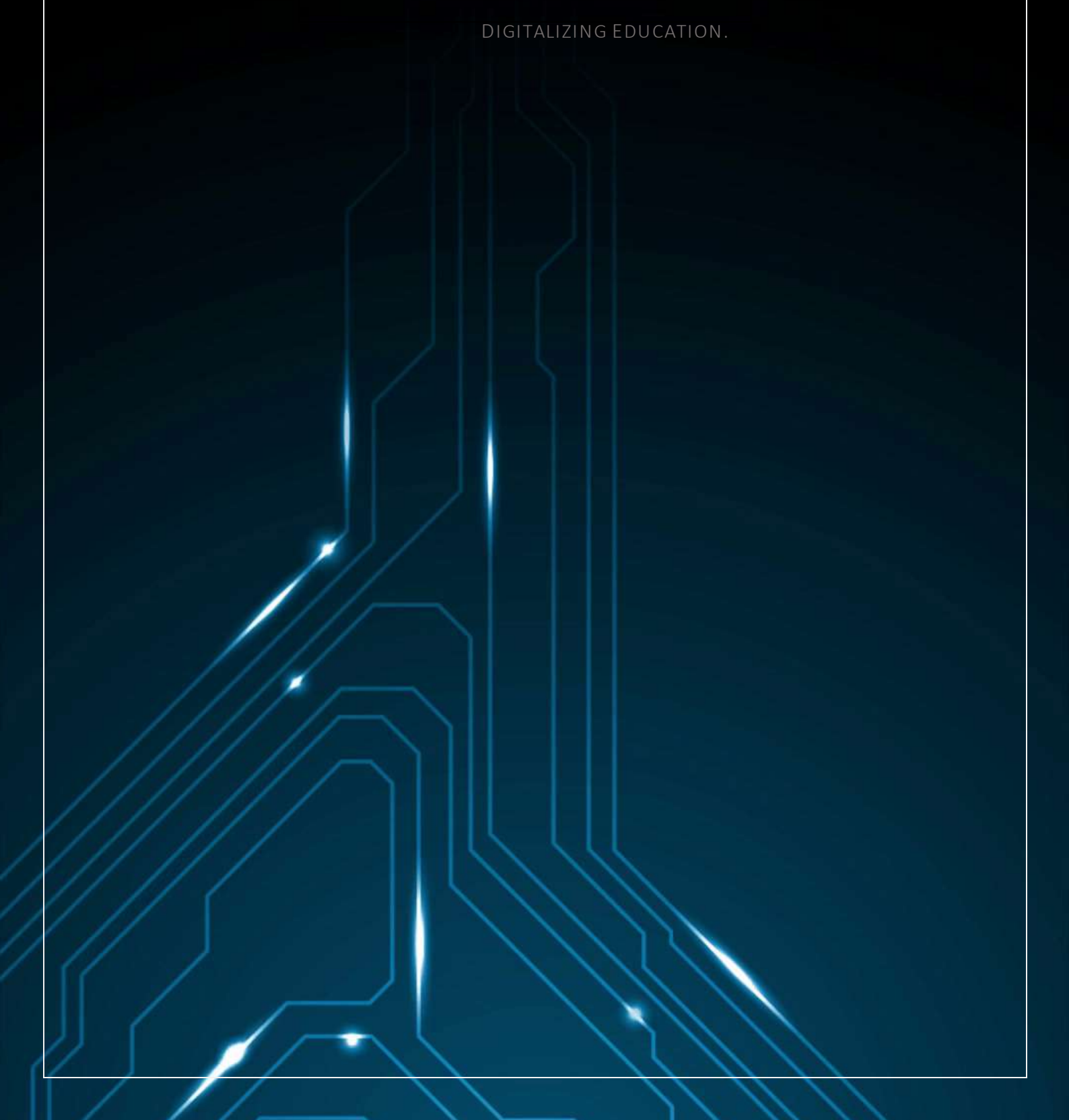


# E G U R U

DIGITALIZING EDUCATION.



*Dedicated to the  
Lotus Feet of  
our Beloved  
Mother  
S&J*

A humble offering by Akash Bairagi, under the guidance  
of Professor Sri. P Sunil Kumar.

## ACKNOWLEDGEMENT

We thank our Institution for giving us the opportunity and motivation for developing this project. We thank our guide Sri.

P Sunil Kumar, without whose direction we would have not perceive our steps to the fulfilment of our project. We would

also like to extend my heartfelt thanks to my friends and family for the continuous support. I am extremely grateful to

everyone who has helped us on this project directly or indirectly. I am eternally indebted to our beloved Bhagawan

Sri Sathya Sai Baba for his grace on us.

# E G U R U

EGuru is a web based Learning Management System, created using MERN stack. It provides the most customizable and secure infrastructure to launch one's personalized, interactive based course website. It facilitates effortless management of content and participants.

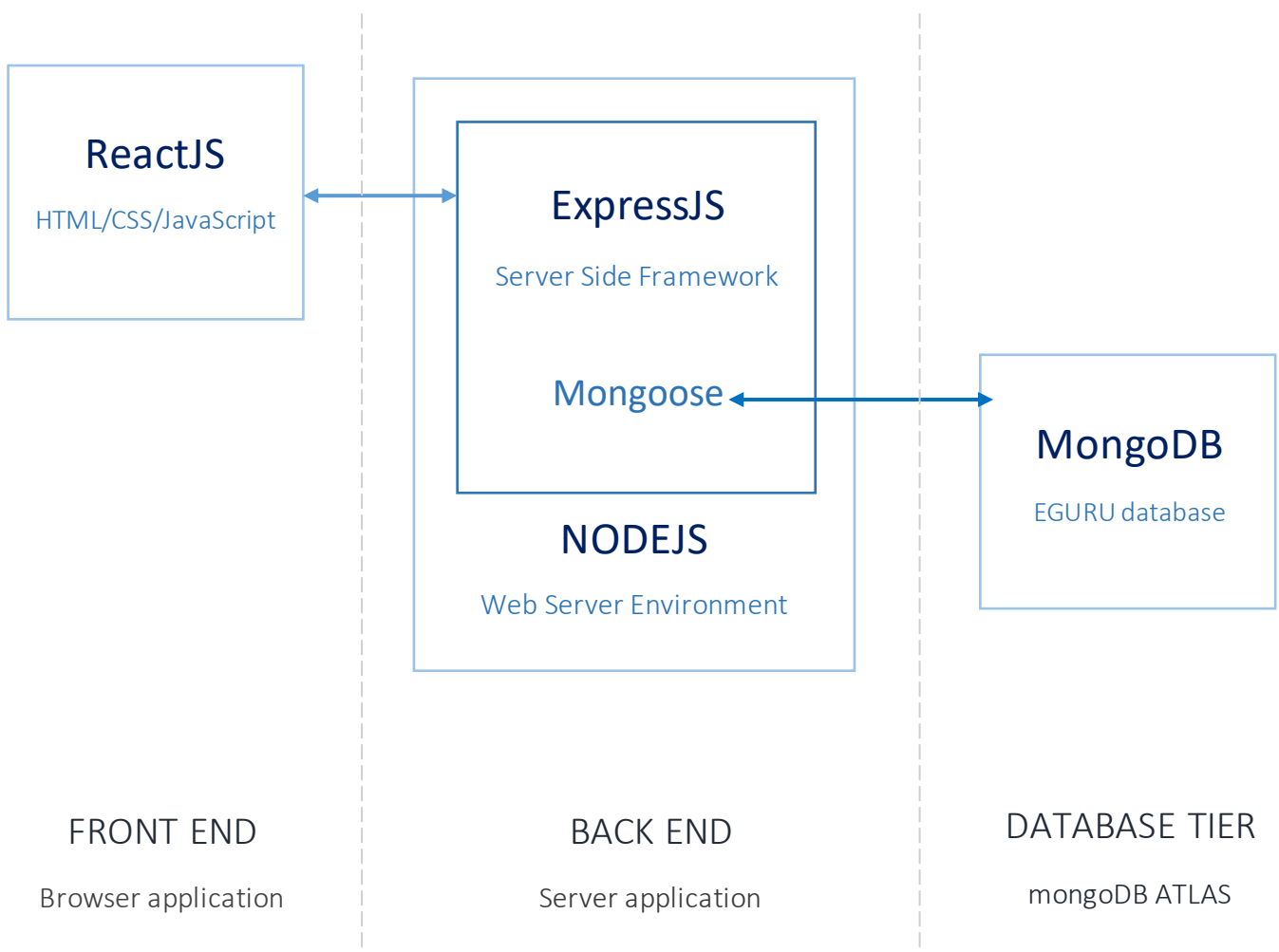
Some of the features are of EGuru :

- Secured accounts and session using JSON web tokens and HMAC encryption.
- Fully customizable Page look for instructors.
- Simple technique for creating course flow.
- Manage students access.
- Students have classified access to the content.
- Facility to stream video.
- Students have option liking and posting doubts in feedback box of the content.

