CLIMATE CAST
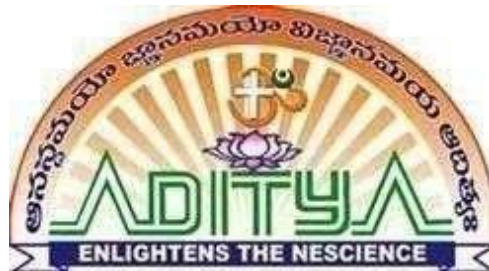
**An internship report submitted in partial
fulfillment of the requirements for the
awardof degree of**

BACHELOR OF TECHNOLOGY
in
COMPUTER SCIENCE AND ENGINEERING

Submitted by:
SANKA SIVA MANI LALITHADITYA
(22A91A05F9)

Department of Computer Science and Engineering
(Accredited by NBA)

ADITYA ENGINEERING COLLEGE

**Approved by AICTE, permanently affiliated to JNTUK & Accredited by NAAC with A++
Recognized by UGC under the sections 2(f) and 12(B) of the UGC act 1956
Aditya Nagar, ADB Road – Surampalem 533437, E.G. Dist., A.P.,**

2023-2024

ADITYA COLLEGE OF ENGINEERING

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Department Of Computer Science and Engineering
(Accredited by NBA)

CERTIFICATE

This is to certify that **SANKA SIVAMANI LALITHADITYA** Reg. No. **22A91A05F9** has completed his Internship in **TECHNICAL HUB** on **Web Development** as a part of partial fulfillment of the requirement for the Degree of **Bachelor of Technology** in the Department of **Computer Science and Engineering** for the academic year 2023-2024.

Internship Coordinator   **Head of the Department**
Mr. A. Phani Sridhar M.Tech, (Ph.D)   Dr. K.Swaroopa
Assistant Professor   Professor & HOD
Department of CSE   Department of CSE

EXTERNAL EXAMINER

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DECLARATION

I **SANKA SIVAMANI LALITHADITYA** a student of **Bachelor Of Technology** Program, Reg. No. **22A91A05F9** of the Department of **Computer Science and Engineering, Aditya Engineering College** do hereby declare that I have completed the mandatory internship from 14**-05-2024** to 28**-06-2024** in **Technical Hub** on **Web Development** underthe Faculty Guideship of **Mr. A. Phani Sridhar**, Department of **Computer Science and Engineering, Aditya Engineering College.**

<div align="right">

BY
SANKA SIVA MANI LALITHADITYA
(22A91A05F9)

</div>

CERTIFICATE OF INTERNSHIP

Date: 27-07-2024

This is to certify that **Mr. SANKA SIVA MANI LALITH ADITYA**, of the **Computer Science and Engineering** department with Roll No:**22A91A05F9** of **Aditya Engineering College(A)** has successfully completed a summer internship with **Technical Hub Pvt Ltd** from **03-06-2024 to 27-07-2024**.

During this tenure, the trainee worked with the following technologies:

- Java
- R Programming
- Java Script

The trainee has a great amount of responsibility, sincerity, and a genuine willingness to learn new things.

We found the trainee's performance and conduct were satisfactory.

We wish you all the best and success in your future endeavours.

Intern ID – THSI241106
https://verify.technicalhub.io/

Babji Neelam
Founder & CEO
Technical Hub Pvt Ltd

+91 83 43 81 81 81
support@technicalhub.io
technicalhubio
www.technicalhub.io

AN ISO 9001 : 2015 CERTIFIED

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ACKNOWLEDGEMENT

ADITYA ENGINEERING COLLEGE (A)

Aditya Nagar, ADB Road, Surampalem

VISION & MISSION OF THE INSTITUTE

Vision:

To emerge as a premier institute for quality technical education and innovation.

Mission:

M1: Provide learner centric technical education towards academic excellence

M2: Train on technology through collaborations

M3: Promote innovative research & development

M4: Involve industry institute interaction for societal needs

PRINCIPAL
PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

VISION & MISSION OF THE DEPARTMENT

VISION:

To emerge as a competent Centre of excellence in the field of Computer Science and Engineering for industry and societal needs.

