



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

# IJIRSET

International Journal of Innovative Research in  
**SCIENCE | ENGINEERING | TECHNOLOGY**

# INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 10, Issue 8, August 2021

**ISSN** INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA

**Impact Factor: 7.569**

9940 572 462

6381 907 438

[ijirset@gmail.com](mailto:ijirset@gmail.com)

[www.ijirset.com](http://www.ijirset.com)



# Secure Digital E-Learning System

K.K.Archana<sup>1</sup>, S.Rajalakshmi<sup>2</sup>, R.Abinaya<sup>3</sup>

Assistant Professor, Sri Ramakrishna Institute of Technology, Coimbatore, Tamilnadu, India

Assistant Professor, Sri Ramakrishna Institute of Technology, Coimbatore, Tamilnadu, India

Assistant Professor, Sri Ramakrishna Institute of Technology, Coimbatore, Tamilnadu, India

**ABSTRACT:** Presently the concept of E-learning is becoming very popular as the numbers of internet savvy users are increasing. Faster bandwidths have immensely helped in boosting the growth of ELearning. Many institutions of higher education and universities are resorting to E-Learning. Big corporate companies are also heavily investing in E-learning and setting up interactive classrooms. E-learning is cost effective as course content once developed could be easily used and modified for teaching and training. E-learning also provides students freedom from carrying heavy school bags and stop cutting of trees for the sake of paper, pencil and rubber. E-learning is the future of education as it is interactive, interesting and entertaining way of learning. In this direction, an eLearning system is designed. The system has been tested and validated by deploying the sample courses. The features of this system includes the separate modules for teachers, learners, evaluators and administrator. To achieve the security the Registration module is designed and the constraints are made that only registered users can access the system. The System is designed with Bootstrap for web page development and SQL for the Database. ODBC connection is implemented and the access materials are stored in the CLOUD storage. The proposed system is an open source and hence it is cost effective. The system provides an opportunity to the educationists to create and link their course contents online. This paper presents the technology behind this system along with the content standardization scheme.

**KEYWORDS:** E-learning, CloudStorage, contentstandardization, SQL, Bootstrap, Open source.

## I. INTRODUCTION

E-Learning is the use of Information and Communication technology to enable people to learn anytime and anywhere. Being online, the eLearning systems provide an opportunity to learn any subject from any part of the world at any time. It may be helpful in resource saving in terms of time, money, paper, etc. The eLearning methodology has been started with the need to learn independently, comfortably and at the desired pace at any time anywhere. In the present COVID-19 pandemic, the schools and universities remains close we are able to manage with the students studies with these E-learning portal and online classes. In this context E-learning is a boon to us. With the advances in internet technology, web based eLearning systems are gaining popularity. Being online, these systems provide an opportunity to learn any course/subject from any part of the world at anytime. It may be helpful in resource saving in terms of time, money, paper, etc. that will improve the accessibility to the course instructors as well as students. In consideration with the changing trends in ICT and scarcity of time, the role of e-learning has increased. Once the course contents are digitized using some Content Management System (CMS) and the same are made available on the web, they can be effectively used by the researchers, instructors and students. Students can take quizzes or read course material during their free time. It is a boon to the working students and professionals who need flexible access to courses, and an eLearning system is a powerful way to give them what they need.

## II. EXISTING SYSTEM

The existng E-learning portals like MOODLE, BYJU'S are good but the user or the organization has to pay cost. For a small school and institution they have to pay a considerable amount. The school or Institution may not hold the whole ownership. It causes some time delay. we cannot alter the entire schema accordingly that suits to our school or college in case of the course material, quiz, test, mark and mark analysis. Moodle is open source (GPL). It is written in PHP. It will run on most common web servers, on common platforms. It requires a database, and will work with MySQL, PostgreSQL, Microsoft SQL Server or Oracle. MoodleCloud plans only accommodates up to 1,000 users and some users reported that interface is not always intuitive. It is cost effective. Based on the advantage and disadvantage of these system the proposed system is formulated.



