A REPORT

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"O7 SERVICES"

on

"STUDY HUB"

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for award of Degree of

BACHELOR OF TECHNOLOGY

(ELECTRONICS & COMPUTER ENG.)



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SUBMITTED TO:

DR. BUTTA SINGH

SUBMITTED BY:

RAVINA DUGGAL (ENC/17301987704)

DEPARTMENT OF ENGINEERING AND TECHNOLOGY GURU NANAK DEV UNIVERSITY REGIONAL CAMPUS, JALANDHAR (PUNJAB) INDIA-144009

CERTIFICATE



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This is to certify that Mr./ Ms. Raveena had enrolled for his/her 6 Month Industrial Training Program in Full Stack Development (MERN Stack) in our company, 07 Services, Jalandhar. His/ Her classes started in December 2022 and last till May 2023.

During his/ her training period, he/ she demonstrated himself/ herself as a dedicated and responsible candidate. His/ Her performance was really very appreciable.

We wish him/ her success in future endeavors.



Thanking You Training Department 07 Services

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in making project. The completion of the project would not have been possible without their help

and in sights.

Regards,

Ravina Duggal(ENC/17301987704)

BATCH - (2019-2023)

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MOTIVATION

A Study Material sharing website can be a fantastic platform for various reasons, providing motivation for its creation and maintenance. Many people spend considerable time and effort creating comprehensive notes or authoring insightful books. By sharing these resources on a centralized platform, individuals can contribute to the collective knowledge of a community and help others learn and grow. A website dedicated to sharing notes, files, question paper and books ensures that valuable educational resources are accessible to a wider audience. By sharing their notes and books, individuals can contribute to their personal growth and skill development. When users take the time to organize their knowledge and articulate their ideas, it deepens their understanding of the subject matter. Additionally, receiving feedback and engaging in discussions with others helps refine their thinking and communication skills, promoting continuous improvement. a notes and books sharing website can create a positive impact by fostering knowledge sharing, promoting accessibility, facilitating collaboration, nurturing learning communities, fostering personal growth, contributing to environmental sustainability, and inspiring users to expand their horizons.

CERTIFICATE



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ABSTRACT

The Online Notes Sharing Project is a web application that allows users to create, store, and share their notes online. The project is built using the MERN stack, which includes MongoDB, Express, React, and Node.js.

The application allows users to create an account, login, and create notes with a title and description. Users can edit, delete, and share their notes with other users. The sharing feature allows users to collaborate on notes with their friends, classmates, or colleagues.

The application is designed with a responsive user interface that allows users to access their notes on any device. The backend of the application is built using Node.js and Express, which provide a scalable and robust server-side solution. MongoDB is used as the database to store user information and notes.

React is used on the frontend to create a dynamic and interactive user interface. The application uses modern web development techniques such as React hooks, Redux, and Axios to provide a seamless user experience.

The Online Notes Sharing Project is a useful tool for students, professionals, and anyone who wants to store and share their notes online. It demonstrates the power and versatility of the MERN stack and showcases the potential of modern web development technologies

INTRODUCTION

The "Online Note Sharing" is web based project designed in Mern programming language. This is website designed to share the notes over the internet between the different user. This is designed with the help of Node.js as backend and html, css, javascript and bootstrap, react as backend. I have used MongoDB database to store the data.

This is very beneficial for those universities, institute, collage, etc who share their notes between the students. On other hand students are also able to share their notes between their friends. Most of the colleges, universities, institute, etc. are uses whatapp or any other social media platforms to share the notes between their students but what for those students who do not use any social media platform, they won't get any notes. So to solve this problem this website play important role. Today in this busy world everyone want to make things easy. Thus there is great challenge of sharing the notes between the students.

The time like this pandemics all the things are shifted towards online so there needs of such platform where the students as well as teacher can share their notes, here online note sharing projects comes into the picture. This provide easy and safe way of sharing the notes. Most of the colleges, universities, etc have problems while sharing the notes or any other files.

INTRODUCTION TO HTML

INTRODUCTION

One language that is specially designed to convert simple text into Hypertext is also known as Hypertext Markup Language (HTML). HTML is the collection of some codes (typically known as tags) that have some special meanings. Each HTML tag has a proper effect on the simple text. Any HTML document is fully portable and can be understood by any browser.

FEATURES OF HTML:

- It is the language which can be easily understand and can be modified.
- It provides the more flexible way to deign web pages along with the text.
- Links can also be added to the web pages so it help the readers to browse the information of their interest.
- We can display HTML documents on any platforms such as Windows and Linux etc.
- We can insert images, links and relative paths from the Workspace.
- Graphics, videos and sounds can also be added to the web pages which give an extra attractive look to your web pages.

INTRODUCTION TO MONGODB

MongoDB is a document-oriented NoSQL database that provides high performance, scalability, and flexibility for storing and managing large amounts of data. It uses a flexible document model, which means that data can be stored in a format that closely resembles the way it is used in the application. MongoDB is an open-source software, meaning that the source code is available for anyone to use and modify.

THE KEY FEATURES OF MONGODB INCLUDE:

- Flexible document model: MongoDB stores data in documents, which are similar to JSON objects. This makes it easy to store and retrieve complex data structures.
- High scalability: MongoDB is designed to scale horizontally, which means that it can handle large amounts of data and traffic by adding more servers to the cluster.
- High availability: MongoDB provides built-in replication and automatic failover capabilities to ensure that your data is always available.

- 4. Rich query language: MongoDB provides a powerful query language that supports complex queries, joins, and aggregation.
- 5. Geospatial indexing: MongoDB has built-in support for geospatial data and can perform complex queries based on location data.

SOME COMMON USE CASES FOR MONGODB INCLUDE:

- Content management: MongoDB can be used to store and manage content such as blog posts, articles, and images.
- E-commerce: MongoDB can be used to store product catalogs, user profiles, and order histories.
- Mobile and web applications: MongoDB can be used as a backend for mobile and web applications, providing fast and flexible data storage.
- Internet of Things (IoT): MongoDB can be used to store and analyze sensor data from IoT devices.
- Analytics: MongoDB can be used as a data store for analytics applications, providing fast access to large amounts of data.

INTRODUCTION TO CSS

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable. CSS handles the look and feel part of a web page.

Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, and variations in display for different devices and screen sizes as well as a variety of other effects.

CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

INTRODUCTION TO JQUERY

jQuery is a popular JavaScript library that simplifies HTML document traversal, manipulation, and event handling. It is designed to make it easier to write client-side code and provides a powerful set of features that can be used to create dynamic and interactive web pages.

