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A MINI PROJECT REPORT ON "STUDENT TEACHER NOTES"

Submitted in partial fulfillment of requirements for the award of 5th semester,

BACHELOR OF ENGINEERING IN

COMPUTER SCIENCE AND ENGINEERING

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ABSTRACT

STUDENT TEACHER NOTES, An online platform for teachers to share notes, events, and photos of past events with their students is a useful tool for improving communication and collaboration between educators and learners. This type of website allows teachers to post important information, such as class notes and homework assignments, in a centralized location where students can access them at any time. In addition, the platform can be used to announce upcoming events, such as tests and field trips, and to share photos of past events, such as class projects and school outings. This helps to keep students informed and engaged in their studies, and allows teachers to more effectively communicate with their students outside of the classroom.

One potential benefit of this type of website is that it can make it easier for teachers to share resources with their students. Rather than having to distribute physical copies of notes or handouts in class, teachers can simply post them on the website for students to access at their convenience. This can save time and resources, and it can also make it easier for students to review material on their own or collaborate with their classmates.

Another benefit of this platform is that it can provide a more interactive and engaging learning experience for students. By allowing teachers to post photos and videos, as well as text-based content, the website can give students a more immersive and dynamic view of their coursework. It can also encourage greater participation and engagement from students, as they can ask questions, share their own work, and interact with their teachers and peers through the platform. Overall, this type of website has the potential to enhance communication, collaboration, and learning for both teachers and students.

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INTRODUCTION

Database is a collection of data and Management System is a set of programs to store and retrieve those data. Based on this one can define DBMS as a collection of inter-related data and set of programs to store & access those data in an easy and effective manner.

1.1 What is the need of DBMS?

Database systems are basically developed for large amount of data. When dealing with huge amount of data, there are two things that require optimization: Storage of data and retrieval of data.

Storage: According to the principles of database systems, the data is stored in such a way that it acquires lot less space as the redundant data (duplicate data) has been removed before storage. Let's take a layman example to understand this. In a banking system, suppose a customer is having two accounts, one is saving account and another is salary account. Let's say bank stores saving account data at one place (these places are called tables we will learn them later) and salary account data at another place, in that case if the customer information such as customer name, address etc. are stored at both places then this is just a wastage of storage (redundancy/duplication of data), to organize the data in a better way the information should be stored at one place and both the accounts should be linked to that information somehow. The same thing we achieve in DBMS.

Fast Retrieval of data: Along with storing the data in an optimized and systematic manner, it is also important that we retrieve the data quickly when needed. Database systems ensure that the data is retrieved as quickly as possible.

The choice of a database product is often influenced by factors such as:

- the computing platform (i.e., hardware, operating system)
- the volume of data to be managed
- the number of transactions required per second
- existing applications or interfaces that an organization may have
- support for heterogeneous and/or distributed computing
- cost
- vendor support

1.2 Design and Modeling:

The first task of a database designer is to produce a conceptual datamodel that reflects the structure of the information to be held in the database. A common approach to this is to develop an entity-relationship model, often with the aid of drawing tools. Another popular approach is the Unified Modeling Language. A successful data model will accurately reflect the possible state of the external world being modeled: for example, if people can have more than one phone number, it will allow this information to be captured.

1.3 Objective

The main objective of this project is to determine how an interactive Website helps to interact between students and teachers to share resource material and upcoming events in campus. This project is a two-tier architecture application.

1.4 Problem Statement

Existing methods are conventional which can be overcome using digital platform lot paperwork can be avoided, sources are sorted can be easily accessed, lesser time required to access the source.