### III. PROPOSED SYSTEM

The proposed system is a web based LMS(Learning Management System) and is based on the client-server architecture. To achieve the security the Registration module is designed and the constraints are made that only registered users can access the system.The System is designed with Bootstrap for web page development and SQL for the Database.ODBC connection is implemented and the access materials are stored in the CLOUD storage.The proposed system is an open source and hence it is cost effective.The entire schema is built according to the requirement of the institution which increase the user satisfaction and productivity.The lecturer videos and course content are stored in cloud so that it can be accessed from anywhere.For maintaining authentication and security the system is designed in such a way that only registered users can enter into the system.

### IV. SOFTWARE SPECIFICATION

**MICROSOFT VISUAL STUDIO .Net IDE:** Visual Studio .NET is an IDE from Microsoft for developing .Net based applications in supported programming languages usually in C#. It can also be used to develop ASP Web applications, XML Web services, desktop applications, and mobile applications. Various supporting programming languages includes, Visual Basic.NET, Visual C++ .NET, Visual C# .NET, and Visual J# .NET thus, enabling tools and facilitates sharing for the creation of mixed-language solutions.

**SQL (Structured Query Language):**SQL is a domain-specific language used in programming and designed for managing data held in a relational database management system, or for stream processing in a relational data stream management system. SQL is used for Data manipulation like INSERT,DELETE,UPDATE,SELECT.

**BOOTSTRAP:**Bootstrap is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first websites.Bootstrap is completely free to download and use.The Webpages are designed using Bootstrap.It includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation,etc.Its five tier grid classes provides better control over the layout as well as how it will be rendered on different types of devices like mobile phones, tablets, laptops and desktops, large screen devices, and so on.

**Cloud Computing:**Cloud computing is a technology that uses the internet for storing and managing data on remote servers, and then access data via the internet. One such example is Google cloud – It is a suite of public cloud services offered by Google. Reasons to use Cloud areFile storage: You can store all types of information in the cloud, including files and email. File sharing: The cloud makes it easy to share files with several people at the same time. Backing up data: You can also use the cloud to protect your files.

The following are the different types of clouds

**Public cloud:**Consumer rents the facilities from the services provider.**Private cloud:**Enterprise buys or leased the capabilities of the cloud to provide services to their clients/users.**Hybrid cloud:**Combined services and elements of two or more cloud servers**Community Cloud:**Shared infrastructure for specific community.

Google Drive is a popular, free cloud storage solution for file storage and synchronization developed by Google. It is one of the most trusted cloud storage providers today built on the top of Google Cloud storage. Google Drive is Google's SaaS (Software as a Service) offerings for general users to store file.As a result, companies using SaaS applications are not tasked with the setup and maintenance of the software. Users simply pay a subscription fee to gain access to the software, which is a ready-made solution.Our project use Saas cloud service.Thus our system "Secure Digital Elearning System" is cost effective.

### V. SYSTEM ARCHITECTURE

This system implementation is based on cloud computing. The lectures and course materials are stored in SaaS(Software as Service Cloud).Hence it achieves data security back up of data, fast access. The login and registration module is built so that only the trusted user can enter in to the system.

A list of course menu are displayed to the students and the student can select appropriate course and can start learning. Separate modules are given to the teachers, Lectures where they can upload their class materials and live class videos.