## THE BUILDING BLOCKS

EGuru is made using the latest web development framework – MERN, which consists of -

- Mongoose – a document-oriented, No-SQL database,
- ExpressJS – the framework supporting the backend,
- NodeJS – the JavaScript run time environment for server,
- ReactJS – the framework supporting our frontend UI.



## THE DEVELOPMENT PLATFORM

The Softwares that has aid us for the efficient development of our EGuru project are as follows :-

### MongoDB Atlas

MongoDB Atlas is the global cloud database service for modern applications. We have used Atlas for -

- Hosting and managing our EGuru Database on the internet.
- Atlas makes our data highly secure and easily monitor the database state.
- It has also facilitated for better accessibility and collaboration.

### SendGrid

SendGrid is a cloud-based SMTP provider that allows you to send email without having to maintain email servers. We have used SendGrid for Single Factor Authentication of our Clients. SendGrid is fast, reliable, free and has simple api to use from NodeJS.

### Visual Studio Code

It is a light weight code editor built by Microsoft. Our whole project was structured using VScode. It comes with essential extensions for MERN files, which helps in code formatting, syntax highlighting, quick-fixes, code suggestions and code autocomplete. It has also helped us in integrating client and server side effectively.

### Github

GitHub, code hosting platform, made version control and collaboration smooth. Apart from this, we have used Github for making our project open source to the public. It is also the platform which we are going to use for hosting

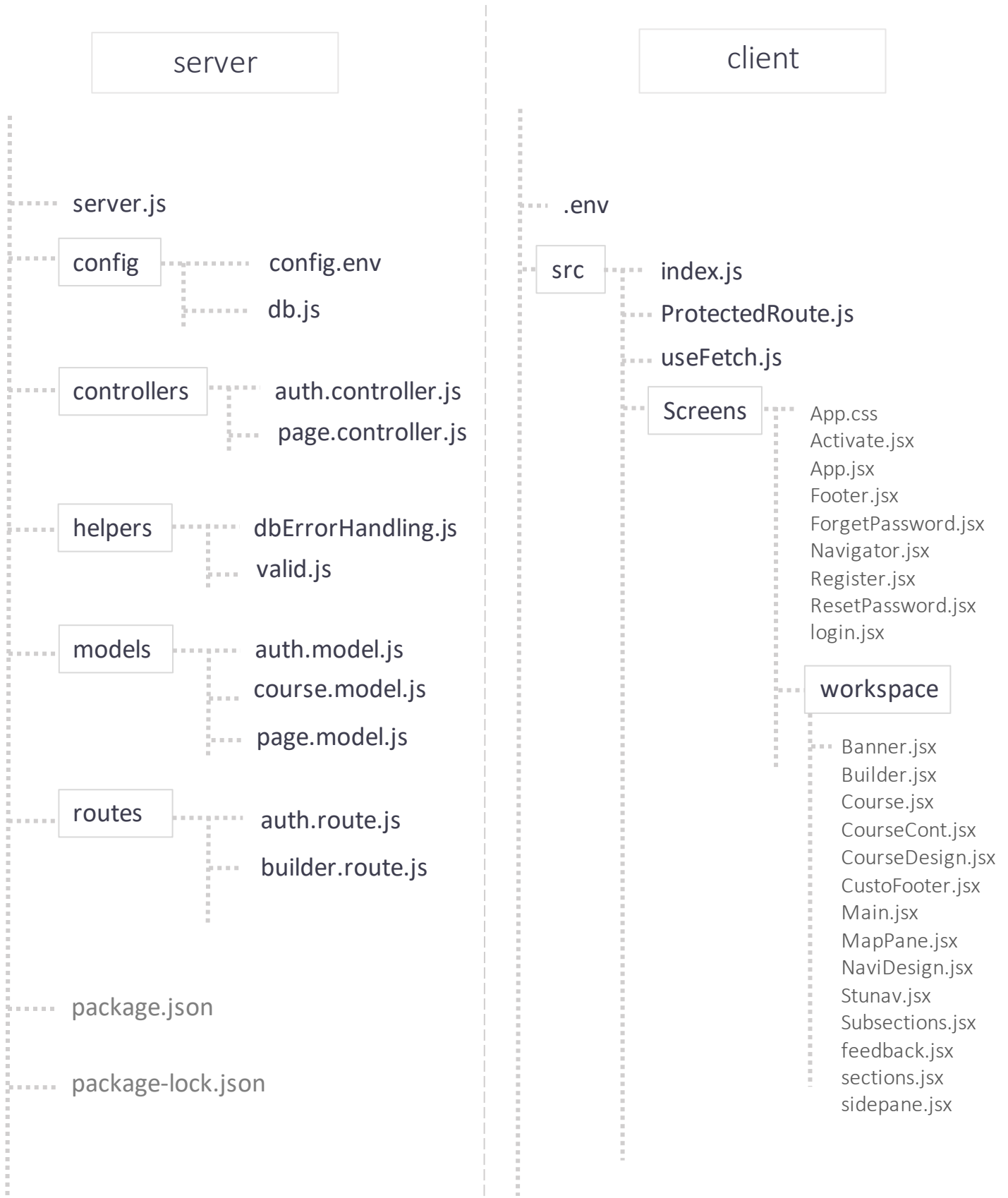
our EGuru web app on internet with the help of Heroku server connected to Github.

Hardware Configurations :-

- OS - Windows 10
- OS Type – 64bit
- Ram – 4GB
- Processor – Intel Pentium

# THE UNDERLYING ARCHITECTUE

E G U R U (Teacher Side)





## node\_modules

- cors
- body-parser
- dotenv
- express
- express-jwt
- express-validator
- jsonwebtoken
- lodash
- mongoose
- morgan
- node-fetch
- sendgrid-mail

## helpers

- auth.js

## assets

- \*.png

## public

- index.html

- ...

## node\_modules

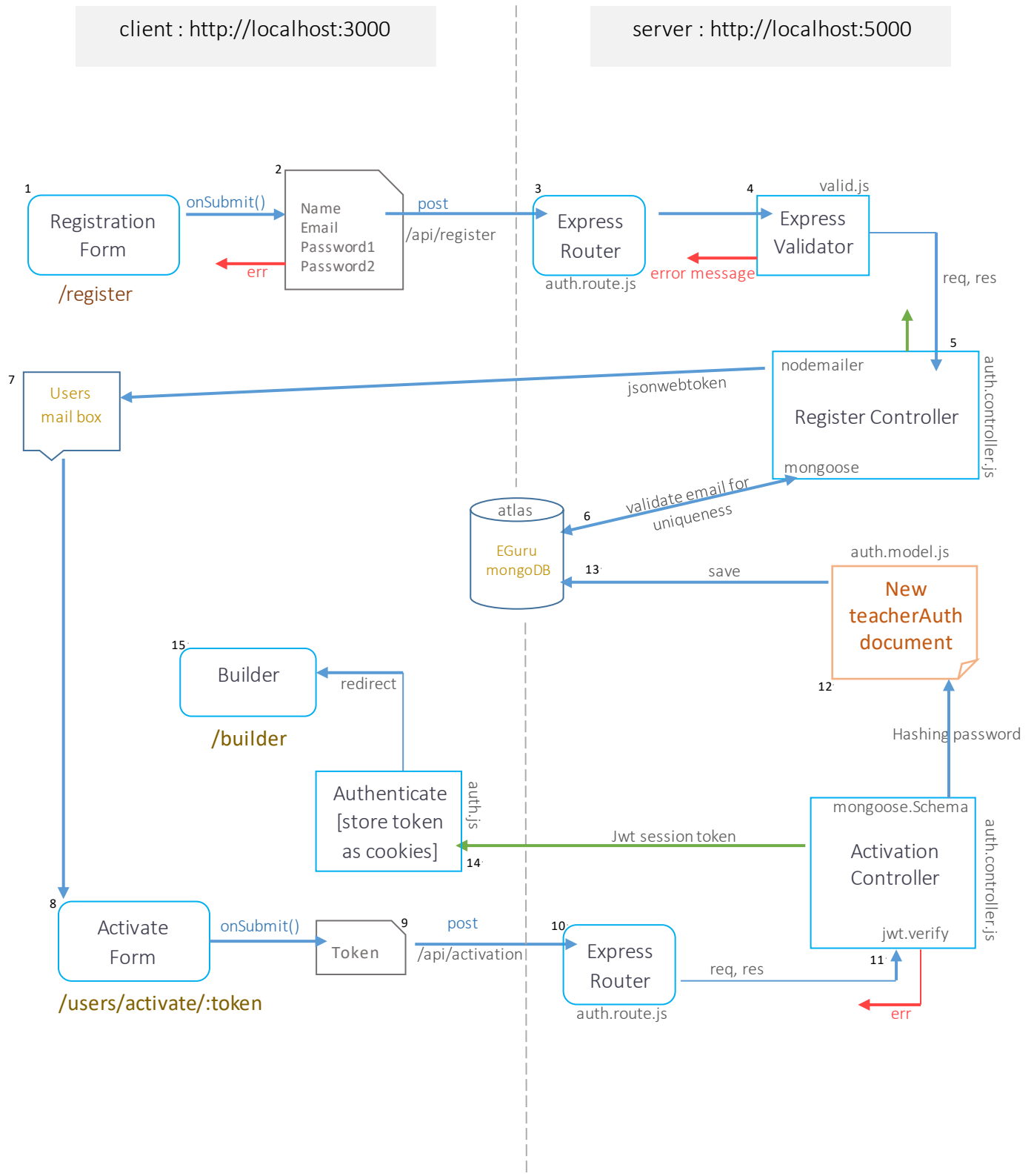
- axios
- js-cookie
- jsonwebtoken
- react 17.0.1
- react-dom
- react-router-dom
- react-toastify

