

# **EDULOGICAL**

## **A PROJECT REPORT**

*Submitted by*

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*in partial fulfillment for the award of the  
degree of*

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**IN**

**ELECTRONICS AND COMMUNICATION**

**UNIVERSITY INSTITUTE OF ENGINEERING AND TECHNOLOGY  
SECTOR 25, CHANDIGARH**

**PANJAB UNIVERSITY : CHANDIGARH**

**160025**

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## **ABSTRACT**

This project's primary interest is helping the society. The project helps students, undergraduates, as well as graduates, get knowledge about different entrance exams, their details, and resources all at one platform. It also makes the students aware of different opportunities in their respective domainsstreams.

Being a student every opportunity is great as it helps learn new things but there are a thousand opportunities out there that we are not even aware about or have any knowledge of their existence . Our website is a savior in such situations.

To tackle this issue we have made a collaboratively designed website specifically for educational purposes providing students with information about nearby coaching institutes, resources, and last but not least - the information about different forthcoming exams. This website's peculiarity lies in its principle of pertaining to society's role in the contribution of the website By having suggestions from authorized users making it a society driven website.

We provide user information about most of the coming entrance exams which include the registration date and the required eligibility criteria. Informed users how and where he/she can apply or register. Recommend books and Resources from which they can prepare for the exam. Suggest students best nearby coaching centers to prepare for the same. And all these at one platform.

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## **ACKNOWLEDGEMENT**

This website became a reality with the kind of support and help of many individuals. I would like to extend my sincere thanks to all of them.

First and foremost, I would like to thank our professor and mentor Dr. Nidhi Garg who guided me in doing this project. She provided me with invaluable advice and helped me in difficult periods. Her motivation and help contributed tremendously to the successful completion of the project.

I am highly indebted to UNIVERSITY INSTITUTE OF ENGINEERING AND TECHNOLOGY, PUNJAB UNIVERSITY for their guidance and constant supervision as well as for providing necessary information and resources regarding the project & also for their support in completing the project.

Furthermore, it would not have been possible without the kind support and help from different individuals and resources. I would like to extend my sincere thanks to all of them.

My thanks and appreciation also go to my team-mates in developing the project and people who have willingly helped me out with their abilities.

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## **CHAPTER-1: INTRODUCTION**

### **MOTIVATION**

The website is an outcome of the joint inspiration of I and my teammates to help the society by contributing in a way that a large number of people are benefitted. Nowadays there are tons of entrance exams that help students to get admitted into their dream institutions. It is difficult to decide which exam to give, best resources for its preparations and to find the best coaching as there are tons of coaching institutes who help in preparing the same exams.

The website, a saviour solution for this budding problem, helps students who are in school, college or affiliated with any other educational institution to get aware about every exam and opportunity associated with their field of interest.

It also helps them to be part of this great inspiration by allowing them to contribute to the website which helps other students get resources, coaching addresses and other details that are genuine and tested by the contributor themselves. All this is possible as our website provides students with the feature to contribute user experienced resources and details.

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## **ABOUT**

**WE'RE AN ONLINE PLATFORM PROVIDING COMPETITIVE EXAM DETAILS AND PREPARATION RESOURCES**

Founded by a team of 5 tech enthusiast in 2021. Edulogical aims to help students get confidently prepared for every exams and as well as opportunity in their pursued field. Our content and resources are freely available and we prefer to keep it that way to encourage our readers acquire as many skills and information as they would like to. Our motto is to nurture each individual passion and educational success.

This educational platform helps students from school, colleges and other educational institutions get well informed about different examinations, their important details, resources and opportunities associated with their streams all at one platform.

As nowadays it is difficult to get all the useful information all at one platform. So to tackle this issue we have made a collaboratively designed website made specifically for educational purposes providing students with information about nearby coaching institutes, resources associated with the exam, and most importantly - the information about forthcoming exams. This website's peculiarity lies in its principle of pertaining to society's role in the contribution of the website By having suggestions from authorized users making the website society driven.

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Users have to sign in/ sign up to the website to search for the details of competitive exams they are interested in and related to their field.

After choosing the exam they can get the best resources which will help them in preparing for the exam and also details of nearby coaching centers who teach the content associated with the exam.