MISSION:

- Impart quality and value based education.
- Inculcate the inter personal skills and professional ethics.
- Enable research through state-of-the-art infrastructure.
- Collaborate with industries, government and professional societies.

Head of the Department
Head of the Department
Department of CSE
ADITYA ENGINEERING COLLEGE (A)

ADITYA ENGINEERING COLLEGE (A)

Aditya Nagar, ADB Road, Surampalem

Department of Computer Science and Engineering

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates of the Program will

- **PEO 1:** Adopt new technologies and provide innovative solutions.

- **PEO 2:** Be employable, become an entrepreneur or researcher for a successful career.

- **PEO 3:** Demonstrate interpersonal, multi-disciplinary skills and professional ethics to serve society.

Head of the Department

Head of the Department
Department of CSE
ADITYA ENGINEERING COLLEGE (A)

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ADITYA ENGINEERING COLLEGE (A)

Aditya Nagar, ADB Road, Surampalem

Department of Computer Science and Engineering

PROGRAM OUTCOMES (POs)

After successful completion of the program, the graduates will be able to

PO 1 **Engineering Knowledge:** Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO 2 **Problem Analysis:** Identify, formulate, research literature and analyze complex engineering problems, reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO 3 **Design/Development of Solutions:** Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

PO 4 **Conduct Investigations of Complex Problems:** Conduct investigations of complex problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide validconclusions.

PO 5 **Modern Tool Usage:** Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering activities, with an understanding of the limitations.

PO 6 **The Engineer and Society:** Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.

PO 7 **Environment and Sustainability:** Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of, and need for sustainable development.

PO 8   **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

PO 9   **Individual and Teamwork:** Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.

PO 10   **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO 11   **Project Management and Finance:** Demonstrate knowledge and understanding of engineering management principles and apply these to one's own work, as a member and leader in a team and to manage projects in multidisciplinary environments.

PO 12   **Life-Long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Head of the Department
Head of the Department
Department of CSE
ADITYA ENGINEERING COLLEGE (A

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PROGRAM SPECIFIC OUTCOMES (PSOs)

After successful completion of the program, the graduates will be able to

PSO 1: Develop efficient solutions to real world problems using the domains of Algorithms, Networks, database management and latest programming tools and techniques.

PSO 2: Provide data centric business solutions through emerging areas like IoT, AI, data analytics and Block Chain technologies.

Head of the Department
Head of the Department
Department of CSE
DITYA ENGINEERING COLLEGE (A9

INDEX.

1. ABSTRACT

During this 7 weeks of internship there are totally 3 modules are held, I attended those session.

In sessions our mentor gave training on the given topics:

- ➤ HTML
- ➤ CSS
- ➤ JAVASCRIPT

There is a final test to be completed for completion of internship.

Project Abstract:

A weather forecasting application is a software tool designed to provide users with up-to-date and accurate information about current and future weather conditions. These applications leverage data from meteorological sources, satellites, and weather stations to deliver forecasts, real-time weather updates, and other related information.

The primary goal of a weather forecasting app is to offer users the ability to plan their activities based on anticipated weather conditions.

Climate Cast app is a web application which will tell the users about the weather details of any particular city . The easy and Interactive User Interface willhelp our users to easily know about the temperature , wind speed , humidity and description about the weather .

Weather Forecasting Application is one of the most common mini project in Software Development .

2. INTRODUCTION

What Is Web Development?

Web development refers to the creating, building, and maintaining of websites. It includes aspects such as web design, web publishing, web programming, and database management. It is the creation of an application that works over the internet i.e., websites.

The word Web Development is made up of two words, that is:

Web: It refers to websites, web pages or anything that works over the internet.

Development: It refers to building the application from scratch.

Frontend Development:

Popular Frontend Technologies**:**

- HTML
- CSS

Backend Development:

Popular Backend Technologies:

- JAVASCRIPT

3. LEARNING OBJECTIVES/INTERNSHIP OBJECTIVES

➢ Internships are thought of to be reserved for college students looking to gain experience in a particular field. However, a wide array of people can benefit from Training Internships to receive real world experience and develop their skills.

