

# **LOADED SOULS DBMS Project Report**

## **Group Details:**

**Group Name:** Loaded\_Souls

**Group Members:** 21CS10051 - Aditya Patankar  
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**Project topic:** BTP Management System using NoSQL Database

## **Objective:**

The aim of this project is to develop a BTP Project Report Management System using a NoSQL Database.

The objective is to develop an application which can be used by students and professors for BTP allocation.

The students should be able to view projects and apply for a project. They should see the status of their approvals and in case of a project outside their department, they should also be able to apply for approvals from their co-guides. They should also be able to see the grading of their BTP report done by the guides, co-guides and panellists.

The professors should be able to upload projects, view applications, select students and approve their applications and also evaluate the students' project reports. They should also be able to act as co-guides for students in their department applying for external projects and approve their co-guide applications.

On getting the necessary approvals, the application should be forwarded to the HOD for final approval.

Once this is done, the student shouldn't be able to apply to any more projects and all his/her pending applications should be cancelled. The guides and co-guides should also be informed accordingly.

## **Methodology:**

We have used the following technologies:

Front-end: ReactJS

Back-end: Python Flask Framework

Database: MongoDB

The flow of the application is as follows:

On login with correct credentials, the user is redirected to the appropriate home page depending on his/her role. The different roles are student, professor, and admin.

The student can view projects of all departments. He/she can view the project description file, the guide assigned and the department. The student can apply for any of these projects either within his department or outside the department. The applications go to the project guides. The student can view the status of his/her application.

Once the guide approves the application, if the student is in the same department, the application is forwarded to the HOD for final approval. If the student belongs to a different department, then the student has to further apply to a co-guide in his/her department. The guide in such a case can optionally

provide a list of co-guides to apply to. In case the guide provides such a list, the student can apply to only those co-guides. If no list is provided, the student can apply to any co-guides he/she wants. If the guide rejects the application, the student has to reapply for a different project.

The student can view the final application sent to the HOD for approval.

If the co-guide approves an application, the application is forwarded to the HOD for final approval. All other pending applications to co-guides are cancelled automatically.

If the co-guide rejects an application, the student waits for another co-guide to approve the application. If all co-guides reject the application, the student has to reapply for a different project.

The professors can upload new projects and process applications either as guides or co-guides. They can also set deadlines for report submission and grade the report submitted by the student.

The admin can add and delete users in the database.

## **MongoDB Collections used:**

1) users: Following are the fields:

- id
- password
- full\_name
- email
- department
- role

2) btp\_list: Following are the fields:

- btp\_id
- btp\_name
- prof\_id
- file\_id

3) application: Following are the fields:

- btp\_id
- roll no
- status

4) co\_guides\_selected: Following are the fields:

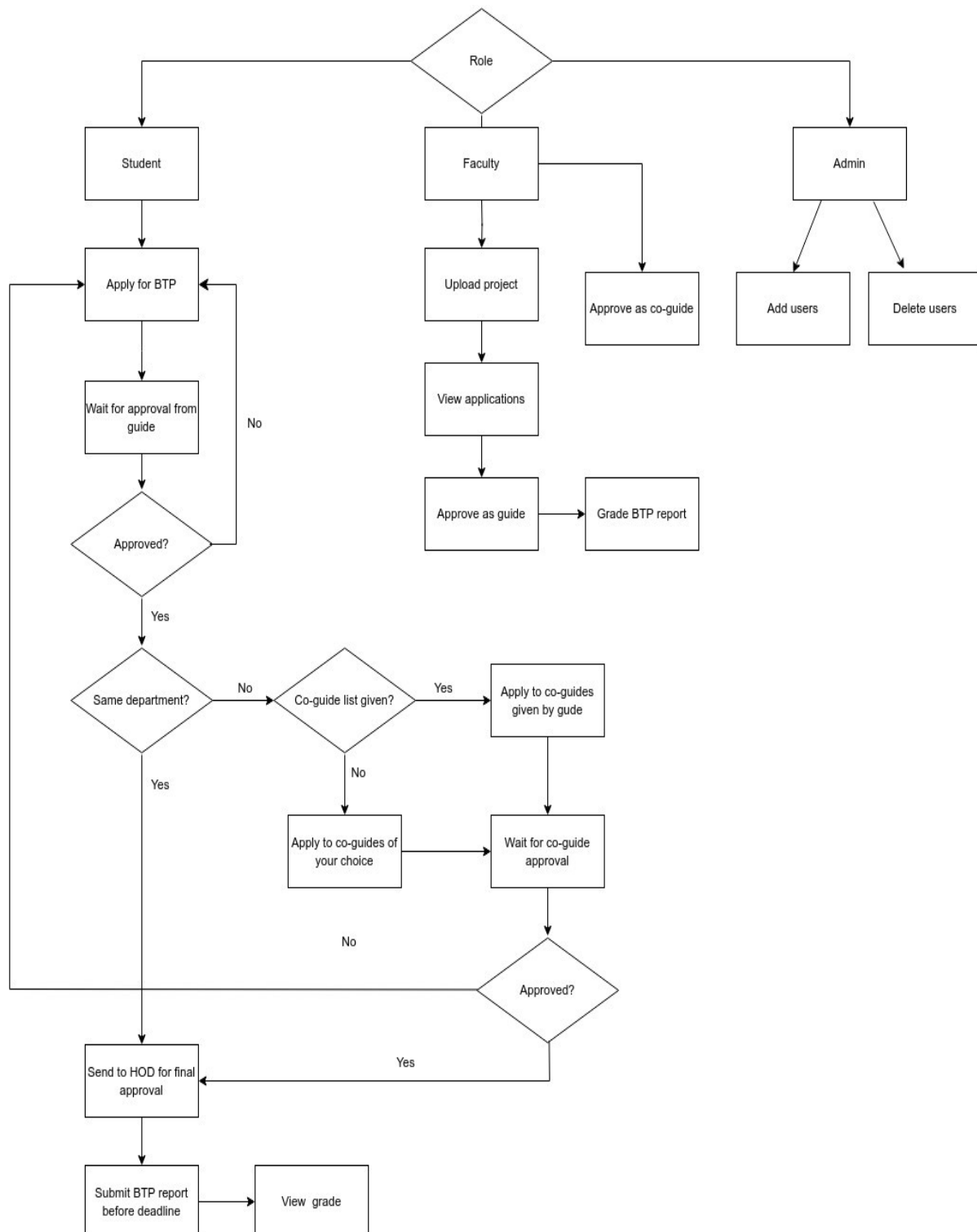
- application\_id
- co\_guide\_id
- status

