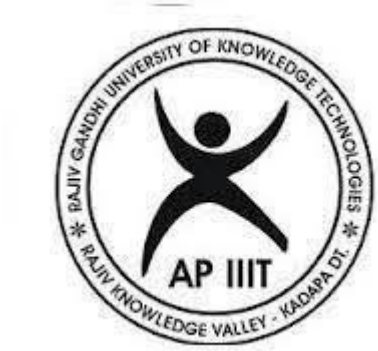
“CS HUB”

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING



RGUKT

Rajiv Gandhi University of Knowledge Technologies

R.K. VALLEY

Submitted by

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Under the Esteemed guidance of
Mr. SATYANANDARAM N
RGUKT RK Valley.

DECLARATION

We hereby declare that the report of the B. Tech Major Project Work entitled "**CS HUB(Computer Science Department Portal)**" which is being submitted to Rajiv Gandhi University of Knowledge Technologies, RK Valley, in partial fulfilment of the requirements for the award of Degree of Bachelor of Technology in Computer Science and Engineering, is a bonafide report of the work carried out by us. The material contained in this report has not been submitted to any university or institution for award of any degree.

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Dept. Of Computer Science and Engineering.

RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES

RGUKT

(A.P. Government Act 18 of 2008)
RGUKT, RK VALLEY
Department of Computer Science and Engineering

CERTIFICATE FOR PROJECT COMPLETION

This is to certify that the project entitled "**CS HUB**" submitted by **G GANGADHAR(R170061),D JAYAKRISHNA(R170064)**, under our guidance and supervision for the partial fulfilment for the degree Bachelor of Technology in Computer Science and Engineering during the academic semester -2 2022-2023 at RGUKT, RK VALLEY. To the best of my knowledge, the results embodied in this dissertation work have not been submitted to any University or Institute for the award of any degree or diploma.

Project Internal Guide	**Head of the Department**
Mr. Satyanandaram N	Mr. Satyanandaram N
Assistant Professor	HOD Of CSE
RGUKT, RK Valley	RGUKT, RK Valley

ABSTRACT

Main aim of the project is to develop a departmental website portal for Computer Science Department where all details and updates of the department is presented. Instead of communicating through social media like WhatsApp and Telegram, this portal gives all updates to Students and faculty.

As everyone has access to this website no student can miss any updates. In this portal there will be availability of curriculums, timetables, faculty details, student details and all subjects related materials and placement related resources etc. The admin has control over all activities in the portal. HOD and faculty has their own privileges to particular activities.

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CS HUB REPORT

Introduction:

The Computer Science Department portal (CS Hub) is an online web portal for the students and faculties. It is an interactive service for students and information seekers of RGUKT RK Valley Computer Science Department. It is easy to access and use for communication between faculties and students. It can also be used for keeping track of information and documents of students and faculties as well.

Intended Audience:

The intended audience will be the **students and faculty** of RGUKT RK Valley Computer Science Department.

Product Vision:

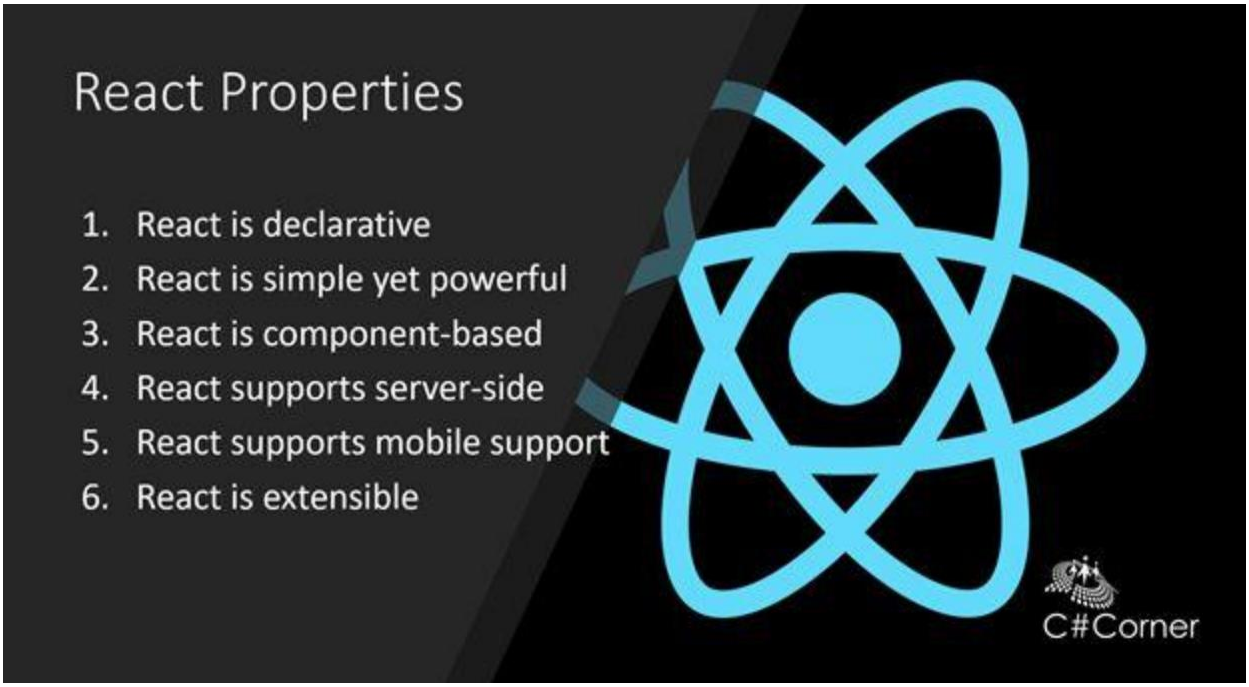
The product vision is to develop a CS Hub (Computer Science Department portal) which is user friendly and easily accessible. This CS Hub helps to provide one platform for all information, details of academics, placements, facilities, faculty and students in CSE department.

Technologies:

- ReactJs, CSS
- NodeJs, ExpressJs
- MongoDB

ReactJs

React is a declarative, efficient, and flexible JavaScript library for building user interfaces. It lets you compose complex UIs from small and isolated pieces of code called “components” .



A Stateful Component

In addition to taking input data (accessed via this.props), a component can maintain internal state data (accessed via this.state). When a component's state data changes, the rendered markup will be updated by re-invoking render().

A Simple Component

React components implement a render() method that takes input data and returns what to display. This example uses an XML-like syntax called JSX. Input data that is passed into the component can be accessed by render() via this.props

```
import React from 'react';

const NewComponent = () => {
    return (
        <div>
            <h1> Hello, welcome to ReactJS</h1>
        </div>
    );
}

export default NewComponent;
```

Node Js

Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the V8 engine and executes JavaScript code outside a web browser. Node.js lets developers use JavaScript to write command line tools and for server-side scripting—running scripts server-side to produce dynamic web page content before the page is sent to the user's web browser. Consequently, Node.js represents a "JavaScript everywhere" paradigm unifying web-application development around a single programming language, rather than different languages for server-side and client-side scripts.

Express Js

Express.js is a popular open-source web application framework for Node.js. It provides a robust set of features and tools for building web applications and APIs, making it a popular choice for developers who want to create scalable, flexible, and efficient web applications.

With Express.js, developers can easily handle HTTP requests and responses, manage middleware, define routes, and implement a wide range of features such as authentication, templating, and database connectivity. Express.js is also highly modular and extensible, allowing developers to choose and use only the components they need for their specific project.

MongoDB

MongoDB is a document-oriented NoSQL database used for high volume data storage. Instead of using tables and rows as in the traditional relational databases, MongoDB makes use of collections and documents. Documents consist of key-value pairs which are the basic unit of data in MongoDB. Collections contain sets of documents and function which is the equivalent of relational database tables. Collections → Table Documents → Rows 9 page of 45

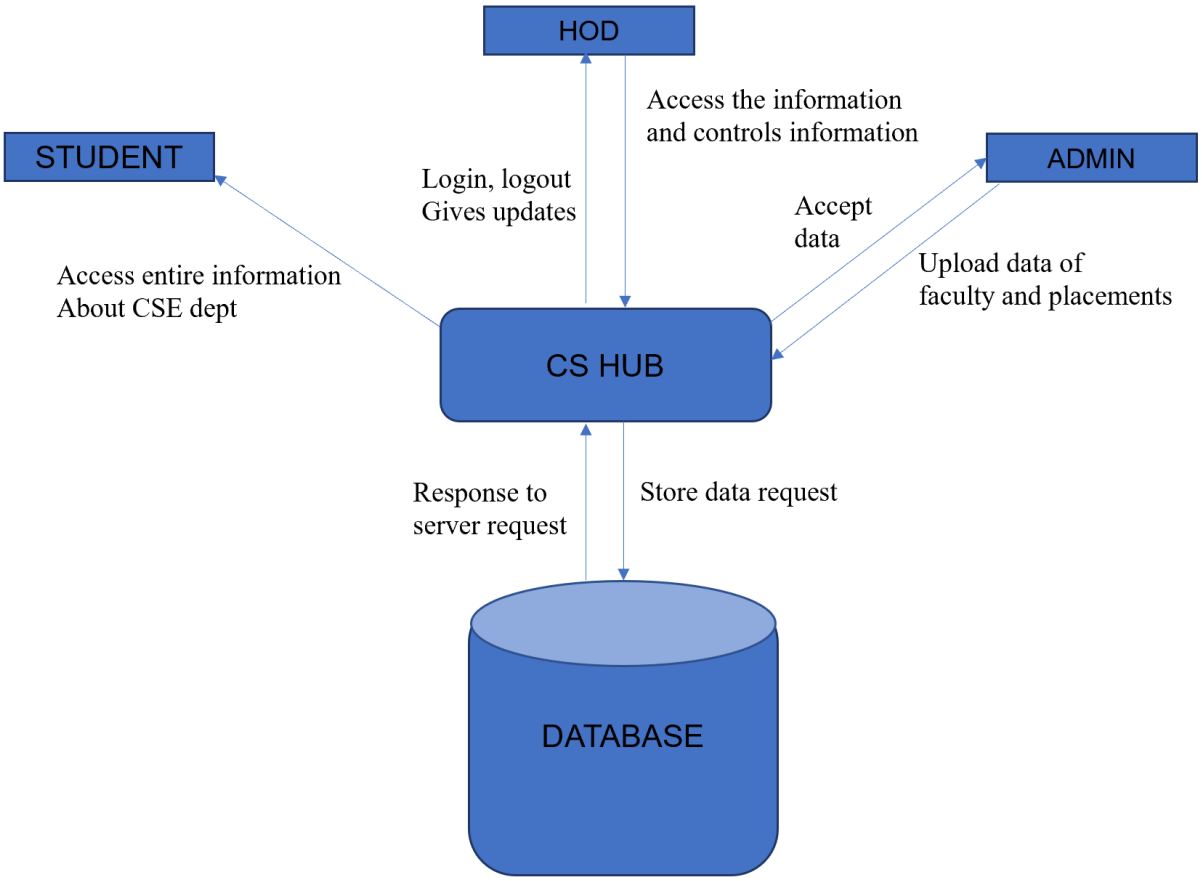
MongoDB Connection to Nodejs

```
import mongoose from "mongoose"
const {Schema} = mongoose

const uri = "mongodb://127.0.0.1:27017"

export default async function connect(){

    await mongoose.connect(uri)
    console.log("Database connected");
}
```

```
import mongoose from "mongoose";
const {Schema} = mongoose;

const userSchema = new Schema({
    email : {
        type : String,
        required : true,
    },
    password : {
        type : String,
        required : true,
    }
})

export default mongoose.model('User', userSchema)
```

System in Context:

This CS HUB provides the list updates, academics, placements, facilities, details of faculty and students of Computer science department.



System-wide Requirements(Received):

Actors:
The system interacts with Two kinds of users. Each user has its own functions to access with the system. The functionalities of users are dependent on each other.

Events:
CS Hub Platform is a multi-user system which provides activities associated with its day to day operations.

The most critical events are:
1. Students get all information about CSE department at single site.
2. HOD login using username and password.