➢ An objective for this position should emphasize the skills you already possess in the area and your interest in learning more

➢ Internships are utilized in several different career fields, including architecture, engineering, healthcare, economics, advertising and many more.

➢ Some internships are used to allow individuals to perform scientific research while others are specifically designed to allow people to gain first-hand experience working.

➢ Utilizing internships is a wonderful way to build your resume and develop skills that can be emphasized in your resume for future jobs. When you are applying for a Training Internship, make sure to highlight any specific skills or talents that can make you stand apart from the rest of the applicants so that you have an improved chance of landing the position.

4. WEEKLY OVERVIEW OF INTERNSHIP ACTIVITIES

Week 1: Introduction and Setup

- o Understand project requirements.
- o Set up the development environment (IDE, browser, code editor).
- o Learn about version control (e.g., Git).

Week 2: HTML Basics

- o Study HTML tags, elements, and attributes.
- o Create static web pages.
- o Practice semantic HTML.

Week 3: CSS Styling

- o Explore CSS selectors, properties, and values.
- o Apply styling to HTML elements (colors, fonts, layout)
- o Work with responsive design (media queries)

Week 4: JavaScript Fundamentals

- o Learn JavaScript syntax (variables, data types, functions).
- o Write simple scripts (e.g., form validation, DOM manipulation).
- o Understand asynchronous programming (callbacks, promises).

Week 5: Building Dynamic Web Pages

- o Implement interactivity using JavaScript (event listeners, animations).
- o Fetch data from APIs (e.g., weather data, city information).

Week 6: Project Development

- o Work on a larger project (e.g., portfolio website, e-commerce site).
- o Debug and troubleshoot issues.

Week 7: Finalization and Reflection

- o Polish the project (styling, responsiveness, performance).
- o Finally Complete the project and Prepare a presentation

5. EXECUTIVE SUMMARY

During my internship at Technical Hub. I had the opportunity to engage in a transformative learning experience. The primary focus of this internship was to apply my programming skills to create a website CLIMATE CAST that would showcase my abilities and creativity. The cumulation of my internship journey wasthe development and submission of a final project .

This is a 7 weeks internship at Technical Hub on Web Development which improves my skills and showcased my skills in Web Development . In this project I used Html, Css, Javascipt languages to develop a website called Today's Weather App to check the current weather condition at a particular city at a given time.

In summary, my internship at Technical Hub has been a transformative experience, allowing me to bridge the gap between theoretical knowledge and practical application in Web Development.

This experience has undoubtedly enriched my understanding and skills of html, css, javascript web development and it's software.

6. ABOUT THE COMPANY

As a transformation on the current engineering education is the need of growth of new knowledge together with rapidly evolving technological skills, the skill to communicate across disciplines, the ability to lead team-centered projects, contextualised problem formulation, and hands-on experience are the present demands of the global industry.

As a timely response, it is this concern for the student that has led Aditya to initiate Technical Hub: a perfect launch pad to the job world. Technical Hub trains students in various disciplines beyond technological labels besides equipping them with skills and creativity required for advancement in their careers. Through its various programs Technical Hub provides adequate opportunities for an unmatched knowledge base by imparting all necessary skills to students and makes them job ready.

Website: https://technicalhub.io/

Industry: Information Technology & services

Company size: 11-50 employees

Headquarters: Surampalem, Andhra Pradesh

Type: Privately Held

Founded: 2016

Specialities: Innovative Product Development, Recruitment, Business Software, Educational Software, Virtual Reality, Machine learning, Cyber Security, Digital Marketing, Android, Networking, Augmented Reality, Block Chain, C, Java, Python, Data Structures, C++, Web Development, Gaming, Robotics, IOT.

