



WEATHER NOW-THE WEATHER WEBSITE

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Abstract: Weather Now is designed to be responsive and accessible, making it convenient for users to check the weather on the go. The project emphasizes a clean and modern design, prioritizing user experience and accessibility. By leveraging modern web technologies and best practices, Weather Now aims to be a reliable and go-to destination for individuals seeking accurate and up-to-date weather information. The website offers a range of features, including current weather conditions such as temperature, wind speed and humidity. Users can customize their experience by setting preferred locations, enabling notifications for severe weather warnings. Additionally, the platform provides interactive visualizations to help users better understand and interpret complex weather data. Through the implementation of this mini-project, we intend to demonstrate the practical application of web technologies in creating a useful and engaging weather information platform. We anticipate that Weather Now will serve as a valuable tool for users, assisting them in making informed decisions based on reliable weather data.

Keywords - Weather API, CSS Grid, Responsive Design, Geolocation.

I. INTRODUCTION

Weather Now is a user-friendly, web-based website that provides real-time weather information and forecasts to its users. The project aims to create a simple, intuitive, and aesthetically pleasing platform that allows users to easily access and interpret weather data. By integrating various weather APIs and data sources, Weather Now ensures the accuracy and reliability of the information presented. The website offers a range of features, including current weather conditions, hourly and daily forecasts, radar maps, and weather alerts. Users can customize their experience by setting preferred locations, enabling notifications for severe weather warnings, and accessing historical weather data for specific locations. Additionally, the platform provides interactive visualizations to help users better understand and interpret complex weather data.

1.Data Sources: A list of the data sources used to fetch weather information. This could include APIs, HTML , CSS AND JAVASCRIPT.

2. Design Elements: Screenshots or descriptions of the design elements used for the website, such as color schemes, typography, and layout.

3.CTechnologies Used: An overview of the programming languages, frameworks, libraries, and tools utilized to build the website.

4. Challenges Faced: A brief explanation of the difficulties or obstacles you encountered during the development process and how overcame them.

5. User Feedback: Any feedback you received from potential users or testers during the development and testing phases, and how you incorporated it into your project.

6. Improvement Suggestions: Own reflections on how the project could be improved or expanded upon in the future.

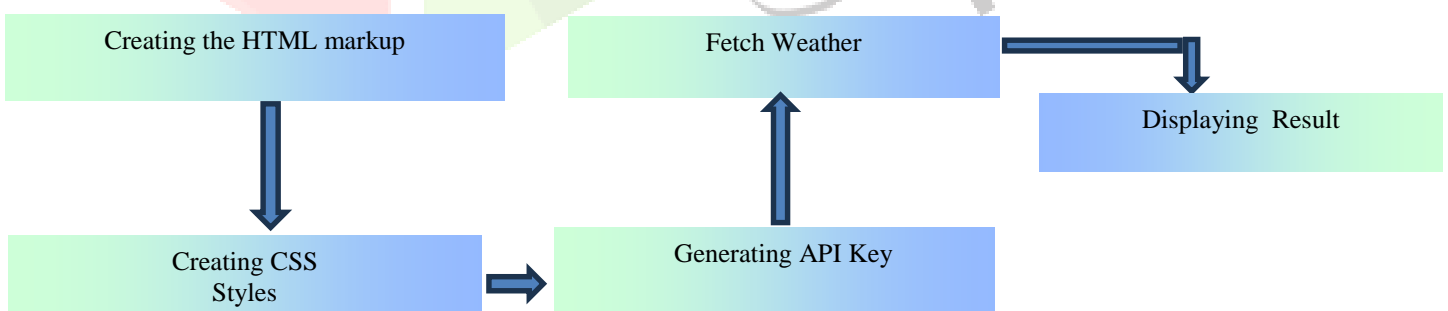
II. RESEARCH AND METHODOLOGY

Data Collection: Determine the data sources for weather-related information. These may include APIs provided by weather services, government weather data repositories, or even data collected from weather sensors.

Data Processing: Develop methods for cleaning and processing raw weather data. This might involve data normalization, filtering out outliers, and interpolating missing data points.

Validation and Testing: Develop strategies to validate and test the accuracy of your weather prediction model. This may involve using cross-validation techniques, splitting the data into training and testing sets, and evaluating performance metrics like mean absolute error or root mean square error.