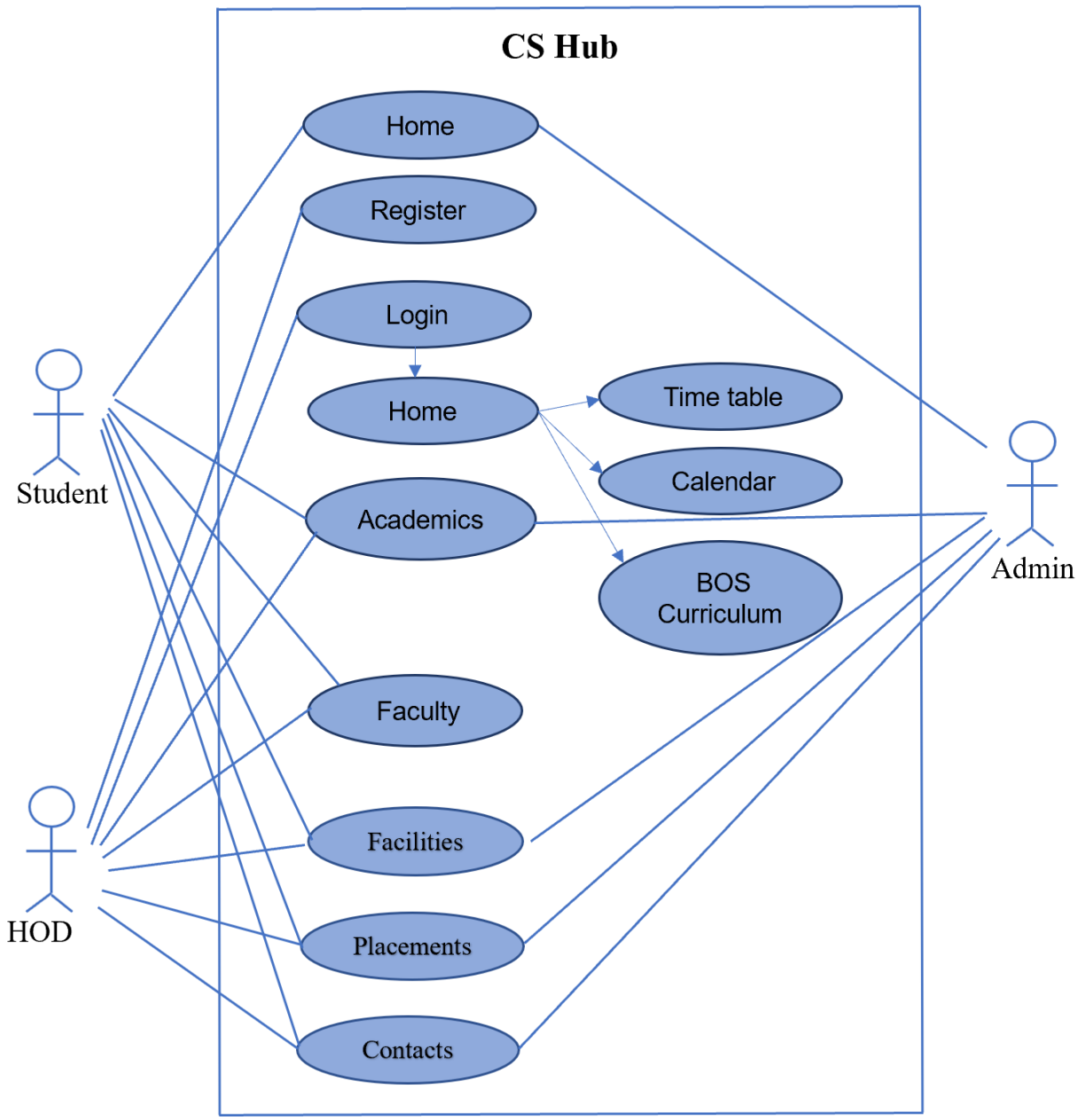
3. HOD posts updates, time tables, academic calendar.
4. Admin manages all details of academics, placements, facilities, faculty and students.

The below table provides a set of user visible events that define the functionalities that are in CS Hub.

S. No	Actor	Action	Object	Frequency	Arrival Pattern	Response
1	Student	Onclick	Academic Calendar	1/day	Episodic	It shows academic calendar of semester
2	Student	Onclick	Time table	1/day	Episodic	It shows time tables of each batch
3	Student	Onclick	Bos cur	1/day	Episodic	It shows BOS curriculum of each batch
4	Student	Onclick	Students	1/day	Episodic	It shows details of students of each batch
5	Student	Onclick	Faculty	1/day	Episodic	It shows details of faculty
6	Student	Onclick	Facilities	1/day	Episodic	It shows details of facilities
7	Student	Onclick	Placements	1/day	Episodic	It shows information about placements
8	HOD	Onclick	Login	1/day	Episodic	It asks email and password
9	HOD	Onclick	Add update	1/day	Episodic	HOD can post updates
10	HOD	Onclick	Add time table	1/day	Episodic	HOD can upload time tables
11	HOD	Onclick	Add calendar	1/day	Episodic	HOD can upload academic calendar

Functional Requirements:

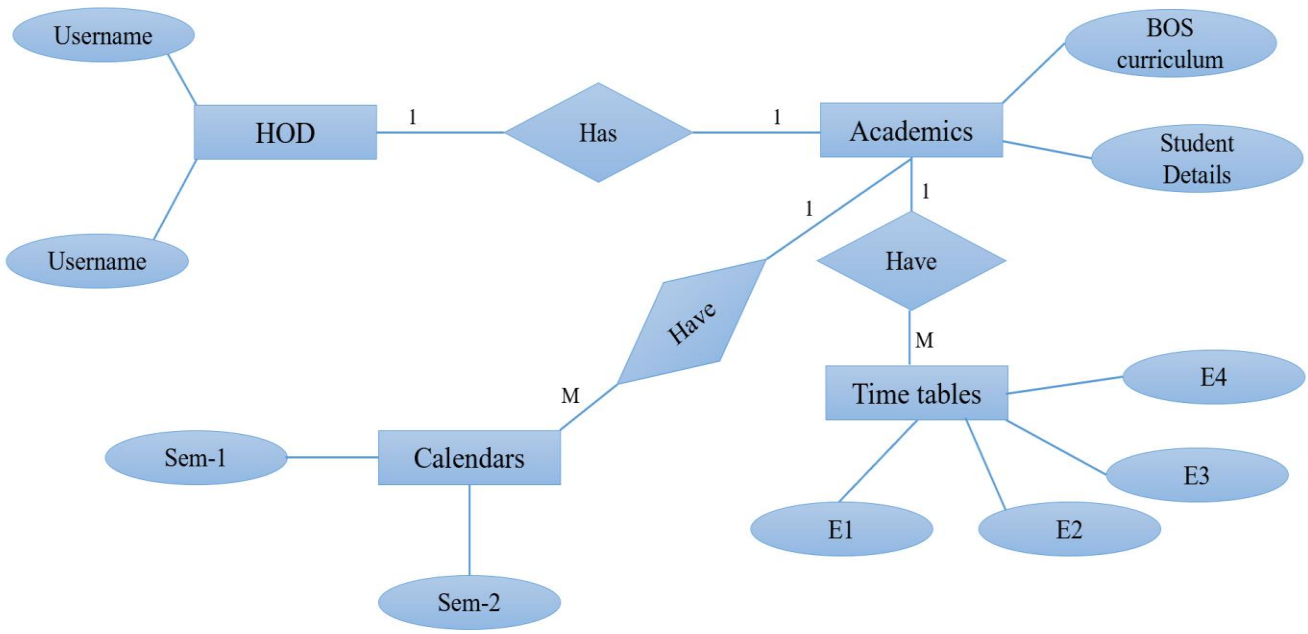
Use Case Diagram:



Use Case Overview:

S. NO	Use-case ID	Use-case Name	Priority	Stability	Verifiable
1	UC-CH-RE	Registration	High	Not Stable	Verifiable
2	UC-CH-UP	Updates	High	Stable	Verifiable
3	UC-CH-CA	Calendars	High	Stable	Verifiable
4	UC-CH-PL	Placements	High	Stable	Verifiable
5	UC-CH-AC	Academics	High	Stable	Verifiable

ER Diagram:



Starting Project:

Steps:

1. Install Node in System

2. Create new React project with below code
   npm create-react-app projectname

3. Install all the dependancies required for the project with below code
   npm install dependencyName

4. Complete the code

5. Complete backend files

6. Start the frontend and backend servers with below code
   npm start

   This command will generate an url https://localhost:3000/ click on the link and can access the website.

Source Code:

FrontEnd

App.js

```
import React, {useState} from 'react'···

const App = () => {

  return (
    <BrowserRouter>
      <Routes>
        <Route path="/"  element={<><Navbar/> <Home/></>}/>

        <Route path="/login" element={<><Navbar/><HODlogin/></>}/>
        <Route path="/register" element={<><Navbar/><SignUp/></>}/>
        <Route path="/hod" element={<><HODNavbar/><HODPage/></>}/>
        <Route path="/hod/updates" element={<><HODNavbar/><AddUpdate/></>}/>
        <Route path="/timeTableManager" element={<><HODNavbar/><TimeTableManager/></>}/>
        <Route path="/calendarManager" element={<><HODNavbar/><CalendarManager/></>}/>

        <Route path="/academics/calendar"  element={<><Navbar/><AcademicCalendar/></>}/>
        <Route path="/academics/timetable"  element={<><Navbar/><Academics/></>}/>
        <Route path="/academics/bos"  element={<><Navbar/><BOS/></>}/>
        <Route path="/academics/students"  element={<><Navbar/><Students/></>}/>

        <Route path="/faculty"  element={<><Navbar/><Faculty/></>}/>

        <Route path="/facilities"  element={<><Navbar/><Facilities/></>}/>

        <Route path="/placements/aptitude"  element={<><Navbar/><Aptitude/></>}/>
        <Route path="/placements/coding"  element={<><Navbar/><Coding/></>}/>
        <Route path="/placements/technical"  element={<><Navbar/><Technical/></>}/>

        <Route path="/contact"  element={<><Navbar/><Contact/></>}/>
      </Routes>
    </BrowserRouter>
  );
}

export default App;
```

Navbar.js

```
import React, { useRef, useState , useEffect} from "react";
import { Link, useNavigate } from "react-router-dom";
```

```
import "../styling/Navbar.css";

const Navbar = () => {
  const [showProductsMenu, setShowProductsMenu] = useState(false);
  const [showServicesMenu, setShowServicesMenu] = useState(false);
  const navigate = useNavigate();
  const menuRef = useRef(null)

  const toggleProductsMenu = () => {
    setShowProductsMenu(!showProductsMenu);
    setShowServicesMenu(false);
  };

  const toggleServicesMenu = () => {
    setShowServicesMenu(!showServicesMenu);
    setShowProductsMenu(false);
  };

  useEffect(() => {
    const handleClickOutside = (event) => {
      if (menuRef.current && !menuRef.current.contains(event.target))
{
        setShowProductsMenu(false);
        setShowServicesMenu(false);
      }
    };

    document.addEventListener("mousedown", handleClickOutside);
    return () => {
      document.removeEventListener("mousedown", handleClickOutside);
    };
  }, [menuRef]);

  const clickHandler = () =>{
    navigate("/login");
  }

  return (
    <nav>
      <div className="logo">
        <Link to="/">CS Hub</Link>
      </div>
```

```
      <div className="menu-container" ref={menuRef}>
        <ul className="menu">
          <li>
            <Link to="/">HOME</Link>
          </li>
          <li className="dropdown">
            <span onClick={toggleProductsMenu}>ACADEMICS</span>
            {showProductsMenu && (
              <ul className="sub-menu">
                <li>
                  <Link to="/academics/calendar">ACADEMIC
CALENDAR</Link>
                </li>
                <li>
                  <Link to="/academics/timetable">TIMETABLE</Link>
                </li>
                <li>
                  <Link to="/academics/bos">BOS CUR</Link>
                </li>
                <li>
                  <Link to="/academics/students">STUDENTS</Link>
                </li>
              </ul>
            )}
          </li>
          <li>
            <Link to="/faculty">FACULTY</Link>
          </li>
          <li>
            <Link to="/facilities">FACILITIES</Link>
          </li>
          <li className="dropdown">
            <span onClick={toggleServicesMenu}>PLACEMENTS</span>
            {showServicesMenu && (
              <ul className="sub-menu">
                <li>
                  <Link to="/placements/aptitude">APTITUDE</Link>
                </li>
                <li>
                  <Link to="/placements/coding">CODING</Link>
                </li>
                <li>
                  <Link to="/placements/technical">TECHNICAL</Link>
```

```
                </li>
              </ul>
            )}
          </li>
          <li>
            <Link to="/contact">CONTACTS</Link>
          </li>
        </ul>
      </div>

      <div>
        <button className="button" onClick={clickHandler}
>LOGIN</button>
      </div>
    </nav>
  );
};

export default Navbar;
```