1.5 Scope of the report

The essential framework of this report would be to elaborate the design of E.R-diagram, Schema Diagram and to display how the modules of the program work in order to achieve the automation

SYSTEM REQUIREMENTS

Hardware Requirements

. Windows

. Operating System: Linux ARCH distribution . Processor: Intel i3 4^{th} Gen

. Memory: 4GB minimum, 8GB recommended

. Screen resolution:1280*1024 or larger

. Application Window Size:1024*680 or larger

. Internet Connection: Required

Software Requirements

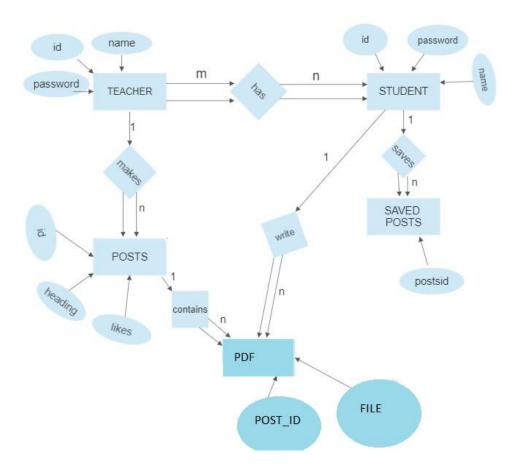
. Client: Operating System{any}

. Web Server: Flask (Python), ReactCLI

. Database: MySQL

. Language: HTML, CSS, JS, SQL, Python

ER DIAGRAM

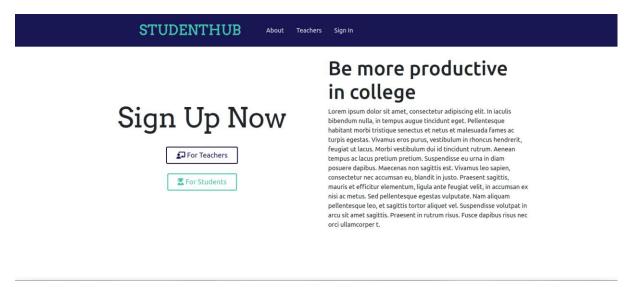


SCHEMA DIAGRAM

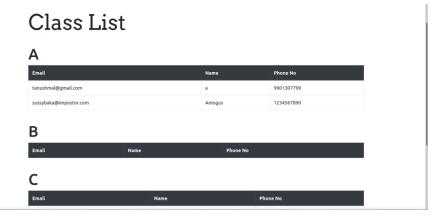
TEACHER			
<u>id</u>	name	password	
STUDENT			
<u>id</u>	name	password	
D O CITIC			
POSTS		_	
<u>id</u>	heading	likes	
PDF			
post_id		file	
GAVED BOOKE			
SAVED_POSTS			
post id		student email	

QUICK PEEK

Login Page:



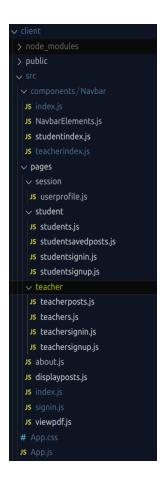
Posts:



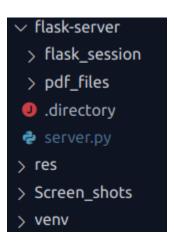
IMPLEMENTATION

FILE STRUCTURE

React Client



Flask Server



server.py

```
from flask import Flask, jsonify, request, session, make_response, send_file
from flask_session import Session
import mysql.connector as mysql
import time
import os
app = Flask(__name__)
# app.config["SESSION_COOKIE_SAMESITE"] = "None"
# app.config["SESSION COOKIE SECURE"] = True
# app.secret_key = 'your-secret-key'
mydb = mysql.connect(
 host="localhost",
 user="client",
 password="client",
 database = "studenthub"
@app.route("/teachers_list_api")
def teachers_list_api():
  classList = ["5A","5B","5C","5D"]
  ret dict = \{\}
  for classSec in classList:
    mycursor = mydb.cursor()
    mycursor.execute("SELECT * FROM teachers WHERE CLASS =
%s;",(classSec,))
    classSecTeachers = mycursor.fetchall()
    ret_dict[classSec[1]] = classSecTeachers
  return ret dict
@app.route("/students_list_api")
def students list api():
  classList = ["5A","5B","5C","5D"]
  ret dict = \{\}
```

```
for classSec in classList:
    mycursor = mydb.cursor()
    mycursor.execute("SELECT * FROM students WHERE CLASS =
%s;",(classSec,))
    classSecTeachers = mycursor.fetchall()
    ret_dict[classSec[1]] = classSecTeachers
  return ret dict
@app.route("/sign_up_teacher", methods =['POST'])
def sign_up_teacher():
  content = request.json
  email = content['email']
  name = content['name']
  phone = str(content['phone'])
  password = content['password']
  classVal = content['class']
  mycursor = mydb.cursor()
  mycursor.execute("INSERT INTO
teachers(EMAIL,NAME,PHONE,PASSWORD,CLASS) VALUES
(%s,%s,%s,%s,%s);",(email,name,phone,password,classVal))
  myresult = mycursor.fetchall()
  mydb.commit()
  return jsonify(myresult)
@app.route("/sign_in_teacher", methods=['POST'])
def sign_in_teacher():
  content = request.json
  email = content['email']
  password = content['password']
  mycursor = mydb.cursor()
  mycursor.execute("SELECT * FROM teachers WHERE EMAIL = %s
AND PASSWORD = %s;",(email,password))
  myresult = mycursor.fetchone()
  print(myresult)
  if myresult == None:
    return jsonify({"exists":"no"})
  session['email'] = email
  session['name'] = myresult[2]
  session['sem'] = myresult[5]
  session['logged'] = True
```

```
session['type'] = "teacher"
  print(session['email'])
  return jsonify({"exists":"yes"})
@app.route("/sign_up_student", methods=["POST"])
def sign_up_student_api():
  content = request.json
  email = content['email']
  name = content['name']
  phone = str(content['phone'])
  password = content['password']
  classVal = content['class']
  mycursor = mydb.cursor()
  mycursor.execute("INSERT INTO
students(EMAIL,NAME,PHONE,PASSWORD,CLASS) VALUES
(%s,%s,%s,%s,%s);",(email,name,phone,password,classVal))
  myresult = mycursor.fetchall()
  mydb.commit()
  return jsonify(myresult)
@app.route("/sign_in_student", methods=['POST'])
def sign in student():
  content = request.json
  email = content['email']
  password = content['password']
  mycursor = mydb.cursor()
  mycursor.execute("SELECT * FROM students WHERE EMAIL = %s
AND PASSWORD = %s;",(email,password))
  myresult = mycursor.fetchone()
  print(myresult)
  if myresult == None:
    return jsonify({"exists":"no"})
  session['email'] = email
  session['name'] = myresult[2]
  session['sem'] = myresult[5]
  session['logged'] = True
  session['type'] = "student"
  print(session['email'])
  return jsonify({"exists":"yes"})
```

```
@app.route("/session_details_api", methods=['GET'])
def session_check_api():
  try:
     return isonify({
       "logged": session["logged"],
       "type": session["type"],
       "details": {
          "email": session["email"],
         "name": session["name"],
         "sem": session["sem"]
  })
  except:
    return jsonify({
       "logged": False })
@app.route("/session_logout_api", methods=['GET'])
def session_logout_api():
  session["logged"] = False,
  session["email"] = None,
  session["type"] = None,
  session["name"] = None,
  session["sem"] = None
  return jsonify({"logged":session["logged"]})
@app.route("/create post api",methods=["POST"])
def create_post_api():
  content = request.json
  title = content['title']
  content api = content['content']
  temail = session["email"]
  created date = time.strftime('%Y-%m-%d %H:%M:%S')
  notes pdf = "No"
  mycursor = mydb.cursor()
  mycursor.execute("INSERT INTO posts(title, content, temail,
created_date, notes_pdf) VALUES (%s,%s,%s,%s,%s,%s);",(title,
content api, temail, created date, notes pdf))
  myresult = mycursor.fetchall()
  mydb.commit()
```

```
mycursor.execute("SELECT pid from posts where title = %s and temail
= %s",(title,temail))
  pid = mycursor.fetchone()[0]
  session["pid"] = pid
  print(pid)
  return jsonify({"success":True})
@app.route("/upload_pdf_api",methods=["POST","GET"])
def upload_pdf_api():
  file = request.files['file']
  if file.filename[-4:] != ".pdf":
    return(jsonify({"success":False}))
  pid = session["pid"]
  mycursor = mydb.cursor()
  mycursor.execute("UPDATE posts set notes pdf='Yes' where pid =
%s",(pid,))
  myresult = mycursor.fetchall()
  file.save(os.path.join(app.config['UPLOAD_FOLDER'],"Notes" +
str(pid) + ".pdf"))
  session.pop("pid")
  return(jsonify({"success":True}))
@app.route("/show_posts_api",methods=["GET"])
def show_posts_api():
  mycursor = mydb.cursor()
  mycursor.execute("SELECT
title,content,name,created_date,pid,notes_pdf FROM posts,teachers where
posts.temail = teachers.email ORDER BY created_date DESC")
  posts = mycursor.fetchall()
  mydb.commit()
  if session["type"] != "student":
    return jsonify({
       "result":posts,
       "student":False
  email = session["email"]
  mycursor = mydb.cursor()
  mycursor.execute("SELECT pid FROM saved_posts WHERE email =
%s",(email,))
  myresult = [x[0] for x in mycursor.fetchall()]
```

```
print(myresult)
  return jsonify({
       "result":posts,
       "student":True,
       "saved": myresult
       })
@app.route("/save_post_api",methods=["POST"])
def save_post_api():
  content = request.json
  print(content)
  pid = content["pid"]
  email = session["email"]
  mycursor = mydb.cursor()
  mycursor.execute("INSERT INTO saved_posts VALUES
(%s,%s)",(email,pid))
  myresult = mycursor.fetchall()
  mydb.commit()
  return myresult
@app.route("/show_saved_posts_api",methods=["GET"])
def show saved posts api():
  email = session["email"]
  mycursor = mydb.cursor()
  mycursor.execute("SELECT title,content,name,created_date,posts.pid
FROM posts,teachers,saved_posts where posts.temail = teachers.email and
posts.pid = saved posts.pid and saved posts.email = %s ORDER BY
created_date DESC",(email,))
  myresult = mycursor.fetchall()
  print(myresult)
  return jsonify({"result":myresult})
@app.route("/get_pdf_notes/<key>",methods=["GET"])
def get_pdf_notes(key):
  # with open(os.path.join(app.config['UPLOAD_FOLDER'],"Notes" +
str(32) + ".pdf"), "r") as file:
      response = make_response(file)
  #
      cd = f"attachment; filename=Notes"+str(32)+".pdf"
  #
      response.headers['Content-Disposition'] = cd
      response.mimetype='application/pdf'
  #
```

```
# return response
return send_file('./pdf_files/Notes'+str(key)+'.pdf')

if __name__ == "__main__":
    SECRET_KEY = "changeme"
    SESSION_TYPE = "filesystem"
    UPLOAD_FOLDER = "./pdf_files/"
    app.config.from_object(__name__)
    app.run(debug = True)
```