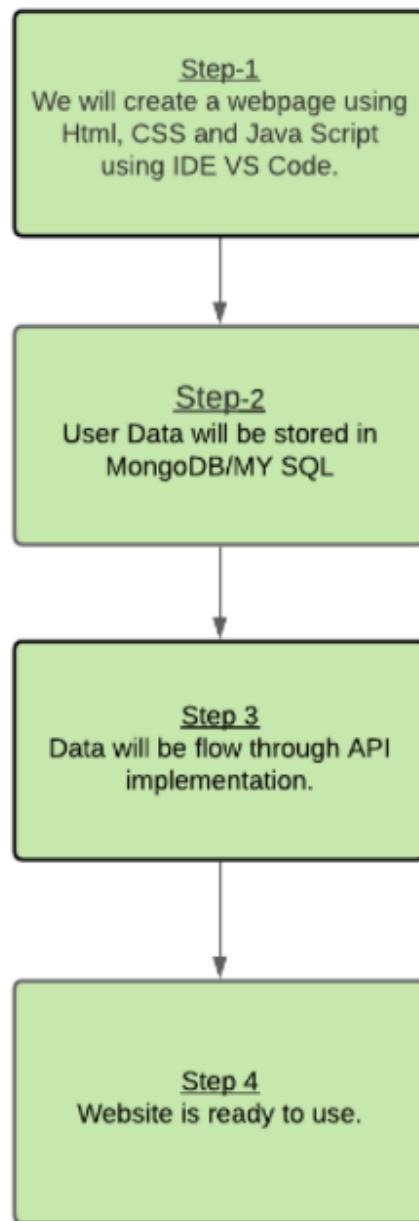
After getting satisfactory details and resources for their concerned exam students or anyone browsing the website can help other students by contributing . Suppose if someone knows or is aware about an exam/opportunity which is not on the website yet they can contribute about its exam details just by filling the forms about details, effective resources and coaching that can help in preparation.

In resources they can add any website link , youtube video link, or any books which helped them in preparing for the exam. And if there is any well known or trusted coaching which hasn't been included they can share its contact/address as well. So basically it is a website which helps in benefitting the students by providing the path to pursue their career.

The website is also implemented as an android app for users who don't own a laptop or PC so that they are not deprived of any opportunity or exam detail and for easy access of the content by all users.

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## WORKING FLOW OF MAKING THE WEBSITE



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## **ASSUMPTIONS**

1. The process of software development of the project will be able to meet the needs of the user
2. The IT support for the project will be able to cater to technical difficulties such as system error, network congestion, connection problem, and technical errors.
3. The data has been automatically updated in the data inventory and all information in the data inventory is synchronized.
4. All the data that has been shared is correct and up to date.
5. It has been assumed that new data will be regularly added.
6. All the information contributed by the user is correct .
7. The information shared is best and user experienced.
8. Information collected while sign in of the user is secured and encrypted.
9. Information provided is free of cost as there will be no subscription charges while registering on the website.

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## **CHAPTER-2 : MAIN THEME**

### **SOFTWARES AND LANGUAGES USED FOR FRONT-END:**

- HTML
- CSS
- JavaScript
- BOOTSTRAP
- Canva

### **SOFTWARES AND LANGUAGES USED FOR BACK-END:**

- Json file
- Express.js
- Node.js
- Database (MongoDB , Mongoose , MongoDB Compass)
- POSTMAN (For testing Api)

### **SOFTWARES USED FOR INTEGRATION:**

- Vs Code
- Github
- Atom
- Postman
- Android studios
- JAVA

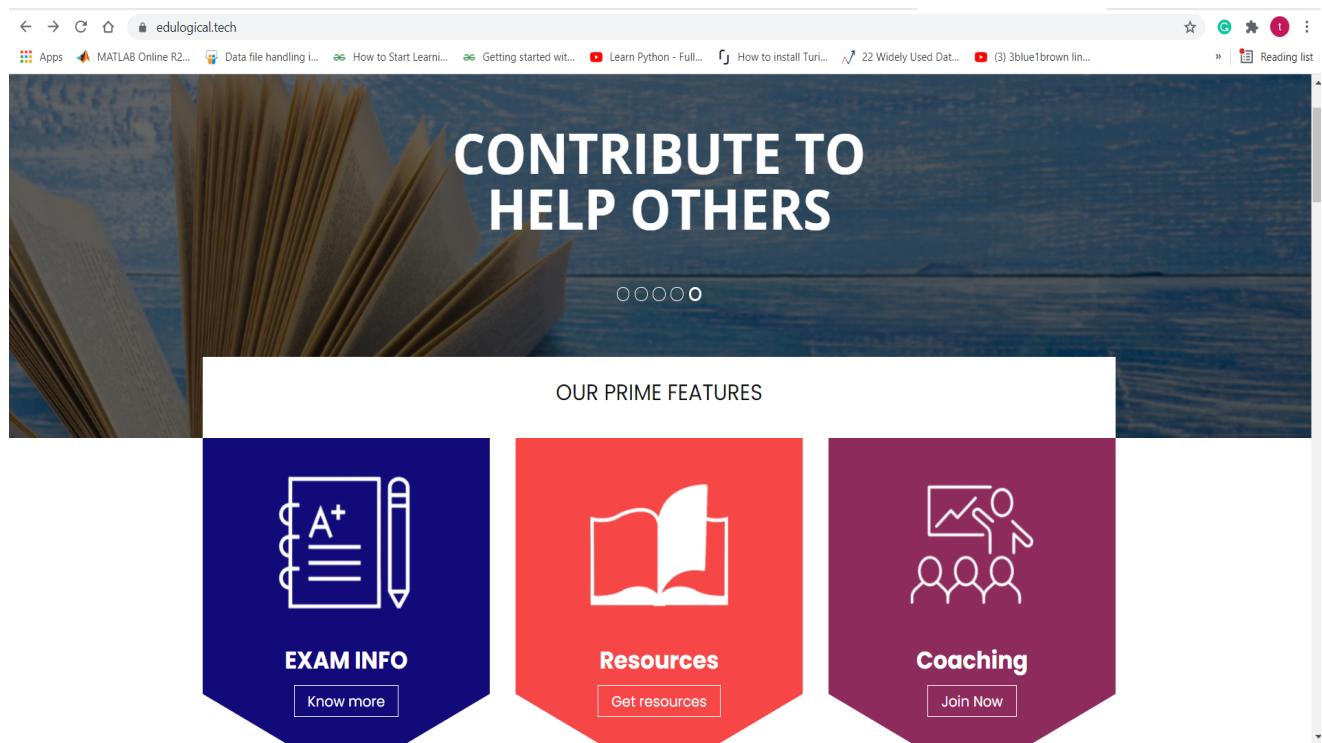
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## FRONT-END

