### WEATHER FORECASTING SITE

#### A PROJECT REPORT

##### *Submitted by*

Vishal Srivastava (201500797)

Shresth Agarwal (201500671)

Piyush Kumar (201500468)

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

#### BACHELOR OF ENGINEERING

**IN**

##### Computer Engineering and Application

**GLA University, Mathura**

APRIL 2023

# Acknowledgement

It gives us a great sense of pleasure to present the synopsis of the B.Tech mini project undertaken during B.Tech III Year. This project is going to be an acknowledgement to the inspiration, drive and technical assistance will be contributed to it by many individuals. We owe special debt of gratitude to Mrs. Pragya Singh, Technical Trainer , for providing us with an encouraging platform to develop this project, which thus helped us in shaping our abilities towards a constructive goal and for his constant support and guidance to our work.

His sincerity, thoroughness and perseverance has been a constant source of inspiration for us. We believe that he will shower us with all his extensively experienced ideas and insightful comments at different stages of the project & also taught us about the latest industry-oriented technologies. We also do not like miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind guidance and co-operation.

**Vishal Srivastava (201500797)**

**Shresth Agarwal (201500671)**

**Piyush Kumar (201500468)**

#### DECLARATION

I would like to express my special thanks of gratitude to my project guide **Mrs. Pragya singh Maam** who gave us the golden opportunity to do this wonderful project on the topic  **Social Networking Site** , which also helped us in doing a lot of research and we came to know about so many new things we are really thankful to them.

Secondly, we would also like to thank my parents and friends who helped us a lot in finalizing this project within the limited time frame.

Candidate’s Names:

**Vishal Srivastava (201500797)**

**Shresth Agarwal (201500671)**

**Piyush Kumar (201500468)**

#### BONAFIDE CERTIFICATE

Certified that this project report **“Social Networking Site”** is the bonafide work of “**Vishal Srivastava, Shresth Agarwal & Piyush Kumar ”** who carried out the project work under my/our supervision.

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| **SIGNATURE**  **HEAD OF THE DEPARTMENT** | **SIGNATURE**  **SUPERVISOR** |

Submitted for the project viva-voce examination held on

**Table of Content**

**1. Introduction**

1.1 Overview …………………………….

1.2 Objective.…………………..…………

**2. Technology Used**

2.1 HTML ……………………….………….

2.2 CSS………………………………………

2.3 JAVASCRIPTT……………………………

2.4 API………………………………………

**3.** **System Requirements**

3.1 Software Required………………….………

3.2 Hardware Required……….……………………...

**4.** **Implementation**

4.1 Explanation of Source Code……………………......

4.2 Final Code …………………….................................

4.3 Output……………………………………………....

**5.** **Conclusion**

**6. References**

**INTRODUCTION**

The Internet has rapidly evolved from just a social platform to a social network that is used to share content, ideas, and information. As a result of social networking, people's communication styles have changed. It affects almost every aspect of our lives: education, communication, employment, politics, health care, public relations, and personal productivity. A telecommunications service (SNS) is An online platform used to build and develop relation between peoples. It provides ways to Users to interact online with people with similar interests, either for romantic or social purposes. Emails, instant messages, online comments, wiki, digital photographs, videos, and blog post submissions are all possible. It also gives people with disabilities the possibility to express their mind and ideas in public.

**OVERVIEW**

We have a range of apps for chatting and video calling with friends, as well as platforms like Instagram, Face book, and LinkedIn where we can obtain updates on a variety of topics like entertainment, news, sports, and more. Some apps are specifically for sharing entertainment related activities or activities etc. Like Instagram, Facebook, LinkedIn to know updates about many things including entertainment, news, sports.

**OBJECTIVE**

Social networks serve two roles as content companies and purchasers. They choose which users get access to his information. A profile is generated with answers to questions, consisting of age, area, hobbies, and many others. Some web sites permit users to upload pix, upload multimedia content material or alternate the profile and sound of profiles, weblog posts, feedback, hyperlinks, and sharing Contact listing. Users can choose who can view, edit, and add to their friend list, and so on, to preserve their  
privacy on social media platforms. Social networking has modified the way people communicate, percentage data, and engages with people. It enables people to communicate as well as interact with each another over the internet. As the recognition of social media grows, new technology grows to  
be increasingly famous.