5) btp\_submission\_collection: Following are the fields:

- btp\_id
- roll\_no
- submission\_deadline
- full\_marks

For the btp\_submission\_collection, the documents corresponding to the students who have submitted the report will contain two additional fields namely report file and grade. This is an example of the flexibility offered by NoSQL where different documents can have different fields according to their needs.

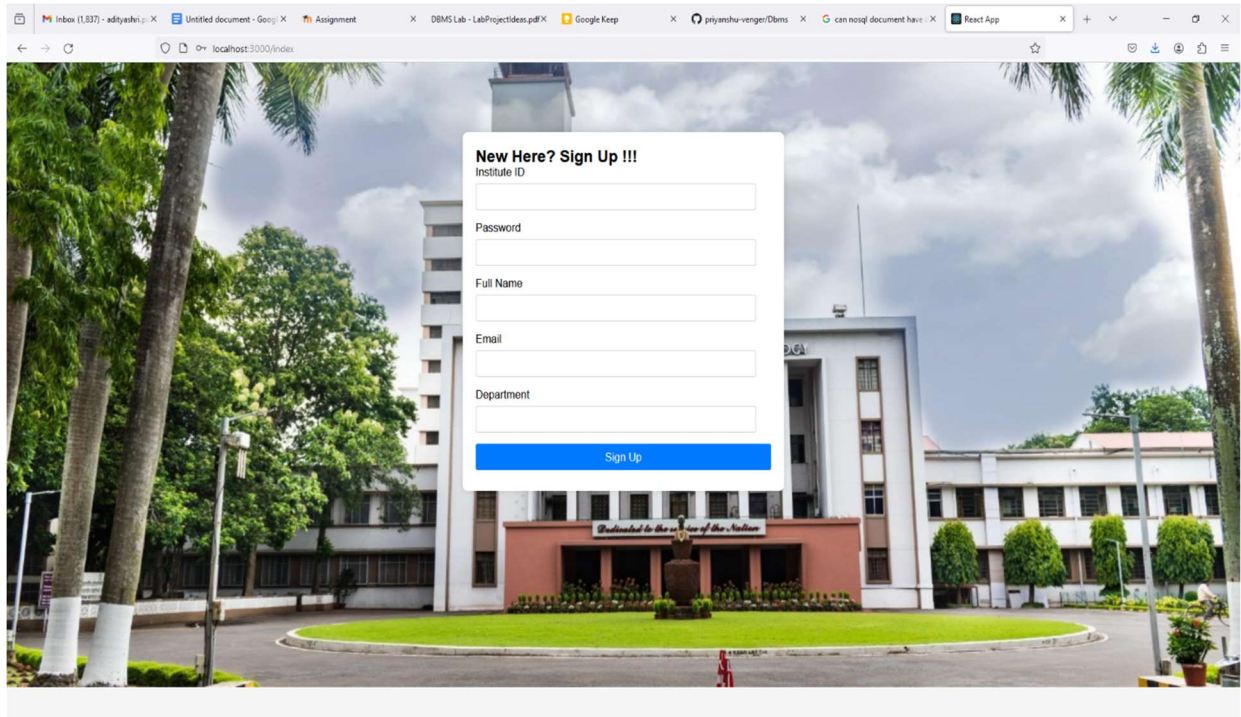
## FLOW DIAGRAM:



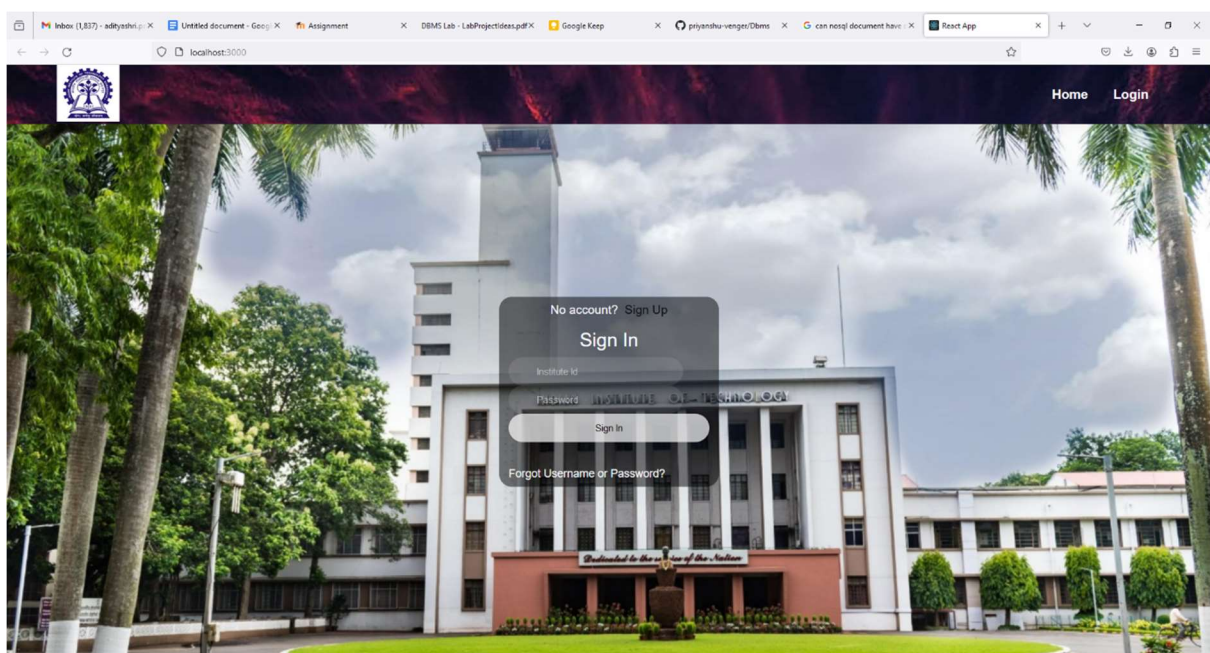


# Screenshots:

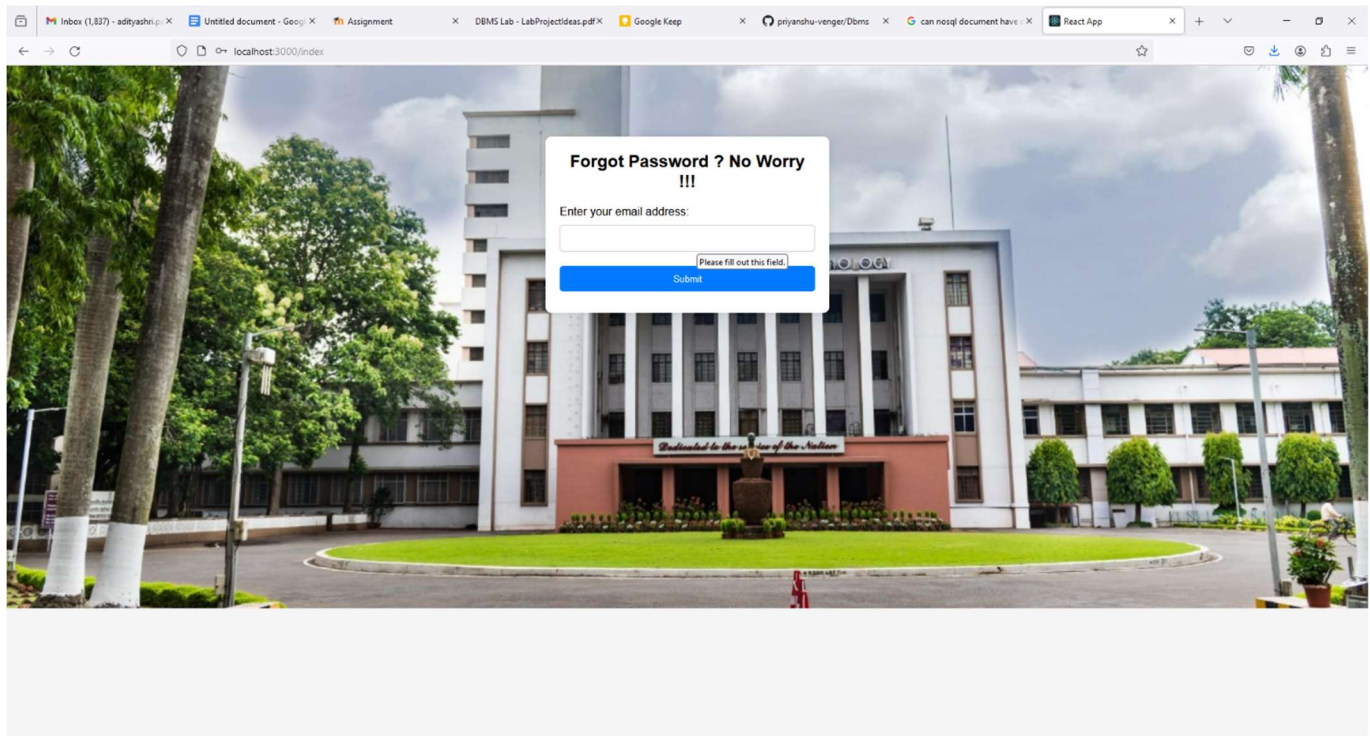