App.js

```
import React from 'react';
import './App.css';
import Navbar from './components/Navbar';
import { BrowserRouter as Router, Routes, Route, useLocation} from
'react-router-dom';
import { useEffect, useState } from 'react';
import Home from './pages';
import About from './pages/about';
import SignIn from './pages/signin';
import TeacherSignUp from './pages/teacher/teachersignup';
import Teachers from './pages/teacher/teachers'
import TeacherSignIn from './pages/teacher/teachersignin'
import TeacherPosts from './pages/teacher/teacherposts';
import TeacherNavbar from './components/Navbar/teacherindex';
import DisplayPosts from './pages/displayposts'
import StudentSignUp from './pages/student/studentsignup';
import StudentSignIn from './pages/student/studentsignin';
import axios from 'axios';
import LogOut from './logout';
import Students from './pages/student/students';
import StudentNavbar from './components/Navbar/studentindex';
import DisplaySavedPosts from './pages/student/studentsavedposts';
import ViewPdf from './pages/viewpdf';
function App() {
     const [profile, setProfile] = useState("")
```

```
const [location, setLocation] = useState("");
     // const [loading,setLoading] = useState(false)
     useEffect(
           () => {axios.get("/session_details_api").then(
                 response => {
                       setProfile(response.data.type)
            }, [location])
     const SettingLocation = () => {
           setLocation(useLocation())
     return (
           <Router>
           <SettingLocation />
            {profile === 'teacher'?
           <TeacherNavbar /> :
           profile === 'student'?
           <StudentNavbar /> : <Navbar />
           <div class="container pt-4">
                 <Routes>
                       <Route path='/' element={<Home />} />
                       <Route path='/about' element={<About/>} />
                       <Route path='/sign-in' element={<SignIn/>} />
                       <Route path='/teacher-sign-in'
element={<TeacherSignIn/>} />
                       <Route path='/teachers' element={<Teachers/>} />
                       <Route path='/teacher-sign-up'
element={<TeacherSignUp/>} />
                       <Route path='/teacher-posts'
element={<TeacherPosts/>} />
                       <Route path='/display-posts' element={<
DisplayPosts /> } />
                       <Route path='/students' element={<Students/>} />
                       <Route path='/student-sign-in'
element={<StudentSignIn/>} />
                       <Route path='/student-sign-up'
element={<StudentSignUp/>} />
                       <Route path='/log-out' element={<LogOut/>} />
```

```
<Route path='/show-saved-posts'
element={<DisplaySavedPosts />} />
                       <Route path='/view-pdf/:id' element={<ViewPdf
/>} />
                 </Routes>
            </div>
            </Router>
);
export default App;
App.css
.App {
 text-align: center;
.App-logo {
 height: 40vmin;
 pointer-events: none;
@media (prefers-reduced-motion: no-preference) {
 .App-logo {
  animation: App-logo-spin infinite 20s linear;
 }
.App-header {
 background-color: #282c34;
 min-height: 100vh;
 display: flex;
 flex-direction: column;
 align-items: center;
 justify-content: center;
 font-size: calc(10px + 2vmin);
 color: white;
```

```
}
.App-link {
 color: #61dafb;
@keyframes App-logo-spin {
 from {
  transform: rotate(0deg);
 to {
  transform: rotate(360deg);
body {
 font-family: Ubuntu;
.vertical-center {
 min-height: 50vh; /* These two lines are counted as one :-)
                                                                 */
 display: flex;
 align-items: center;
h1 {
 font-family: 'Arvo';
 font-size: 70px;
}
h2 {
 font-size: 50px;
.btn-outline-primary:hover, .btn-outline-primary:active, .btn-outline-
primary:visited {
 background-color:#191654;
.btn-outline-primary {
```

```
border: 3px solid #191654;
 color:#191654;
 font-size: large;
.btn-outline-success:hover, .btn-outline-success:active, .btn-outline-
success:visited {
background-color:#43C6AC;
.btn-outline-success {
 border: 3px solid #43C6AC;
 color:#43C6AC;
 font-size: large;
}
img {
width: 100px;
iframe {
 position:absolute;
/* .btn-danger {
color:#ff3759;
} */
about.js
import React from "react";
const About = () => {
return (
      <div>
      < h1 >
           About StudentHub
      </h1>
```

```
 StudentHub is a project created using React +
Flask(Python)
      </div>
);
};
export default About;
```