- package.json

- package-lock.json

# A WORKFLOW CYCLE

## Registration Event



# APP SHOTS

Welcome page -



## WHAT WE PROVIDE

THE BEST PLATFORM TO LAUNCH YOUR LMS.



**CUSTOMIZABLE**

Customize and design your web with road maps, videos, materials, flowcharts and quizzes.



**SOCIABILITY**

Make your website come alive with discussion forums, student's feedback, and comments.



**EASY AND FREE**

Easy user friendly interface to quick start your e-learning website, with numerous features for free.

## ABOUT EGURU

EGuru is an open source project originally initiated by Narendra and Akash. The platform helps an educator to by-pass any hosting website and establish an independent identity in the current E-learning opportunity. Quality education must reach every corner of the world at a very optimum price. This can only happen when fruits of the efforts made by online tutors are not eaten up by other web giants. Our moto is to optimize the supply chain of knowledge.

### CONTACT US

Whatsapp number - +91 90000 00000  
Email - eguru@gmail.com  
Please feel free to contact us for any related queries. Sarvam.

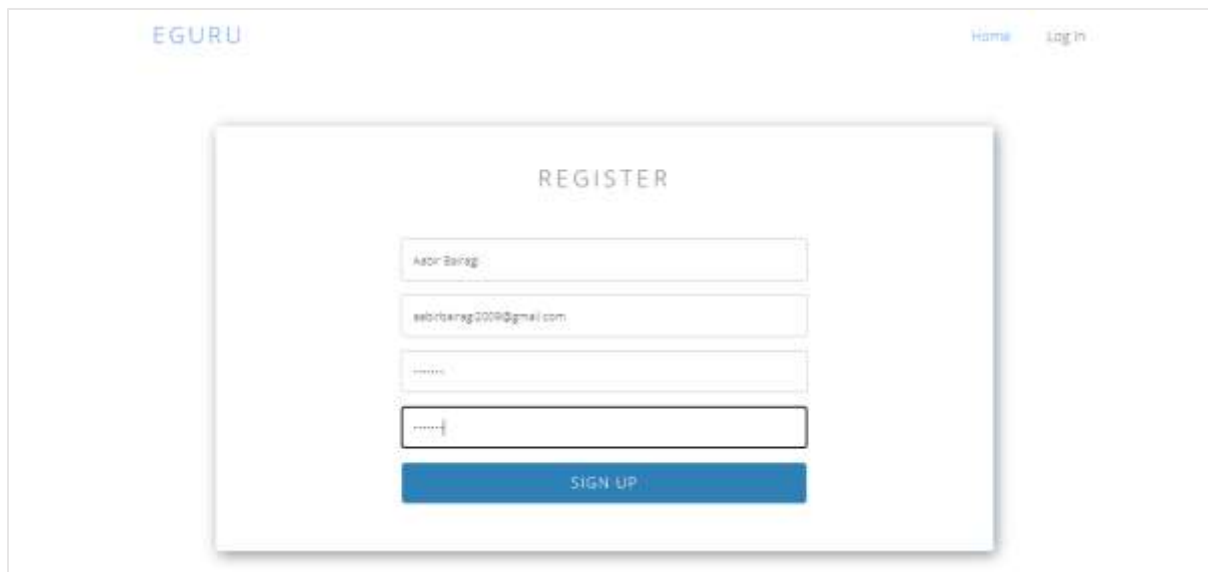
### USEFUL LINKS

[Source Code](#)  
[Contact Us](#)  
[Documentation](#)

### SOCIAL

[Instagram](#)  
[Facebook](#)  
[Youtube](#)