Home.js

```
import React from 'react'
import '../styling/Home.css'
import image1 from '../carousel_images/1.jpg';
import image2 from '../carousel_images/2.jpg';
import image3 from '../carousel_images/3.jpg';
import image4 from '../carousel_images/4.jpg';
import image5 from '../carousel_images/5.jpg';
import chancellor from '../carousel_images/chancellor.jpg';
import vc from '../carousel_images/vc.jpg';
import director from '../carousel_images/director.jpg';

import ImageCarousel from './ImageCarousel';
import UpdateTicker from './UpdateTicker';
import Images from './Images';
import HOD from './HOD';

/** Images for carousel */
const images = [image1, image2, image3, image4, image5]

/** Authorities images with title */
```

```
const image = [
  {
    image : chancellor,
    alt : "Image ",
    title : "CHANCELLOR"
  },
  {
    image : vc,
    alt : "Image 1",
    title : "VC"
  },
  {
    image : director,
    alt : "Image ",
    title : "DIRECTOR"
  }
]

export default function Home() {
  return (

    /** Image Carousel component */
    <div className='container'>

       {/* Left part of body which contains image slider and HOD
information  */}
      <div className='left-body'>

        <div className='carousel'>
          <ImageCarousel images={images} />
        </div>

        <div className='hod-container'>
          <HOD/>
        </div>

      </div>

       {/* Right part of body which contains higher authorities and
scrolling updates  */}
      <div className='right-body'>

        <div className='authorities'>
```

```
          <Images image={image[0]}/>
          <Images image={image[1]}/>
          <Images image={image[2]}/>
        </div>

        <div className='update-box'>
          <UpdateTicker/>
        </div>
      </div>

    </div>
  )
}
```

UpdateTicker.js

```
import React, { useState, useEffect } from 'react';
import '../styling/UpdateTicker.css'
import axios from 'axios'

const UpdateTicker = () => {
  const [updates, setUpdates] = useState([]);

  useEffect(() => {

    axios.get('http://localhost:5000/hod/updates')
      .then(response => {
        const newUpdates = response.data;
        setUpdates(newUpdates);
      })
      .catch(error => {
        console.log("Error fetching details", error)
      })

    // setUpdates(newUpdates);
  }, []);

  useEffect(() => {
    const intervalId = setInterval(() => {
      // Rotate the updates so that the first one becomes the last
one.
      setUpdates((prevUpdates) => {
        const newUpdates = [...prevUpdates];
```

```
        newUpdates.push(newUpdates.shift());
        return newUpdates;
      });
    }, 2000);

    return () => clearInterval(intervalId);
  }, [updates]);

  return (
    <div>
        <div className="update-ticker">
        <h4 className='heading'>UPDATES</h4>
        {updates.map((update) => (
            <div key={update.id} className="update-ticker__item">
            {update.text}
            </div>
        ))}
        </div>
    </div>

  );
};

export default UpdateTicker;
```

ImageCarousel.js

```
import '../styling/ImageCarousel.css';
import React, { useState, useEffect } from 'react';

const ImageCarousel = ({ images }) => {
  const [currentImageIndex, setCurrentImageIndex] = useState(0);
  const totalImages = images.length;

  const handlePrevClick = () => {
    setCurrentImageIndex(currentImageIndex === 0 ? totalImages - 1 :
currentImageIndex - 1);
  };

  const handleNextClick = () => {
    setCurrentImageIndex(currentImageIndex === totalImages - 1 ? 0 :
currentImageIndex + 1);
  };
```

```
  useEffect(() => {
    const intervalId = setInterval(() => {
      setCurrentImageIndex(currentImageIndex === totalImages - 1 ? 0 :
currentImageIndex + 1);
    }, 2500);
    return () => clearInterval(intervalId);
  }, [currentImageIndex, totalImages]);


  return (
    <div className="carousel-container">
      <img src={images[currentImageIndex]} alt="carousel"
className="carousel-image" />
      <div className="arrow left-arrow" onClick={handlePrevClick}>
        &lt;
      </div>
      <div className="arrow right-arrow" onClick={handleNextClick}>
        &gt;
      </div>
    </div>
  );
};

export default ImageCarousel;
```

HOD.js

```
import React from 'react'
import Images from './Images'
import hod from '../carousel_images/hod.jpg'
import '../styling/HOD.css'

const hod_image = {
    image : hod,
    alt : "photo",
    title : "HOD, CSE"
}

export default function HOD() {
  return (
    <div className='container-hod'>
```

```
      <div className='photo'>
        <Images image={hod_image}/>
      </div>

      <div className='data'>
        <h4>Mr. N. Satyanandaram</h4>
        <p>Mr. N.Satyanandaram, obtained MSIT degree from IIIT
Hyderabad,
                        and has joined the RGUKT RK VALLEY in 2011. He
is having a total of 11 years of teaching experience in RK VALLEY. He
is the IT infra
                        coordinator along with the HOD of CSE
department.</p>
      </div>
    </div>
  )
}
```

AcademicCalendar.js

```
import React, { useState } from "react";
import '../styling/AcademicCalendar.css'
import '../styling/Timetable.css'
import Timetable from "./Timetable";

const calendars = {
  sem1 : {
    image : "../timeTable/sem1.png",
    batch : "SEM 1"
  },
  sem2 : {
    image : "../timeTable/sem2.png",
    batch : "SEM 2"
  }
}
const AcademicCalendar = () => {

  const [sem, setSem] = useState("sem1")
  const handleClick = (sem) => {
    setSem(sem);
    console.log(sem)
  };
```

```
  return (
    <div className='time-table'>
      <center> <h2 className='text'>ACADEMIC CALENDARS for YEAR 2022-
2023</h2> </center>
      <div className='buttons'>
        <button onClick={() => handleClick("sem1")}>SEM 1</button>
        <button onClick={() => handleClick("sem2")}>SEM 2</button>
      </div>
      <Timetable data={calendars[sem]}/>
    </div>
  )
};
export default AcademicCalendar;
```

Timetable.js

```
import React from 'react';
import '../styling/Timetable.css'

const Timetable = ({data}) => {
  return (
    <div className="academic-calendar">
      <h2 className="calendar-title">{data.batch}</h2>
      <img className="calendar-image" src={data.image} alt="Academic
Calendar" />
    </div>
  );
};

export default Timetable;
```

BOS.js

```
import React from 'react'
import '../styling/BOS.css'

export default function BOS() {
  return (
    <div className='bos'>
      <h3>BOS CURRICULUM for ALL BATCHES</h3>
      <div className='bos-all'>
```

```
        <p>Download the curriculum for E4 CSE batch <a
href="../pdf/E4.pdf">Click Here</a></p>
        <p>Download the curriculum for E3 CSE batch <a
href="../pdf/E3.pdf">Click Here</a></p>
        <p>Download the curriculum for E2 CSE batch <a
href="../pdf/E2.pdf">Click Here</a></p>
        <p>Download the curriculum for E1 CSE batch <a
href="../pdf/E1.pdf">Click Here</a></p>
      </div>
    </div>
  )
}
```

Students.js

```
import React from 'react'
import '../styling/BOS.css'

export default function Students() {
  return (
    <div className='bos'>
      <h3>STUDENTS DATA</h3>
      <div className='bos-all'>
        <p>Download the data of R17 CSE Batch<a
href="../students/E4.pdf">Click Here</a></p>
        <p>Download the data of R18 CSE Batch<a
href="../students/E3.pdf">Click Here</a></p>
        <p>Download the data of R19 CSE Batch <a
href="../students/E2.pdf">Click Here</a></p>
        <p>Download the data of R20 CSE Batch <a
href="../students/E1.pdf">Click Here</a></p>
      </div>
    </div>
  )
}
```

Facilities.js

```
import '../styling/Facilities.css'
import React from 'react';

const Facilities = () => {
```

```
  return (
    <div className="facilities">
      <h2>FACILITIES OF DEPARTMENT</h2>
      <ul>
        {facilitiesData.map((facility) => (
          <li key={facility.id}>
            <h3>{facility.name}</h3>
            <img src={facility.image} alt={facility.name} />
            <p>{facility.description}</p>
          </li>
        ))}
      </ul>
    </div>
  );
};

export default Facilities;
```

ContactSingle.js

```
import React from 'react'
import '../styling/ContactSingle.css'

export default function ContactSingle({data}) {
  return (
    <div className='Contact'>
      <h4 >{data.designation}</h4>
      <ul>
        <li> <strong>Name : </strong>{data.name}</li>
        <li> <strong>Email : </strong> {data.email}</li>
        <li> <strong>Contact : </strong> {data.contact}</li>
      </ul>
    </div>
  )
}
```

Aptitude.js

```
import '../styling/Placements.css'
import React from 'react';

const Aptitude = () => {
  return (
```

```
    <div className="preparation-container">
      <h2>Importance of Aptitude in Job Interviews</h2>
      <p className="preparation-text">Aptitude tests are becoming
increasingly common in job interviews, regardless of the field or
industry. These tests are designed to evaluate a candidate's ability
to reason, solve problems, and think critically under pressure. Some
of the skills that are commonly assessed during aptitude tests
include:</p>
      <ul className="preparation-list">
        <li>Numerical reasoning</li>
        <li>Verbal reasoning</li>
        <li>Logical reasoning</li>
        <li>Abstract reasoning</li>
        <li>Critical thinking</li>
        <li>Problem-solving</li>
      </ul>
      <p className="preparation-text">Having a strong aptitude is
crucial for success in many roles, particularly those that require
analytical thinking, decision-making, and problem-solving skills.</p>

      <h2>References for Preparation</h2>
      <p className="preparation-text">If you're looking to improve
your aptitude skills before a job interview, here are some references
that may help:</p>
      <ul className="preparation-list">
        <li>Careerride: <a href="https://www.careerride.com/online-
aptitude-test.aspx">https://www.careerride.com/</a></li>
        <li>Indiabix: <a
href="https://www.indiabix.com/aptitude/questions-and-
answers/">https://www.indiabix.com</a></li>
        <li>JobTestPrep: <a
href="https://www.jobtestprep.co.uk/">https://www.jobtestprep.co.uk/</
a></li>
        <li>AssessmentDay: <a
href="https://www.assessmentday.co.uk/">https://www.assessmentday.co.u
k/</a></li>
        <li>CareerGym: <a
href="https://careergym.com/">https://careergym.com/</a></li>
      </ul>
      <p className="preparation-text">These resources offer practice
tests, sample questions, and detailed explanations to help you prepare
for your aptitude test and improve your chances of success in your job
interview.</p>
```

```
    </div>
  );
};

export default Aptitude;
```

Faculty.js

```
import React from 'react';
const Faculty = () => {
return (
    <div className="faculty-details">
      <h2>FACULTY - Department of CSE</h2>
      {facultyList.map((faculty, index) => (
        <div key={index} className="faculty-card">
          <div className='image'>
            <img src={faculty.image} alt='faculty'/>
          </div>

          <div className='info'>
          <h3>{faculty.name}</h3>
          <p className='information'><h5>Education:
</h5>{faculty.designation}</p>
          <p className='information'><h5>Email:
</h5>{faculty.email}</p>
          <p className='information'><h5>Join Date:
</h5>{faculty.joinDate}</p>
          <p className='information'><h5>Experience:</h5>
{faculty.experience}</p>
          </div>

        </div>
      ))}
    </div>
  );
};

export default Faculty;
```

HOD Login.js

```
import React, { useState } from 'react';
import axios from 'axios';
import {Link, useNavigate} from 'react-router-dom'
import '../styling/HODlogin.css'
const HODlogin = () => {

  const history = useNavigate(); // used to move between different
routers
  const [email, setEmail] = useState("")
  const [password, setPassword] = useState("")
  const [errorMessage, setErrorMessage] = useState("")

  async function submit(e){
    e.preventDefault();
    try {
      await axios.post("http://localhost:5000/login",{email,password})
      .then(res => {
        if(res.data=="User correct"){
          history("/hod",{state : {id:email}})
        }
        else if(res.data == "Password Incorrect"){
          setErrorMessage("Password Incorrect")
        }
        else if(res.data == "User doesn't exist"){
          setErrorMessage("User have not registered")
          console.log("User have not registered")
        }
      })
      .catch(e => {
        setErrorMessage("Wrong details");
        console.log(e)
      })

    } catch (error) {
      console.log("error");
    }
  }

  return (
    <div className="LoginPage">
      <h1>Login</h1>
```

```
      <form action="POST" className='form'>

        <input type='email' placeholder='Email' onChange = {(e) =>
{setEmail(e.target.value)}}/>
        <input type='password' placeholder='Password' onChange={(e) =>
{setPassword(e.target.value)}}/>

      <input type='submit' onClick={submit} />
      </form>

      <div className='error-message'>
        {errorMessage && <p>{errorMessage}</p>}
      </div>

      <br />
      <p>OR</p>
      <div className='end-title'>
        <Link to="/register">Sign Up</Link>
      </div>
    </div>
  );
};

export default HODlogin;
```