We all started working on the front-end, back-end and database separately and then integrated them all to make the final working website.

For the front-end we started with a basic structure of the website in which we decided about the homepage, colour scheme, different forms to include, resources to provide, content to include etc. We made all of these separately and then integrated to form an interactive front-end.

### HOME PAGE:



**ABOUT US**

**WE'RE AN ONLINE PLATFORM  
PROVIDING COMPETITIVE EXAM  
DETAILS AND STUDY RESOURCES**

Founded by a team of 5 tech enthusiast in 2021. Edulogical aims to help students get confidently prepared for every exams and as well as opportunity in their pursued field. Our content and resources are freely available and we prefer to keep it that way to encourage our readers acquire as many skills and information as they would like to. Our motto is to nurture each individual passion and educational success.

Initially the team started working on the Homepage of the website. This page consists of all the main tabs of the website like homepage, exams, coaching, resources, contribute now, contact us, and our mission. This also has a about us section which tells about our website and its motto.

## COACHING PAGE:

**EDULOGICAL**

HOME EXAMS COACHING RESOURCES CONTRIBUTE NOW ▾ CONTACT US OUR MISSION [Sign Up](#) [Login](#)

**COACHING CENTRES**

Provided below is a list of the most renowned coachings and their details that will definitely help you crack the exam that you aim for. The details include faculty members, addresses, contact, and email. Feel free to contribute if you know of any other great coaching for the exam.

**1) AAKASH INSTITUTE**

Faculty : Dr. Aayush(Physics) , Mrs. Radha(Chemistry), Mrs. Arundhati(Maths)

have more than **(10-20)yrs years of Experience**

Our aim is to become one of the most admired brands in education sector and help the young aspirants to make their dream comes true through quality teaching , technology enabled systems and commitment

This page lists all the renowned coachings that are available and provide preparation for different exams. These websites are contributed by the website users so these resources are genuine and also tested by the contributed. This unique feature helps other users get contacts of coaching that are user-experienced and saves a lot of time.

## EXAM PAGE:

The screenshot shows the 'EXAMS' section of the Edulogical website. At the top, there's a navigation bar with links for HOME, EXAMS, COACHING, RESOURCES, CONTRIBUTE NOW, CONTACT US, OUR MISSION, Sign Up, and Login. Below the navigation, a large heading says 'EXAMS'. Underneath it, a specific section is highlighted for 'BITSAT'. To the left of this section is the logo of Birla Institute of Technology & Science, Pilani, featuring a gear design and text in English and Hindi. The 'BITSAT' section contains the following information:

- BITSAT**
- REGISTRATION DATE:** 3RD WEEK OF MARCH TO 2ND WEEK OF APRIL 2022
- BITSAT (short for BITS Admission test) is an online (computer based) entrance examination for admission to integrated first degree programmes of BITS Pilani (Pilani; Goa, Hyderabad campuses).
- Documents Required:** Class 10 and 12 marks statement, Scanned images of passport size photograph and signature, Credit/Debit card details for payment of application fee.
- Eligibility Criteria:** Passed class 12 or its equivalent examination from any central or state board. Candidates must have Physics, Chemistry and Mathematics subjects in class 12. Candidates should have obtained a minimum of 75% aggregate marks in Physics, Chemistry and Mathematics in class 12 examination with 60% marks in each subject. Students who are presently studying on BITS on any campus are not eligible to apply.

This page provides information about exams that are associated with the stream or field of the user . All tells the user about registration date, documents required, eligibility criteria and some basic description of the exam.