THE KEY FEATURES OF JQUERY INCLUDE:

- DOM manipulation: jQuery makes it easy to select and manipulate HTML elements on a page, allowing developers to create dynamic and interactive web applications.
- Event handling: jQuery provides a simple and consistent way to handle events such as mouse clicks, keyboard input, and form submissions.
- AJAX support: jQuery provides built-in support for making AJAX (Asynchronous JavaScript and XML) requests, which allows web pages to update content dynamically without requiring a full page refresh.
- Animation and effects: jQuery provides a set of animation and effects functions that can be used to create visually appealing and engaging user interfaces.
- Cross-browser compatibility: jQuery is designed to work seamlessly across different web browsers, ensuring that your web pages look and function the same way for all users.

SOME COMMON USES OF JQUERY INCLUDE:

- Creating dynamic web pages: jQuery can be used to create dynamic and interactive web pages that respond to user actions and update content dynamically.
- Building web applications: jQuery can be used to build web applications that provide a rich
 user experience, such as online stores, social networking sites, and content management
 systems.
- Enhancing user interfaces: jQuery can be used to add animation, effects, and other visual enhancements to web pages, making them more engaging and appealing to users.
- Validating forms: jQuery can be used to validate form input, ensuring that users provide valid data before submitting the form.
- Creating plugins: jQuery provides a plugin architecture that allows developers to extend its functionality and create reusable components that can be shared with others.

INTRODUCTION TO JAVASCRIPT

In spite of the similarity of names, JavaScript is not Java. The languages are not related. Java is frequently used to program games, mobile phones, and other devices, such as the Amazon Kindle. Although Java can be used in websites, it's rarely used that way.

JavaScript, on the other hand, is a lightweight, yet powerful language that normally runs inside a web browser. Its role is to provide access to different elements of the page so that they can be removed or updated. It can also create new elements, change the style of existing elements, or extract information from them.

INTRODUCTION TO NODE.JS

Node.js is an open-source, cross-platform runtime environment for executing JavaScript code outside of a web browser. It allows developers to write server-side applications in JavaScript and is built on the Chrome V8 JavaScript engine.

Node.js was created by Ryan Dahl in 2009 and has since grown to become a widely-used technology for building scalable and high-performance web applications, APIs, and network applications.

One of the key advantages of Node.js is its event-driven, non-blocking I/O model, which allows it to handle a large number of simultaneous connections and requests without blocking. This makes it ideal for building real-time applications and services that require high concurrency and low latency.

Node.js also has a rich ecosystem of libraries and tools, including the npm package manager, which makes it easy to find and use third-party packages and modules in your applications.

Overall, Node.js is a powerful and versatile technology that has revolutionized the way we build web applications and services, and it continues to evolve and grow in popularity.

EXISTING SYSTEM

Online Study Material sharing systems are web-based platforms that enable users to create, store, and share notes with others in a digital format. These systems are designed to offer a convenient and accessible way for users to collaborate and exchange information, irrespective of their location and time zone.

The existing online notes sharing systems offer several features to facilitate the creation, organization, and sharing of notes. These features include the ability to create different types of notes such as text notes, audio notes, and video notes, the ability to categorize notes based on topics, tags or labels, and the ability to search for notes using specific keywords.

In addition, most online notes sharing systems allow users to share their notes with others through different means such as direct sharing, email, social media, and messaging. Some systems also offer collaboration tools that enable multiple users to work on the same note or project simultaneously.

One of the major advantages of online notes sharing systems is their ability to provide a centralized location for storing and accessing notes. This makes it easier for users to keep track of their notes, eliminate the need for physical storage, and access their notes from any device with internet connectivity.

However, online notes sharing systems also pose some risks such as data breaches, loss of data due to technical issues or errors, and unauthorized access to confidential information. To mitigate these risks, users should take necessary precautions such as using strong passwords, regularly backing up their data, and being cautious when sharing notes with others.

Overall, online notes sharing systems are a valuable tool for individuals and teams looking to streamline their note-taking and collaboration processes. However, users should exercise caution and ensure that their data is secure and protected when using these systems.

PROPOSED SYSTEM:

An online notes sharing proposed system is a web-based platform that is designed to provide users with a more robust and efficient way to create, store, and share notes with others. This proposed system would offer several features and functionalities that address the limitations of existing online notes sharing systems.

One of the key features of the proposed system is its ability to integrate with various applications and tools commonly used by users, such as productivity software, calendar apps, and messaging platforms. This integration would allow users to seamlessly access and share notes from different applications and platforms.

Another feature of the proposed system is its advanced security and privacy measures, such as end-to-end encryption and multi-factor authentication. These measures would ensure that users' notes and data are protected from unauthorized access and cyber threats.

The proposed system would also offer enhanced collaboration features, such as real-time editing and commenting, allowing multiple users to work on the same note simultaneously. It would also provide users with the ability to create and share notes with specific groups or individuals, offering greater flexibility in sharing and collaborating on notes.

Additionally, the proposed system would be designed to support a range of note formats, including text, audio, and video notes, as well as image and file attachments. This would allow users to create and share notes in a variety of formats, depending on their needs and preferences.

Overall, an online notes sharing proposed system would offer users a more secure, efficient, and collaborative way to create, store, and share notes with others. It would address the limitations of existing systems and provide users with a more robust set of features and functionalities to meet their note-taking and collaboration needs.

EXPECTED ADVANTAGES OF THE PROPOSED SYSTEM

The proposed online notes sharing system is expected to offer several advantages to users, including:

1. Enhanced Collaboration:

The proposed system will provide users with advanced collaboration features, such as real-time editing and commenting, enabling multiple users to work on the same note simultaneously. This will facilitate more efficient and effective teamwork, boosting productivity and creativity.

2. Increased Security:

The proposed system will offer enhanced security and privacy measures, such as end-to-end encryption and multi-factor authentication, protecting users' notes and data from cyber threats and unauthorized access.

3. Improved Accessibility:

The proposed system will be accessible from any device with internet connectivity, allowing users to access and share their notes from anywhere and at any time, making it easier to collaborate and stay organized.

4. Customizable Note Formats:

The proposed system will support a range of note formats, including text, audio, video notes, image, and file attachments. This will enable users to customize their note-taking to their needs and preferences.

5. Seamless Integration:

The proposed system will integrate with various applications and tools commonly used by users, such as productivity software, calendar apps, and messaging platforms. This will allow users to seamlessly access and share notes from different applications and platforms.