HODpage.js

```
import React, { useState } from 'react';
import { Link, useLocation, useNavigate } from 'react-router-dom';
import '../styling/HODPage.css'

function HODPage() {
  const location = useLocation();

  return (
    <div className='hod-manager'>
      <h1>Welcome {location.state.id}</h1>

      <div className='add-update'>
        <span>Add Updates : </span> <Link
to="/hod/updates"><button>Add</button></Link>
      </div>
```

```
      <div className='add-update'>
      <span>Update Academic Calendar : </span><Link
to="/calendarManager"><button>Add</button></Link>
      </div>
      <div className='add-update'>
      <span>Update Timetable : </span><Link
to="/timeTableManager"><button>Add</button></Link>
      </div>

      <div className='logout'>
        <Link to="/login">LOG OUT</Link>
      </div>
    </div>
  );
}

export default HODPage;
```

TimetableManager.js

```
import {useEffect} from "react"
import '../styling/PostData.css'

export default function TimeTableManager(){
    useEffect(()=>{
        let form=document.getElementById("form");
        form.onsubmit=async function(event){
            event.preventDefault();
            let formData=new FormData(form)
            let ret=await
fetch("http://localhost:5000/timeTableManager",{method:"post","body":f
ormData})
            let res=await ret.json()
            console.log(res)
        }
    })
    return (
        <div className="manager">
            <h1>Update TimeTable</h1>
            <form  id="form" method="post" enctype="multipart/form-
data">
                Select year:<br/>
                <select name="year">
```

```
                    <option value="E1">E1</option>
                    <option value="E2">E2</option>
                    <option value="E3">E3</option>
                    <option value="E4">E4</option>
                </select>
                Select File:<br/>
                <input type="file" name="file"/>
                <input type="submit" value="submit"/>
            </form>
        </div>
    );
}
```

STYLING – CSS

```
nav {
    display: flex;
    justify-content: space-between;
    align-items: center;
    background-color: #333;
    color: #fff;
    padding: 1rem;
  }

  .logo a {
    color: #fff;
    font-size: 2rem;
    text-decoration: none;
    font-style:oblique;
    font-weight: bolder;
    margin-left: 20px;
  }

  .menu {
    display: flex;
    list-style: none;
    margin: 0;
    padding: 0;
  }

  .menu li {
    margin: 0 1rem;
```

```
    font-weight: bold;
  }

  .menu li a {
    color: #fff;
    text-decoration: none;
  }

  .dropdown {
    position: relative;
  }

  .dropdown .sub-menu {
    display: none;
    position: absolute;
    top: 100%;
    left: 0;
    z-index: 1;
    background-color: #333;
    margin-top: 0.5rem;
    padding: 0.5rem;
  }

  .sub-menu li{
    list-style: none;
    margin-top: 0.7rem;
    font-weight: normal;
  }

  .dropdown .sub-menu {
    display: block;
  }

  .button{
    border: none;
    border-radius: 20px;
    padding: 5px;
    width: 5rem;
    color: #fff;
    background-color:rgb(68, 151, 59);
  }

.container{
```

```
    display: flex;
    margin: 0;
    padding: 0;
}

.left-body{
    display: flex;
    flex-direction: column;
    width: 70vw;
}

.right-body{
    display: flex;
    flex-direction: column;
    width: 30vw;
}

.carousel{
    width: 68vw;
    margin: 20px;
}

.update-box{
    width: 28vw;
    margin-top: 20px;
    margin-left: 10px;
    height: 60vh;
}

.authorities{
    border: none;
    background-color: rgb(187, 219, 187);
    width: 28vw;
    margin-top: 20px;
    margin-left: 10px;
    height: 25vh;
    display: flex;
    justify-content: space-between;
    border-radius: 5px;
}

.hod-container{
    width: 68vw;
```

```
    margin: 20px;
}

.faculty-details {
    display: flex;
    flex-direction: column;
    flex-wrap: wrap;
    justify-content: center;
    align-items: center;
    margin: 20px;
  }
  .faculty-details h3{
    color: rgb(62, 9, 109);
  }

  .faculty-details h2{
    color: rgb(28, 6, 134);
    font-weight: 700;
  }

  .faculty-card {
    display: flex;
    background-color: #f2f2f2;
    border: 1px solid #ddd;
    padding: 20px;
    margin: 10px;
    width: 50vw;
    /* text-align: center; */
    border-radius: 20px;
  }

  .faculty-card h3 {
    margin-top: 0;
    margin-left: 50px;
  }

  .faculty-card p {
    margin: 10px 0;
  }
```

BACKEND

Server.js

```
import express from 'express'
import cors from 'cors'
import { config } from 'dotenv'
import mongoose from 'mongoose'

import connect from './Database/connection.js'
import updates from '../Server/models/updateSchema.js'
import User from '../Server/models/userSchema.js'
import bodyParser from 'body-parser'
import multer from 'multer'
import fs from "fs"

const app = express();
const path="../client/public/timeTable"
// const pathCalendar="../client/public/calendars"
app.use(cors());
app.use(express.json());
app.use(bodyParser.urlencoded({extended:false}))
app.use(multer({"dest":path}).any())
config();

const port = process.env.PORT || 8080;

connect().then()
const db = mongoose.connection


// UPDATES module
app.get('/hod/updates', (req, res) => {
    updates.find()
      .sort('-createdAt') // Sort by newest first
      .limit(10) // Limit to 10 updates
      .then(updates => {
        res.json(updates);
      })
      .catch(error => {
        console.error('Error fetching updates:', error);
        res.status(500).send('Internal server error');
      });
  });
```

```
  app.post('/hod/updates', (req, res) => {
    console.log(req.body.text);
    updates.insertMany({text : req.body.text})
      .then(() => {
        // res.send('Update created');
      })
      .catch(error => {
        console.error('Error creating update:', error);
        // res.json('Internal server error');
      });
    res.json("This is post request")
  });

  app.delete('/hod/updates', (req,res) => {
    updates.deleteMany()
  })

// Timetable post

  app.post("/timeTableManager",function(req,res){
    console.log(req.body,req.files)
    try{
      fs.unlink(path+"/"+req.body.year+".png",function(err){
        console.log(err)
      })
    }
    catch(err){

    }
    fs.rename(path+"/"+req.files[0].filename,path+"/"+req.body.year+".
png",function(err){
      console.log(err)
    })
  })


  // academic calendar post
  app.post("/calendarManager",function(req,res){
    console.log(req.body,req.files)
    try{
      fs.unlink(path+"/"+req.body.sem+".png",function(err){
```

```
        console.log(err)
      })
    }
    catch(err){

    }
    fs.rename(path+"/"+req.files[0].filename,path+"/"+req.body.sem+".p
ng",function(err){
      console.log(err)
    })
  })

// User model

app.post("/login", async(req,res) => {
  const {email,password} = req.body;

  try {
    const check = await User.findOne({email:email})
    let msg = ""
    if(check){
      if(check.password === password){
        msg = "User correct"
      }
      else{
        msg = "Password Incorrect"
      }
    }
    else{
      msg = "User doesn't exist"
    }
    res.json(msg)

  } catch (error) {
    res.json("User doesn't exist")
  }

})

app.post("/register", async(req,res) => {
  const {email,password} = req.body;
  console.log(req.body)
  const data = {
```

```
    email : email,
    password : password
  }
  try {
    const check = await User.findOne({email:email})
    if(check){
      res.json("User exist")
    }
    else{
      console.log(data)
      // console.log(User.find())
      await User.insertMany({email:email, password:password})
      res.json("User doesn't exist")
    }
  } catch (error) {
    res.json("User doesn't exist")
  }

})

app.listen(port, () => {
    console.log("Server Started")
})
```

Database Connection.js

```
import mongoose from "mongoose"
const {Schema} = mongoose

const uri = "mongodb://127.0.0.1:27017"

export default async function connect(){

    await mongoose.connect(uri)
    console.log("Database connected");
}
```

UserSchema.js

```
import mongoose from "mongoose";
```

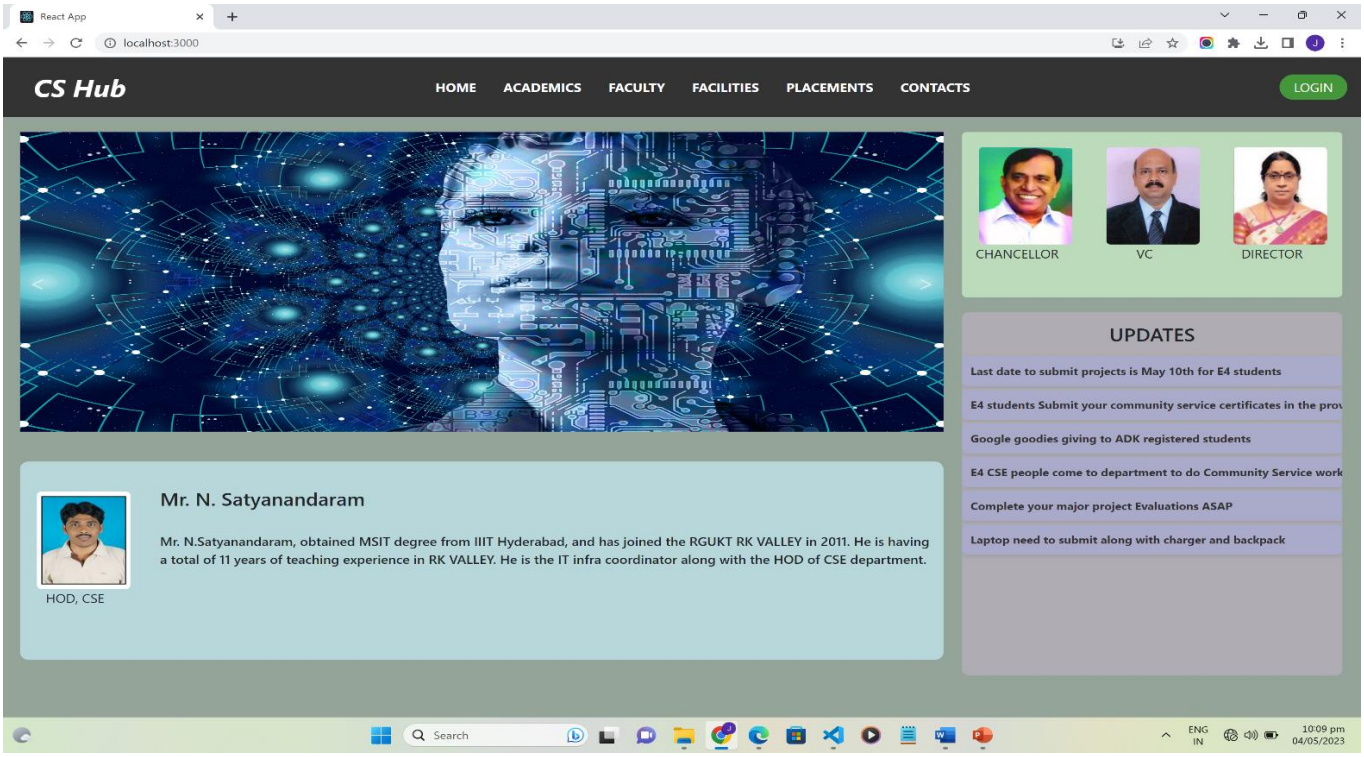
```
const {Schema} = mongoose;

const userSchema = new Schema({
    email : {
        type : String,
        required : true,
    },
    password : {
        type : String,
        required : true,
    }
})

export default mongoose.model('User', userSchema)
```

