **5.1** Future Scope
 - 5.2 Conclusion
- 6 References

Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

1 INTRODUCTION

1.1 Introduction

The aim of this project is to improve the conventional method of chalk and board style of learning imparted to the students.

System allows students and teachers to access and securely share essential study materials and resources.

However, most of the LMS in service have different characteristics and are mutually incompatible, hence, effective Health Information Sharing needs to be standardized thus, we are implementing Smart LMS.

In this Learning Management System students can conveniently utilize an overwhelming amount of online resources. Students can access updated content when they want and access the study material unlimited times. Through this we can facilitate collaborative learning independent of time and space. Also they can provide time to prepare and reflect on comments and contributions. Students will be able to facilitate on-demand access to learning activities that continue for an extended time period. System can provide unique opportunities to utilize discourse transcripts for analytical and reflective assignments.

Unlike the traditional method of teaching, e-learning has a quick mode of delivery. This indicates that learning time is reduced. Through Learning Management System we can save time, money and reduced transportation cost, So it is cost-effective compared to traditional learning. E-Learning is provided online so there is no need for papers like traditional learning. Thus, we can save the Environment through this. Such Web-based learning promotes active and independent learning.

Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

1.2 Problem Statement

The Learning Management System is for any learner or teacher which will replace existing conventional methods of chalk and board style of learning. The new system will control the following information: store the instructional materials, books, videos, and control information and various other educational resources, which will be organized by category. These services are to be provided in an effective manner, with the goal of giving and receiving simpler, prolific, and productive learning

1.3 Objectives

The Learning Management System is designed to replace existing conventional methods of chalk and board style of learning. A Learning Management System (LMS) is software that automates the administration of teaching events. All Learning Management Systems manage the log-in of registered users, manage course catalogs, record data from learners, and provide reports to management. However, most of the LMS in service have different characteristics and are mutually incompatible, hence, effective Learning Management System needs to be standardized thus, we are implementing LMS.

Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

2. HARDWARE AND SOFTWARE REQUIREMENTS

2.1 HARDWARE REQUIREMENT:

• System: Pentium 4 or more for optimum performance

• Hard disk: Recommended 1GB

• RAM: Minimum 2GB

2.2 SOFTWARE REQUIREMENT:

• Operating system: Certified Distribution of Windows or macOS

• Front end: HTML,CSS ,JavaScript ,Bootstrap

• Back end: Django

• Coding language: Python

Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

3. PROPOSED METHODOLOGY

3.1 Introduction

The aim of this project is to improve the conventional method of chalk and board style of learning imparted to the students.

System allows students and teachers to access and securely share essential study materials and resources.

However, most of the LMS in service have different characteristics and are mutually incompatible, hence, effective Health Information Sharing needs to be standardized thus, we are implementing Smart LMS.

In this Learning Management System students can conveniently utilize an overwhelming amount of online resources. Students can access updated content when they want and access the study material unlimited times. Through this we can facilitate collaborative learning independent of time and space

3.2 Methodology

The system is divided into two sections: one for teacher and another for students. teacher may choose stream as they are belonging from and after selecting stream, teacher will create account and then have an option to add classroom. After adding classroom teacher can check how many students joined class. Teacher can upload notes, makes sections and assign assignments to students as well can check how many submissions received.

On the other hand, have the option for student i.e., join classroom and refer uploaded notes for particular stream and sections. Also, user can download these notes as well as students can download or upload assignment material on classroom also user can see deadline for particular submission.

The platform was developed using the Django which includes SQLite3 as a database, For the front end of the website, we used HTML, CSS, JavaScript and Bootstrap as a client-side framework as it is extremely flexible and provides great performance. The User interface design was built using Material Design principles and components which provide clean, ready-to-use UI components.

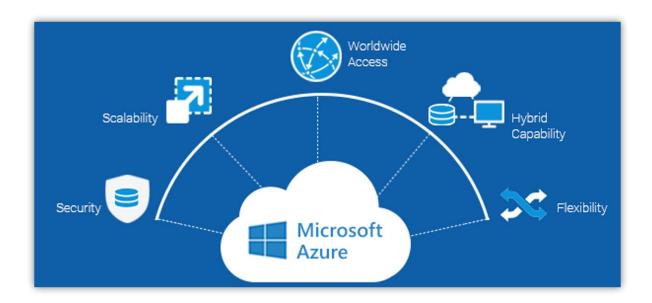
Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

3.3 Description of cloud service model used

Microsoft Azure

Azure is cloud computing platform and an online portal that allows you to access and manage cloud services and resources provided by Microsoft. These services and resources include storing your data and transforming it, depending on your requirements. To get access to these resources and services, all you need to have is an active internet connection and the ability to connect to the Azure portal.