6. Increased Productivity:

The proposed system will simplify note-taking and sharing processes, allowing users to focus on their work, boosting their productivity, and reducing their workload.

7. Efficient Note Organization:

The proposed system will provide users with the ability to categorize notes based on topics, tags, or labels, making it easier to organize and find notes, reducing time spent searching for information.

Overall, the proposed online notes sharing system is expected to offer a more efficient, secure, and collaborative way to create, store, and share notes with others, improving productivity, and enhancing the user experience.

SYSTEM DEVELOPMENT PROCESS

SYSTEM ANALYSIS

System analysis is a process of gathering and interpreting facts, diagnosing problems and the information to recommend improvements on the system. It is a problem solving activity that requires intensive communication between the system users and system developers. System analysis or study is an important phase of any system development process. The system is studied to the minutest detail and analyzed. The system analyst plays the role of the interrogator and dwells deep into the working of the present system. The system is viewed as a whole and the input to the system are identified. The outputs from the organizations are traced to the various processes. System analysis is concerned with becoming aware of the problem, identifying the relevant and decisional variables, analyzing and synthesizing the various factors and determining an optimal or at least a satisfactory solution or program of action.

A detailed study of the process must be made by various techniques like interviews, questionnaires etc. The data collected by these sources must be scrutinized to arrive to a conclusion. The conclusion is an understanding of how the system functions. This system is called the existing system. Now the existing system is subjected to close study and problem areas are identified. The designer now functions as a problem solver and tries to sort out the difficulties that the enterprise faces. The solutions are given as proposals. The proposal is then weighed with the existing system analytically and the best one is selected. The proposal is presented to the user for an endorsement by the user. The proposal is reviewed on user request and suitable changes are made. This is loop that ends as soon as the user is satisfied with proposal.

Preliminary study is the process of gathering and interpreting facts, using the information for further studies on the system. Preliminary study is problem solving activity that requires intensive communication between the system users and system developers. It does various feasibility studies.

FEASIBILITY STUDY

Feasibility study is made to see if the project on completion will serve the purpose of the organization for the amount of work, effort and the time that spend on it. Feasibility study lets the developer foresee the future of the project and the usefulness. A feasibility study of a system proposal is according to its workability, which is the impact on the organization, ability to meet their user needs and effective use of resources. Thus when a new application is proposed it normally goes through a feasibility study before it is approved for development.

The document provide the feasibility of the project that is being designed and lists various areas that were considered very carefully during the feasibility study of this project such as Technical, Economic and Operational feasibilities.

TYPES OF FEASIBILITY

Technical Feasibility

The system must be evaluated from the technical point of view first. The assessment of this feasibility must be based on an outline design of the system requirement in the terms of input, output, programs, and procedures. Having identified an outline system, the investigation must go on to suggest the type of equipment, the required method of developing the system, of running the system once it has been designed.

Technical issues raised during the investigation are:

- Does the existing technology sufficient for the suggested one?
- Can the system expand if developed?

The project should be developed such that the necessary functions and performance are achieved within the constraints. The project is developed within latest technology. Through the technology may become obsolete after some period of time, due to the fact that never version of same software supports older versions, the system may still be used. So there are minimal constraints involved with this project

Economic Feasibility

The developing system must be justified by cost and benefit. Criteria to ensure that effort is concentrated on project, which will give best, return at the earliest. One of the factors, which affect the development of a new system, is the cost it would require.

The following are some of the important financial questions asked during preliminary investigation:

- The costs conduct a full system investigation.
- The cost of the hardware and software.
- The benefits in the form of reduced costs or fewer costly errors.

Since the system is developed as part of project work, there is no manual cost to spend for the proposed system. Also all the resources are already available, it give an indication of the system is economically possible for development.

Behavioral Feasibility

This includes the following questions:

- Is there sufficient support for the users?
- Will the proposed system cause harm?

The project would be beneficial because it satisfies the objectives when developed and installed. All behavioral aspects are considered carefully and conclude that the project is behaviorally feasible.

CHAPTER – 5

DESIGN

Design is the first step into the development phase for any engineered product or system. Design is a creative process. A good design is the key to effective system. The term "design" is defined as "the process of applying various techniques and principles for the purpose of defining a process or a system in sufficient detail to permit its physical realization". It may be defined as a process of applying various techniques and principles for the purpose of defining a device, a process or a system in sufficient detail to permit its physical realization. Software design sits at the technical kernel of the software engineering process and is applied regardless of the development paradigm that is used. The system design develops the architectural detail required to build a system or product. As in the case of any systematic approach, this software too has undergone the best possible design phase fine tuning all efficiency, performance and accuracy levels. The design phase is a transition from a user oriented document to a document to the programmers or database personnel. System design goes through two phases of development: Logical and Physical Design.

LOGICAL DESIGN

- The logical flow of a system and define the boundaries of a system. It includes the following steps:
- Reviews the current physical system its data flows, file content, volumes, Frequencies etc.
- Prepares output specifications— that is, determines the format, content and Frequency of reports.
- Prepares input specifications—format, content, and most of the input functions.
- Prepares edit, security, and control specifications.
- Specifies the implementation plan.
- Prepares a logical design walk-through of the information flow, output, input, Controls and implementation plan.

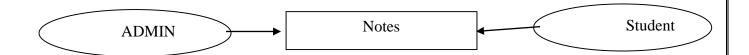
MODULE DESIGN

- Admin Module
- User Module

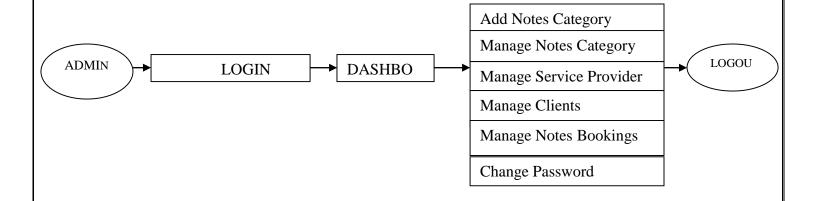
DATA FLOW DIAGRAM

5.3.1 Level 0 for User

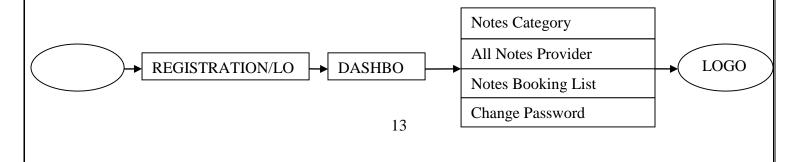
LEVEL 0 DFD:



5.3.2 LEVEL 1 DFD:



5.3.4 LEVEL 2 DFD:



5.4 Database Design

A database is an organized mechanism that has the capability of storing information through which a user can retrieve stored information in an effective and efficient manner. The data is the purpose of any database and must be protected.