displayposts.js

```
import React, {useState, useEffect} from 'react'
import axios from 'axios';
import { Link } from 'react-router-dom';
export default function DisplayPosts() {
  const [data, setData] = useState({})
  const [saved, setSaved] = useState({})
  const [student, setStudent] = useState(false)
  const [load,setLoad] = useState(false)
  useEffect(() => {
    axios.get("/show_posts_api").then((response) => {
       setData(response.data.result)
       setStudent(response.data.student)
       setSaved(response.data.saved)
       setLoad(true)
       console.log(data)
     })
  }, [] );
  const savePost = (pid) => {
    const returnJSON = {"pid":pid}
    axios.post("/save_post_api",returnJSON).then((response) => {
       console.log(response)
     document.getElementById(pid).className = "btn btn-danger
disabled"
    document.getElementById(pid).innerHTML = "Post Saved"
```

```
}
    return !load ? Loading... : (
    <>
         { Array.from(data).map(
           bruh => <div>
             <div className="card border-dark mb-3 mt-5">
         <div className="card-header">{bruh[2]} <div</pre>
className="small">{bruh[3].slice(4,17)}</div></div>
         <div className="card-body text-dark">
           <h3 className="card-title">{bruh[0]}</h3>
           {bruh[1]}
         </div>
         <div className="card-footer">
         {student?
         <div>
           {saved.includes(bruh[4])?
           <button id={bruh[4]} className='btn btn-danger disabled'>
             Post Saved
           </button>
           <button id={bruh[4]} className='btn btn-danger'</pre>
onClick={() => savePost(bruh[4])}>
             Save Post
           </button>
          </div>
         : <></>}
           <div className='mt-2'>
           {bruh[5] === "Yes" ?
           <Link to={"/view-pdf/"+bruh[4]} className='btn btn-
danger'>
             View PDF
           </Link>: <></>}
           </div>
         </div>
         </div>
           </div>
```

```
)}
</>
```