7. OPPORTUNITIES

During this internship, I was given the opportunity to perform the following role:
Intern:
• Coordinating with the team members and team leads on a regular basis to keep a track of
   the activities like the sessions held and about the work to be done.
• I learned about developing the applications using different tools.
• For that I have referred the GitHub repositories related to gain the complete knowledge on that.
• Then I have gathered the requirements.
• They have given different tasks to develop various parts of the application.
• I learned about Frontend development and Backend development.
• Also they have finally conducted tests to certify with the completion of internship

8. TRAINING

In these 7 weeks of the training, they have provided us the training in Frontend development,
Backend development, website development.
They have provided us with the training of several technologies like:
• Frontend Development
• Backend Development

Frontend Development:
I completed the below mentioned technologies
1. HTML- Hyper Text Markup Language
2. CSS-Cascading Style Sheet
Backend Development:
I completed the below mentioned technologies
1.JAVASCRIPT

9. ABOUT PROJECT

Project Introduction:

A weather forecasting application is a software tool designed to provide users with up-to-dateand accurate information about current and future weather conditions. These applications leverage data from meteorological sources, satellites, and weather stations to deliver forecasts,real-time weather updates, and other related information.

The primary goal of a weather forecasting app is to offer users the ability to plan their activities based on anticipated weather conditions.

Project Requirements:

System development hardware
   a. **Operating System**: Windows 7 and above.
   b. **Language**: Html **,** Css , Javascript .
   c. **API** : Openweathermap api

Project Implementation (Sample Code):

<u>Climate Cast</u>

<u>Html:</u>

```html
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Weather Widget</title>
  <link rel="stylesheet" href="style.css">
</head>

<body>
  <div class="card">
    <header>Weather Widget</header>
    <div class="search">
      <input type="text" placeholder="Search" spellcheck="false">
      <button><img src="Images/search.png" alt="search"></button>
    </div>
    <div class="error">
      <p>Invalid City Name</p>
    </div>
    <div class="weather">
      <img src="Images/rain.png" class="weather-icon" alt="weather icon">
      <h1 class="temp">22°c</h1>
      <h2 class="city">Kakinada</h2>
      <div class="details">
        <div class="col">
          <img src="Images/humidity.png" alt="humidity icon">
          <div>
            <p class="humidity">50%</p>
            <p>Humidity</p>
          </div>
        </div>
        <div class="col">
          <img src="Images/wind.png" alt="wind icon">
          <div>
            <p class="wind">15 km/h</p>
            <p>Wind Speed</p>
```

```html
          </div>
        </div>
      </div>
    </div>
  </div>

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

</html>
```

CSS:

```css
* {
  margin: 0;
  padding: 0;
  font-family: 'Poppins', sans-serif;
  box-sizing: border-box;
}

body {
  background-color: #222;
}

header {
  padding-bottom: 30px;
  font-size: 40px;
  font-weight: 800;
  display: flex;
  justify-content: center;
  align-content: center;
}

.card {
  width: 90%;
  max-width: 470px;
  background: linear-gradient(135deg, #00feba, #5b548a);
  color: white;
  margin: 35px auto 0;
  border-radius: 20px;
```

```css
    padding: 40px 35px;
    text-align: center;
}

.search {
    width: 100%;
    display: flex;
    align-items: center;
    justify-content: space-between;
}

.search input {
    border: 0;
    outline: 0;
    background-color: #ebfffc;
    color: #555;
    padding: 10px 25px;
    height: 60px;
    border-radius: 30px;
    flex: 1;
    margin-right: 16px;
    font-size: 18px;
}

.search button {
    border: 0;
    outline: 0;
    background-color: #ebfffc;
    border-radius: 50%;
    width: 60px;
    height: 60px;
    cursor: pointer;
}

.search button img {
    width: 16px;
}

.weather-icon {
    width: 170px;
```

```css
    margin-top: 30px;
}

.weather h1 {
    font-size: 80px;
    font-weight: 500;
}

.weather h2 {
    font-size: 45px;
    font-weight: 400;
    margin-top: -10px;
}

.details {
    display: flex;
    align-items: center;
    justify-content: space-between;
    padding: 0 20px;
    margin-top: 50px;
}

.col {
    display: flex;
    align-items: center;
    text-align: left;
}

.col img {
    width: 40px;
    margin-right: 10px;
}

.humidity, .wind {
    font-size: 28px;
    margin-top: -6px;
}

.weather {
    display: none;
```

```css
}

.error {
  text-align: left;
  margin-left: 10px;
  font-size: 14px;
  margin-top: 10px;
  display: none;
}

@media (max-width: 768px) {
  header {
    font-size: 30px;
  }

  .card {
    padding: 30px 25px;
  }

  .search input {
    padding: 10px 20px;
    font-size: 16px;
  }

  .search button {
    width: 50px;
    height: 50px;
  }

  .weather h1 {
    font-size: 60px;
  }

  .weather h2 {
    font-size: 35px;
  }

  .humidity,
  .wind {
    font-size: 24px;
```

```css
  }

  .details {
    flex-direction: column;
    align-items: flex-start;
  }

  .col {
    margin-bottom: 15px;
  }
}

@media (max-width: 480px) {
  header {
    font-size: 24px;
  }

  .card {
    margin: 60px auto;
    padding: 20px 15px;
  }

  .search input {
    font-size: 14px;
    padding: 8px 15px;
  }

  .search button {
    width: 40px;
    height: 40px;
  }

  .weather h1 {
    font-size: 50px;
  }

  .weather h2 {
    font-size: 30px;
  }
```

```css
.humidity,
.wind {
    font-size: 20px;
}

.details {
    padding: 0 10px;
}
}
```