## Register Page -



EGURU Home Log In

### REGISTER

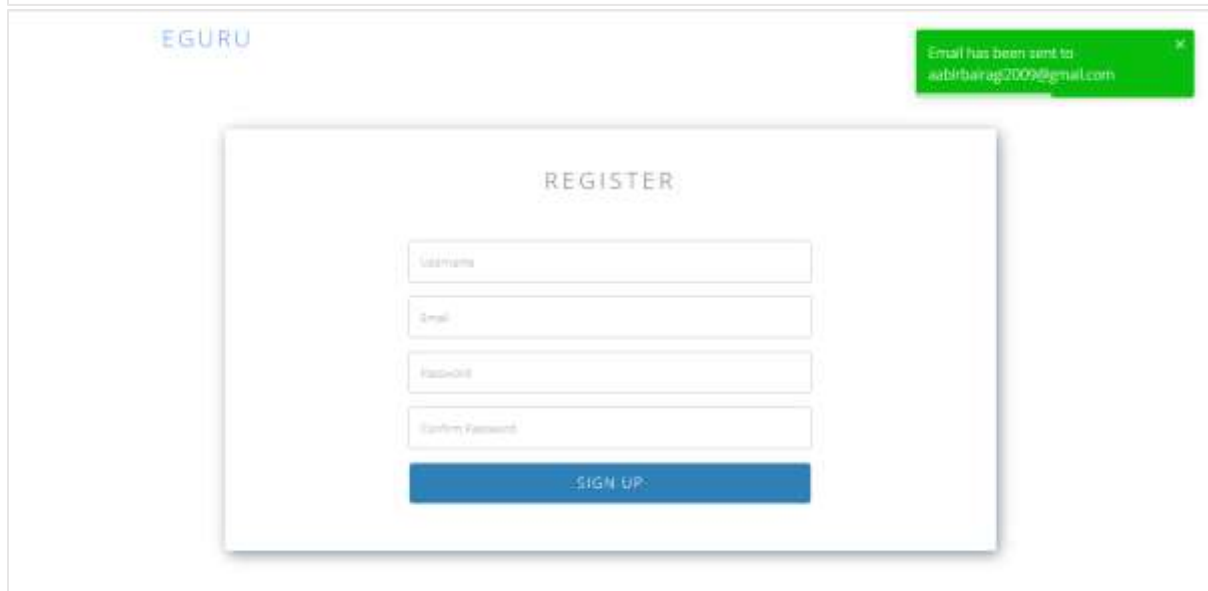
Username

Email

Password

Confirm Password

SIGN UP



EGURU

Email has been sent to aaksh99bairagi@gmail.com

### REGISTER

Username

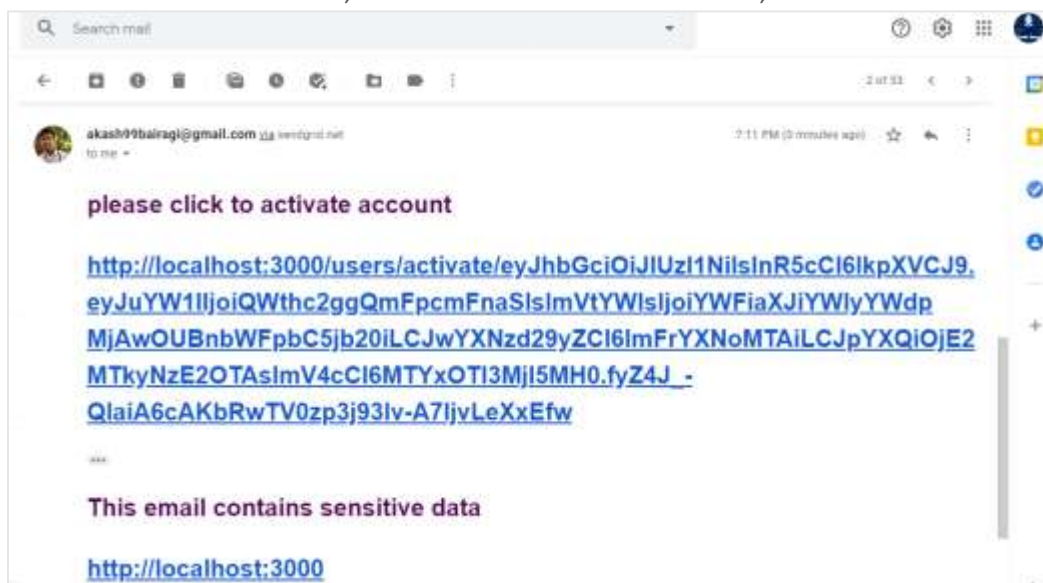
Email

Password

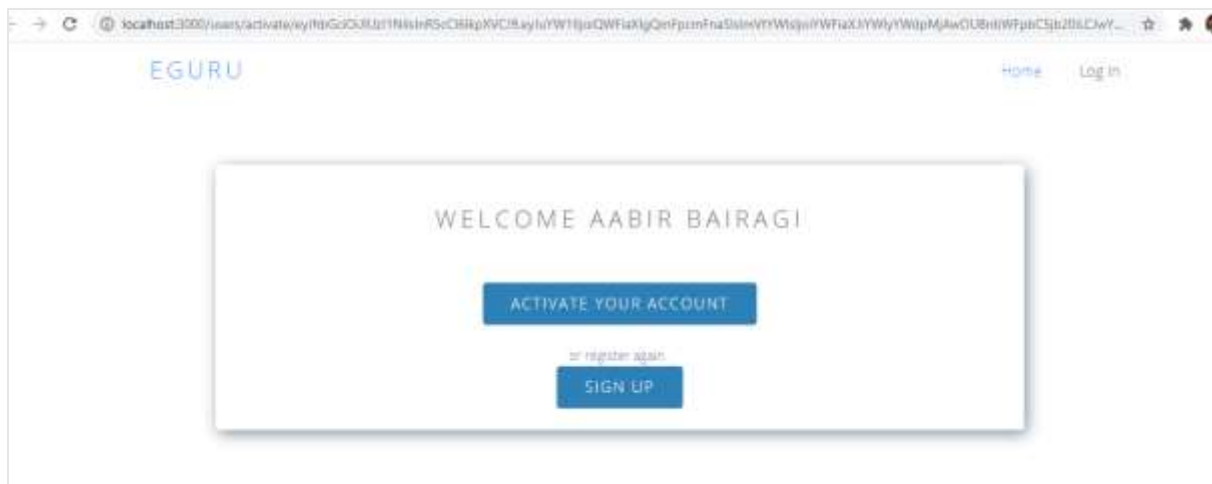
Confirm Password

SIGN UP

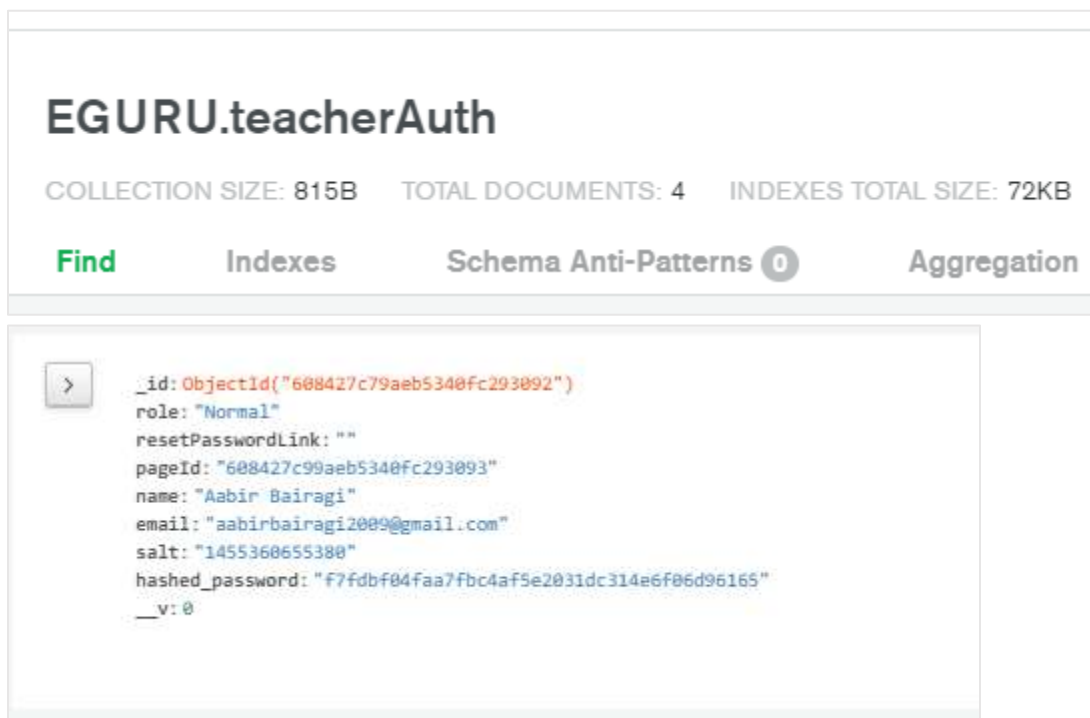
Account activation link, which is valid for 10 minutes, is mailed to user' mailID..



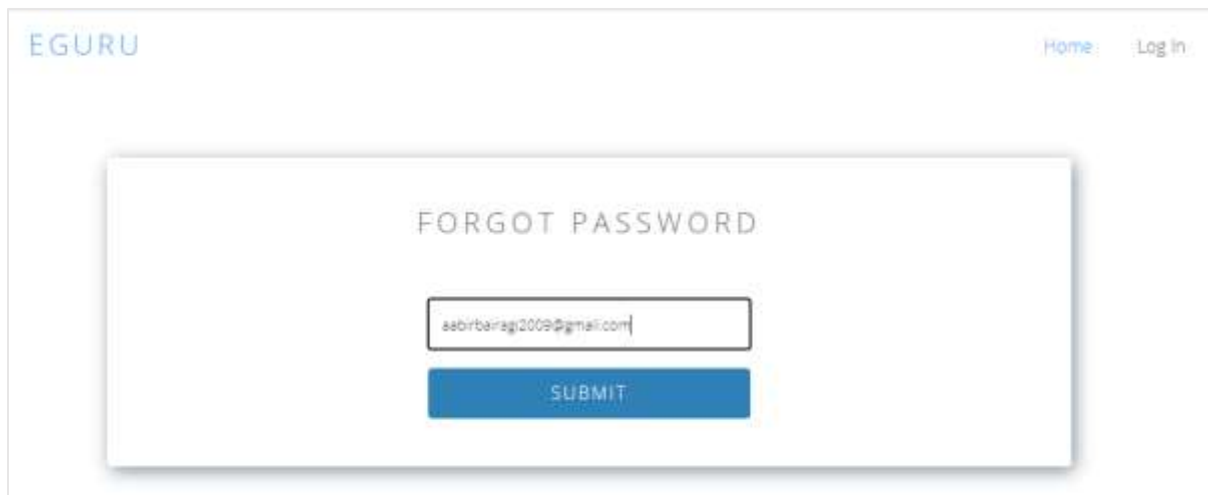
Mailed link directs to Activation Page –



After clicking Activate your account, the New User added in the teacherAuth collection of EGuru Database -