Snapshots :

**Registration Form**

Name  \*

Email Adresse

Aadhar Number

Password  \*

Confirm Password

[Home](#)

**Registration Form**

Name  \*

Email Adresse

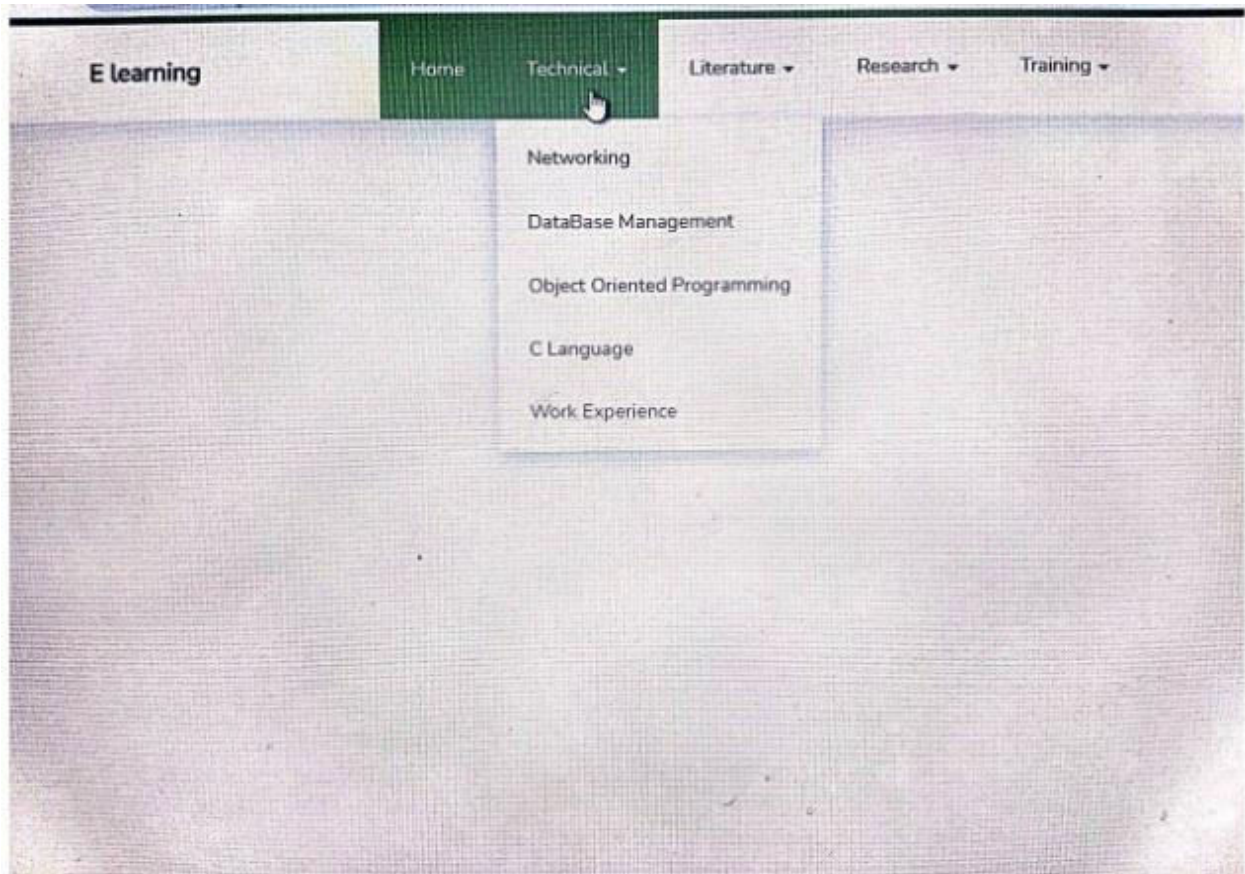
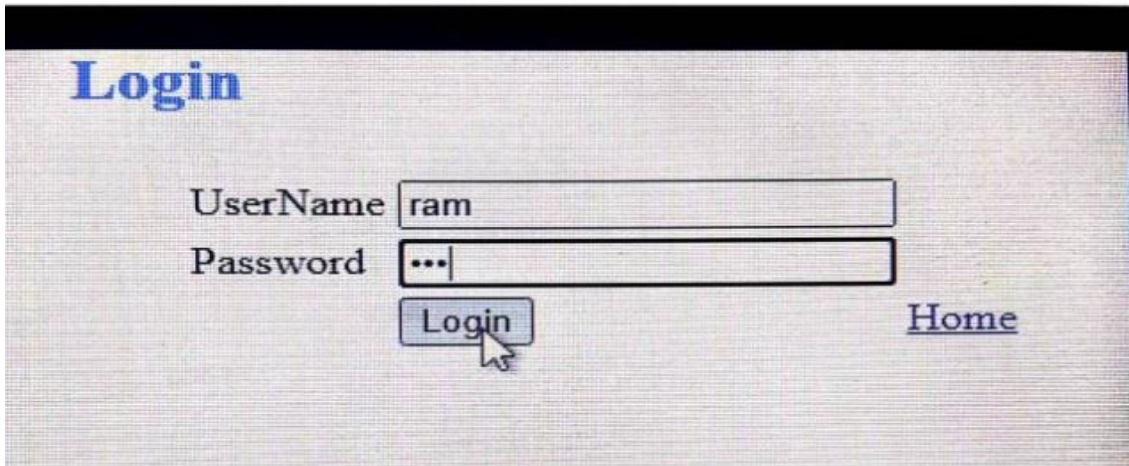
Aadhar Number