UpdateSchema.js

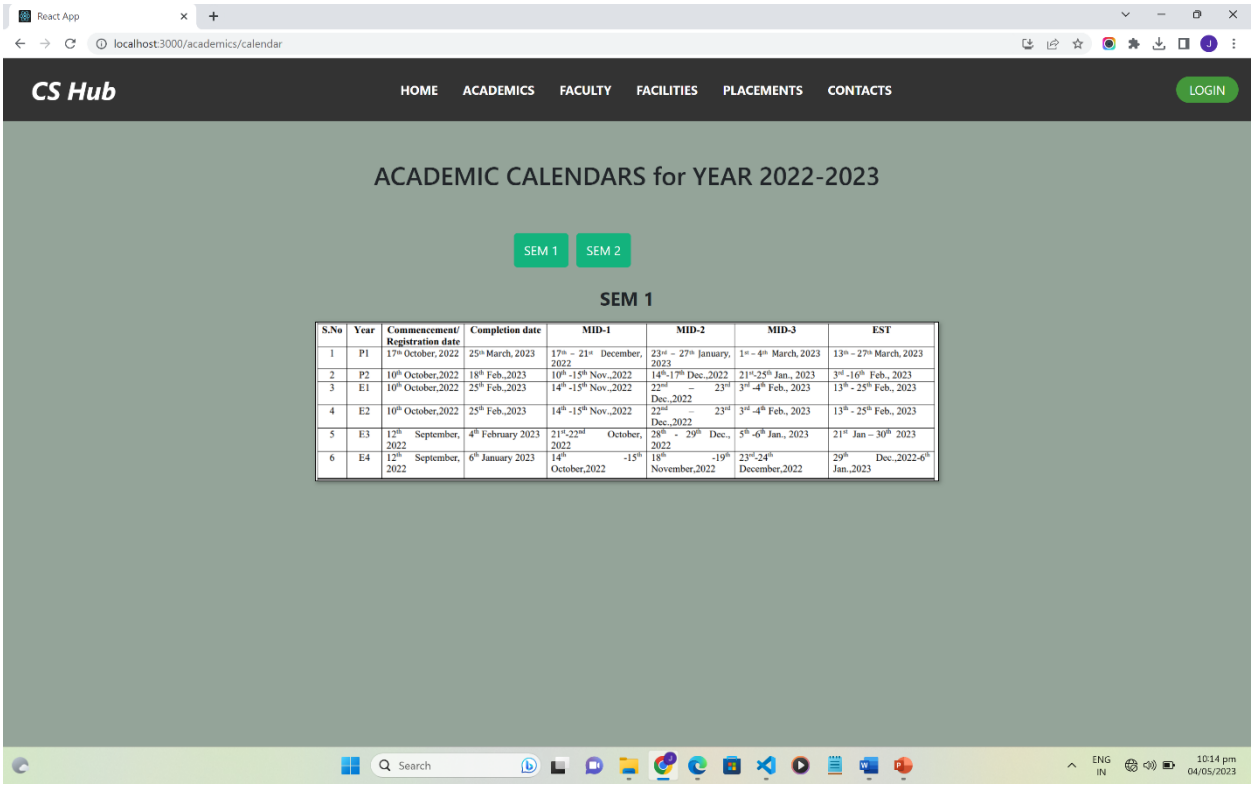
```
import mongoose from "mongoose";
const {Schema} = mongoose;

const updateModel = new Schema({
    text: {
        type: String,
        required: true
    },
    createdAt: {
        type: Date,
        default: Date.now
    },
})

export default mongoose.model('Updates', updateModel)
```

RESULT:

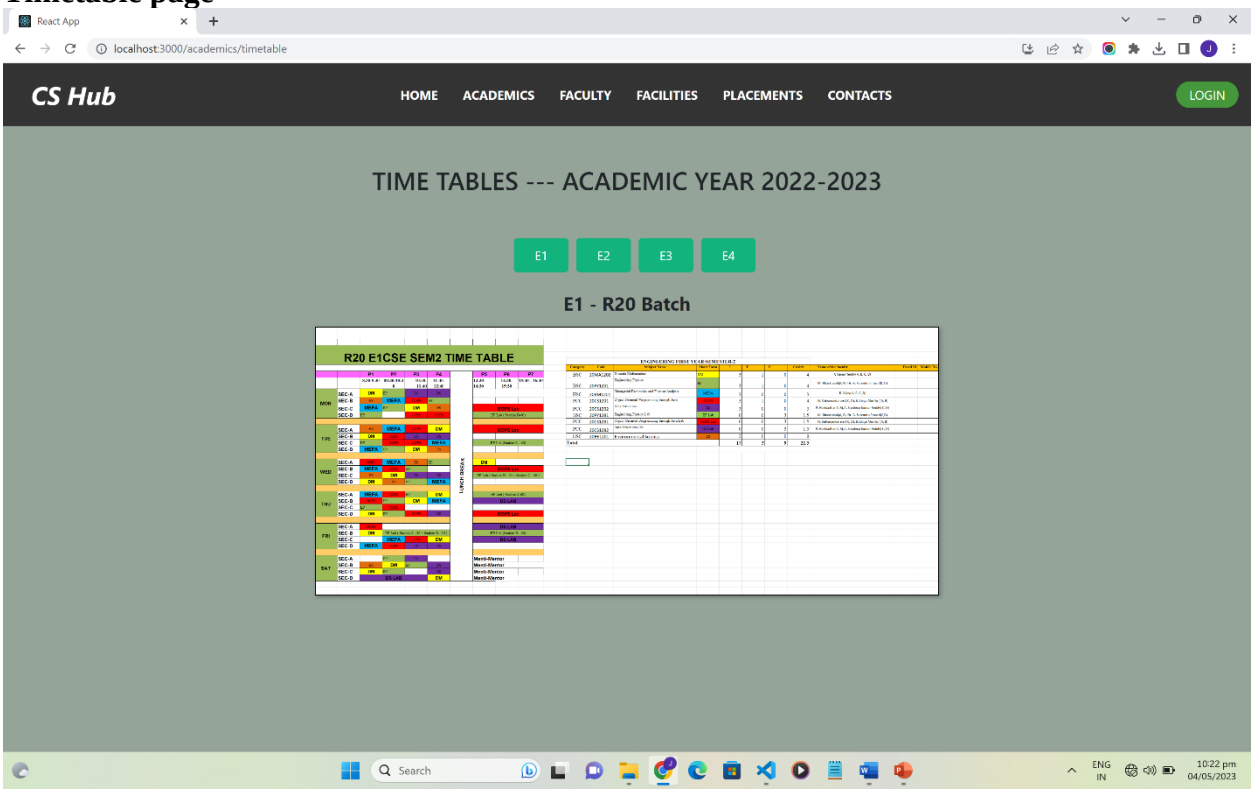
HOME PAGE



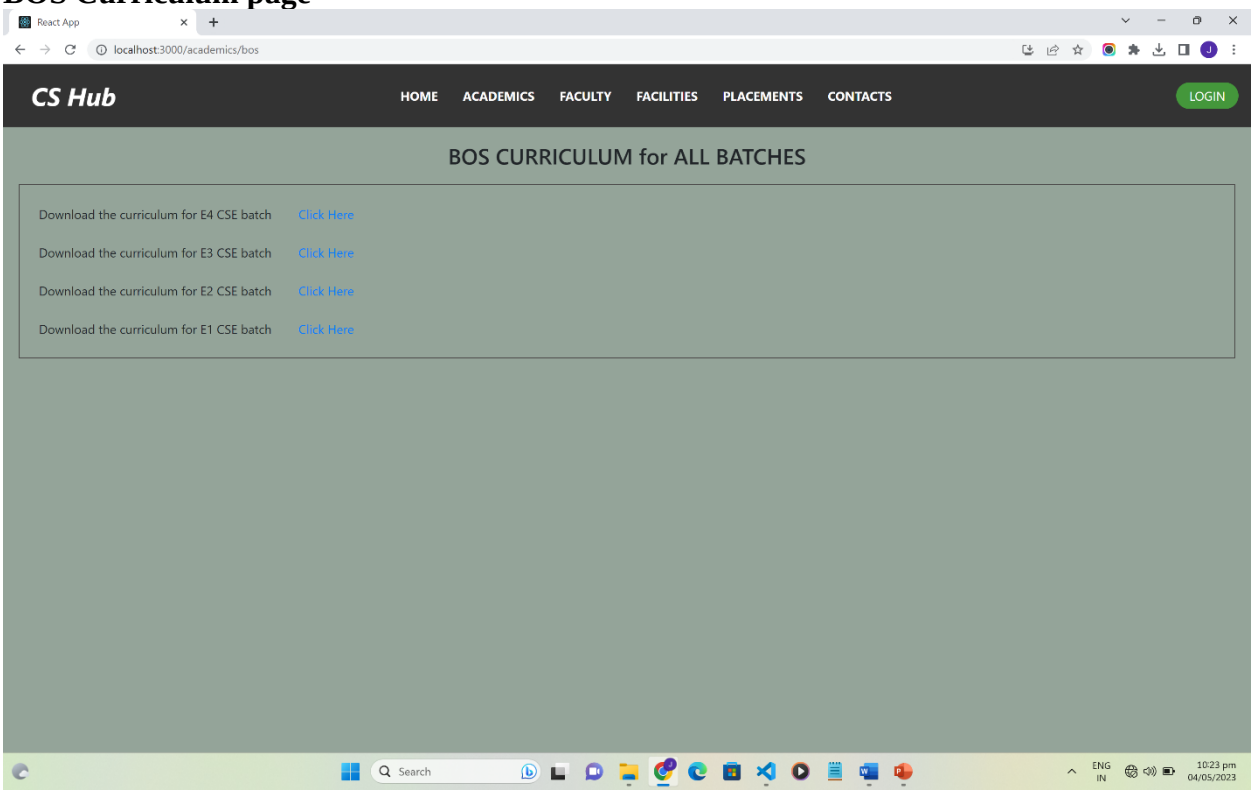
Academic Calendar



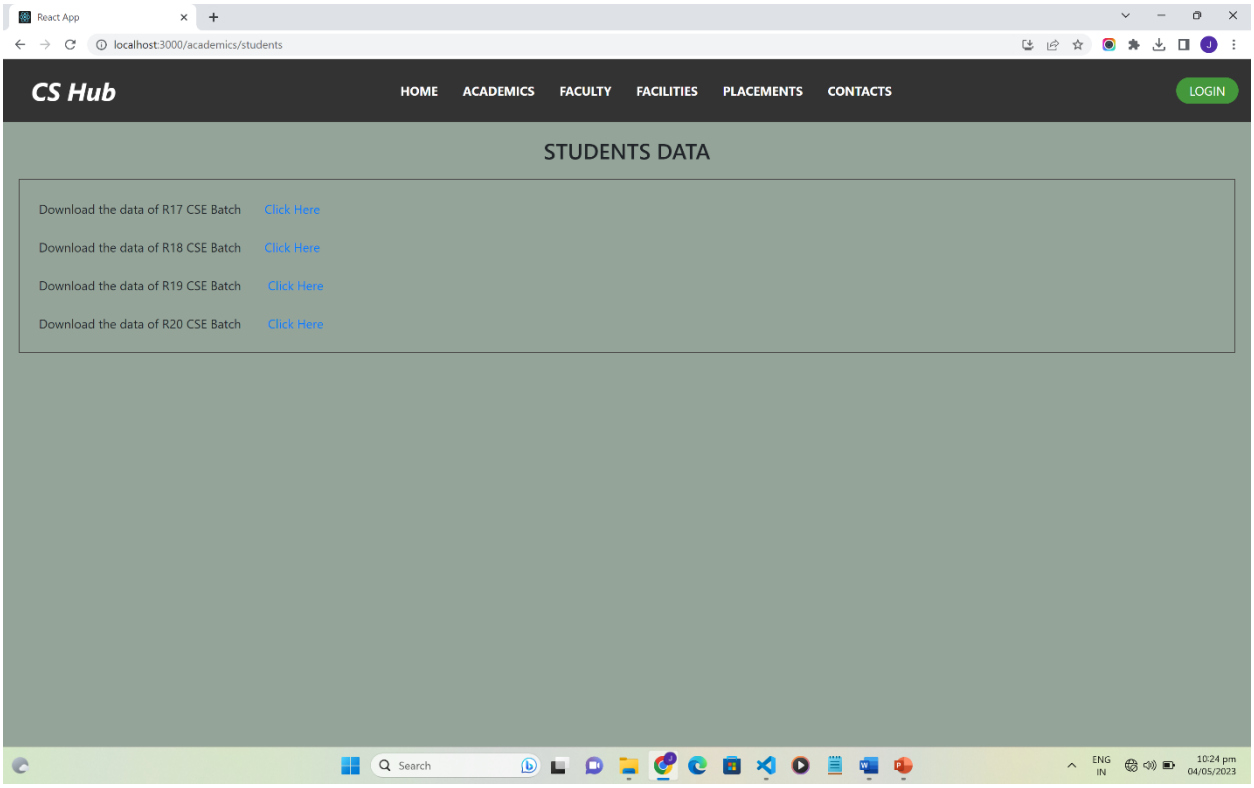
Timetable page



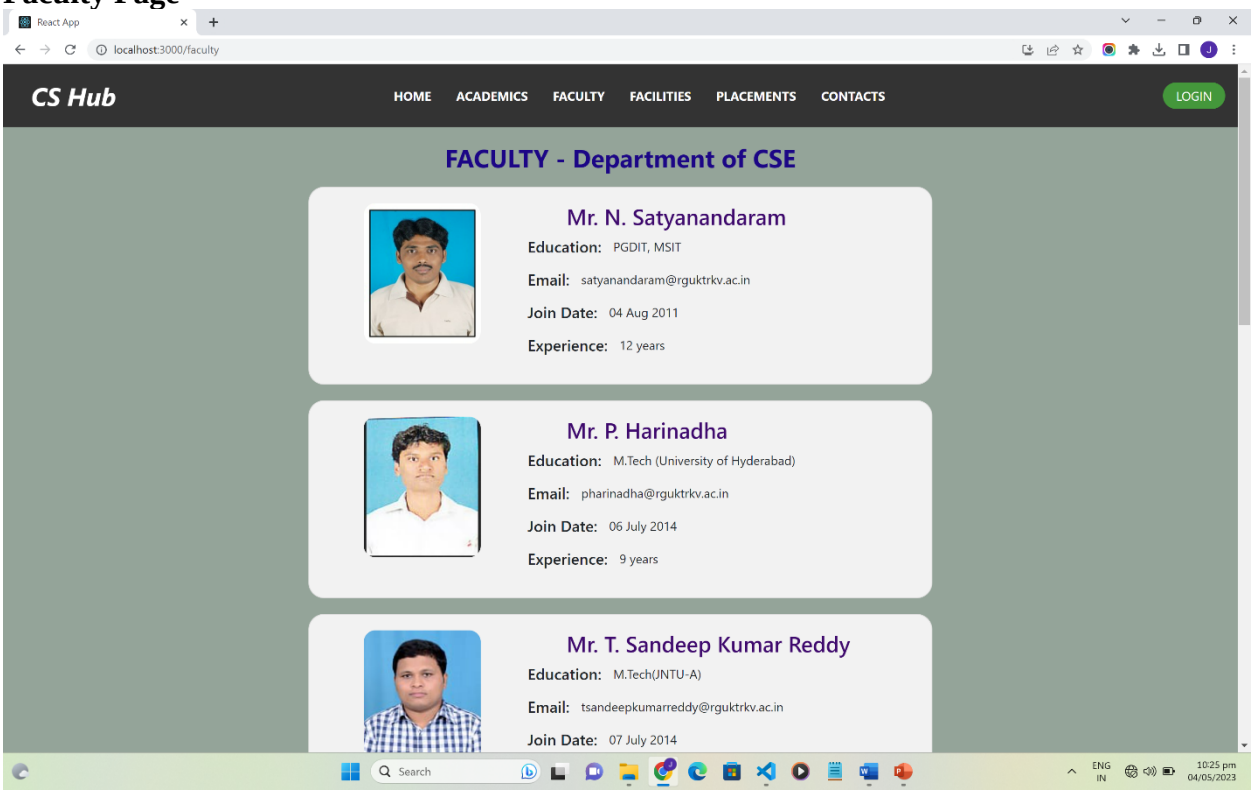
BOS Curriculum page



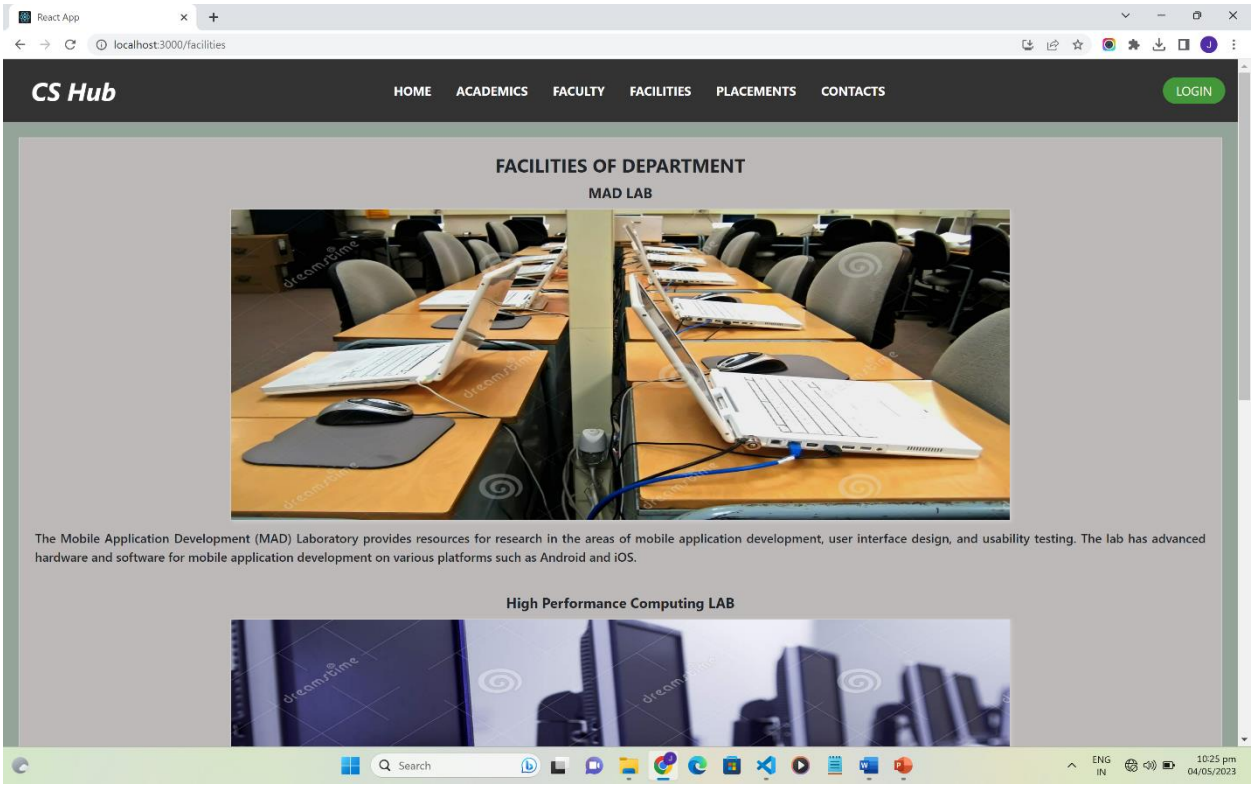
Students Page



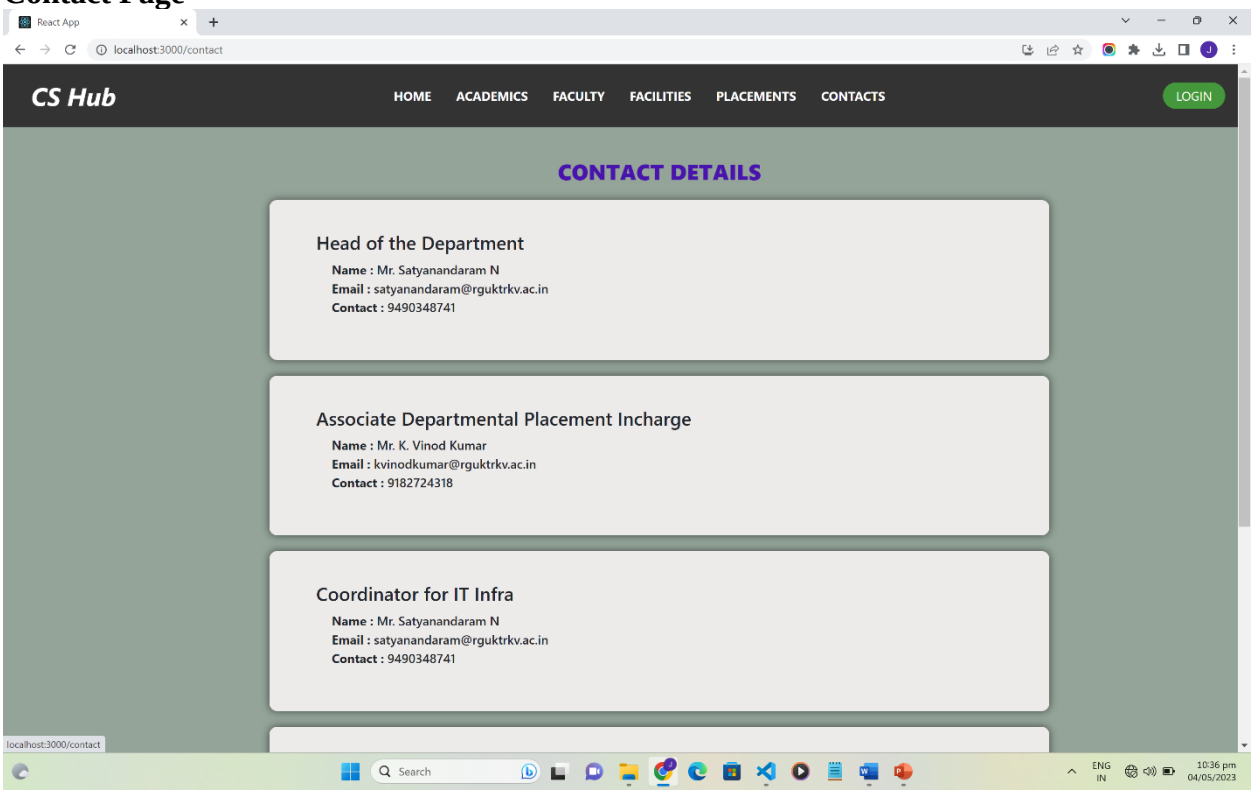
Faculty Page



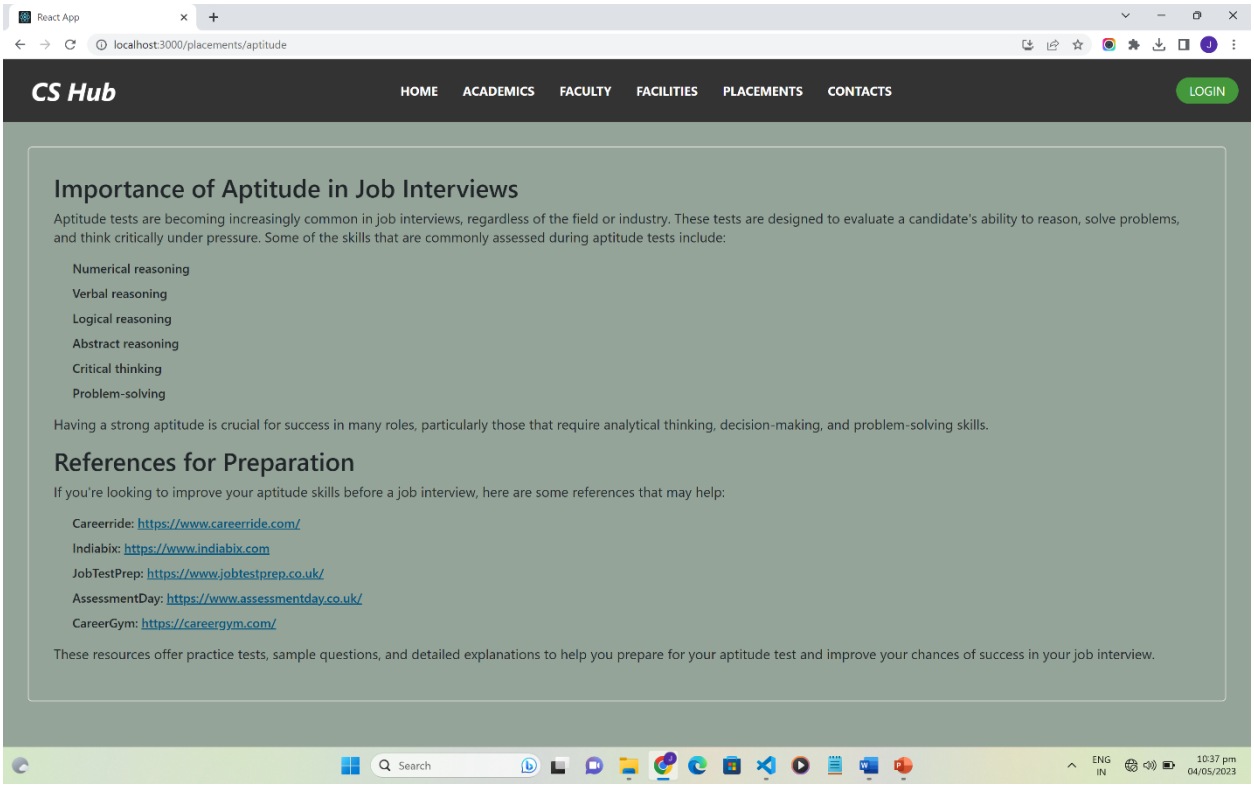
Facilities Page



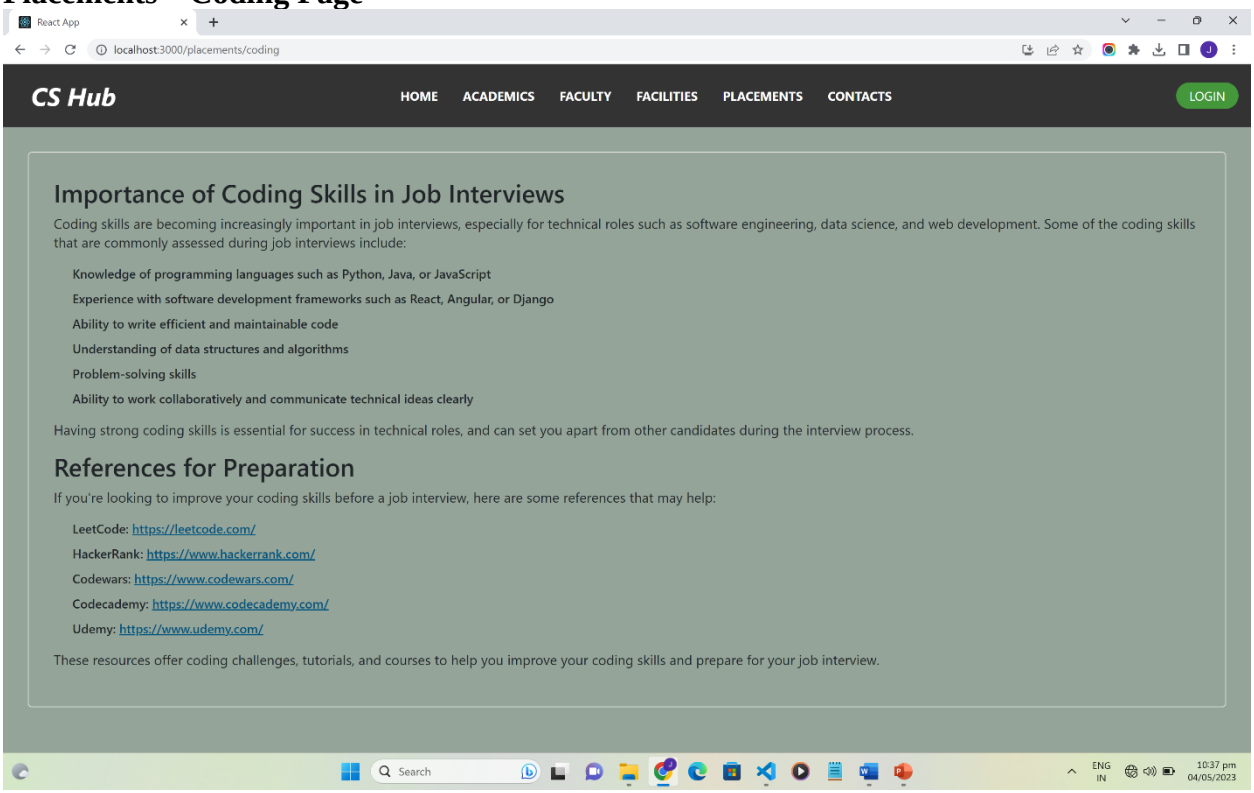
Contact Page



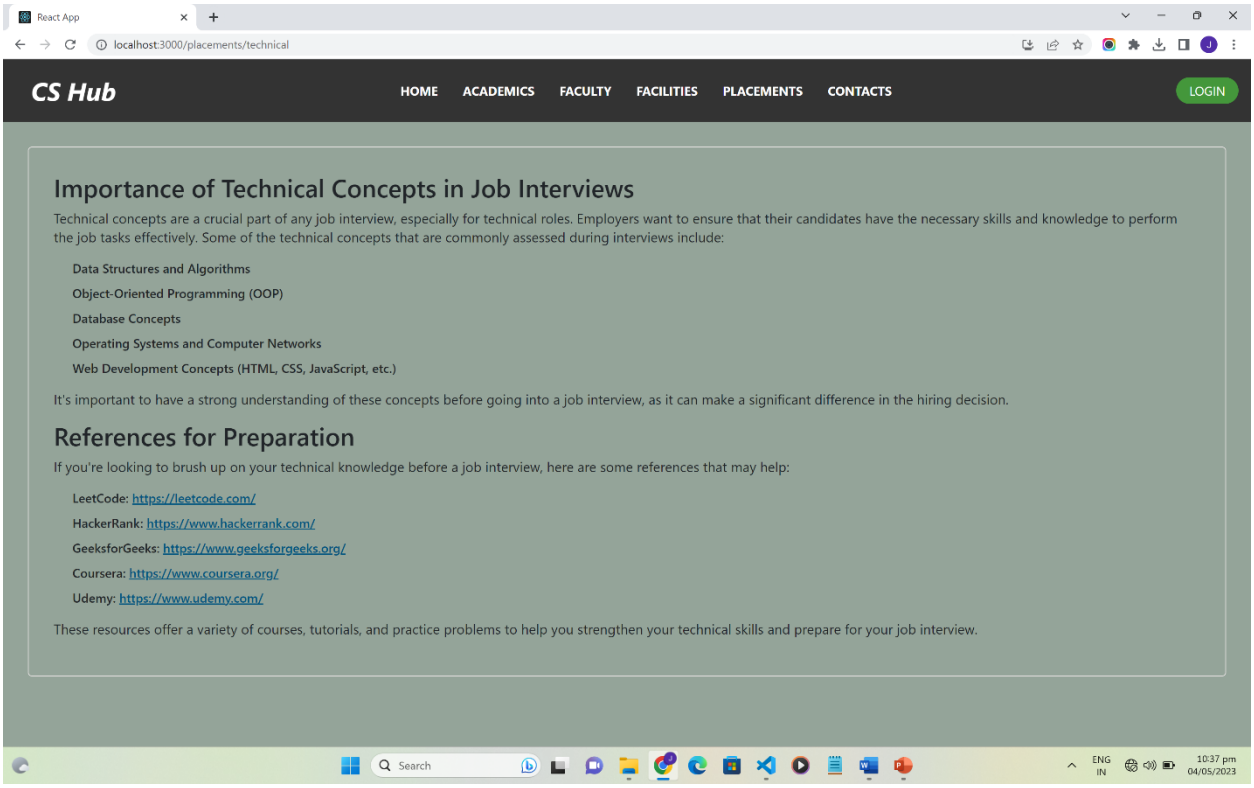
Placements – Aptitude Page



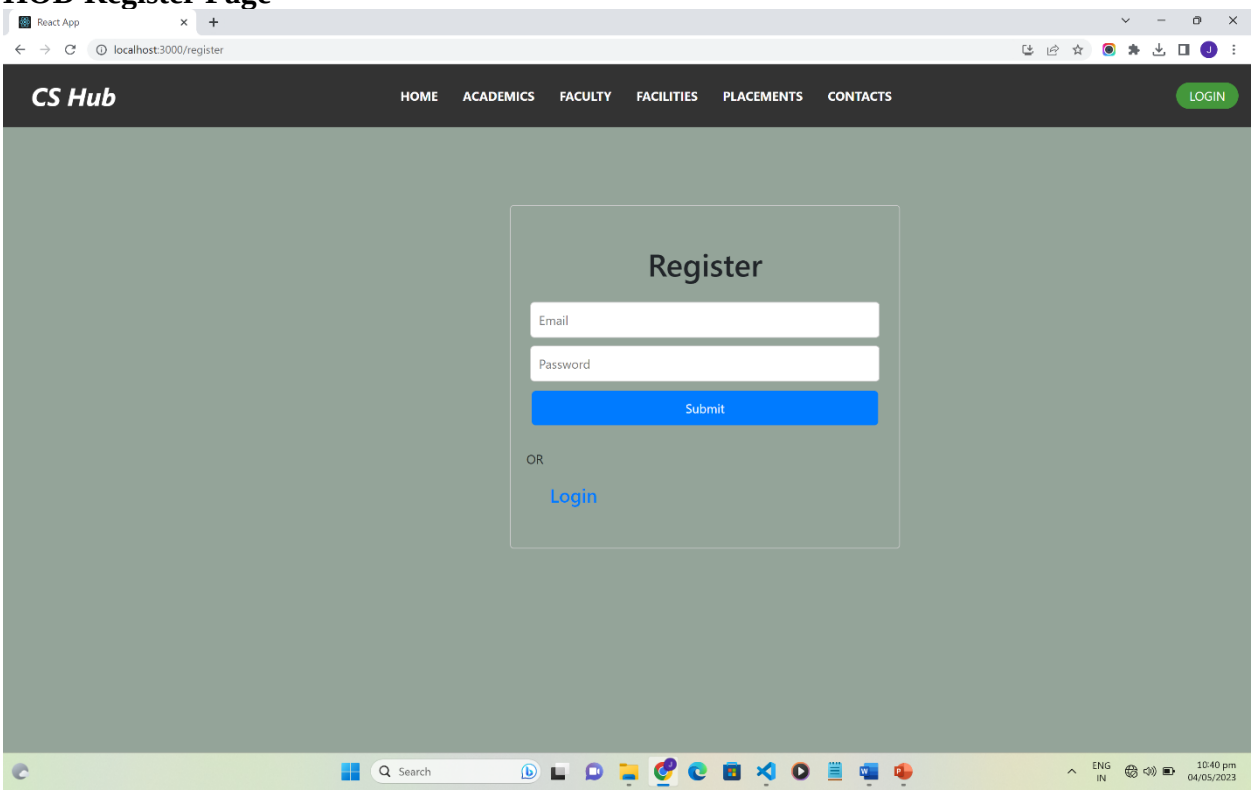
Placements – Coding Page



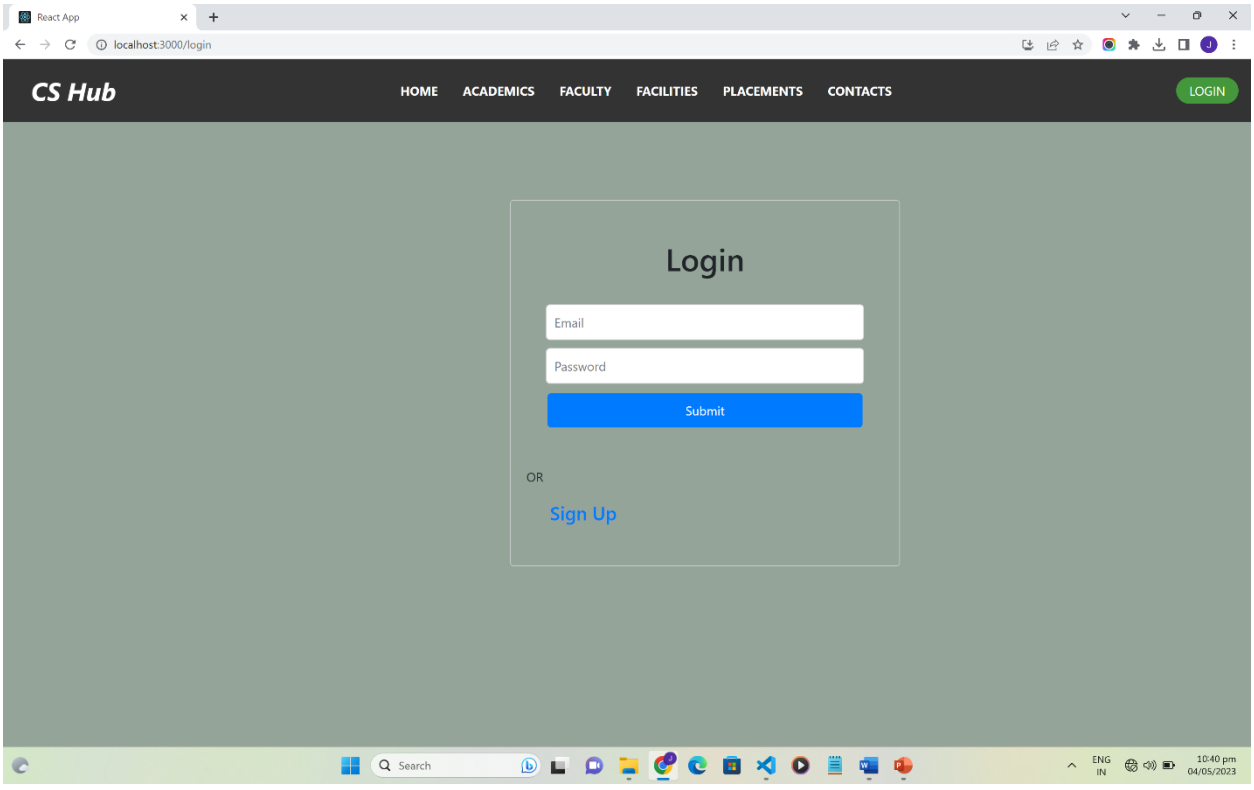