## Forgot Password Page –



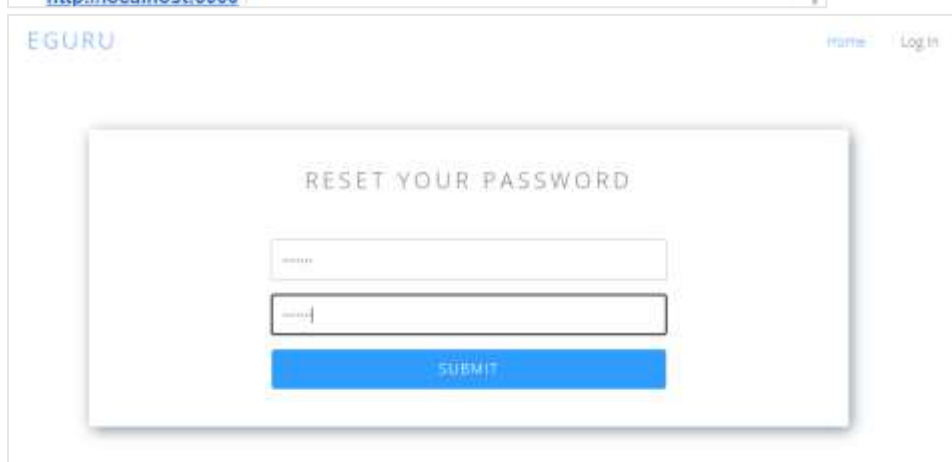
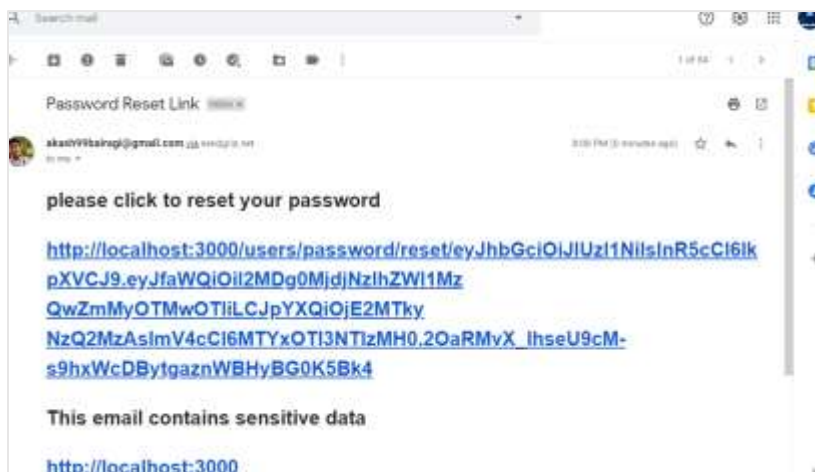
EGURU Home Log in

### FORGOT PASSWORD

asbirbaragi2009@gmail.com

SUBMIT

Link is mailed the users mail ID, for changing the password.



EGURU Home Log in

### RESET YOUR PASSWORD

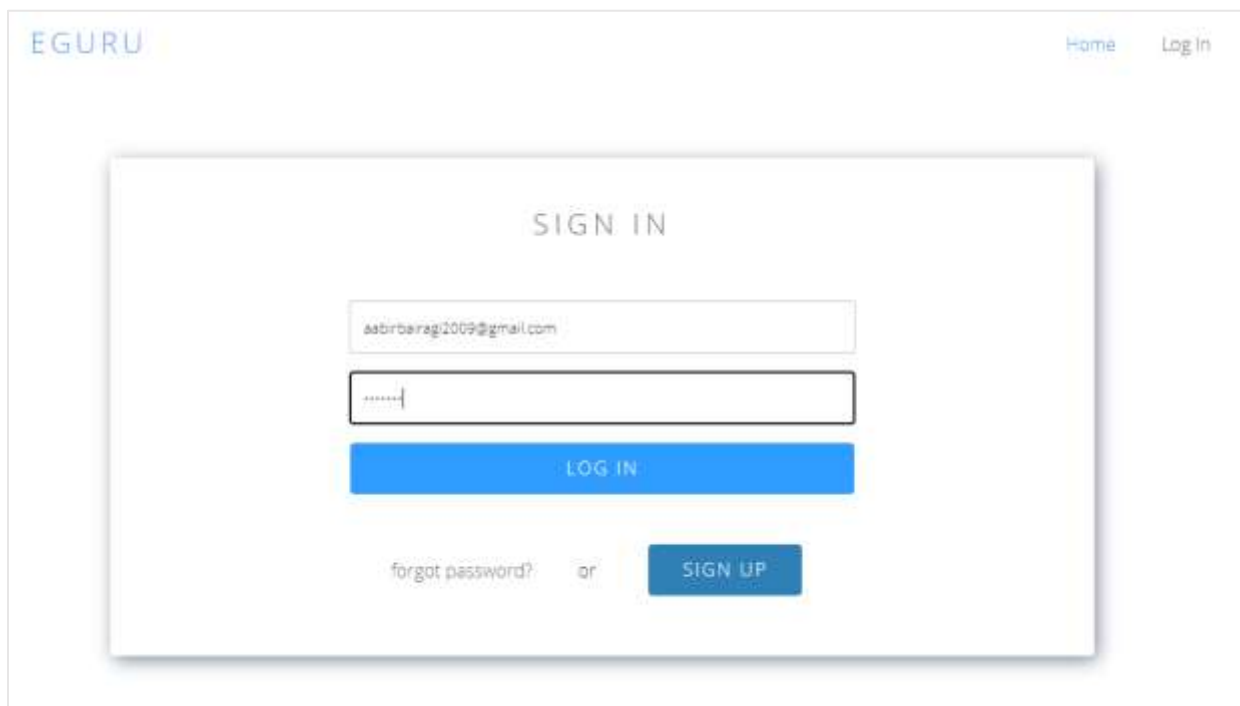
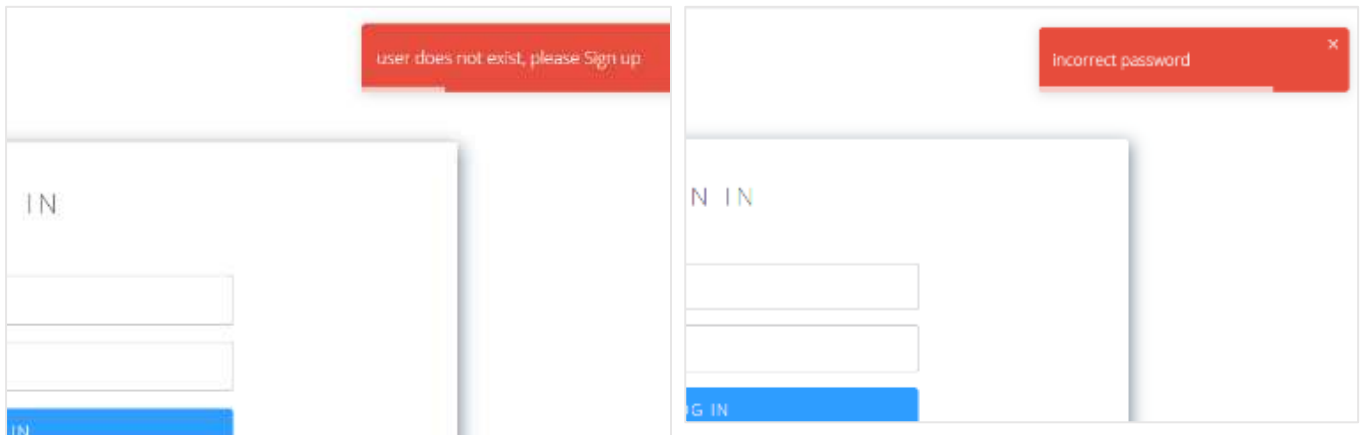
123456

SUBMIT

The new password will be hashed using HMAC and the document will be updated in the DB.

## Sign In Page –

### Secured login and error management



After successful login, Authentication Token is maintained as cookie, which is valid for 1 day –

Storage	token	eyJhbGciOiJIU...	1...	/	2021-04-25T14:38:56....	1
storage						
Local Storage						
Session Storage						
IndexedDB						
Web SQL						
Cookies						
http://localhost:3000						

## Builder Page for Instructor –

EGURU

SAVE

Author

add tagline

add description

Say Something...

COURSE NAME

Course Description

Duration 0 hrs

Ratings 0 %

Enrolled 0

img

Publish

Statistics

Change Domain

Update Profile

Log Out

Guide

Contact Us

ABOUT ME

CONTACTS

Type something about yourself.