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## RESOURCES PAGE:

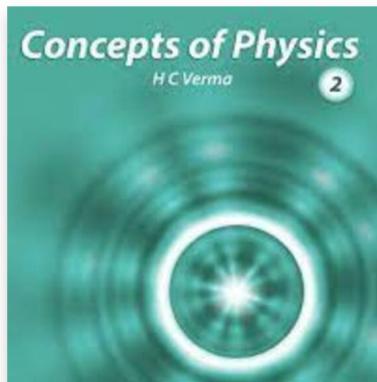


HOME EXAMS COACHING RESOURCES CONTRIBUTE NOW ▾ CONTACT US OUR MISSION

[Sign Up](#) [Login](#)

## RESOURCES

Provided below is a list of all the best resources that will fully prepare you for your exam of interest, will make you more confident in your preparation, and will help you stand out from the crowd. Get all your resources in one place for a hassle-free preparation.



### CONCEPTS OF PHYSICS (VOL. 1 AND 2)

By H.C. Verma

Subject : Physics

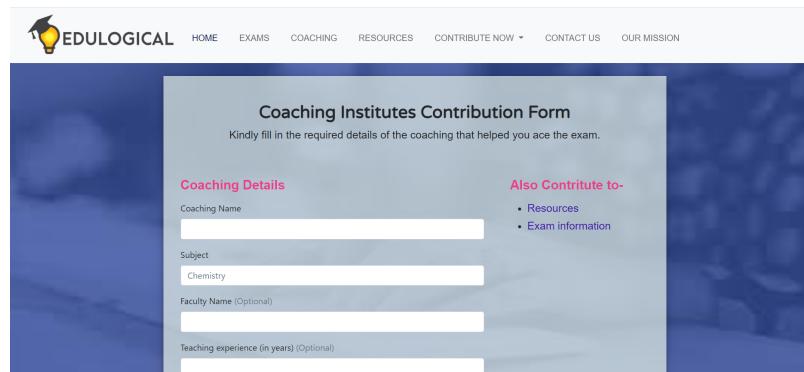
Quality problems on all topics of physics

Book edition : 2018

[READ MORE](#)

This page provides resources like pdf books, video lectures , notes etc for preparation of the exam that the user has registered for. Buying books can be very expensive but edulogical provides you the softcopy and saves the day. This page gives you all the resources at one place making your preparation hassle free.

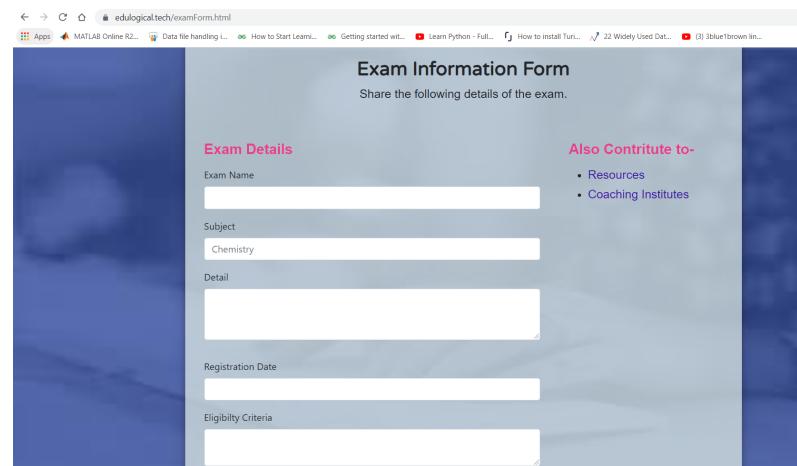
## FORMS:



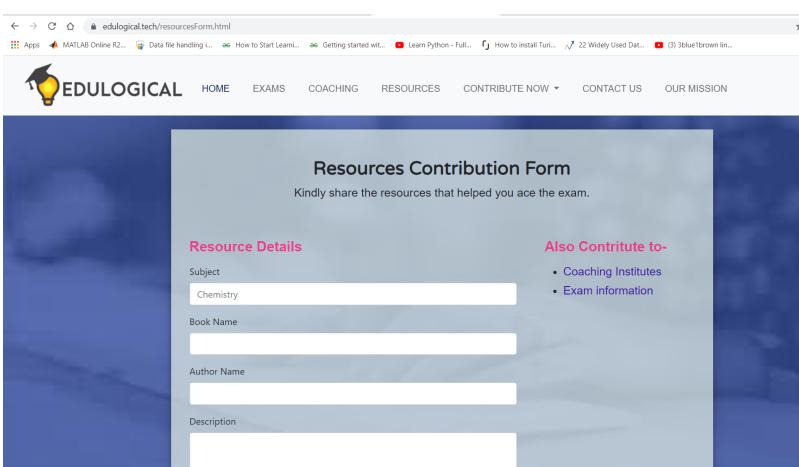
The screenshot shows a form titled "Coaching Institutes Contribution Form". It asks users to fill in required details about coaching that helped them ace an exam. The fields include "Coaching Name" (with a placeholder "Chemistry"), "Subject" (placeholder "Chemistry"), "Faculty Name (Optional)" (placeholder " "), and "Teaching experience (in years) (Optional)" (placeholder " "). To the right, there's a section titled "Also Contribute to-" with options "Resources" and "Exam information". The background features a blue gradient.