## 1) Sign Up



## 2) Login

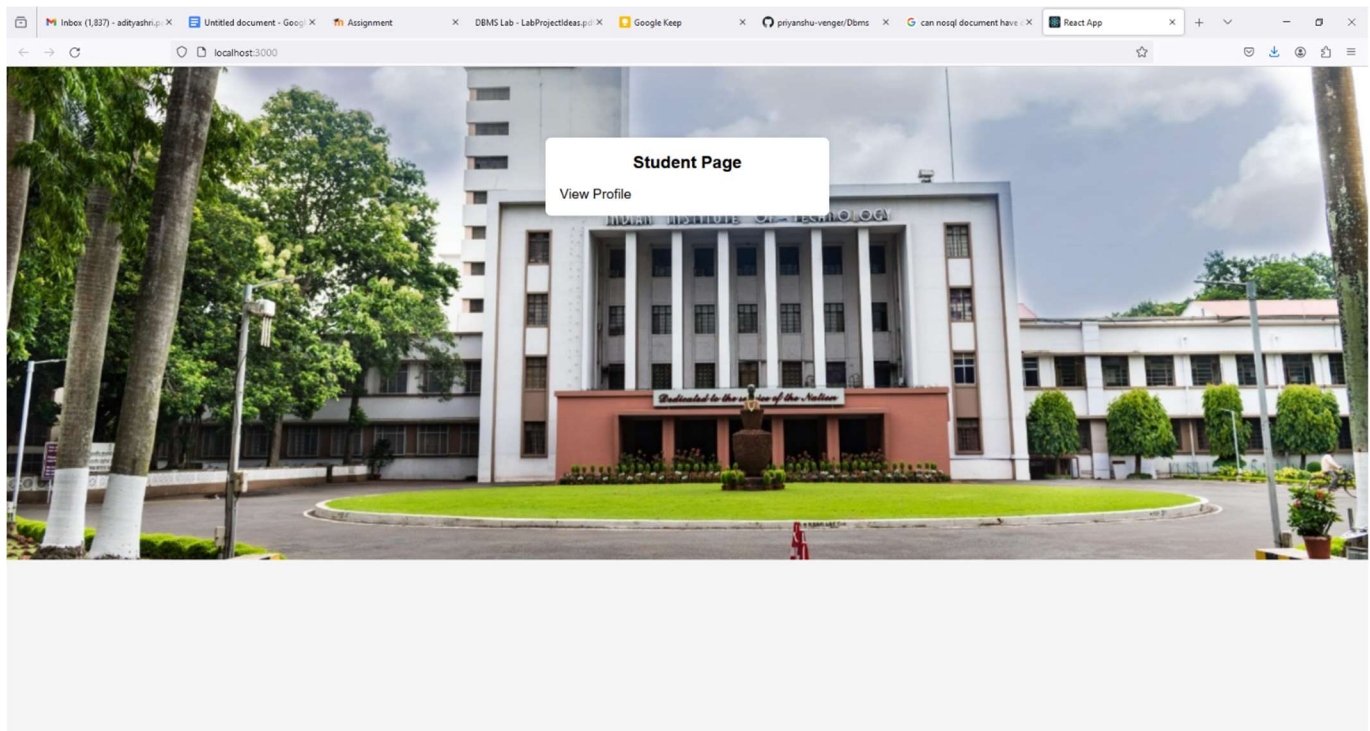