Your contacts

Made using EGuru PE

## Builder Page state document created on pageDetails collection of EGuru DB –

EGURU.pageDetails

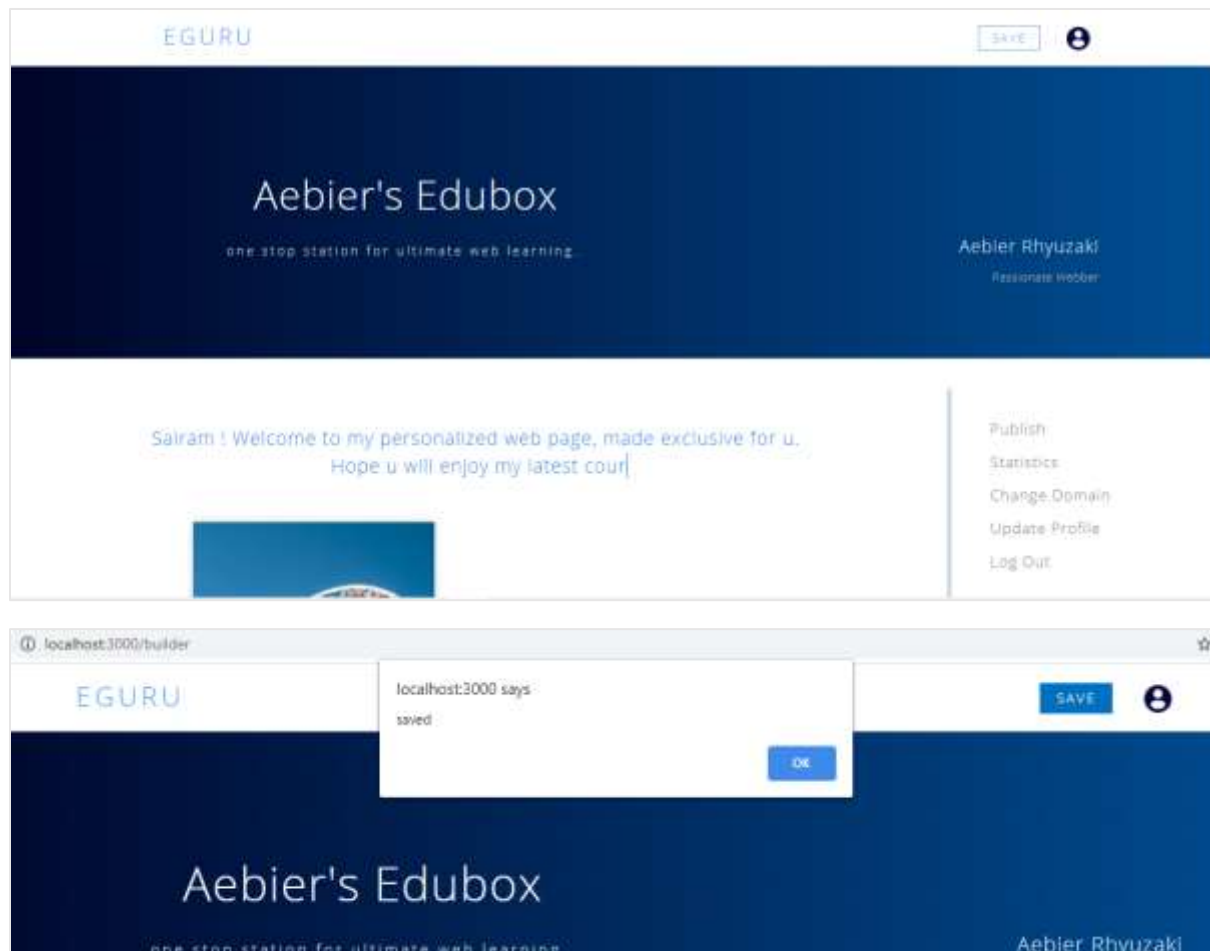
COLLECTION SIZE: 1,004BZ TOTAL DOCUMENTS: 3 INDEXES: TOTAL 101 36KB

Find Indexes Schema And Patterns Aggregation Search

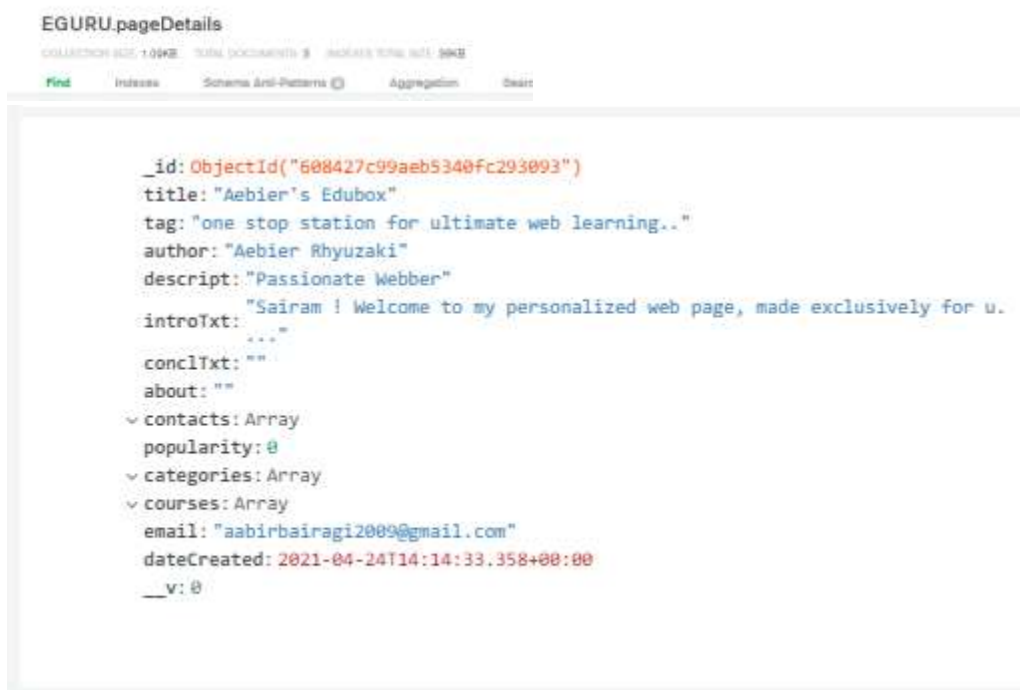
```
{
  "_id": ObjectId("608427c99aeb5340Fc293093"),
  "title": "",
  "tag": "",
  "author": "",
  "descript": "",
  "introTxt": "",
  "conclTxt": "",
  "about": "",
  "contacts": Array,
  "popularity": 0,
  "categories": Array,
  "courses": Array,
  "email": "aabirbairagi2009@gmail.com",
  "dateCreated": 2021-04-24T14:14:33.358+00:00,
  "__v": 0
}
```



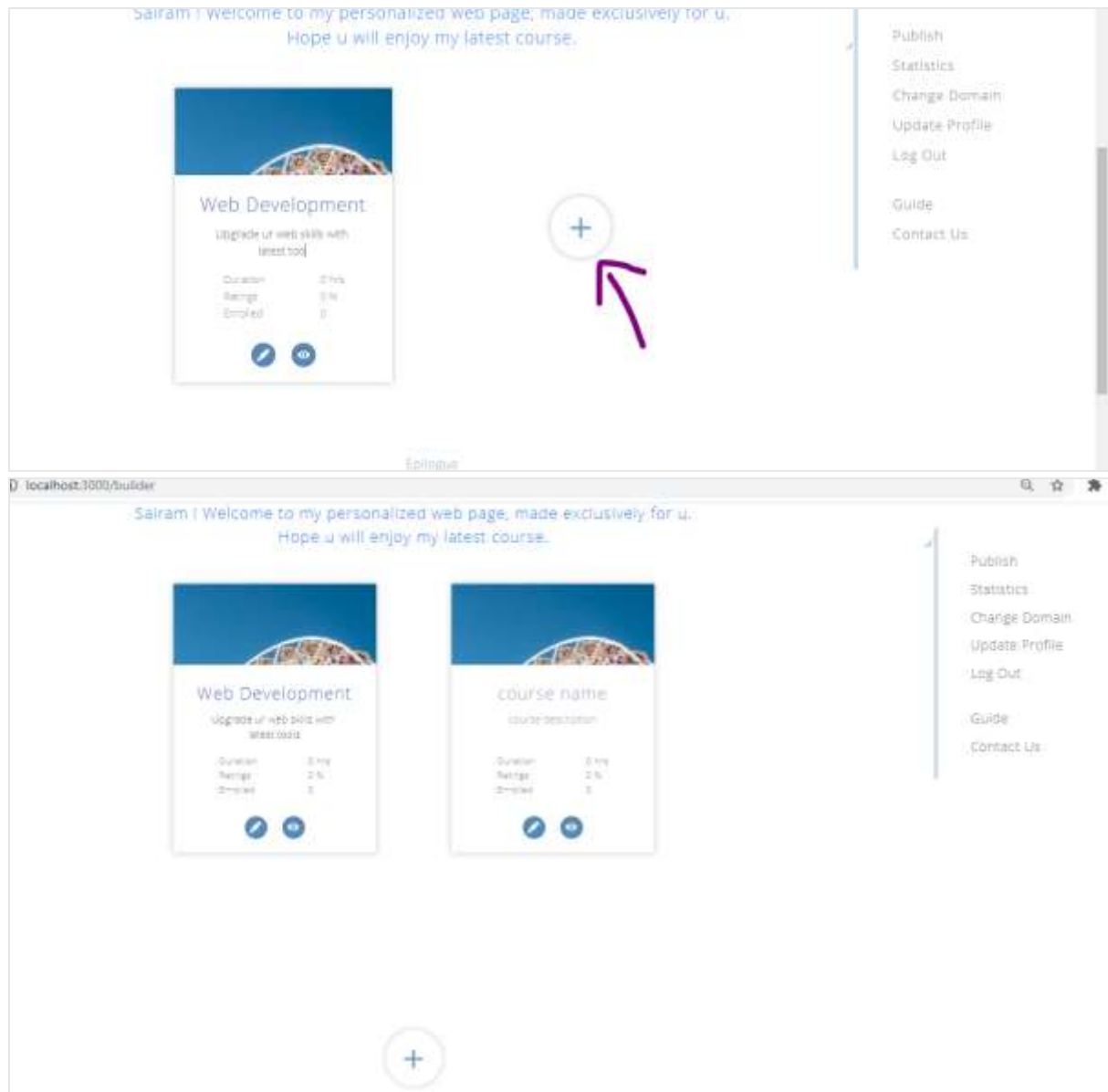
Editing and Saving changes done to the front page –