## Exam info form

## Contribution form



The screenshot shows a form titled "Exam Information Form". It asks users to share details of the exam they took. Fields include "Exam Name" (placeholder " "), "Subject" (placeholder "Chemistry"), "Detail" (placeholder " "), "Registration Date" (placeholder " "), and "Eligibility Criteria" (placeholder " "). To the right, there's a section titled "Also Contribute to-" with options "Resources" and "Coaching Institutes". The background features a blue gradient.



The screenshot shows a form titled "Resources Contribution Form". It asks users to share resources that helped them ace an exam. Fields include "Subject" (placeholder "Chemistry"), "Book Name" (placeholder " "), "Author Name" (placeholder " "), and "Description" (placeholder " "). To the right, there's a section titled "Also Contribute to-" with options "Coaching Institutes" and "Exam information". The background features a blue gradient.

## Resource form

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## BACKEND :

The back-end basically is designed using three dimensions -

- First, we had created an API For Post & GET of coaching, resources, exams .

**FOR COACHING (POST REQUEST)** - It will create a field in our database when our

Contributors will fill out a form on website.

```
{} package-lock.json      36 //USING ASYNC AWAIT FOR COACHING
{} package.json          37 app.post("/createcoaching",async(req,res) => {
38   const user = new Coaching(req.body);
39
40   try{
41     const user = new Coaching(req.body);
42     const createUser = await user.save();
43     res.status(201).send(createUser);
44
45   }catch(e){ res.status(400).send(e);}
46
47
```

**FOR COACHING (GET REQUEST)** - From this we will be able to get all the data related to coaching .

```
//Reading data of registered coaching(i.e. handling GET request). this will give us all the data
app.get("/coaching",async(req,res) => {
  try{
    const coachData = await Coaching.find();
    res.status(200).send(coachData);
  }catch(e){ res.status(400).send(e);}
})
```

---

**For EXAM (POST REQUEST)** - It will create a field in our database when our contributor will fill form on website

```
66  //USING ASYNC AWAIT FOR exams
67  app.post("/createexams",async(req,res) => {
68      const user = new Exam(req.body);
69
70  try{
71      const user = new Exam(req.body);
72      const createUser = await user.save();
73      res.status(201).send(createUser);
74
75  }catch(e){ res.status(400).send(e);}
76
77  })
78
```

**For EXAM (GET REQUEST)** - From this we will be able to get all the data related to coaching .

```
// Reading data of exams (i.e. handling GET request). this will give us all the data
app.get("/exams",async(req,res) => {

    try{
        const examData = await Exam.find();
        res.status(200).send(examData);

    }catch(e){ res.status(400).send(e);}

})
```

---

**FOR RESOURCES (POST)** - It will create a field in our database when our contributor will fill a form on the website.

```
//USING ASYNC AWAIT FOR RESOURCES
app.post("/createresources",async(req,res) => {
    const user = new Resource(req.body);

    try{
        const user = new Resource(req.body);
        const createUser = await user.save();
        res.status(201).send(createUser);

    }catch(e){ res.status(400).send(e);}

})
```