**TECHNOLOGY USED**

**MERN:**

MERN is MongoDB, Express.js, React.js, and Node.js. Express.js is a web server framework (together with Node.js); React.js is a web purchaser library, and Node.js as server-side platform to MongoDB as a database. MERN combines four cutting-edge technologies in today's development, from front-end to back-end. It saves effort and time for builders to grasp new technology for utility improvement. The stack is supported by a large number of open-source packages and a committed community enabling programmers to boost scalability and maintain software products, thanks to the same JavaScript platform.

The basis of the MERN stack is Node.js, a server-side technology that provides very excessive overall performance and rapid reaction to all duties, such as huge and complicated data. MERN doesn't need Typescript; all it needs is the flexible basis of React, today's most popular and important front-end technology.

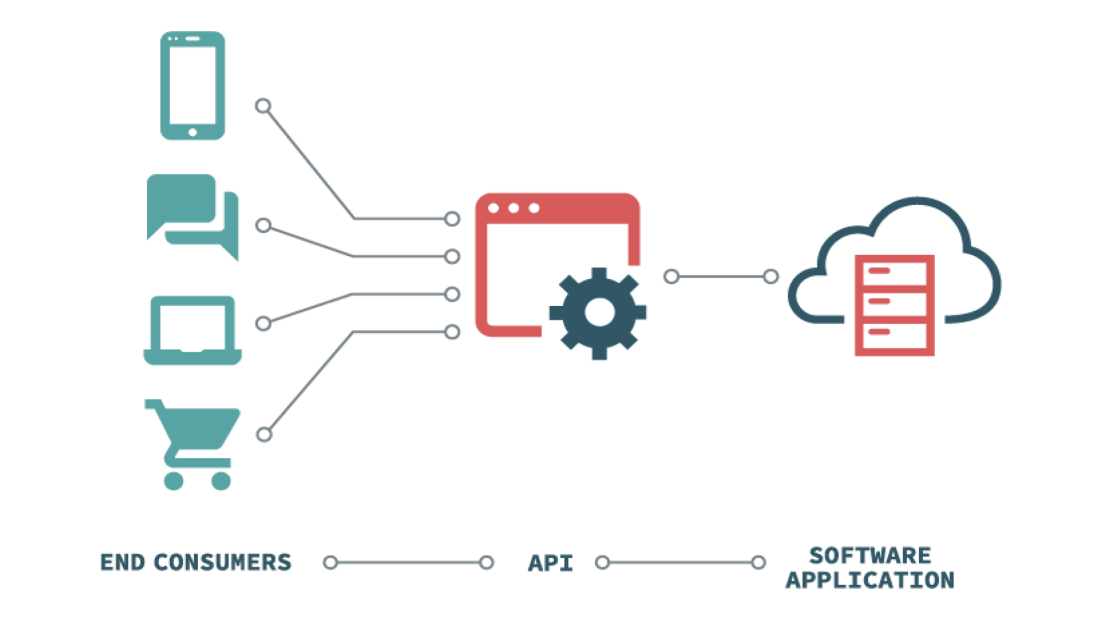
Express.js is an open-source framework that is utilized in commercial applications and has a huge community of supporters. As a result, developers can utilize this framework with confidence for their projects of any size, from little to huge. Express.js comes with a slew of support packages and extra developer features to help you build a better system. It does not, however, slow down Node.js. The popular Node.js forum today uses Express.js as the main function.

MongoDB is a text-based and NoSQL-based website. Therefore, MongoDB will generally avoid database-based formats to be compatible with all documents such as JSON, which is available in a highly flexible schema called BSON. The Benefits and Drawbacks of MongoDB The following are  
some of MongoDB's most compelling features that have persuaded current users to utilize it: Because MongoDB stores data in JSON format, each collection has its own size and number of documents. They are, nevertheless, extremely adaptable when it comes to archiving. MongoDB data is usually not tied to each other; does not support joining queries as in the RDBMS, so once users install, delete or update, they will not spend much time checking whether they meet the criteria as in the RDBMS or not. MongoDB is easy to measure. In MongoDB, the term "collection" refers to groupings of nodes that have data to share. Users can quickly expand the system by adding a new node to the cluster. Because the unique identity \_id will always be automatically discovered, the query information will always be processed quickly.