Javascript:

```javascript
const apiKey = "fbab96ca9c468702a4e5dc8eb46f50ec";
const apiUrl = "https://api.openweathermap.org/data/2.5/weather?units=metric&q=";

const searchBox = document.querySelector(".search input");
const searchBtn = document.querySelector(".search button");
const weatherIcon = document.querySelector(".weather-icon");

async function checkWeather(city) {
  const response = await fetch(apiUrl + city + &appid=${apiKey});

  if (response.status == 404) {
    document.querySelector(".error").style.display = "block";
    document.querySelector(".weather").style.display = "none";
  } else {
    const data = await response.json();

    document.querySelector(".city").innerHTML = data.name;
    document.querySelector(".temp").innerHTML = Math.round(data.main.temp) + "°c";
    document.querySelector(".humidity").innerHTML = data.main.humidity + "%";
    document.querySelector(".wind").innerHTML = data.wind.speed + " km/h";

    switch (data.weather[0].main) {
      case "Clouds":
        weatherIcon.src = "Images/clouds.png";
        break;
      case "Clear":
        weatherIcon.src = "Images/clear.png";
        break;
```

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```javascript
        case "Rain":
          weatherIcon.src = "Images/rain.png";
          break;
        case "Drizzle":
          weatherIcon.src = "Images/drizzle.png";
          break;
        case "Mist":
          weatherIcon.src = "Images/mist.png";
          break;
    }

    document.querySelector(".weather").style.display = "block";
    document.querySelector(".error").style.display = "none";
  }
}