### 3) Forgot password



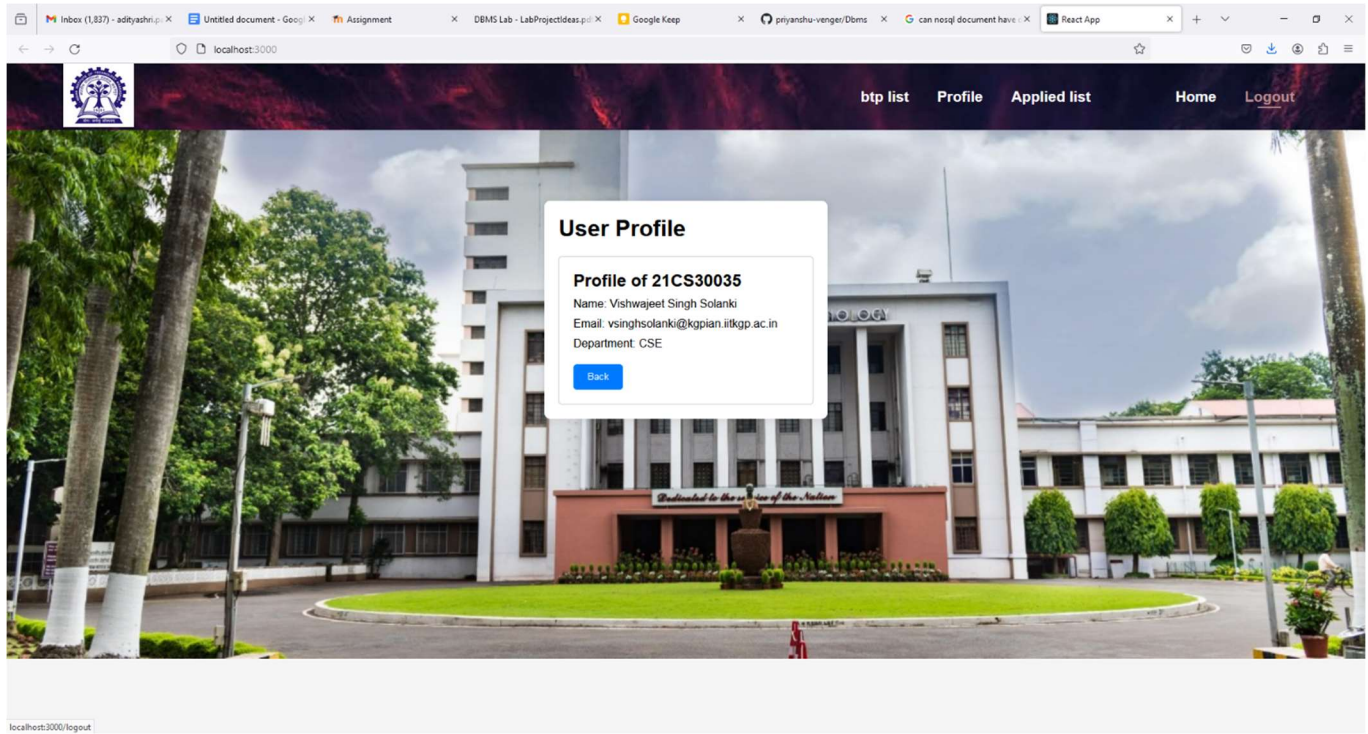
### Student view:

#### 4) Student home page

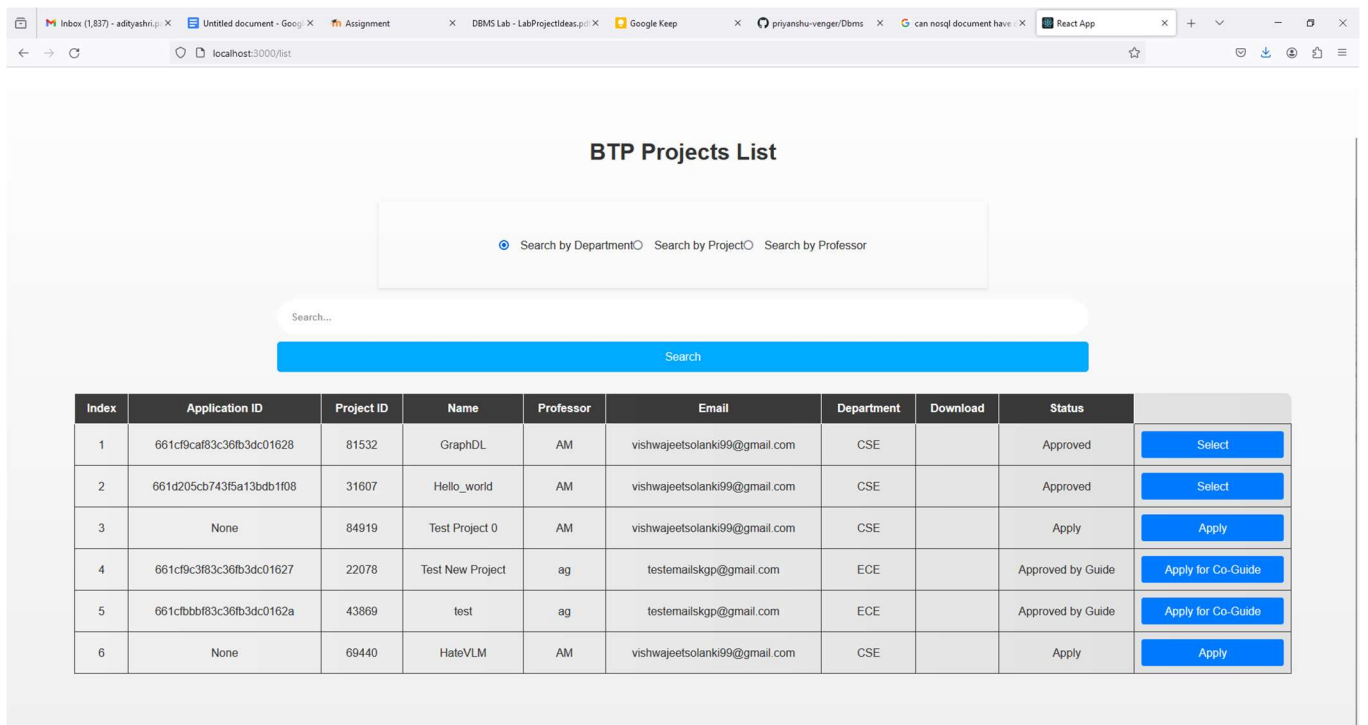




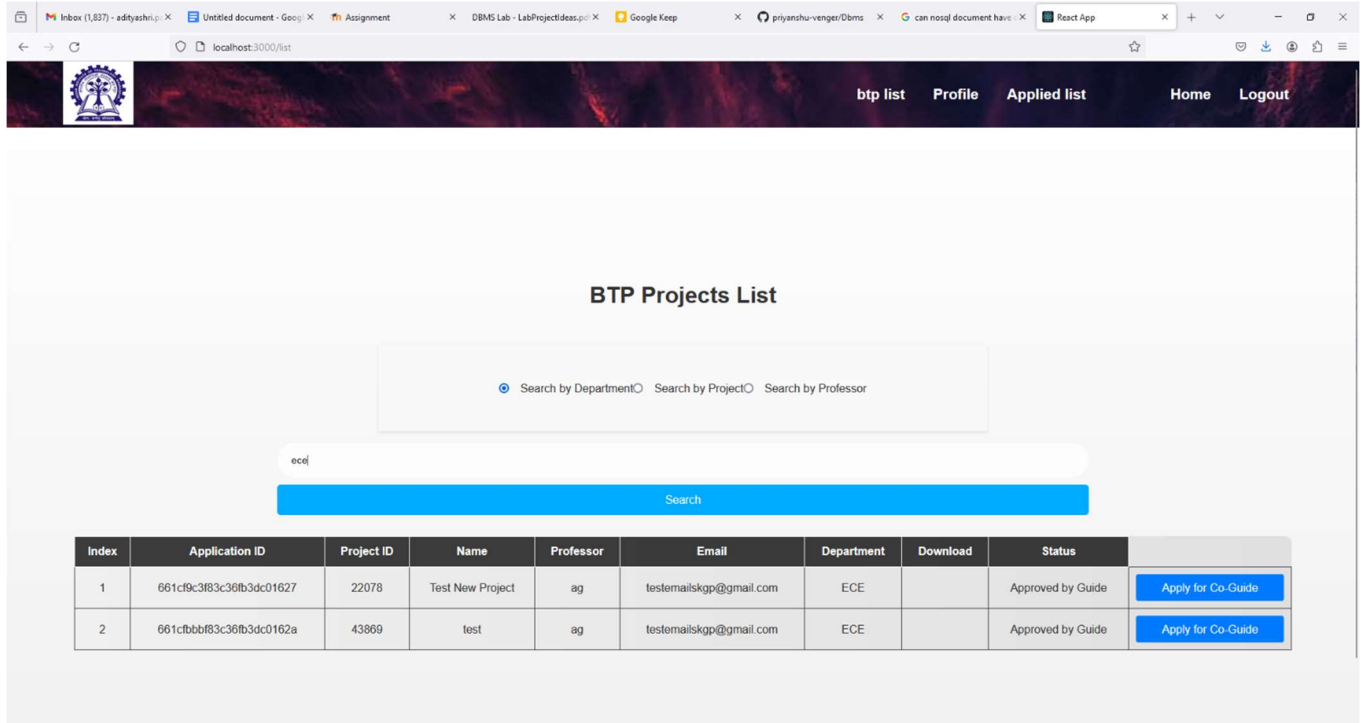
## 5) View Profile



## 6) Project List



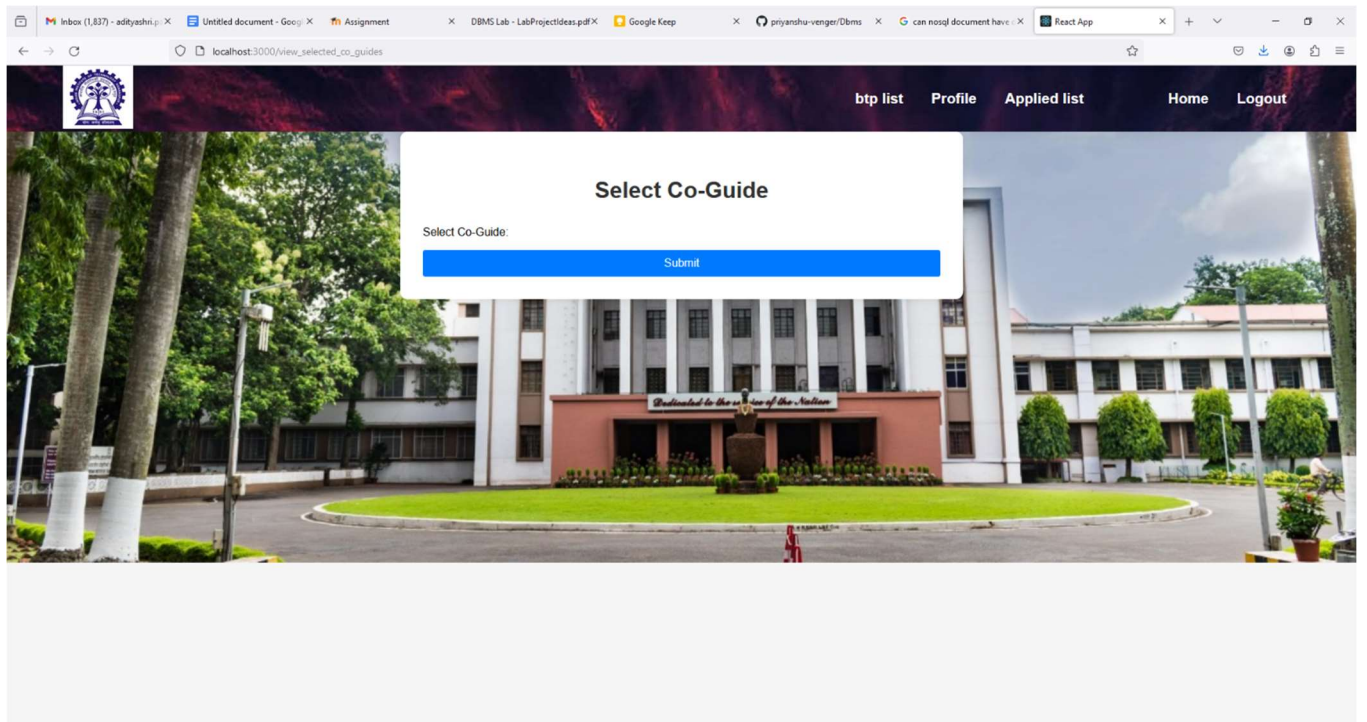
## 7) Search project list (below is example of search by dept)



The screenshot shows a web application titled "BTP Projects List". The navigation bar includes links for "btp list", "Profile", "Applied list", "Home", and "Logout". The main content area features a search interface with three radio buttons: "Search by Department" (selected), "Search by Project", and "Search by Professor". A search input field contains the text "ece", and a blue "Search" button is below it. Below the search bar is a table with the following data:

Index	Application ID	Project ID	Name	Professor	Email	Department	Download	Status	
1	661cf9c3f83c36fb3dc01627	22078	Test New Project	ag	testemailspp@gmail.com	ECE		Approved by Guide	<a href="#">Apply for Co-Guide</a>
2	661cfbbf83c36fb3dc0162a	43869	test	ag	testemailspp@gmail.com	ECE		Approved by Guide	<a href="#">Apply for Co-Guide</a>

## 8) Select co-guide



The screenshot shows a web application titled "Select Co-Guide". The navigation bar includes links for "btp list", "Profile", "Applied list", "Home", and "Logout". The main content area features a modal form with the title "Select Co-Guide". Inside the modal, there is a label "Select Co-Guide:" and a blue "Submit" button. The background of the page is a large image of a building with a circular driveway.