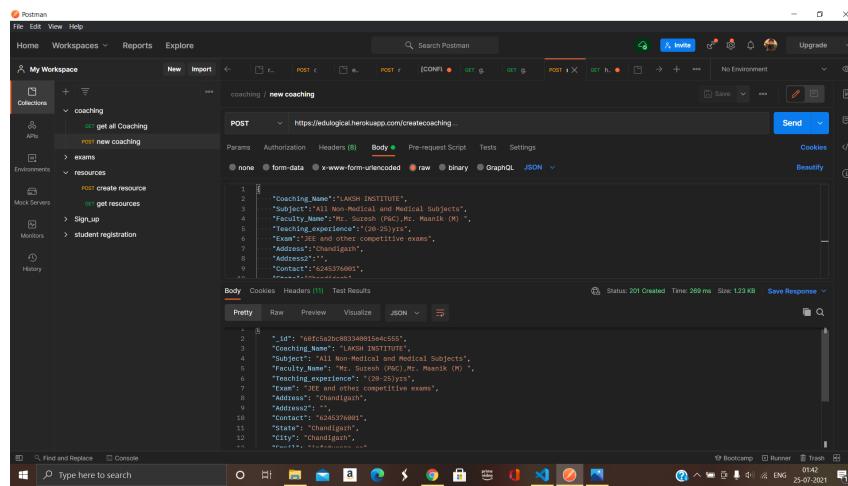
**FOR RESOURCES (GET REQUEST)** - From this we will be able to get all the data

```
app.get("/resources",async(req,res) => {
    try{
        const resourceData = await Resource.find();
        res.status(200).send(resourceData);

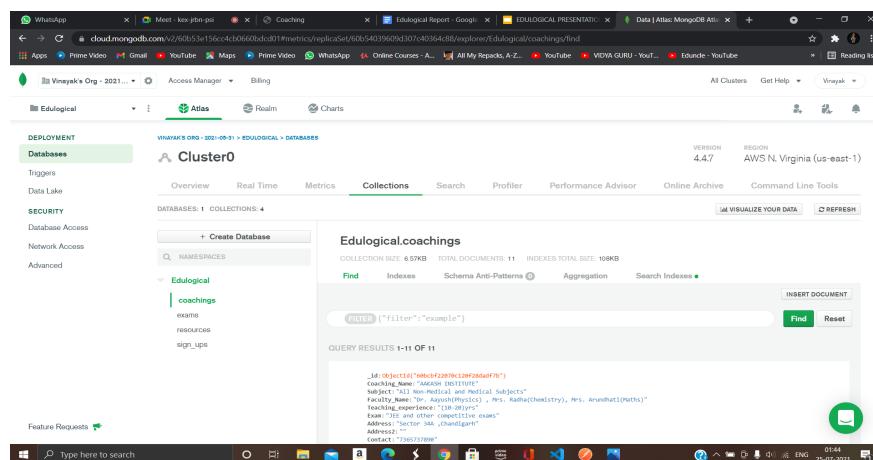
    }catch(e){ res.status(400).send(e);}

})
```

- Testing these APIs using Postman by manually adding data and then putting a get request(Get request is the request made for reading the data) .

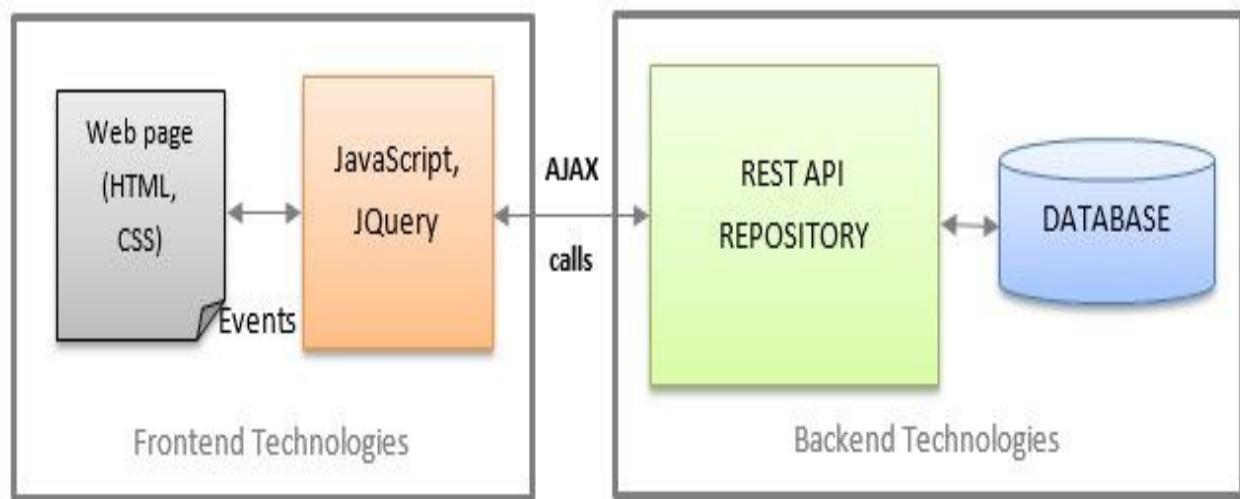


- Setting up a data-base account on mongoDB compass for viewing and editing(editing includes operations of Create, Read, Update & Delete)the data that the contributor will add to our site.



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## INTEGRATION:



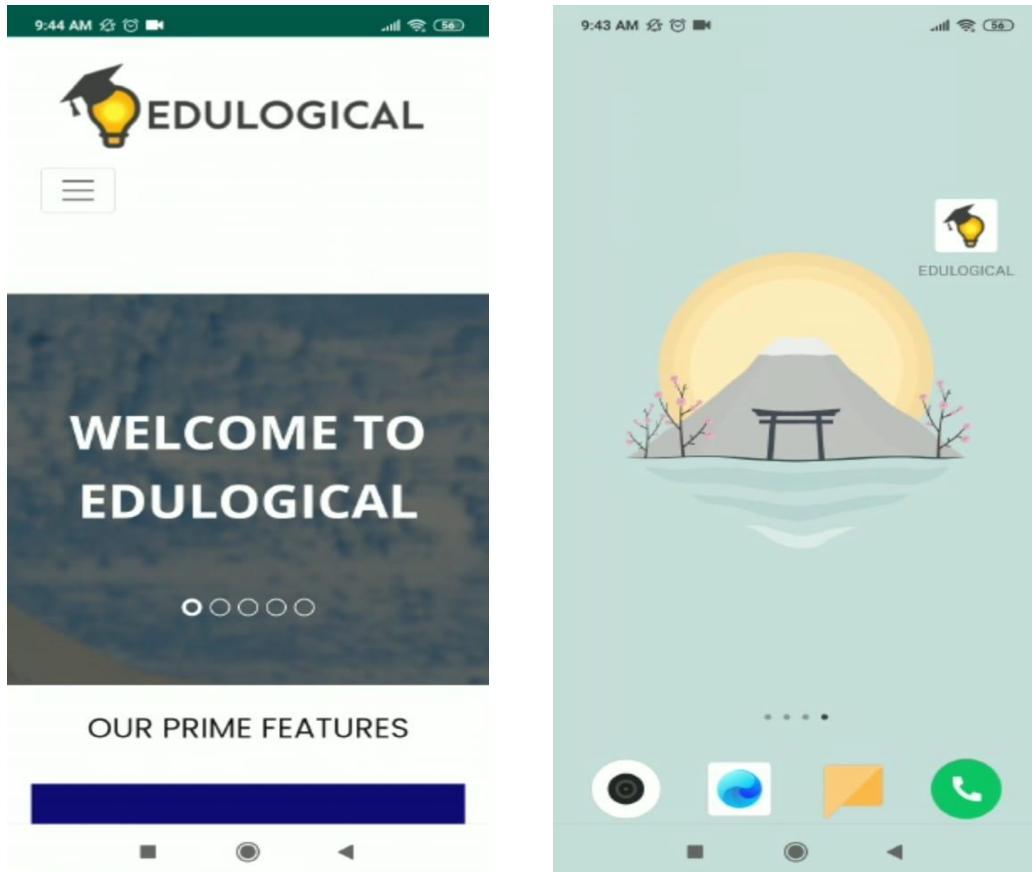
Api's work as bridge between frontend and backend:

Basically we made an api request from the website to the backend server for the data and this data is manipulated in a user readable language from json format.

JSON format is used for Data transfer in API's .

---

## ANDROID APP :



This is an APP made as a substitute for the website for the android users for easy access.  
This holds all the functionality as in a website.

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## **FEATURES**

1. Edulogical is a unique discovery platform, which connects education seekers with education providers, at the same time offering information about resources, entrance exam details, and coaching information.
2. Edulogical is a society driven web application . Our website enables the user to become a contributor through which he/she can update the information on the website.
3. Resources available on the website are being scrutinized by the admins . In case false information is being added somehow in the database , it will be deleted .
4. Information available on the website is authentic & correct as it is provided by users who are experienced in their fields.
5. An app is also available for our website edulogical which is a contemporary to our website and allows android users to have access to the features of edulogical on android

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## **CHAPTER-3 :CONCLUSIONS**

### **APPLICATION:**

- Get exam information here.
- Get details about the best and nearby coaching institutions .
- Get information about course resources.
- Contribute to help others.

### **MERITS:**

- The students don't need to search for exams from other sites.
- They may get all required pre and post information they need for exams.
- Students can rely on the info as it's been verified before updating.
- Students have one place to search on various aspects they need for their education.

### **DEMERITS :**

- As the website is less popular then there are few contributors till now and have less data to share.
- The Website takes some time to load as the data is coming from the backend.

---

## **FUTURE SCOPE :**

- We will create a filtering system for the user. In this, the user would have the option to filter out the type of subject or exam they would like to search for.
- Bookmark exams or resources for the future so that they won't have to search again for the exam or resource they have searched for.
- Releasing our app on the play store and app store so that it would be available for both android and apple users.
- Advertisement of the product so that people will get to know about our product and start using it, recommend to those who need it, and start contributing to it.

---

## **APPENDIX-1**

### **FRONT-END :**

The part of a website that the user interacts with directly is termed the front end. It is also referred to as the ‘client side’ of the application. It includes everything that users experience directly: text colors and styles, images, graphs and tables, buttons, colors, and navigation menu. HTML, CSS, and JavaScript are the languages used for Front End development.

**HTML :** HTML stands for Hypertext Markup Language. It is used to design the front-end portion of web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. The markup language is used to define the text documentation within the tag which defines the structure of web pages.

**CSS :** Cascading Style Sheets fondly referred to as CSS is a simply designed language intended to simplify the process of making web pages presentable. CSS allows you to apply styles to web pages..

**JavaScript :** JavaScript is a famous scripting language used to create magic on the sites to make the site interactive for the user. It is used to enhance the functionality of a website to run cool games and web-based software.