Azure provides more than 200 services, are divided into 18 categories. These categories include computing, networking, storage, IoT, migration, mobile, analytics, containers, artificial intelligence, and other machine learning, integration, management tools, developer tools, security, databases, DevOps, media identity, and web services.



Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

Cloud services uses:

• Azure Blob storage: for storing media and static files

Azure Blob Storage helps you create data lakes for your analytics needs and provides storage to build powerful cloud-native and mobile apps.

• Azure web app : for app deployment

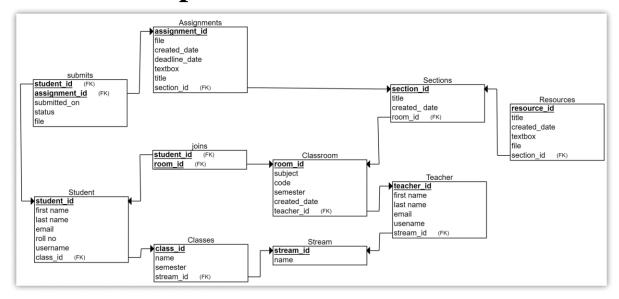
Azure Web Apps is a cloud computing based platform for hosting websites, created and operated by Microsoft. It is a platform as a service which allows publishing Web apps running on multiple frameworks and written in different programming languages

Python libraries:

- Django
- Sqlite3
- django-bootstrap4 : for stylish forms
- django-storages :for connecting django and azure blob

Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

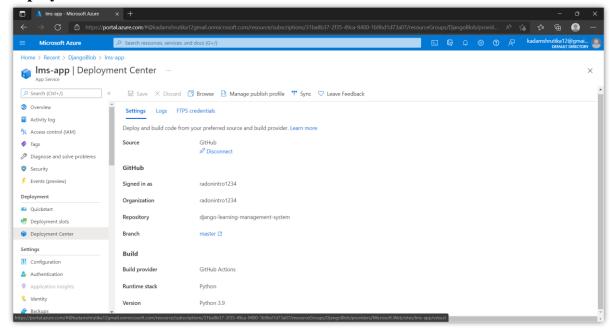
4. Implementation and Result



ER Diagram for Learning Management System

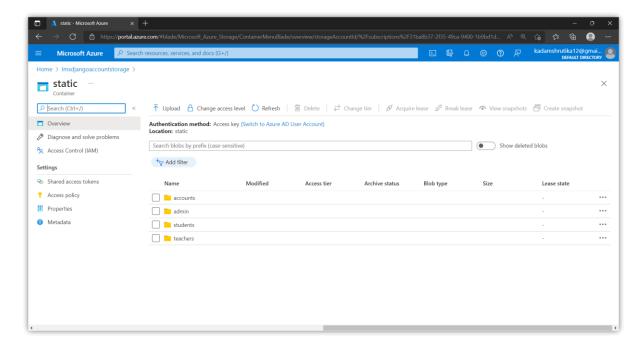
4.1 Results with Output

1. Deployment on Azure Portal.

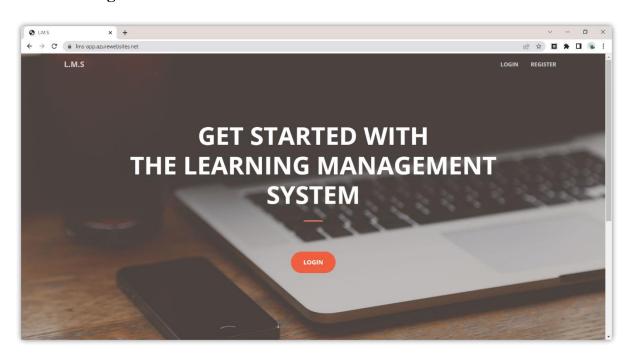


Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

2. Azure Blob Storage for Static Media File

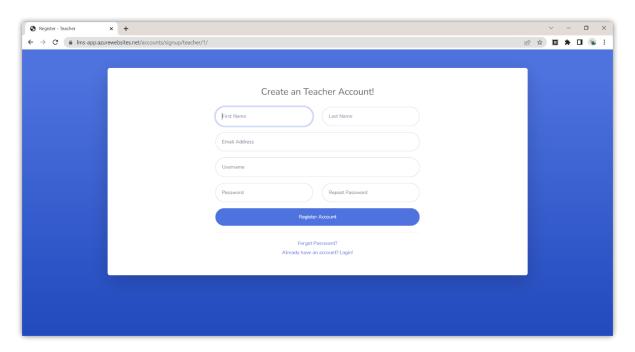


3. Home Page

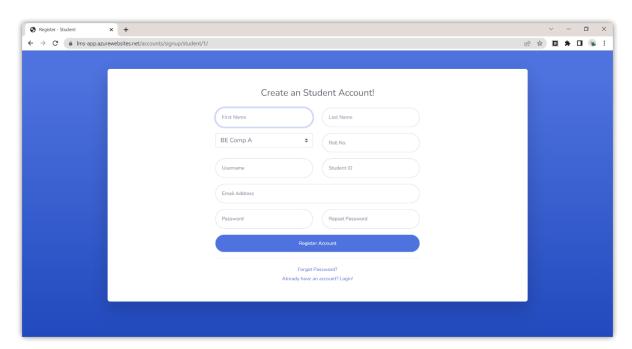


Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

4. Registration Page: Teacher

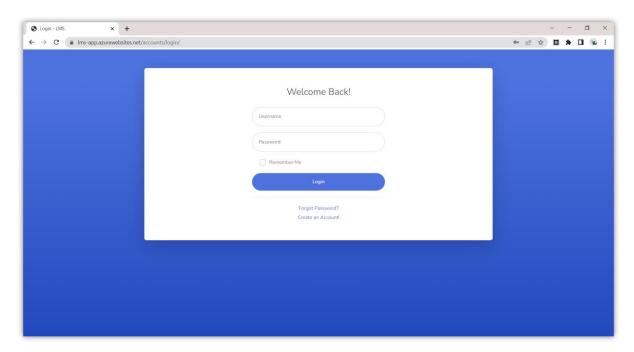


5. Registration Page: Student

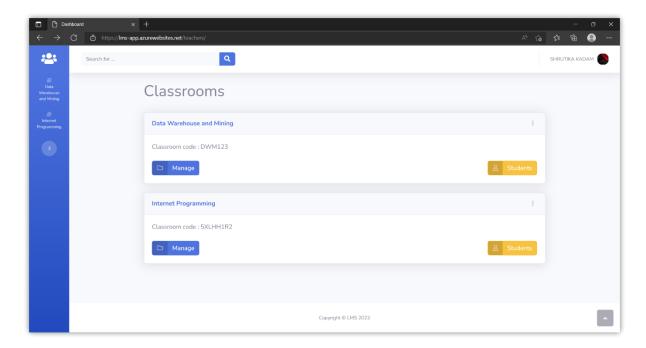


Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

6. Login Page

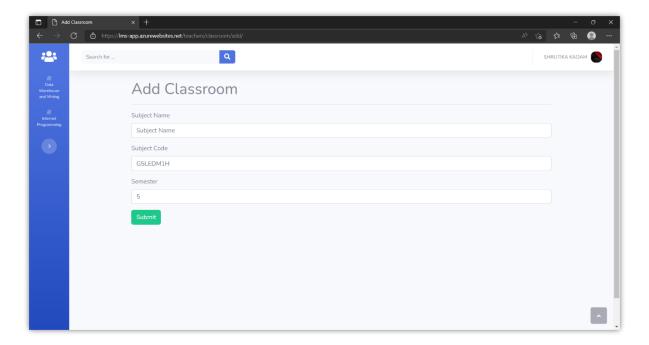


7. Teacher: Dashboard

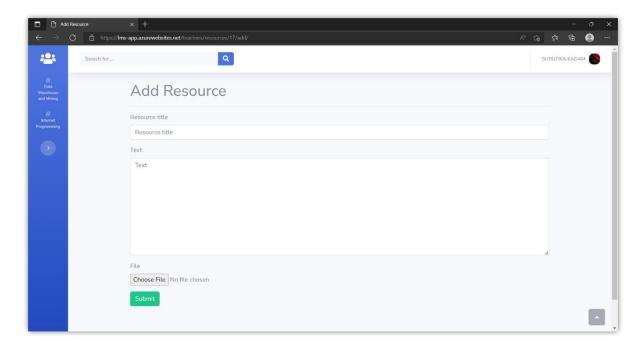


Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

8. Teacher: Create Classroom

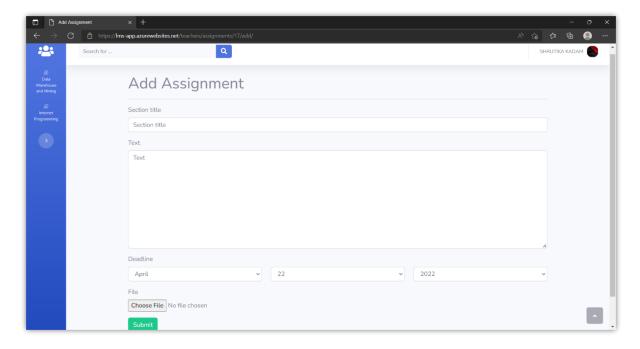


9. Teacher: Add Resources

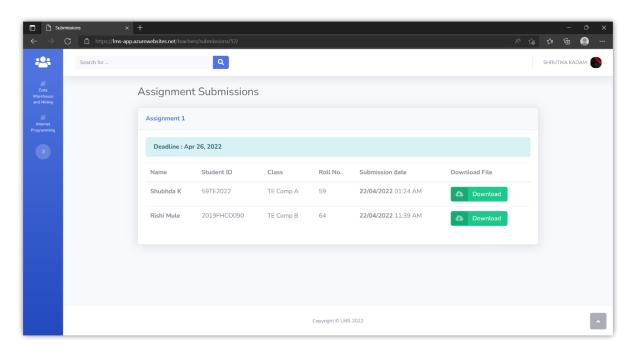


Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

10. Teacher: Add Assignments

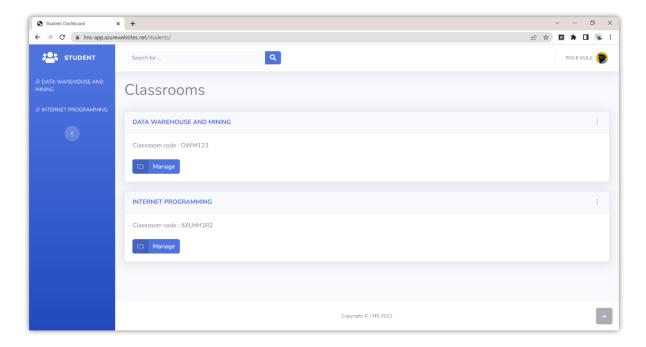


11. Teacher: Assignment Submissions

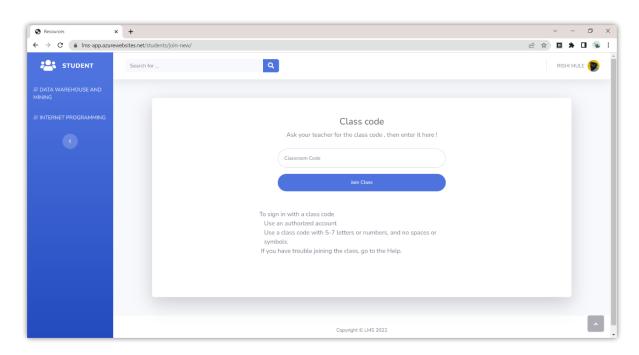


Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

12. Student: Dashboard