index.js

```
import React from 'react';
import { Link } from "react-router-dom";
import { FontAwesomeIcon } from '@fortawesome/react-fontawesome'
import { faChalkboardTeacher, faUserGraduate } from
'@fortawesome/free-solid-svg-icons'
const Home = () => \{
return (
    <div className="row d-flex align-items-center">
       <div className="col vertical-center">
         <div className="text-center ml-5">
            <h1>Sign Up Now</h1>
              <Link to="/teacher-sign-up" className="btn btn-outline-
primary mt-4 pl-4 pr-4"><FontAwesomeIcon
icon={faChalkboardTeacher} />
                                           For Teachers</Link> <br/>
              <Link to="/student-sign-up" className="btn btn-outline-
success mt-4 pl-4 pr-4"><FontAwesomeIcon icon={faUserGraduate} />
For Students</Link>
            </div>
         </div>
         <div className="col">
            <div className="container">
              <h2>Create Posts, Manage Students</h2>
              \langle p \rangle
                 Studenthub is the place for all your needs, teacher or
student. Support for four sections in the class. Your post can contain
10000 characters. Now that is a lot of
```

characters. You can save as many posts you want for your future reference. This amazing website is powered by both Python and

```
JavaScript. Create your account now!

</div>
</div>
</div>
</>

</div>

export default Home;
```