The database design is a two level process. In the first step, user requirements are gathered together and a database is designed which will meet these requirements as clearly as possible. This step is called Information Level Design and it is taken independent of any individual DBMS.

In the second step, this Information level design is transferred into a design for the specific DBMS that will be used to implement the system in question. This step is called Physical Level Design, concerned with the characteristics of the specific DBMS that will be used. A database design runs parallel with the system design. The organization of the data in the database is aimed to achieve the following two major objectives:

- Data Integrity
- Data independence

Normalization is the process of decomposing the attributes in an application, which results in a set of tables with very simple structure. The purpose of normalization is to make tables as simple as possible. Normalization is carried out in this system for the following reasons.

- To structure the data so that there is no repetition of data, this helps in saving.
- To permit simple retrieval of data in response to query and report request.
- To simplify the maintenance of the data through updates, insertions, deletions.
- To reduce the need to restructure or reorganize data which new application Requirements arise.

RELATIONAL DATABASE MANAGEMENT SYSTEM (RDBMS)

A relational model represents the database as a collection of relations. Each relation resembles a table of values or file of records. In formal relational model terminology, a row is called a tuple, a column header is called an attribute and the table is called a relation. A relational database consists

of a collection of tables, each of which is assigned a unique name. A row in a tale represents a set of related values.

Relations, Domains & Attributes:

A table is a relation. The rows in a table are called tulles. Tulle is an ordered set of n elements. Columns are referred to as attributes. Relationships have been set between every table in the database. This ensures both Referential and Entity Relationship Integrity. A domain D is a set of atomic values. A common method of specifying a domain is to specify a data type from which the data values forming the domain are drawn. It is also useful to specify a name for the domain to help in interpreting its values. Every value in a relation is atomic, that is not decomposable.

RELATIONSHIPS:

Table relationships are established using Key. The two main keys of prime importance are Primary Key & Foreign Key. Entity Integrity and Referential Integrity Relationships can be established with these keys.

- Entity Integrity enforces that no Primary Key can have null values.
- Referential Integrity enforces that no Primary Key can have null values.
- Referential Integrity for each distinct Foreign Key value, there must exist a matching Primary Key value in the same domain. Other key are Super Key and Candidate Keys.
- Relationships have been set between every table in the database. This ensures both Referential and Entity Relationship Integrity.

SOFTWARE& HARDWARE SPECIFICATIONS

SOFTWARE REQUIREMENTS:-

• Front end: react

• **Web server:** Express server 8.0.0(for above.)

• **DB Tool:** Mongo DB

• **Browser:** Mozilla Firefox/Chrome/Edge

• OS: Windows Operating System/Linux

• Text Editor: Visual Studio

• Environment: Node JS

HARDWARE REQUIREMENTS:-

• Processor : Intel(R) Core(TM) i3-3120M

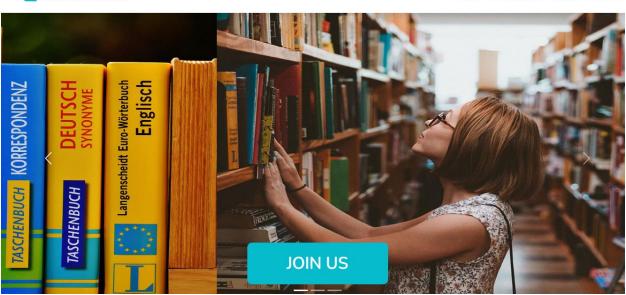
• RAM : 8 GB

• Hard Disk : **SSD:** 256 GB

IMPLEMENTATION OF THE PROJECT

HOME PAGE:

StUdY HuB



StUdY HuB

Senior Students

Only those students that are verify by the admin are uploading the data



Question Papers

Previous year question papers are provided to the students for their better prepration



V

E-Books
E-Books are uploaded in this web application for the Students and Teachers also

HOME OUR COURSES LOGIN REGISTER

HOME OUR COURSES LOGIN REGISTER



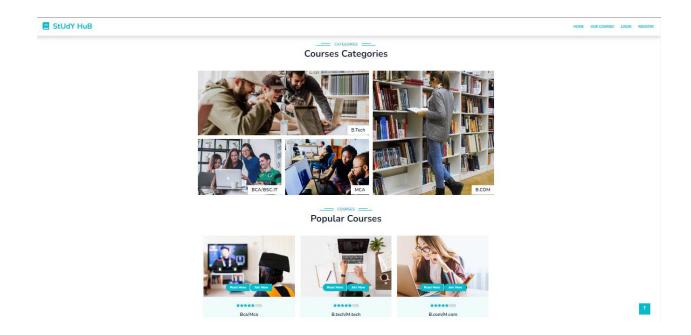
Welcome to STUDY HUB

This web application help the students to take Notes, E-Books, Previous year Question Papers for their any kind of prepration.

- → Senior Students
 → Quiz's
- → Notes
 → E-Books
- → Download
- → Question Papers

JOIN US

1

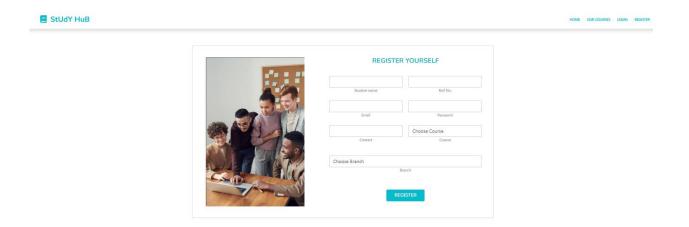


LOGIN PAGE:



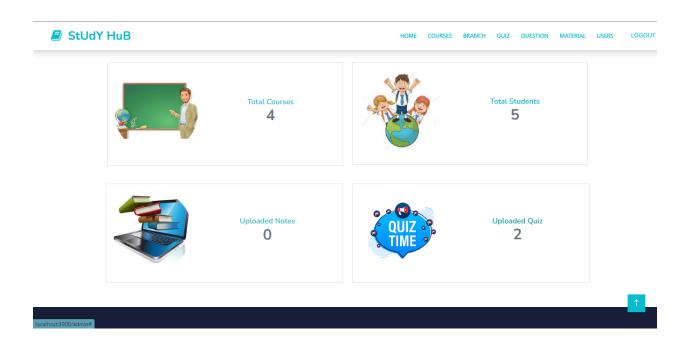


REGISTER PAGE:



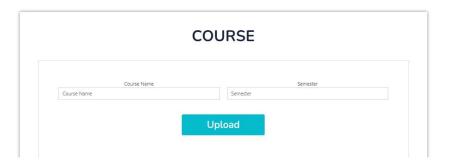


ADMIN DASHBOARD:

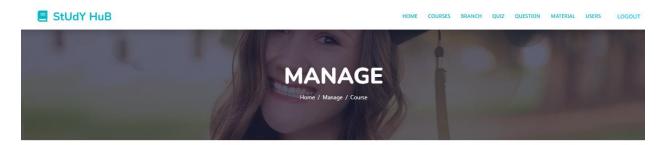


ADD COURSE:





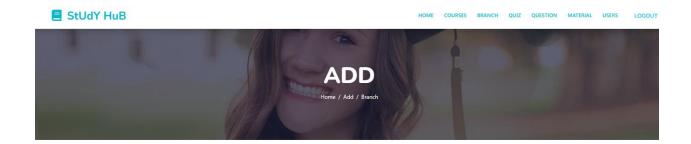
MANAGE COURSE:

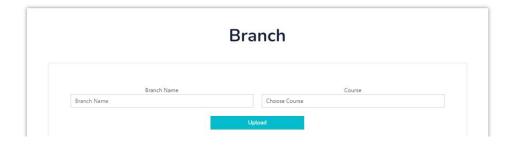


Courses

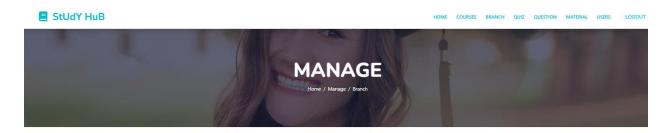
Sr No	Course Name	Semester	Status	Action
1	MBA	2	Active	Edit Change Status
2	IT	1	Active	Edit Change Status
3	Medical	5	Active	Edit Change Status
4	Btech	3	Active	Edit Change Status

ADD BRANCH:

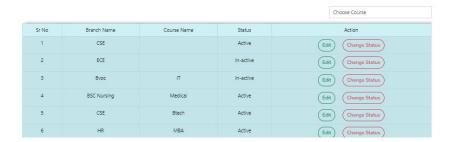




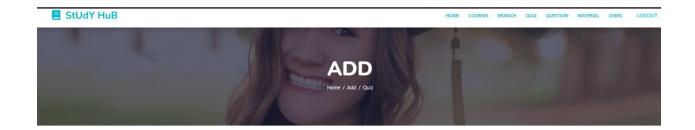
MANAGE BRANCH:

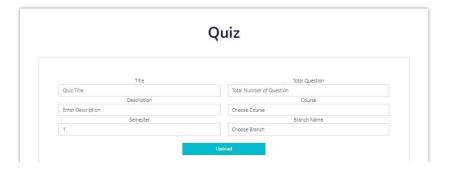


Branch



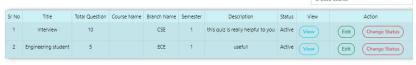
ADD QUIZ:





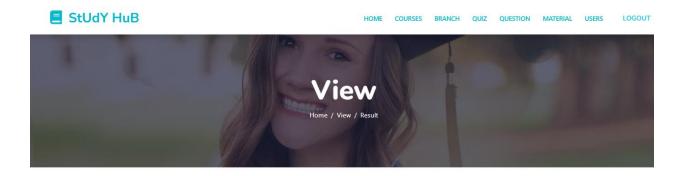
MANAGE QUIZ:





Quick Link Contact Gallery

VIEW QUIZ RESULT:

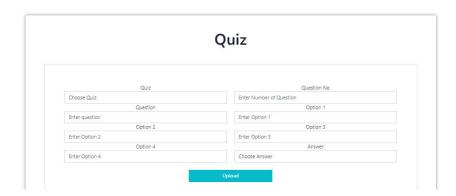


Results



QUIZ QUESTION ADD

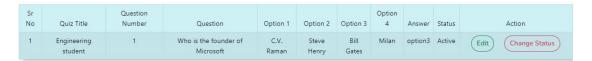




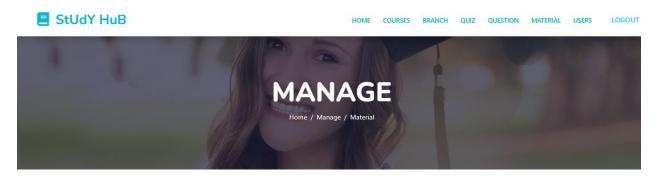
MANAGE QUIZ QUESTION:



Quiz Question



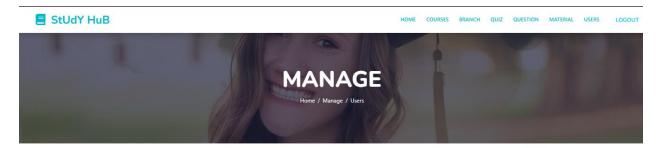
MANAGE MATERIAL:



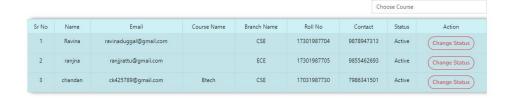
Material



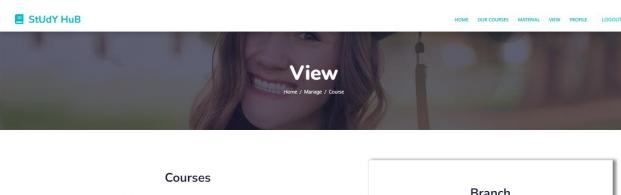
ALL USER:



USERS



USER COURSES:

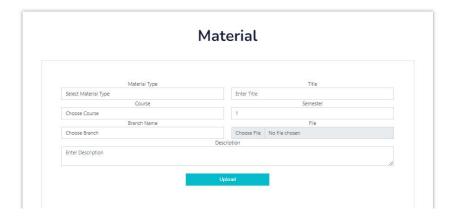




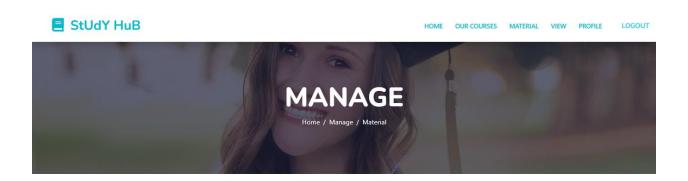


Add Material:





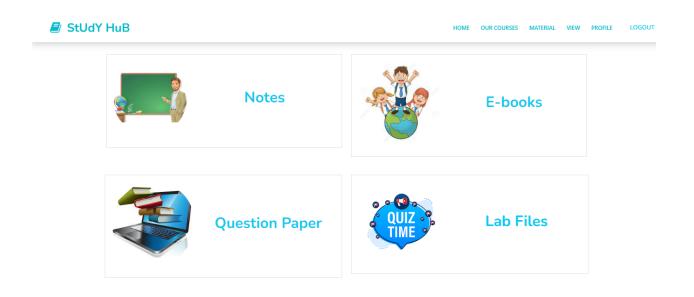
MANAGE MATERIAL:



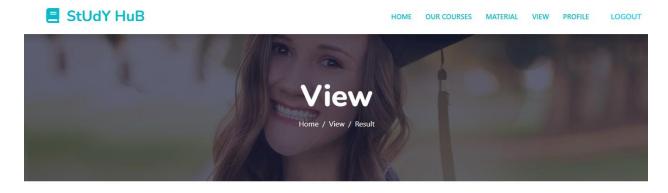
Material



ALL MATERIAL:



QUIZ RESULT:

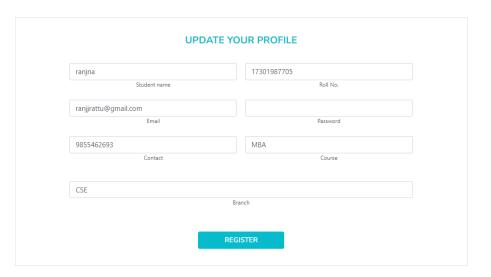


Results

Sr No	Title	Semester	Description	Total Questions	Correct Answers
1	Engineering student	1	usefull	5	1

User Profile:





INDEX.JS ROUTER PAGE:

```
★ File Edit Selection View Go Run ···
                                                                                                                                                                                                                                                                        ... IS Appjs X IS ViewBranchijs IS Coursesijs IS Index.js IS Register.js IS ViewAllUser.js IS ViewAlluserial.js IS UpdateMaterial.js
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JS AddBranchjs 26 import Update

JS UpdateBranchjs 27 import ViceMat
                         JS ViewBranch.js
                        JS UpdateCourse.js

→ materials

                       JS UpdateMaterial.js
JS ViewMaterial.js
                       > submissions
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(Route path="Alogate, material, type"element={\flaster/})
(Route path="Alogate, quiz/; die element={\flaster/})
(Route)
                JS App.test.js
# index.css
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              > TIMELINE
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                                                                                                                                                                                                                                                                                                                                                                                                                          Ln 77, Col 65 Spaces: 2 UTF-8 LF () JavaScript ₽ Д
               In 77. Col 65 Spaces. 2 UTF-8 LF () Junistrup. R ()

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APISERVICES.JS PAGE

```
... JS App.js JS apiServices.js X JS ViewBranch.js JS Courses.js JS Index.js
Ф

    ✓ FRONT__C; C; C; D; Ø
    src > services > IS appServices/s > ½ apiServices > Ø changeStatusBranch

    IS AddBranch, S
    1 import axios from laving to the property of the prop
                                                                                                                                                JS UpdateBranch.is
 d<sub>a</sub>
                                                                                                                                                                                               // console.log(data)
return axios.post(BASE_URL+"user/login",data)
                                           JS ViewCourse.is
                                              JS ViewMaterial.is
                                                                                                                                                                                        }
dashboard(data){
    let header={
        Authorization:sessionStorage.getItem("token")
    }
    return axios.get(BASE_URL+"dashboard", fheaders:header)}
                                                                                                                                                                                           addCourse(data){
                                                                                                                                                                                                     let header={
   Authorization:sessionStorage.getItem("token")
                                                                                                                                                                                                   }
return axios.post(BASE_URL+"course/add",data,{headers:header})
                                                                                                                                                                                                  }
allCourse(data){
   let header={
        Authorization:sessionStorage.getItem("tok
                                          JS UpdateProfile.is
                                                                                                                                                                                                       let header={
    Authorization:sessionStorage.getItem("token")
                                                                                                                                                                                                                  return axios.post(BASE_URL+"course/update",data,{headers:header})
                                 JS App.test.js
# index.css
                                                                                                                                                                                                     changeStatusCourse(data){
                      > OUTLINE
Authorization:sessionStorage.getItem("token")
                                                                                                                                                                     Ln 71, Col 56 (12 selected) Spaces: 2 UTF-8 CRLF (1) JavaScript. № 0

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```

MASTER PAGE:

```
X File Edit Selection View Go Run
                                                                                                      JS Master.js X JS ViewBranch.js JS Courses.js JS Index.js
                                                                                                                                                                        JS ViewMaterial.js JS Upd: [] ..
Ð
                                   1 import { Outlet } from "react-router-dom";
2 import Header from '../Layouts/Header';
3 import Footer from '../Layouts/Footer';
4 import { ToastContainer } from "react-toastify";
5 import "react-toastify/dist/ReactToastify.css"
6 export default function Master(){
          JS ViewBranch.js

∨ courses

ď,

✓ materials

           JS UpdateMaterial.js
品
           JS ViewMaterial.js
                                                   <ToastContainer autoClose={2000}/>
           v users 14 )

JS ViewAllUser.js 15 }
           JS Adminhome.js
          JS Adminmaster.is

✓ auth

          JS About.js
          JS Contact.is
          JS Courses.js
          JS Error.js
Js Master.js
Js Slider.js
> OUTLINE
      > TIMELINE
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```

DEPENDENCIES:

```
XI File Edit Selection View Go Run …
                                                                                                                                                                                                                   □ □ □ □ □ −
                                                              {} package.json × J5 ViewBranch.js J5 Courses.js J5 Index.js
                                                                                                                                                                                                                                             JS Ur Ⅲ ··
Ð
                                          1 {
2    "name": "final-project",
3    "version": "0.1.0",
4    "private": true,
5    "dependencies": {
    "etosting-library/jest"
            JS Master.is
            JS Slider.is
                                                         "@testing-library/jest-dom": "^5.16.5",

∨ Layouts

                                                        "@testing-library/react": "^13.4.0",
"@testing-library/user-event": "^13.5.0",
留
                                                        "axios": "^1.3.5",
"react": "^18.2.0"
                                                        "react': "^18.2.0",
"react-idom": "^18.2.0",
"react-iframe": "^1.8.5",
"react-quiz-component": "^0.8.5.1",
"react-router-dom": "^6.9.0",
"react-scripts': "5.0.1",
"react-select": "^5.7.2",
"react-spinners": "^6.0.18.0",
"react-toastify": "^9.1.2",
"web-vitals": "^2.1.4"