The Social Platform perpetration will be carried out into three separate way back- end creation, frontal – end creation, and eventually testing of the operation. It is not suggested to cover all components of the project in depth because to the thesis restriction. However, it can show all the steps needed to successfully launch the MERN application. The Express.js library, which runs on top of Node.js, is used to create the app endpoint. The Mongoose library is also installed to connect to the MongoDB website and store the data in JSON format. Finally, routing logic is implemented, which includes endpoints for interacting with the front-end. A node package called Mongoose is installed to connect the MongoDB website to the Express.js application. Mongoose is an Object Data Modeling tool that aids in the design of MongoDB schemas. Models are defined using the visual Schema interface. Developer can use the Schema to define the fields that are saved in each document, as well as their confirmation styles and dereliction values.

**API:**

* APIs, application programming interfaces, are used to allow software applications to communicate. This unique interface dictates requests and responses to and from different systems to allow for the exchange of data. Each letter in the acronym API has an important meaning.
* **Interface:** Let’s start with the “I” because that will help to better contextualize the term in question. An interface, in short, is how individuals interact with a computer. As an interface, an API is a way to interact with the underlying program or software for which the API was created. We work in interfaces everyday. In fact, you are currently viewing this article through an interface – a graphical user interface (GUI or UI). Developers spend much of their time coding in a different interface – a command line interface (CLI). When you talk to Siri you are leveraging yet another interface – a natural language interface (NLI). We could go on here, but I think you get the point.
* An API is a unique interface in which to interact with software.
* **Application:** APIs are specific to an application, service, or function. The application is what an end user (whether that be a person or another application) is trying to communicate with by way of an interface. The same way you are interacting with this UI to reach Aloi or how you would be interacting with the bank when using an ATM.



**JSON:**

* JSON stands for JavaScript Object Notation.
* JSON is an open standard data-interchange format.
* JSON is lightweight and self-describing.
* JSON originated from JavaScript.
* JSON is easy to read and write.
* JSON is language independent.
* JSON supports data structures such as arrays and objects.

**Features of JSON:**

* Simplicity
* Openness
* Self-Describing
* Internationalization
* Extensibility
* Interoperability

**Why do we use JSON?**

* Less Verbose
* Faster
* Readable
* Structured Data

**SYSTEM REQUIREMENTS**

**Software Requirement-**

**To build application –**

* 64-bit Windows 8/10/11
* Libraries
* Visual Studio code (latest version).

**To Run Website–**

* Web Browsers (chrome,Mozilla)

**Hardware Requirement –**

* x86\_64 CPU architecture; 2nd generation Intel Core or newer
* 8 GB RAM or more
* 8 GB of available disk space minimum

**IMPLEMENTATION**

**HTML Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8" />

<meta http-equiv="X-UA-Compatible" content="IE=edge" />

<meta name="viewport" content="width=device-width, initial-scale=1.0" />

<title>Weather App</title>

<link rel="stylesheet" href="./style.css" />

<!-- <script type="text/javascript" src="./cities.js"></script> -->

<script src="./script.js" defer></script>

</head>

<body>

<div class="card">

<div class="search">

<input type="text" class="search-bar" placeholder="search" />

<button>

<?xml version="1.0" ?><svg

height="1.2em"

version="1.1"

viewBox="0 0 32 32"

width="1.2em"

xmlns="http://www.w3.org/2000/svg"

xmlns:sketch="http://www.bohemiancoding.com/sketch/ns"

xmlns:xlink="http://www.w3.org/1999/xlink"

>

<title />

<desc />

<defs />

<g

fill="none"

fill-rule="evenodd"

id="Page-1"

stroke="none"

stroke-width="1"

>

<g fill="#929292" id="icon-111-search">

<path

d="M19.4271164,20.4271164 C18.0372495,21.4174803 16.3366522,22 14.5,22 C9.80557939,22 6,18.1944206 6,13.5 C6,8.80557939 9.80557939,5 14.5,5 C19.1944206,5 23,8.80557939 23,13.5 C23,15.8472103 22.0486052,17.9722103 20.5104077,19.5104077 L26.5077736,25.5077736 C26.782828,25.782828 26.7761424,26.2238576 26.5,26.5 C26.2219324,26.7780676 25.7796227,26.7796227 25.5077736,26.5077736 L19.4271164,20.4271164 L19.4271164,20.4271164 Z M14.5,21 C18.6421358,21 22,17.6421358 22,13.5 C22,9.35786417 18.6421358,6 14.5,6 C10.3578642,6 7,9.35786417 7,13.5 C7,17.6421358 10.3578642,21 14.5,21 L14.5,21 Z"

id="search"