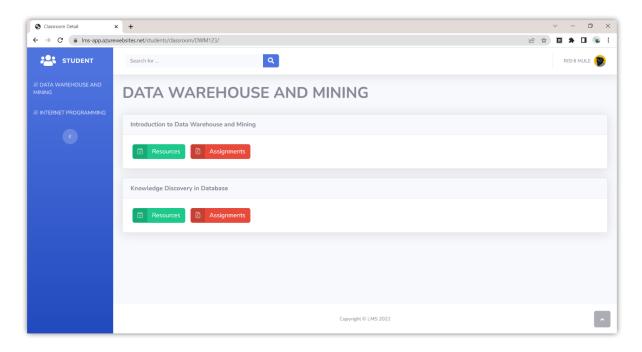


13. Student: Join Classroom

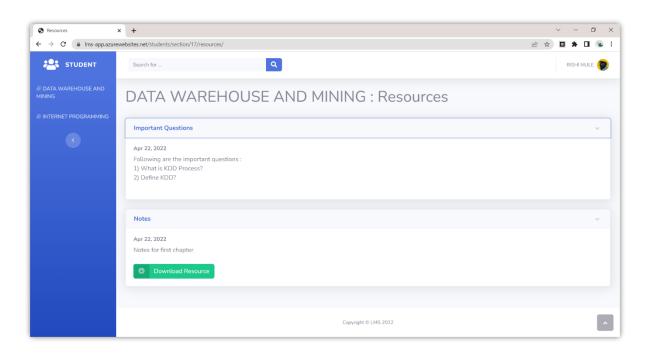


Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

14. Student: Sections

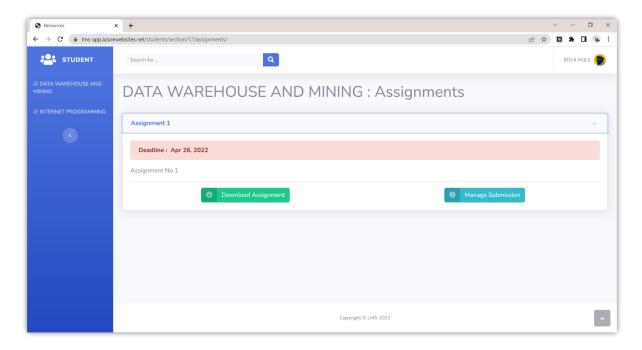


15. Student: Resources

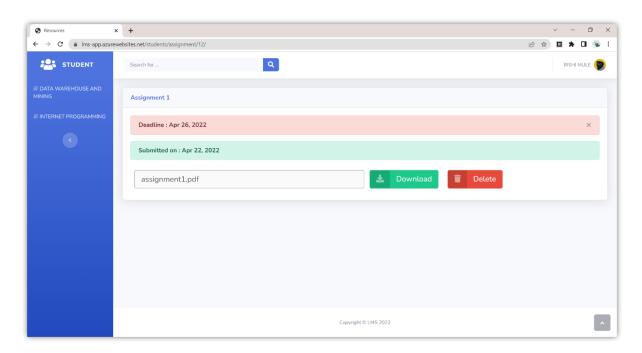


Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

16. Student: Assignments



17. Students: Submissions



Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

5. Conclusion and Future work

5.1 Future Scope

LMS systems could have reached a point where user-friendliness, cost-effectiveness, and integration with other systems are more important than new features.

We will try to implement following characteristics.

- 1. Better Administrative Tools.
- 2. Content Management and Development.
- 3. Better Systems Integration
- 4. Interest in Standardization
- 5. Improved Communication and Collaboration

We would like to make it more flexible with systems and tools. Several would like more use of multimedia, especially with regard to audio and video services.

In future we will implement new features to organize and visualize the learning process, better tools for synchronous communication, better ways to personalize design elements, and more national and international collaboration. The scope of the project is really wide and hence there is a lot of room for improvement and future work.

5.2 Conclusion

The aim of this project is to improve the traditional method of teaching and learning. The system is designed based on cloud computing platforms, which can provide shared computer processing resources and data to computers and other devices on demand. We implement our designs on the OpenStack cloud computing system. The scope of the project is really wide and hence there is a lot of room for improvement and future work.

Dept: Computer Engineering		
Subject: Cloud Computing Lab	Subject Code: CSL605	
Year/Semester: TE-VI	Date: 20 – 01 – 2022	Page No.
Student Name: Mule Rishi Niranjan	Roll No.: 64	Division: B

6. References

- [1] "Implementation of Learning Management System Based on Cloud Computing" Haibo Yi, Zhe Nie, Weijian Li, 2017 4th International Conference on Information Science and Control Engineering
- [2] Smart E-Learning System Architecture based on Cloud Computing Jawaher Ahmed Mohammed AL Busaidia, Muhammad Sohail Hayata -Journal of Student Research (2017)
- [3] elearningpost (www.elearningpost.com) is a digest of daily links to articles and news stories about Corporate Learning, Community Building, Instructional Design, Knowledge Management, Personalization and more.
- [4] Web-Teaching, A Guide to Designing Interactive Teaching for the World Wide Web (Brooks 1997)