searchBtn.addEventListener("click", () => {
  checkWeather(searchBox.value);
});
```
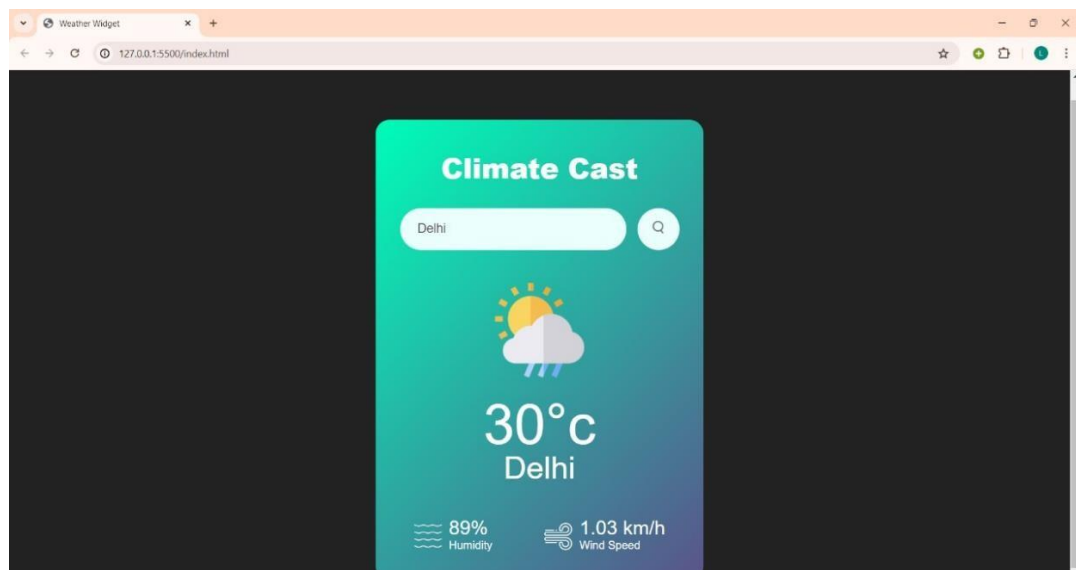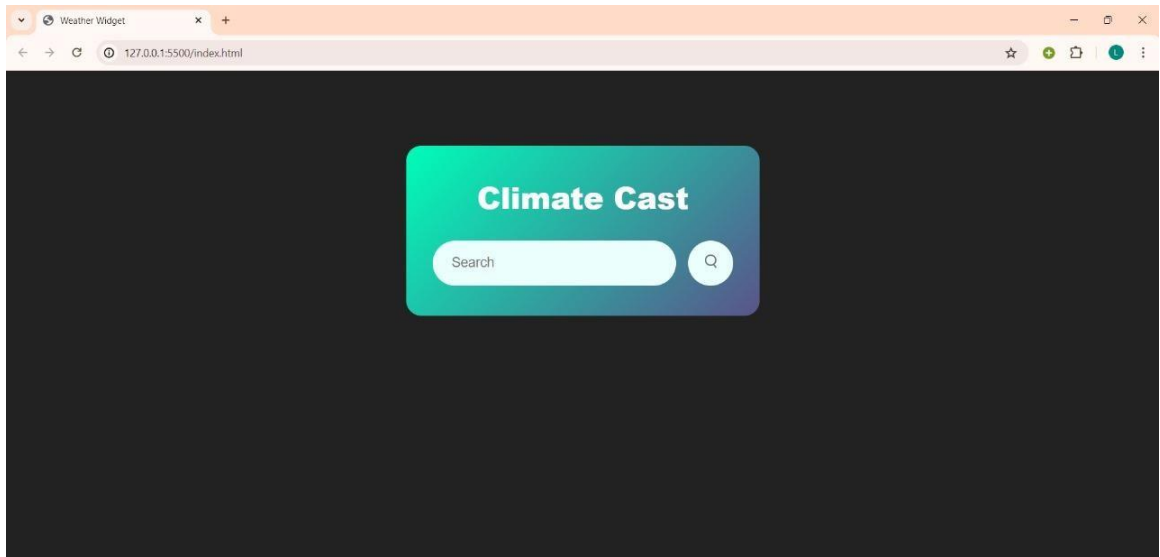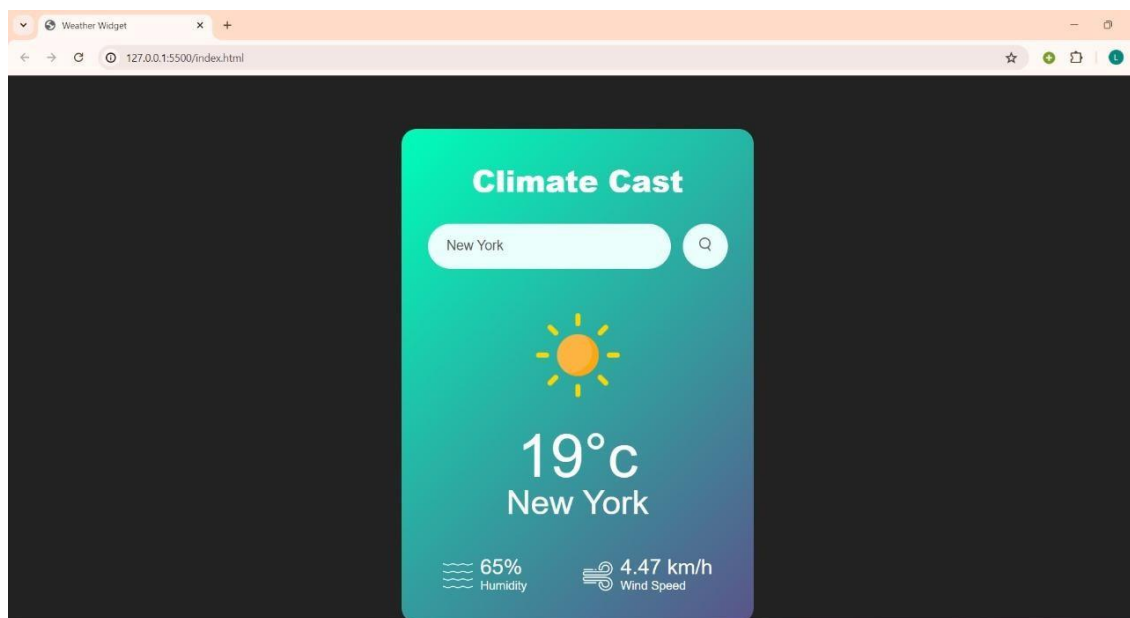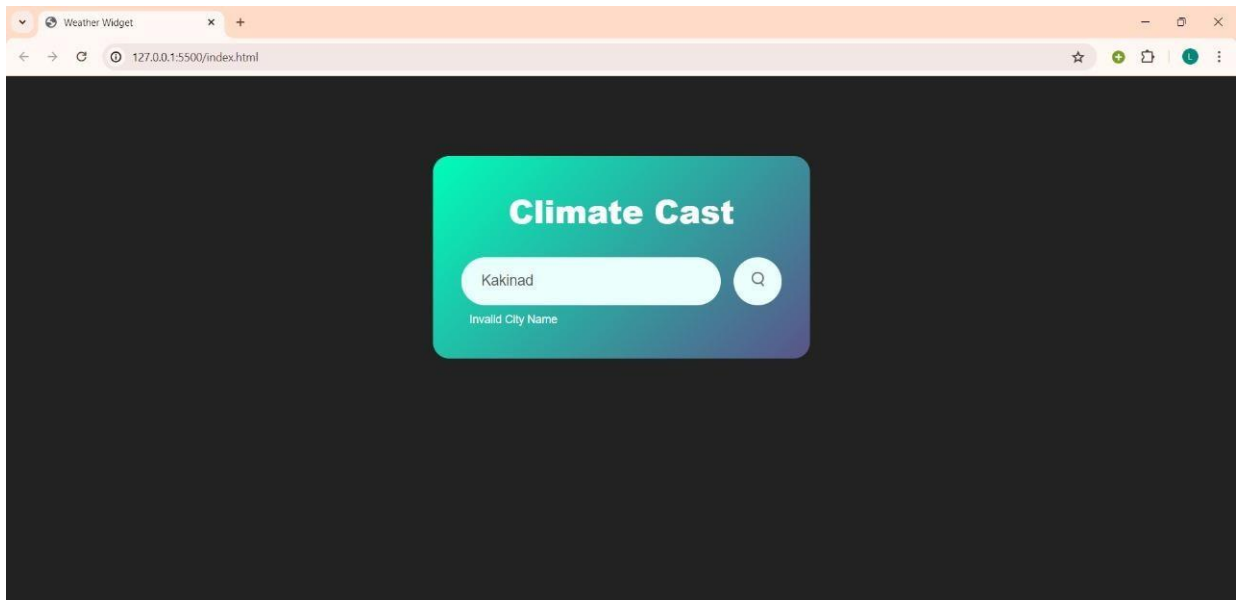
Project Outputs:

10. CHALLENGES FACED

➢ At the beginning of internship, I faced difficulty for understanding the applications and different tools.
➢ I faced difficulty in installing the packages.
➢ I faced difficulty in managing college and internship timings.
➢ I faced difficulty in understanding the advanced topics in web development.
➢ I faced difficulty in managing the memory in pc.
➢ I faced difficulty in network issues.
➢ I faced difficulty in process automation module.
➢ Even with these difficulties, I can complete the internship and it helps me in securing a New job.

11.CONCLUSION

In conclusion, the "Climate Cast" project implemented in Web Development using Html, CSS, Javascript demonstrates a functional and user- friendly interface. Weather App is the application of science and technology to predict the conditions of the atmosphere for a given location and time. It will show the current weather condition of the provided location.