## Faculty view:

### 9) View Pending Approvals:

Search

Applications List

Project name:Hello\_world

Index	Application ID	Roll no	Student name	Email	Department	Status		
1	661d0568596b3a72df20d0fb	21EC10035	Paramananda test	paramanandabhaskar@gmail.com	ECE	Approved by Guide	Approved by Guide	Reject
2	661d205cb743f5a13bdb1f08	21CS30035	Vishwajeet Singh Solanki	vsinghsolanki@kgpian.iitkgp.ac.in	CSE	Approved	Approved	Reject

Project name:HateVLM

Index	Application ID	Roll no	Student name	Email	Department	Status
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Project name:GraphDL

Index	Application ID	Roll no	Student name	Email	Department	Status		
1	661cf9caf83c36fb3dc01628	21CS30035	Vishwajeet Singh Solanki	vsinghsolanki@kgpian.iitkgp.ac.in	CSE	Approved	Approved	Reject
2	661d121918e4bd628133ed0d	21EC10035	Paramananda test	paramanandabhaskar@gmail.com	ECE	Confirmed	Confirmed	Reject

Project name:Test Project 0

Index	Application ID	Roll no	Student name	Email	Department	Status		
1	661d00a4bab9b69c1af130dcc	21EC10035	Paramananda test	paramanandabhaskar@gmail.com	ECE	Approved by Guide	Approved by Guide	Reject
2	661d5ce10fcbcb11e31a4dcf	21CS30035	Vishwajeet Singh Solanki	vsinghsolanki@kgpian.iitkgp.ac.in	CSE	Pending	Approve	Reject

### 10) View approved applications:

Search by Department Search by Project Search by Roll

Search...