signin.js

```
import React from 'react';
import { Link } from "react-router-dom";
import { FontAwesomeIcon } from '@fortawesome/react-fontawesome'
import { faChalkboardTeacher, faUserGraduate } from
'@fortawesome/free-solid-svg-icons'
import { FaUserGraduate } from 'react-icons/fa';
const SignIn = () => {
return (
    <div className="row d-flex align-items-center">
       <div className="col vertical-center">
         <div className="text-center ml-5">
           <h1>Login Now</h1>
             <Link to="/teacher-sign-in" className="btn btn-outline-
primary mt-4 pl-4 pr-4"><FontAwesomeIcon
icon={faChalkboardTeacher} />
                                         For Teachers</Link> <br/>
             <Link to="/student-sign-in" className="btn btn-outline-
success mt-4 pl-4 pr-4"><FontAwesomeIcon icon={faUserGraduate} />
For Students</Link>
              Haven't created a profile yet? <Link</pre>
to="/sign-up" className=">Sign up now</Link>
           </div>
```

```
</div>
         <div className="col">
           <div className="container">
             <h2>Unlimited posts!</h2>
             >
                By using MySQL DBMS powered systems we can store
as many posts as we like.
             <h2 className='mt-2'>Powered By</h2>
             <div className='row mt-4'>
                <div className='col'>
                  <img
src="https://assets.stickpng.com/images/5848152fcef1014c0b5e4967.png"
className="img-rounded" />
                </div>
                <div className='col'>
                  <img
src="https://upload.wikimedia.org/wikipedia/commons/thumb/a/a7/React-
icon.svg/2300px-React-icon.svg.png" className="img-rounded" />
                </div>
                <div className='col'>
                  <img
src="https://www.freepnglogos.com/uploads/logo-mysql-png/logo-mysql-
mysql-logo-png-images-are-download-crazypng-21.png"
className="img-rounded" />
                </div>
             </div>
           </div>
       </div>
           </div>
     </>
);
};
export default SignIn;
```

viewpdf.js

```
import React from 'react'
import { useParams } from 'react-router-dom';
export default function ViewPdf() {
    let { id } = useParams();
    return (
         <div className=">
              <iframe src={"http://localhost:5000/get_pdf_notes/"+id}</pre>
width="75%" height="75%">
              This browser does not support PDFs. Please download
the PDF to view it: <a href="/get_pdf_notes">Download PDF</a>
              </iframe>
         </div>
}
index.js(NavBar)
import React from "react";
import UserProfile from "../../pages/session/userprofile";
import { Nav, NavLink, NavMenu, NavHead }
     from "./NavbarElements";
import { useNavigate } from "react-router-dom";
export default function Navbar() {
  const navigate = useNavigate();
  return (
    <>
    <Nav>
       <NavMenu>
         <NavHead to="/">
           STUDENTHUB
```

```
</NavHead>
         <NavLink to="/about" activeStyle>
           About
         </NavLink>
         <NavLink to="/teachers" activeStyle>
           Teachers
         </NavLink>
         <NavLink to="/students" activeStyle>
           Students
         </NavLink>
           <NavLink to="/sign-in" activeStyle>
             Sign In
           </NavLink>
       </NavMenu>
    </Nav>
    </>
);
};
```

NavbarElements.js

```
import { FaBars } from "react-icons/fa";
import { NavLink as Link } from "react-router-dom";
import styled from "styled-components";

export const Nav = styled.nav`
background: #191654;
color: #43C6AC;
height: 85px;
display: flex;
justify-content: space-between;

padding: 0.2rem calc((100vw - 1000px) / 2);
z-index: 12;
`;
```

```
export const NavHead = styled(Link)`
color: #43C6AC;
display: flex;
align-items: center;
text-decoration: none;
font-family: Arvo;
padding: 0 3rem;
height: 100%;
font-weight: 1000;
font-size: 35px;
&:focus, &:hover, &:visited, &:link, &:active {
     text-decoration: none:
  }
export const NavLink = styled(Link)`
color: #f5f5f5;
display: flex;
align-items: center;
text-decoration: none;
padding: 0 1rem;
height: 100%;
font-family: Ubuntu;
cursor: pointer;
&:focus, &:hover, &:visited, &:link, &:active {
     text-decoration: none;
export const Bars = styled(FaBars)`
display: none;
color: #808080;
@media screen and (max-width: 768px) {
      display: block;
      position: absolute;
      top: 0;
      right: 0;
      transform: translate(-100%, 75%);
      font-size: 1.8rem;
      cursor: pointer;
```

REFERENCES

During the course of this project the following materials were referenced:

- 1. https://reactjs.org/docs/getting-started.html
- 2. https://flask.palletsprojects.com/en/2.2.x/