/>

</g>

</g>

</svg>

</button>

</div>

<p id="suggest1" class="suggestions"></p>

<p id="suggest2" class="suggestions"></p>

<p id="suggest3" class="suggestions"></p>

<div class="weather">

<h2 class="city">Weather in your city ?</h2>

<h1 class="temp"></h1>

<div class="flex">

<img

src="https://openweathermap.org/img/wn/04n.png"

alt=""

class="icon"

/>

<div class="description">Feels ?</div>

</div>

<div class="humidity">humidity: \_\_\_</div>

<div class="wind">Wind Speed: \_\_\_</div>

</div>

</div>

<div class="places card">

<h3>Suggestion of Places you can go on vacation:</h3>

<p id="place"></p>

<a id="link" href=""></a>

</div>

</body>

</html>

**CSS Code:**

body {

display: flex;

justify-content: center;

align-items: center;

height: 100vh;

margin: 0;

font-family: "Open snas", sans-serif;

background: #222;

background-image: url("https://images.unsplash.com/photo-1512511708753-3150cd2ec8ee?ixlib=rb-4.0.3&ixid=MnwxMjA3fDB8MHxzZWFyY2h8MTR8fHJhaW58ZW58MHx8MHx8&auto=format&fit=crop&w=600&q=60");

}

#link {

color: rgb(65, 65, 160);

}

.card {

background: #000000d0;

color: white;

padding: 2em;

border-radius: 30px;

width: 100%;

max-width: 420px;

margin: 1em;

}

.search {

display: flex;

align-items: center;

justify-content: center;

}

button {

margin: 0.5px;

margin-left: 5px;

border-radius: 50%;

border: none;

height: 46px;

width: 46px;

outline: none;

background: #7c7c7c2b;

color: white;

cursor: pointer;

transition: 0.2s ease-in-out;

}

input.search-bar {

border: none;

outline: none;

padding: 0.4em 1em;

border-radius: 24px;

background: #7c7c7c2b;

color: white;

font-family: inherit;

font-size: 105%;

width: calc(100%-100px);

}

button:hover {

background: #7c7c7c6b;

}

h1.temp {

margin: 0;

margin-bottom: 0.4em;

}

.flex {

display: flex;

align-items: center;

}

.description {

text-transform: capitalize;

margin-left: 8px;

}

.suggestions {

background-color: rgb(66, 64, 64);

display: flex;

align-items: center;

justify-content: left;

margin-left: 80px;

margin-right: 120px;

}

**React Js Code:**

let weather = {

apiKey: "ea8777f7cd299604a7082b4974bd8d7d",

fetchWeather: function (city) {

fetch(

"https://api.openweathermap.org/data/2.5/weather?q=" +

city +

// +"&units=metric&appid="

"&appid=" +

this.apiKey

)

.then((response) => response.json())

.then((data) => this.displayWeather(data));

},

displayWeather: function (data) {

const { name } = data; //const name=data.name;

const { icon, description } = data.weather[0];

const { temp, humidity } = data.main;

const { speed } = data.wind;

// console.log(name, icon, description, temp, humidity, speed);

document.querySelector(".city").innerText = "Weather in " + name;

document.querySelector(".icon").src =

"https://openweathermap.org/img/wn/" + icon + "@2x.png";

document.querySelector(".description").innerText = description;

document.querySelector(".temp").innerText = temp - 273 + "°C";

document.querySelector(".humidity").innerText =

"Humidity:" + humidity + "%";

document.querySelector(".wind").innerText = "wind speed:" + speed + "km/h";

},

search: function () {

this.fetchWeather(document.querySelector(".search-bar").value);

},

};

document.querySelector(".search button").addEventListener("click", function () {

weather.search();

});

document

.querySelector(".search-bar")

.addEventListener("keyup", function (event) {

if (event.key == "Enter") {

weather.search();

}

});