**Bootstrap :** Bootstrap is a potent front-end framework used to create modern websites and web apps. It's open-source and free to use, yet features numerous HTML and CSS templates for UI interface elements such as buttons and forms. Bootstrap also supports JavaScript extensions.

---

## **APPENDIX - 2**

### **BACK-END :**

Backend is the server-side of the website. It stores and arranges data, and also makes sure everything on the client-side of the website works fine. It is the part of the website that you cannot see and interact with. It is the portion of software that does not come in direct contact with the users. The parts and characteristics developed by backend designers are indirectly accessed by users through a front-end application. Activities, like writing APIs, creating libraries, and working with system components without user interfaces or even systems of scientific programming, are also included in the backend.

**Node.js :** Node.js is an open-source and cross-platform runtime environment for executing JavaScript code outside a browser. We often use Node.js for building back-end services like APIs like Web App or Mobile App. It's used in production by large companies such as Paypal, Uber, Netflix, Walmart, and so on.

**Express.js :** Express.js is a free and open-source web application framework for Node.js. It is used for designing and building web applications quickly and easily. Express is the back-end component of the MEAN stack, which also includes MongoDB for the database, AngularJS for the front end and Node.

This imports express in our node app

```
const express = require('express');
```

---

now initialize our app

```
const app = express();
```

now we can listen to a path and respond with text

```
app.get('/', (req,res)=>{  
    res.send('hi we got you\'request')  
})
```

now let's listen to a port

```
app.listen(2000, ()=>{  
    console.log('listening at https://localhost:2000')  
})
```

now go to <http://localhost:2000>

**Database :** Database is a physical container for collections. Each database gets its own set of

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files on the file system. A single MongoDB server typically has multiple databases [.](#)

**MongoDb** : MongoDB is a source-available cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with optional schemas. The document data model is a powerful way to store and retrieve data that allows developers to move fast. MongoDB's horizontal, scale-out architecture can support huge volumes of both data and traffic. MongoDB has a great user experience for developers who can install MongoDB and start writing code immediately.

**Mongoose** : Mongoose is an Object Data Modeling (ODM) library for MongoDB and Node. js. It manages relationships between data, provides schema validation, and is used to translate between objects in code and the representation of those objects in MongoDB.

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## APPENDIX - 3

**Canva :** Canva is a free graphic design platform that's great for making invitations, business cards, Instagram posts, and more. A drag and drop interface makes customizing thousands of templates simple and easy. Canva's wide array of features allow you to edit photos without extensive photo editing knowledge or experience.

**Github :** GitHub is a code hosting platform for version control and collaboration. It lets you and others work together on projects from anywhere.

This tutorial teaches you GitHub essentials like repositories, branches, commits, and Pull Requests. You'll create your own Hello World repository and learn GitHub's Pull Request workflow, a popular way to create and review code.

**MongoDb Compass :** MongoDB Compass is a powerful GUI for querying, aggregating, and analyzing your MongoDB data in a visual environment. Compass is free to use and source available, and can be run on macOS, Windows, and Linux.

**Postman :** Postman is an API client that makes it easy for developers to create, share, test and document APIs. This is done by allowing users to create and save simple and complex HTTP/s requests, as well as read their responses. The result - more efficient and less tedious work.

---

**VS Code :** Visual Studio Code is a streamlined code editor with support for development operations like debugging, task running, and version control. It aims to provide just the tools a developer needs for a quick code-build-debug cycle and leaves more complex workflows to fuller featured IDEs, such as Visual Studio IDE.

---

## **REFERENCES :**

1. Full Stack Web development course :-

<https://www.udemy.com/course/the-complete-web-development-bootcamp/>

2. Javascript tutorial :- <https://www.youtube.com/watch?v=hKB-YGF14SY&t=9s>

3. Node.js tutorial Playlist :-

<https://www.youtube.com/playlist?list=PLwGdqUZWnOp00IbeN0OtL9dmnasipZ9x8>

4. MongoDb playlist :-

<https://www.youtube.com/watch?v=XeDM28c5kO4&list=PLwGdqUZWnOp1P9xSsJg7g3AY0CUjs-WOa&index=1>

5. Bootstrap :- <https://getbootstrap.com/>

---

## **Links :**

Link to code : <https://github.com/tarunjain3/Edological>

Api code link : <https://github.com/Kingsmaan/apiprojectwebhosting>

Website Link : <https://edulogical.tech/>

Dev Sheet :

[https://docs.google.com/spreadsheets/d/1TINCuWajs6xU1KdyVXShKJVzbgRLadMEh\\_HzXgqZmWA/edit#gid=0](https://docs.google.com/spreadsheets/d/1TINCuWajs6xU1KdyVXShKJVzbgRLadMEh_HzXgqZmWA/edit#gid=0)