✓ students

            > materials
             > views
            JS UpdateProfile.js
           # index.css
                                                       "scripts": {
    "start": "react-scripts start",
    "build": "react-scripts build",
           JS index.js
           ¶ logo.svg
           JS reportWebVitals.js
                                                         "test": "react-scripts test",
"eject": "react-scripts eject"
       {} package.json
                                                        "eslintConfig": {
         README.txt
> OUTLINE
       > TIMELINE
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```

CSS PAGE:

```
XI File Edit Selection View Go Run …
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽ front end
                                                                                                                                                                                                                                # style.css X JS ViewBranch.js JS Courses.js JS Index.js
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JS Upd: 🗓 ··
  C
                              --primary: ■#06BBCC;
--light: ■#F0FBFC;
--dark: □#181d38;

✓ assets

  م
  ď,
                                                   # style.css
                                                                                                                                                                                        .fw-medium {
   font-weight: 600 !important;
  œ
                                           * favicon.ico
                                                                                                                                                                                                            pointer-events: none;
                                                                                                                                                                                                      background-color: □white !important;
                                                                                                                                                                                   .fw-semi-bold {
| font-weight: 700 !important;
|}

    robots.txt

✓ admin

                                                                                                                                                                                        .back-to-top {
    position: fixed;

→ branches

                                                                                                                                                                                                           display: none;
right: 45px;
bottom: 45px;

∨ courses

                                                                                                                                                                                                             z-index: 99;
                                                 JS AddCourse.js
  (8)
                                                   JS UpdateCourse.is
 > OUTLINE
                             > TIMELINE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    를 32°C ^ @ ■ /6 4× 12:26 AM 5/31/2023 ■
```

INDEX.HTML FILE:

```
XI File Edit Selection View Go Run ···
                                                                                                    JS ViewAllUser.js
                                                                                                   JS ViewMaterial.is
                                                                                                                JS Upd: III ··
Ð
                1 <!DOCTYPE html>
2 <html lang="en"
    > node_modules
                           # style.css
留
                            name="description"
content="Web site created using create-react-app"
     o index.html
     🖾 logo192.png
     logo512.png
     {} manifest.json

    robots.txt

→ branches

      JS AddBranch.is
      JS UpdateBranch.is
      JS ViewBranch.is

∨ courses

                           <title>React App</title>
      JS ViewCourse.js
> OUTLINE
   > TIMELINE
                                                                                     Ln 1, Col 1 Spaces: 2 UTF-8 LF HTML デ ロ
                                                                                             5/31/2023 €3 32°C ∧ @ ■ @ 4× 12:26 AM 5/31/2023
```

BACKEND APP,JS:

```
Ⅺ File Edit Selection View Go Run ···
                                                                                                                                                                                                                                                                                                      Ð
                                                                                                                                                                                                                                                                                       JS index.js X
                    ∨ BACKEND [‡ E‡ ひ ⑤ JS index.js > ...
                                                                                                        1  const express = require('express')
2  const res = require('express/lib/response
3  const db = require('./server/config/db')
                               > dashboard

✓ material

                                  JS materialControlle...
                                  JS materialModel.js
                                                                                                                        const app = express()
const PORT = 3004
 ₫
                               > guestion
                                                                                                                      const apiRoutes = require('./server/routes/apiRoutes')
品
                                                                                                      app.use(express.static(_dirname + '/server/public/'));
app.use(express.json({ limit: "50mb" }));
app.use(express.urlencedadic());
                                                                                                                      app.use(express.json(( limit: "50mb" )));
app.use(express.urlencoded(( limit: "50mb", extended: false, parameterLimit: 5000000000 }));
                                  JS userController.js
                                  JS userModel.is
                                                                                                                        app.get('/', (req, res) => {
    res.send('Welcome to Kiza Textiles Server')

✓ collection

                                                                                                                        app.use('/api', apiRoutes)
                              JS seed.is
                            > middleware
                            > public
                                                                                                                                    console.log("Server Listerning to port ", PORT)
                   JS index.js
                      {} package-lock.json
> OUTLINE
                    > TIMELINE
                                                                                                           Ln 1, Col 1 Spaces 4 UTF-8 CRLF () JavaScript ₹ Q

Ln 1, Col 1 Spaces 4 UTF-8 CRLF () JavaScript ₹ Q

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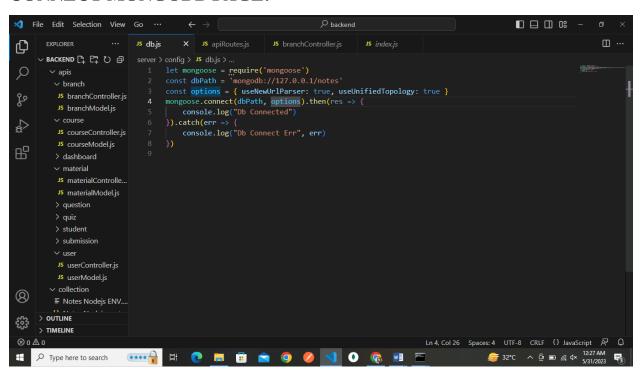
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CONNECT MONGODB PAGE:



SEEDER.JS PAGE:

```
XI File Edit Selection View Go ···
                                                                                                            □ □ □ □ □ −
                                                                                                                               □ …
                                                                     JS branchController.js
      EXPLORER
                         JS db.js
                                        JS seed.js X JS apiRoutes.js
     ∨ BACKEND [ □ □ server > config > J5 seed.js > ...
         JS courseModel.is
Q
                                User.findOne({email:"admin@gmail.com"}).then(userData => {

∨ material

လို
         JS materialControlle..
        JS materialModel.js
₽
        > quiz
                                           mail: "admin@gmail.com",
password: "$2b$10$tbSZP8IZYfEw/3FcZZhSLOsuQhxBSw.2dHYcofSnXU9m1fdE.manK",
        > student
        > submission

✓ user

                                       let user = new User(userData)
         JS userController.js
         JS userModel.js
                                          console.log("Admin created")
       collection
                                       console.log("Admin create err", err)
})
                                       }).catch(err => {
        ■ Notes Nodejs ENV....
        {} Notes Nodejs.post...