Password  \*

Confirm Password

[Home](#)

Submitted Successfully!





## V. CONCLUSION AND FUTURE WORK

E-learning is a vital tool in learning environment. A cost effective, Reliable Elearning system is designed in this work. people can learn from anywhere with this Elearning system. It is a boon. Also, as the number of trees is becoming less and less by each passing day due to cutting of trees for manufacturing paper, pencil and rubber; though banned by most governments in their respective countries, is making way for E-Learning. E-learning will overcome these drawbacks, if instead of heavy school bags, each learner is given a tablet with the course content fed in it, which would be much attractive, enjoyable and thoughtful decision to take in the present era of modernization. Thus, the day is not far away when E-learning will become the future popular method of education throughout the world. The additional features of elearning system like e-attendance and e-correction may be the future work.

## REFERENCES

1. Sun, P.C., Tsai, R.J., Finger, G., Chen, Y.Y. and Yeh, D. (2008). "What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction", *Computers & Education* 50: pp.1183–1202.
2. Naidu, S (2006). "E-Learning: A Guidebook of Principles, Procedures and Practices", 2nd Revised Edition, CEMCA.
3. Shashi Dahiya, Seema Jaggi, K.K. Chaturvedi, Anshu Bhardwaj, R.C Goyal and Cini Varghese, "An eLearning System for Agricultural Education", *Indian Res. J. Ext. Edu.* 12 (3), September, 2012.
4. Cennamo, K.S., Ross, J.D., & Ertmer, P.A. (2010). Assessment and evaluation. "Technology integration for meaningful classroom use: A standards-based approach" (pp.161-188).
5. Ellis, Ryann K. (2009), "Field Guide to Learning Management Systems, ASTD Learning Circuits".
6. Gray, B. (2004). "Informal learning in an online community of practice. *Journal of Distance Education*", 19(1), 20-35.
7. Fritz, S.M.; King, A.W.; Moody, L.B, Schauer, J. & Rockwell, S. K. (2002). "Analysis of distance education research". Presented at the 29th National Agricultural Research Meetings (1992-2001).
8. Dobrin, J. (1999). Who's teaching online? *ITPE News*, 2 (12): pp.6-7.
9. MRS. Veramanickam, M. Mohanapriya, "Research paper on E-Learning application design features: Using cloud computing & software engineering approach", 2016 International Conference on Information Communication and Embedded Systems (ICICES).
10. Paul Pocatilu, Felician Alecu and Marius Vetri, "Using Cloud Computing for E-learning Systems" in *Recent Advances On Data Networks Communications Computers*, USA, pp. 07-09, Nov 2009.





**Impact Factor:  
7.569**



# INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

 9940 572 462  6381 907 438  [ijirset@gmail.com](mailto:ijirset@gmail.com)



[www.ijirset.com](http://www.ijirset.com)

Scan to save the contact details