New State saved in the pageDetails collection of Eguru database –

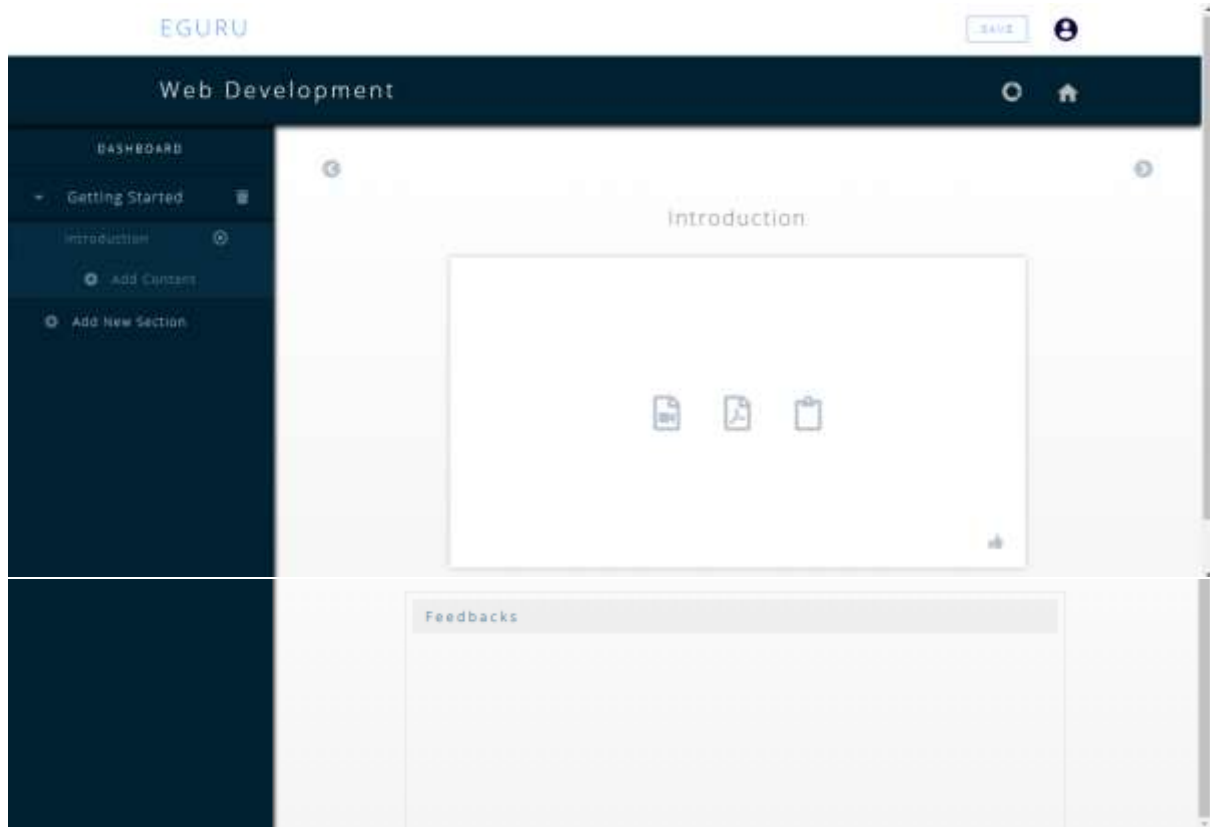


## Adding New Course –

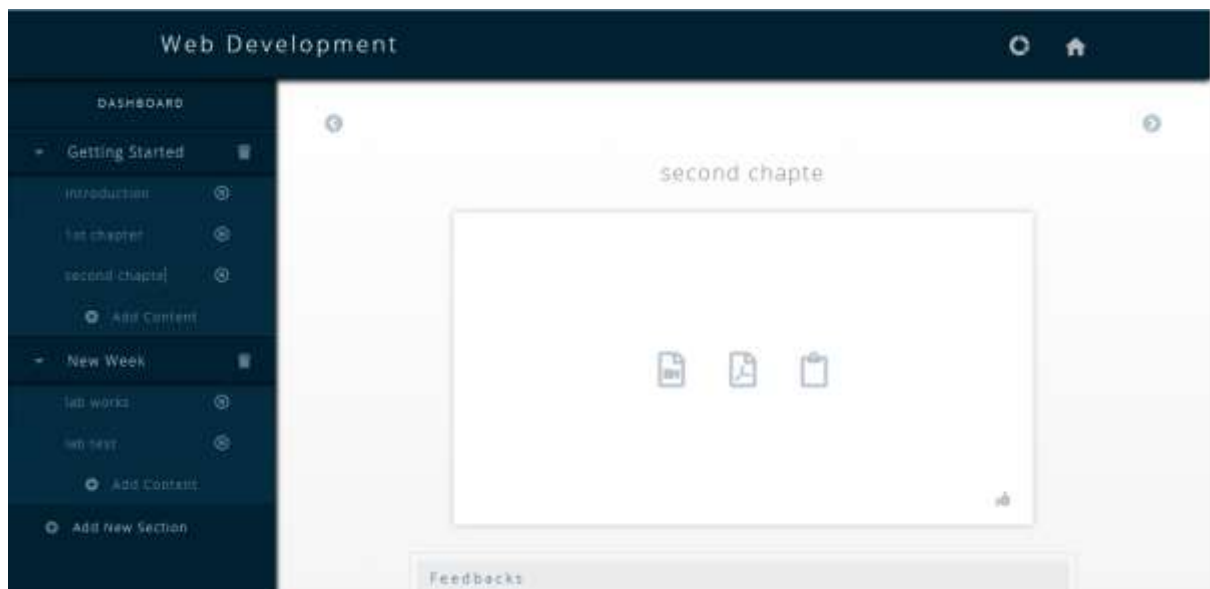


## Editing the course details –

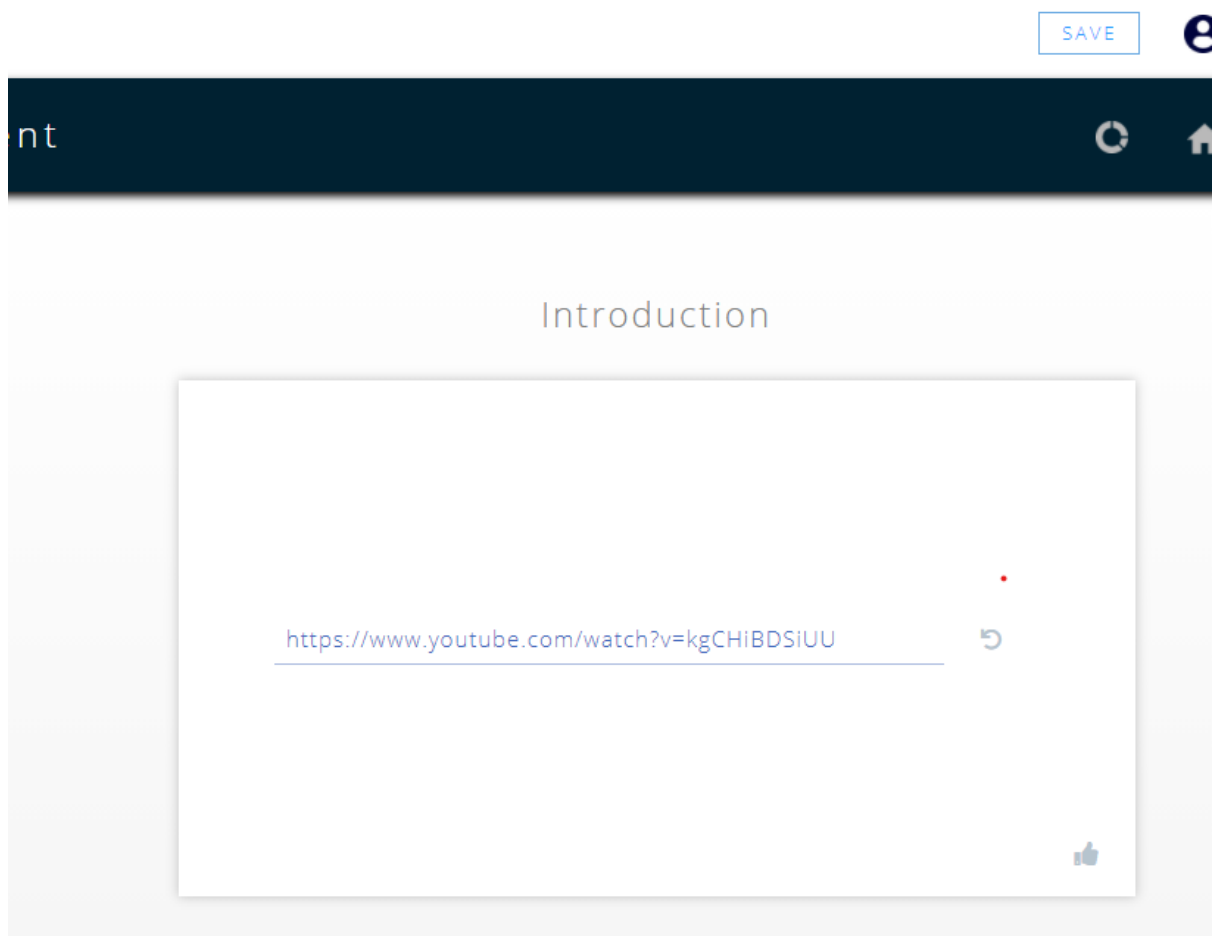




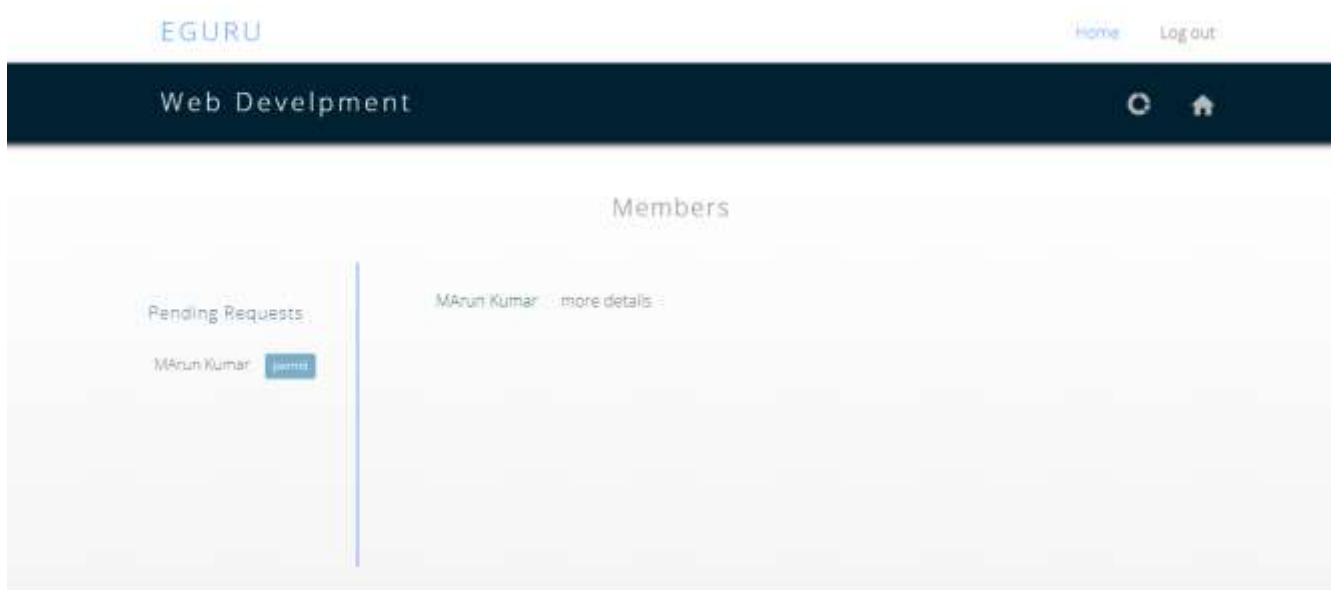
Features for adding new section, new content, deleting them, editing titles, selecting content type...



Adding Content Link.



Permitting New Members and Tracking them.



## UTILIZED SCHEMAS

```
const courseSchema=new mongoose.Schema({
  {
    pageId:{type: String},
    cname:{
      type:String,
      trim:true,
      default:'course name'
    },
    descript:{
      type:String,
      trim:true,
      default:''
    },
    category:[String],
    duration:{type:Number, default:0},
    rating:{type:mongoose.Schema.Types.Decimal128, default:0.0},
    members:[memdetails],
    memRequest:[memdetails],
    roadmap:coursedetails
  },
  {
    collection: 'course'
  },
});
```

```
const userSchema=new mongoose.Schema({
  {
    email:{
      type:String,
      trim:true,
      required:true,
      unique:true,
      lowercase:true
    },
    name:{
      type:String,
      trim:true,
      required:true
    },
    hashed_password:{
      type:String,
      required:true
    },
    salt:String,
    role:{
      type:String,
      default:'Normal'
    },
    resetPasswordLink:{
      type:String,
      default:''
    },
    pageId:{
      type:String,
      default:''
    },
  },
});
```

```
const profileSchema=new mongoose.Schema({
  {
    email:{type:String, required:true, unique:true},
    name:{type:String, default:''},
    country:{type:String, default:''},
    state:{type:String, default:''},
    eduStatus:{type:String, default:''},
    phone: {type:String, default:''},
    whatsapp: {type:String, default:''},
  },
  {
    collection: 'teacherProfile'
  },
  {
    timeStamp:true
  }
});
```

```
const pageSchema=new mongoose.Schema({
  {
    email:{type:String, required:true},
    title:{type:String, default:''},