Search

Approved Applications List

Project name:Hello\_world

Index	Application ID	Roll no	Student name	Email	Department	
1	661d205cb743f5a13bdb1f08	21CS30035	Vishwajeet Singh Solanki	vsinghsolanki@kgpian.iitkgp.ac.in	CSE	Reject

Project name:HateVLM

Index	Application ID	Roll no	Student name	Email	Department
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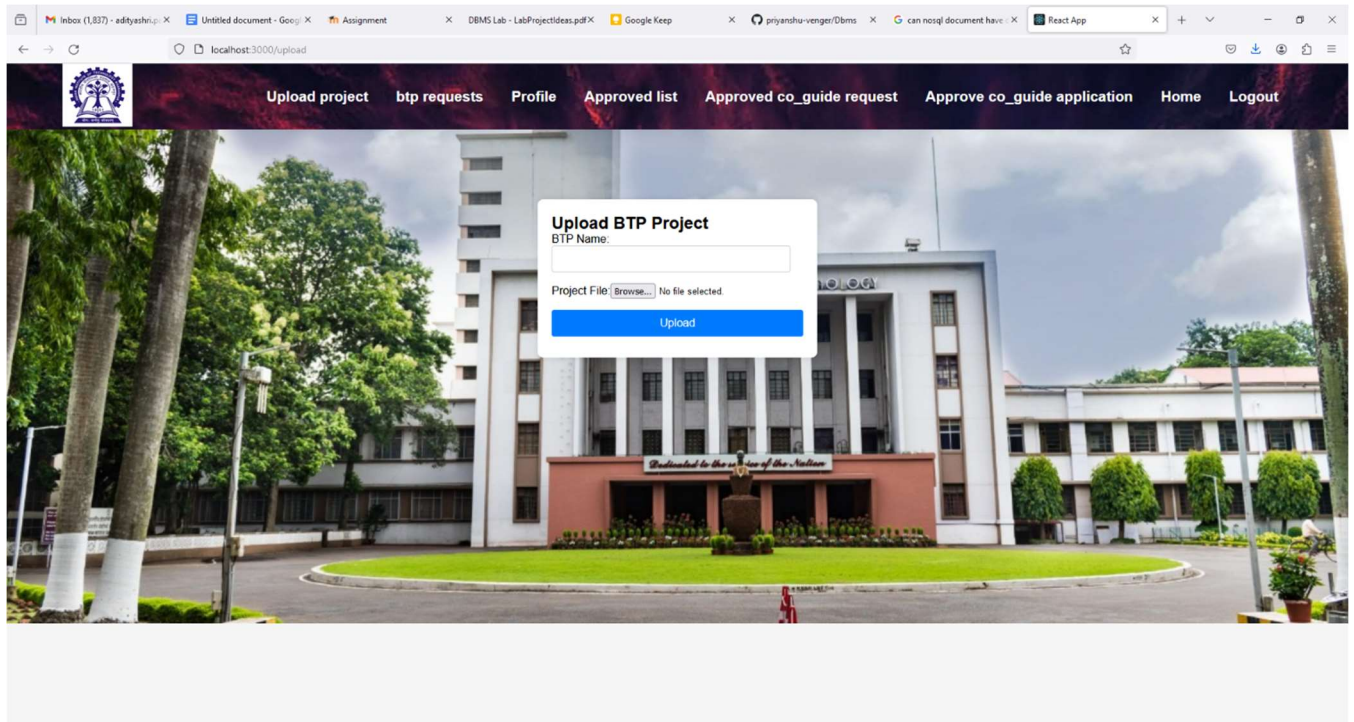
Project name:GraphDL

Index	Application ID	Roll no	Student name	Email	Department	
1	661cf9caf83c36fb3dc01628	21CS30035	Vishwajeet Singh Solanki	vsinghsolanki@kgpian.iitkgp.ac.in	CSE	Reject

Project name:Test Project 0

Index	Application ID	Roll no	Student name	Email	Department
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## 11) Upload new project



## 12) Forgot Password OTP

OTP for Email Verification in BTP Report Management Website

External

Inbox x



testemailskgp@gmail.com

to me ▾

Welcome to BTP Report Management System !!!

OTP: 534122

Use this otp for verifying your Institute Email Id.

Regards,

BTP Report Management System

↩ Reply

➡ Forward



**GitHub link for the code:**

<https://github.com/priyanshu-venger/Dbms>