Placements – Technical Page



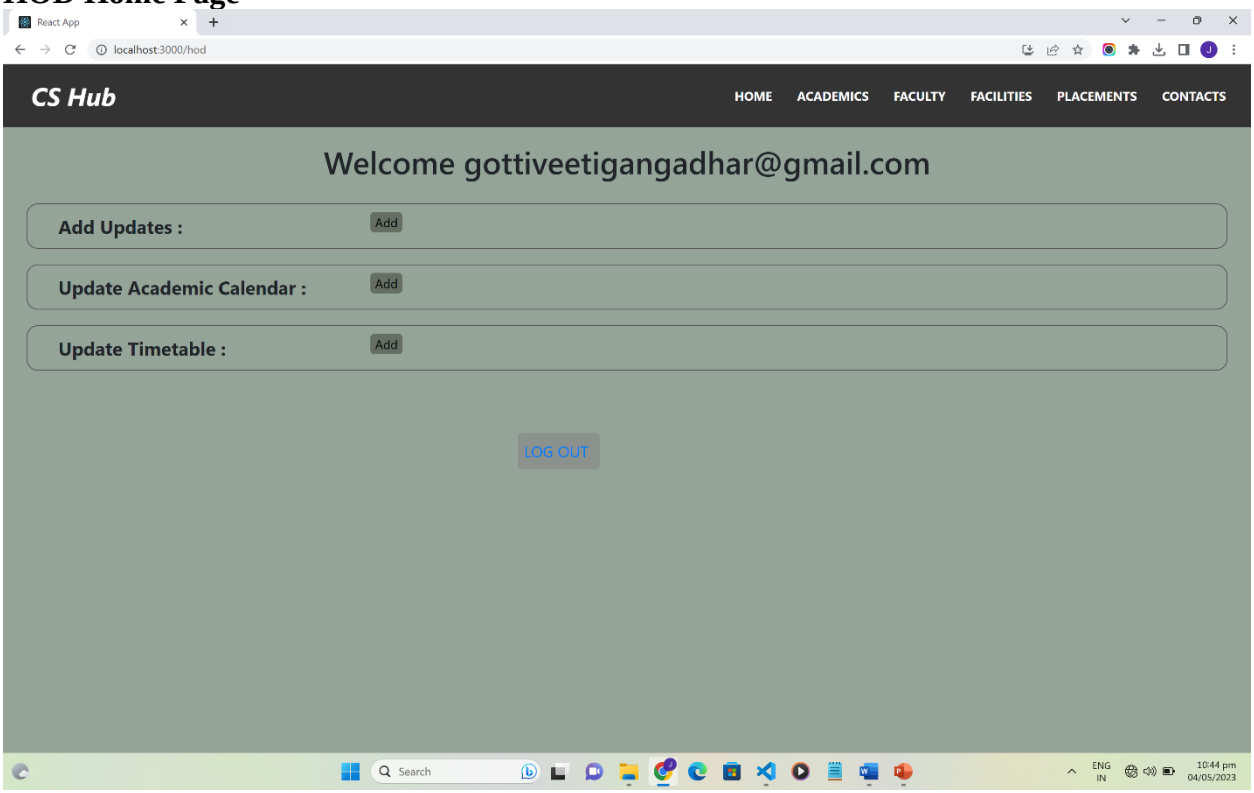
HOD Register Page



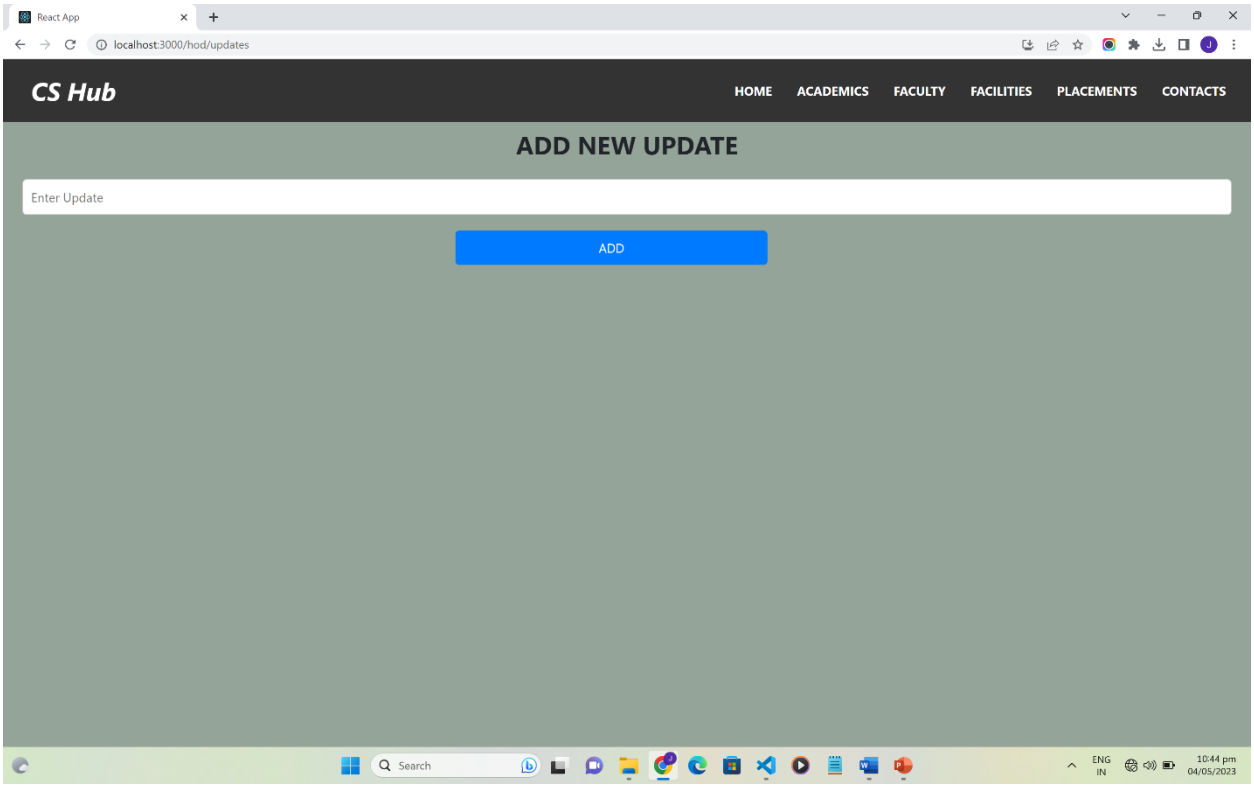
HOD Login Page



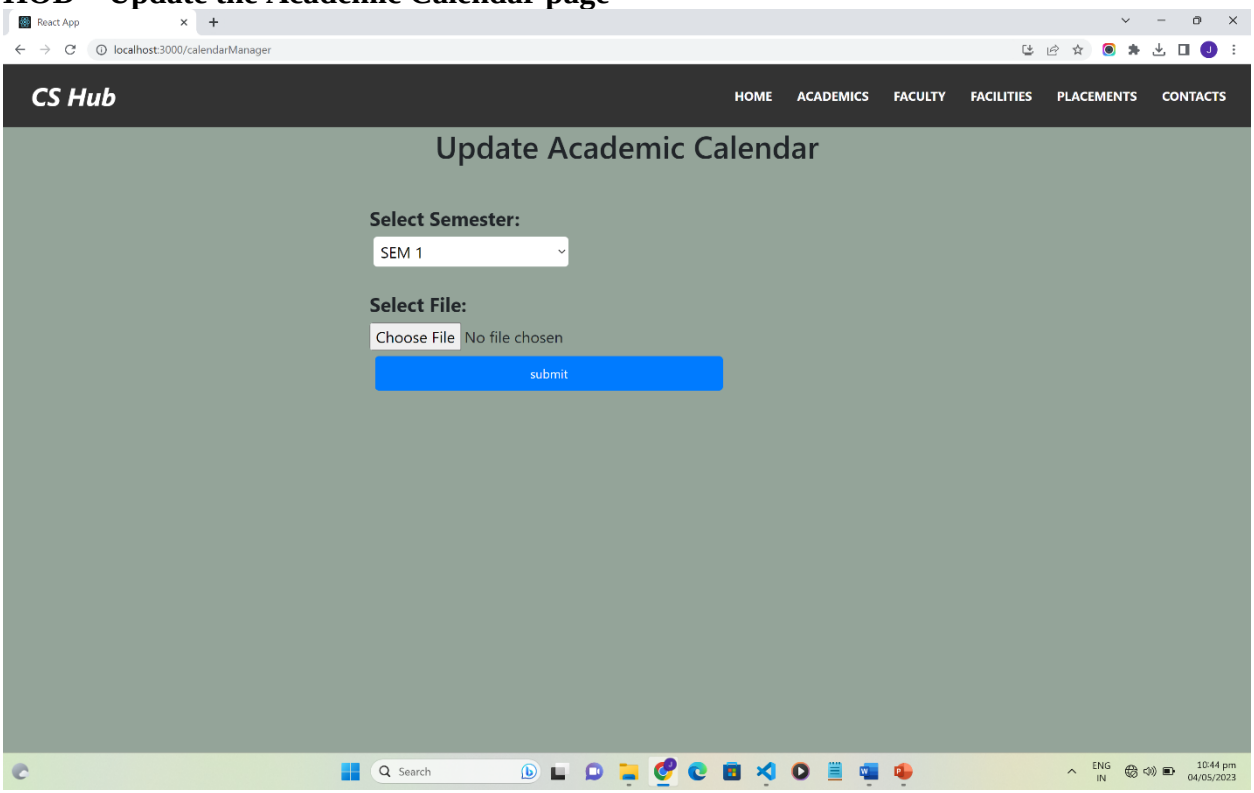
HOD Home Page



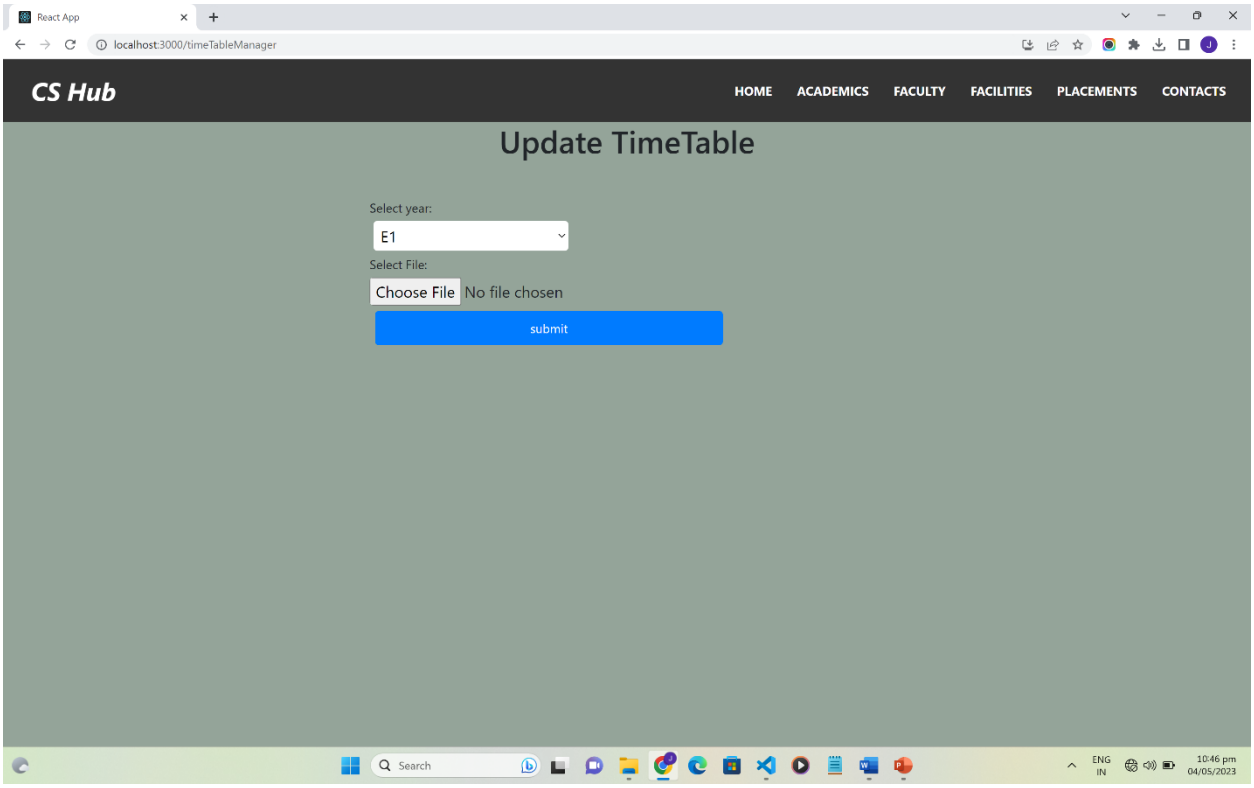
HOD - Add Updates Page



HOD – Update the Academic Calendar page



HOD – Update Timetable Page



CONCLUSION

As there was no such system available for department by which the students can communicate with teachers properly. This project will provide the students proper medium to communicate with the faculties over their problems regarding studies and other topics. There were a lot of difficulties for the student regarding the current updates of the department. All the latest updates of the departments are provided on the website, such as all the information are uploaded on the website as quick as possible.

FUTURE ENHANCEMENTS

We can also embed chat option for the users (Students or Faculties) who are online at the time and are registered, so that it can be used as a social networking site such as Facebook and Twitter etc at a small scale or at department level

REFERENCE

[1] ReactJs : React

[2] MongoDB : What Is MongoDB? | MongoDB

[3] NodeJs : Documentation | Node.js (nodejs.org)

[4] YouTube

[5] Chatgpt