    tag:{type:String, default:''},
    author:{type:String, default:''},
    descript:{type:String, default:''},
    introTxt:{type:String, default:''},
    conclTxt:{type:String, default:''},
    about:{type:String, default:''},
    contacts:[String],
    popularity:{type:mongoose.Schema.Types.Decimal128, default:0.0},
    dateCreated:{ type: Date, default: Date.now },
    categories:[String],
    courses:[mongoose.Schema.Types.ObjectId]
  },
  {
    collection: 'pageDetails'
  },
  {
    timeStamp:true
  }
});
```

## FUTURE SCOPE

Our EGuru project is at very infant stage. This management app has exhaustive scope for development, and it is bound to become better with plugging of additional advanced features.

- We can make the Feedback system more modern and optimised.
- A search system can be introduced, as the number of courses integrated.
- Scope for more customizability.
- Using Machine Learning we can generate advanced statistical reports.

## ENDING NOTES

The current pandemic situation has increased the demand for a cost effective learning management system among educational institutions. EGuru is a small initiative aiming to meet that demand. At personal level, the project was quite challenging and we gave best of our time, energy, patience and creativity. We may not have reached our initial vision for our project, but in the process we have gained wide range of skills, and now we are very much confident about working on any MERN full stack project. This project is not an end, it's just the beginning. Thank You Lord for every bit of knowledge that we have achieved, Thank You Lord for giving us the strength to work out of our comfort zone, Thank You Lord for reaching us to our weaknesses, Thank You for rebuilding us...

## REFERENCES

- React Docs
- Node Docs
- MongoDB docs
- [www.youtube.com](https://www.youtube.com)
- [www.css-tricks.com](https://www.css-tricks.com)
- [www.tutorialspoint.com](https://www.tutorialspoint.com)
- [www.stackoverflow.com](https://www.stackoverflow.com)