

E-Shiksha
E-Learning Web Application

MINI – PROJECT – II

SYNOPSIS



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DECLARATION

We hereby declare that the work which is being presented in the project synopsis “**E-Shiksha E-Learning Web Application**” in partial fulfilment of the requirement for project is an authentic record of our work carried under the supervision of **Ms. Pragya Singh, Technical Trainer, GLA University, Mathura** during session **2022-23**.

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INTRODUCTION

E-learning is a learning environment which uses information and communication technologies (ICT's) as a platform for teaching and learning activities. It has been defined as "pedagogy empowered by technology", though 'digital technology' is more accurate. Note that, due to the difference in terms of institutional goals, higher education and the industry have very different ideas about what e-learning is and how e-learning can be/should be used.

E-learning has its root in distance learning and is part of the revolution brought by the new media: The Web. Educators and trainers soon found the potentials to advance learning at the advent of the new Web technologies. The advocates of e-learning voice for the breakdown of barriers to learning (especially for adult learners in higher education) such as the limitations in time and distance. Research on media comparison "proves" that there is no difference in the learning outcome of e-learning from traditional face-to-face instruction. Over time, more and more instructors/institutions are incorporating e-learning components in the practice of instruction in higher education as a way of facilitating learning.

REQUIREMENTS



SOFTWARE REQ.

- Technologies used: React, Nodejs, Express Js
- Database: Mongo DB
- Tools: VS Code, JetBrains WebStorm, Chrome
- Version Control: Git



HARDWARE REQ.

- Processor: i3 or above.
- Operating System: Windows
- Ram: 2GB or above.
- Hardware Device: Computer
- Hard Disk: 5GB or above.

PROJECT DESCRIPTION

An e-learning website is an online platform that provides users with access to educational content and resources. Here is a project description for an e-learning website:

Project Name: E-Shiksha

Project Goal:

To create a user-friendly e-learning platform that provides high-quality educational resources to users.

Features:

User registration and login system: Users can register on the platform with their email address, and they can use their credentials to log in to the platform.

Course creation and management system: The platform allows instructors to create and manage courses. They can upload course materials, create quizzes and assignments, and set deadlines.

Course search and enrollment system: Users can search for courses based on keywords, categories, or instructors. Once they find a course they like, they can enroll in it and access its materials.

Payment system: The platform has a payment system that allows users to purchase courses. They can pay using credit/debit cards or other payment methods.

WORKING

The working of an e-learning website typically involves the following steps:

User registration and login: The user registers on the platform by providing their name, email address, and creating a password. Once registered, they can log in to the platform using their credentials.

Course search and enrollment: The user can browse courses based on different categories, such as subject, level, or instructor. Once they find a course they are interested in, they can enroll in it by paying the course fee (if applicable).

Course materials access: Once enrolled, the user gains access to the course materials, which can include videos, lectures, quizzes, and assignments. They can access these materials at their own pace and convenience.

Platform maintenance and updates: The platform requires regular maintenance and updates to ensure it functions smoothly and is up-to-date with the latest technologies and trends.

In summary, an e-learning website works by providing users with access to high-quality educational resources, tracking their progress, facilitating communication and collaboration, and providing assessment and certification. The platform is designed to be flexible, convenient, and accessible, enabling users to learn at their own pace and convenience.

IMPLEMENTATION

Frontend:

For the frontend we are using REACT JS, HTML, CSS, BOOTSTRAP.

Backend:

In the backend we are using Node.js, Express.js, MongoDB and NoSQL.

Tools Description:

HTML: Hyper-Text-Markup-Language is used for structuring web pages over the internet. HTML is the **language in which most websites are written**. HTML is used to create pages and make them functional.

CSS: Cascading-Style-Sheet is a styling language used to style and basically define **how** the content will appear on the website.

JavaScript: JavaScript is a scripting or programming language which is now used extensively to design modern web applications and website, it allows the developer to write application which modify themselves according to each user

and its data, this made web applications much more accessible and suitable for many purposes. Many Frameworks of JavaScript such as React, Node, Next etc. are used for different type of requirements and developments.

Bootstrap: Bootstrap is a popular front-end framework for building responsive, mobile-first web projects on the web. It is an open-source toolkit that contains a set of pre-designed CSS styles and JavaScript plugins that can be used to develop modern and professional-looking web pages and user interfaces.

Node.js: Node.js is an open-source, server-side JavaScript runtime environment that allows developers to build scalable, high-performance applications. It uses an event-driven, non-blocking I/O model, making it ideal for real-time applications that require high-speed data transfer and processing.

Express.js: Express.js is a popular, open-source web application framework for Node.js. It provides a set of features and utilities for building web applications, including robust routing, middleware support, and template engine integration.

MongoDB: MongoDB is a non-relational document database that provides support for JSON-like storage. The MongoDB database has a flexible data model that enables you to store unstructured data, and it provides full indexing support, and replication with rich and intuitive APIs.

REFERENCES

Books:

- a. Black Book HTML5, CSS, JS
- b. HTML & CSS: Design and Build Web Sites
Book by Jon Duckett
- c. JavaScript and JQuery: Interactive Front-End Web
Development
Book by Jon Duckett

Websites:

- a. MDN Web Docs ([link](#))
- b. W3Schools ([link](#))
- c. GeeksForGeeks ([link](#))
- d. CSSTricks ([link](#))

Faculty Guidelines:

Ms. Pragya Singh (Technical Trainer, GLA University)

GitHub Repository Link:

[https://github.com/RahulPatel2727/Mini-
Project-2_E_Learning_Website](https://github.com/RahulPatel2727/Mini-Project-2_E_Learning_Website)