//https://api.openweathermap.org/data/2.5/weather?q=denver&appid=ea8777f7cd299604a7082b4974bd8d7d

**JSON Document:**

{

"coord": { "lon": -104.9847, "lat": 39.7392 },

"weather": [

{ "id": 500, "main": "Rain", "description": "light rain", "icon": "10d" }

],

"base": "stations",

"main": {

"temp": 275.05,

"feels\_like": 272.21,

"temp\_min": 273.89,

"temp\_max": 276.54,

"pressure": 1013,

"humidity": 89

},

"visibility": 64,

"wind": { "speed": 2.68, "deg": 333, "gust": 6.26 },

"rain": { "1h": 0.87 },

"clouds": { "all": 100 },

"dt": 1666880992,

"sys": {

"type": 2,

"id": 2004334,

"country": "US",

"sunrise": 1666876976,

"sunset": 1666915465

},

"timezone": -21600,

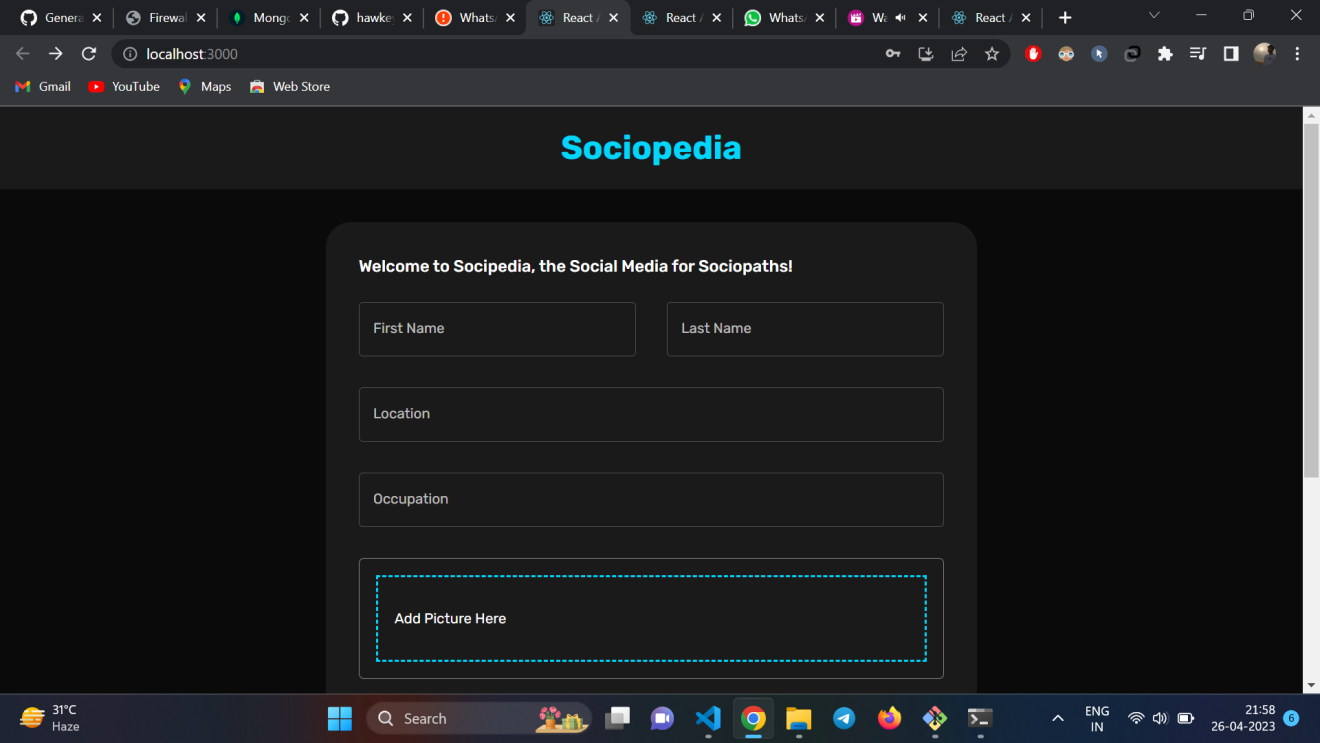
"id": 5419384,

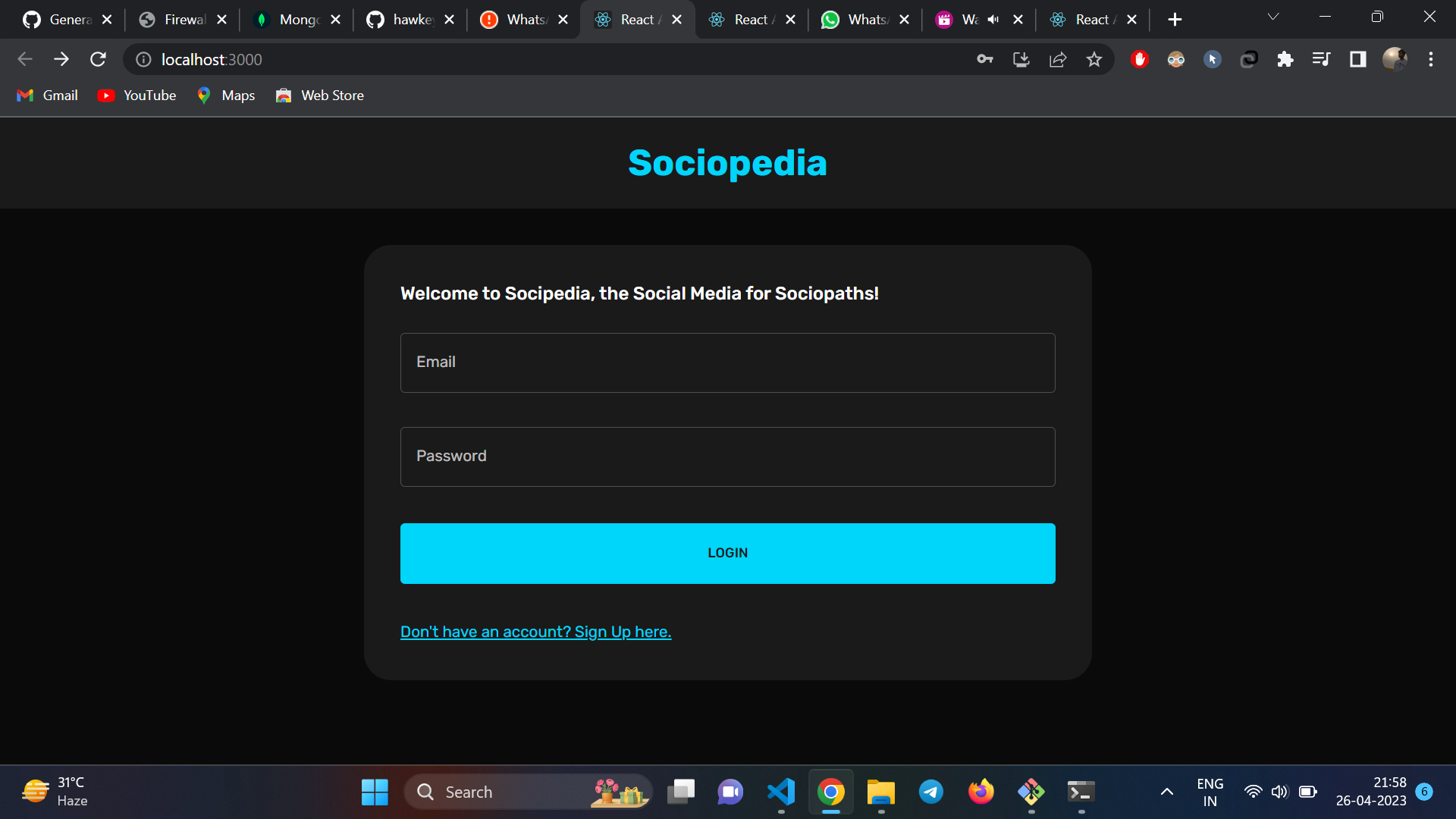
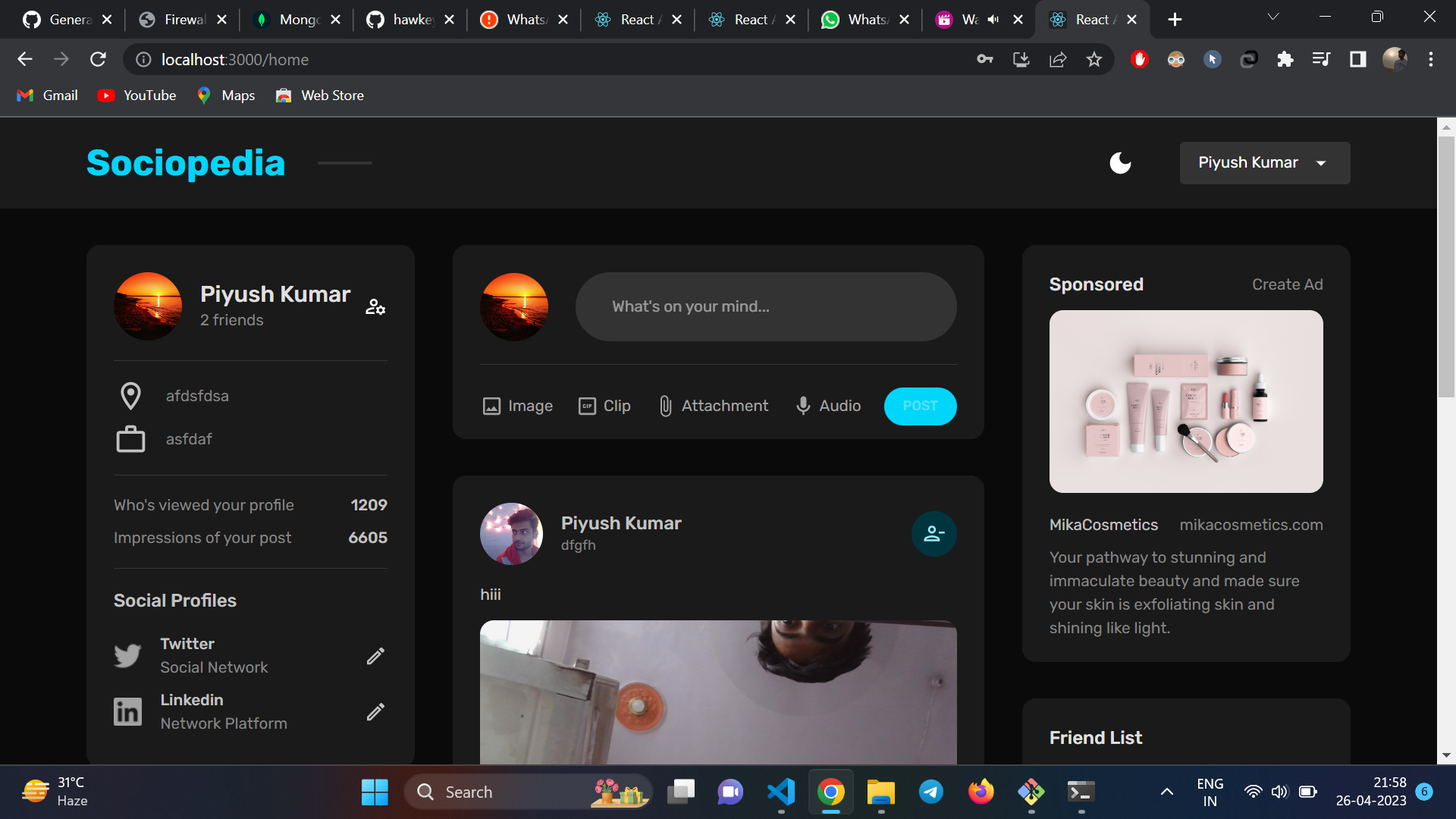
"name": "Denver",

"cod": 200

}

**ScreenShots**

****



**Conclusions**

‘Sociopedia' is the name of the application.  
There are Three pages: a registration page for registration of users, a login page for who already registered a home page to post images, videos or massage, and there is one more feature that will allow us to switch on dark mode or vice versa.

**Working**

* User should first visit the site
* Either login with the existing email or register for new id.
* As the user reaches at the home page he will able to see the posts of other persons and he can also post images or content.
* In the right corner there is one moon shaped button through which we can switch to dark mode of a webpage or vice-versa.

**References**

* Jonah Lawrence. Dev Pro Tips (Youtube Channel)
* Under Inspect section of Google Weather Section
* W3school
* CSS-Tricks

Github Link: https://github.com/hawkeye1806/Mern\_Mini\_Project