✓ config

       JS db.is
                                       console.log("Admin Already Exists");
      JS seed.js

✓ middleware

                                }).catch(err=>{
(8)
        JS tokenChecker.js
    > OUTLINE
     > TIMELINE
⊗ 0 ∆ 0
```

API ROUTER PAGE:

```
□ □ □ □ -
                                                                                           JS apiRoutes.js X JS branchController.js
Ð
         const router = require('express').Router()
const helper = require('../utilities/helpers')
ည
              > student
             > submission
                                                    const userController = require('../apis/user/userController')
const studentController = require('../apis/student/studentController')
const courseController = require('../apis/student/studentController')
const branchController = require('../apis/pranch/branchController')
const materialController = require('../apis/material/materialController')
const questionController = require('../apis/quistion/questionController')
const submissionController = require('../apis/submission/submissionController')
const dashboardController = require('../apis/dashboard/dashboardController')
留

■ Notes Nodejs ENV....
             {} Notes Nodejs.post...

✓ config

             JS db.js
             JS seed.js
                                                      router.post('/user/login', userController.login)
             ∨ routes
                                                      router.post('/student/add', studentController.addStudent)
        JS apiRoutes.js
             > utilities
           gitignore
                                                      router.post('/course/single', courseController.getAll)
router.post('/course/single', courseController.getSingle)
          {} package-lock.json
           {} package.jsor
         (i) README.md
                                                      router.post('/branch/all', branchController.getAll)
router.post('/branch/single', branchController.getSingle)
> OUTLINE
       > TIMELINE
```

MIDDLEWARE.JS PAGE:

```
∠ backend

X File Edit Selection View Go ···
                                                                                                                 □ □ □ □ □ −
                                                                                                                                    □ …
                                                         JS tokenChecker.js X JS branchController.js
      EXPLORER
                          JS db.js
                                         JS apiRoutes.js

∨ BACKEND [ ☐ ☐ Server > middleware > JS tokenChecker.js > .

                             1 let jwt = require('jsonwebtoken')
2 const helper = require('../utilities/helpers')
Q
         JS materialModel.js
         > quiz
လူ
        > student
₽

∨ user

         JS userController.js
                                         jwt.verify(token, helper.SECRET, function (err, decoded) {
         JS userModel.js
       collection

■ Notes Nodejs ENV....
        {} Notes Nodejs.post...
        JS db.is
        JS seed.js
        ∨ middleware
                                         status: 403,
success: false,
        > public\material
                                            message: "No Token Found "

∨ routes

        JS apiRoutes.js
       > utilities
> OUTLINE
     > TIMELINE
                                                                                          Ln 1, Col 1 Spaces: 4 UTF-8 CRLF {} JavaScript を 口
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                         Type here to search
```

MODELS OR SCHEMA:

```
★ File Edit Selection View Go ··· ← →
                                                                               ··· JS db.js
                                                                   JS userModel.js X JS branchController.js
                                                                                                                                                         □ …
Ф

    ∨ BACKEND [ ] [ ] [ ] [ ] [ ] server > apis > user > JS userModel.js > ...

                                  const mongoose = require('mongoose')
const userSchema = mongoose.Schema({
 Q
           JS materialModel.js
           > question
                                          userId: { type: Number, default: 0 },
name: { type: String, default: "" },
           > quiz
 વ્યૂ
          > student
                                          email: { type: String, default: "" },
password: { type: String, default: "" },
usonType: { type: String, default: "" },
          > submission
                                           userType: { type: Number, default: 2 },// 1=> Admin, 2=> Student
status: { type:Boolean, default:true},
          JS userController.js
Js userModel.js
                                           createdAt: { type: Date, default: Date.now }

■ Notes Nodejs ENV....

■ Notes Nodejs ENV....
         {} Notes Nodejs.post...

∨ confia

                                      const User = module.exports = mongoose.model('user', userSchema)
          JS seed.js

✓ middleware

          JS tokenChecker.js
         > public \ material
          JS apiRoutes.js
> OUTLINE
      > TIMELINE
```

SYSTEM IMPLEMENTATION AND TESTING

IMPLEMENTATION

Implementation is the status of the project when the theoretical designs turned into a working system. It is the process of converting a new revised system in to an operational one. It is the key stage in achieving a successful new system because usually it involves a lot of upheaval in the use department. It must therefore carefully plan and controlled so as to avoid chaos.

Apart from planning, the two major task of preparing for implementation are education and training of users and testing of system. Education of users should really have taken place much earlier in the project when they were being involved in the investigation and design work.

The user staff has been given necessary training for using the system. The training has made them to get acquainted with the system. The development any system results in success only when the system is implemented properly.

TESTING

Testing is one of the major hurdles in the development of the system. Testing is the process of fining errors in the system. Only error-free website will be stable for a long time. There are different types of techniques for finding the bugs in website.

System testing is the major quality control measure during software development. A series of test cases are generated that is intended to demolish the software that has been built. Testing is a set activity that can be planned and conducted schematically. Testing begins at the module level and work towards the integration of entire computer based system.

Testing is a process of executing a program with the intention of finding an error. A good test case is one that has a higher probability of finding an undiscovered error. A successful test case is one that uncovers an undiscovered error. Nothing is complete without testing, as it the vital success of the system.

TESTING OBJECTIVES

There are several rules that can serve as testing objectives. They are

- Testing is a process of executing a program with the intent of finding an error.
- A good test case is one that has high probability of finding an undiscovered error.
- A successful test is one that uncovers an undiscovered error.

If testing is conducted successfully according to the objectives as stated above, it would uncover errors in the software. Generally by testing we are verifying the following three aspects.

- Testing for correctness
- Testing for implementation efficiency.

CONCLUSION

In conclusion, the Online Notes Sharing Project built using the MERN stack provides a robust and efficient solution for note-taking, organization, and sharing. The project leverages modern web development technologies such as React, Redux, and Axios to create a dynamic and interactive user interface.

The project's key features include the ability to create an account, login, and create notes with a title and description. Users can edit, delete, and share their notes with other users, enabling efficient collaboration. The application also features a responsive user interface that allows users to access their notes on any device.

The project demonstrates the potential of web-based technologies for solving real-world problems and improving productivity. The MERN stack provides a scalable and robust server-side solution that can handle a large number of users and data.

Overall, the Online Notes Sharing Project is a useful tool for students, professionals, and anyone who wants to store and share their notes online. It provides an efficient and collaborative approach to note-taking, organization, and sharing, and showcases the power and versatility of the MERN stack.

BIBLIOGRAPHY

- www.google.com
- www.financebusiness.com
- www.w3school.com
- www.scribd.com/pages?/emp
- www.w3schools.in
- www.tutorialspoint.com