STEPS TO DEVELOP WEATHER NOW



1. : Designing the HTML Structure In HTML file, creating the necessary structure for weather website. This includes headers, footers, and sections for displaying weather information.

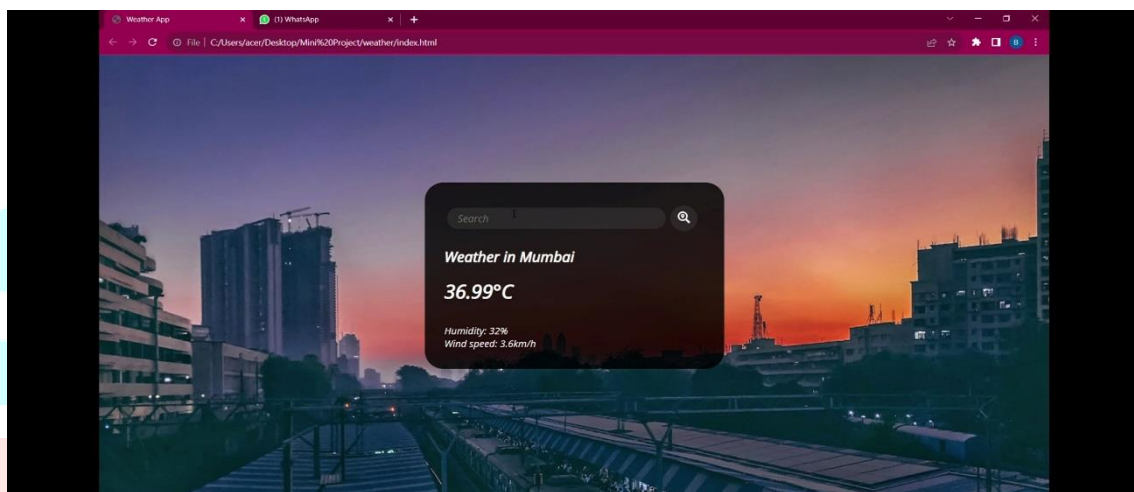
2. Styling the Website using CSS. In CSS file, style the HTML elements to make the visually appealing and user-friendly.

3. Fetching Weather Data Using JavaScript Utilize a weather API to fetch real-time weather data based on the user's location or a specific location Fetching API or any JavaScript library that makes HTTP requests.

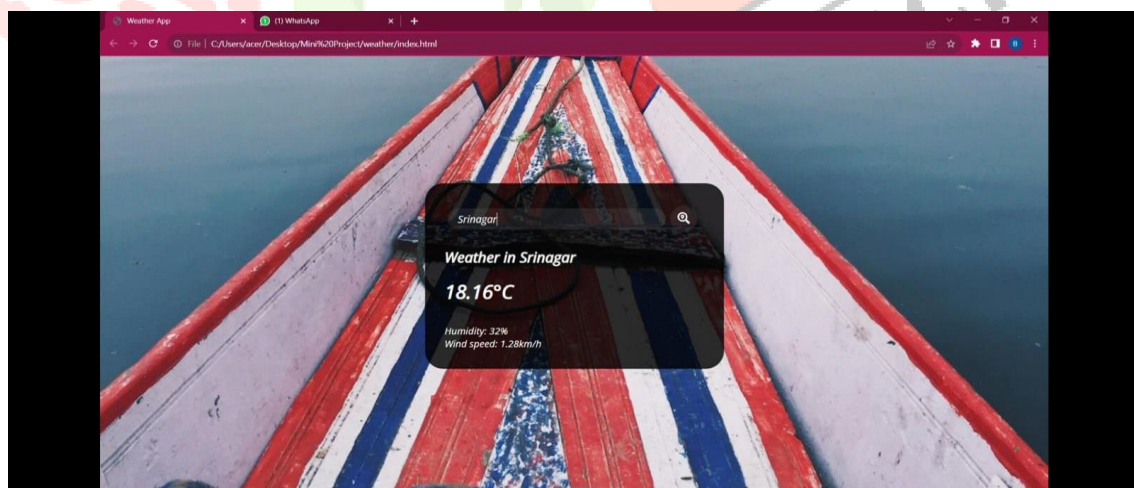
4. Running and Testing the Website. Opening HTML file in a web browser to see the basic weather website. Test the functionality and ensure that the weather data is being fetched and displayed correctly.

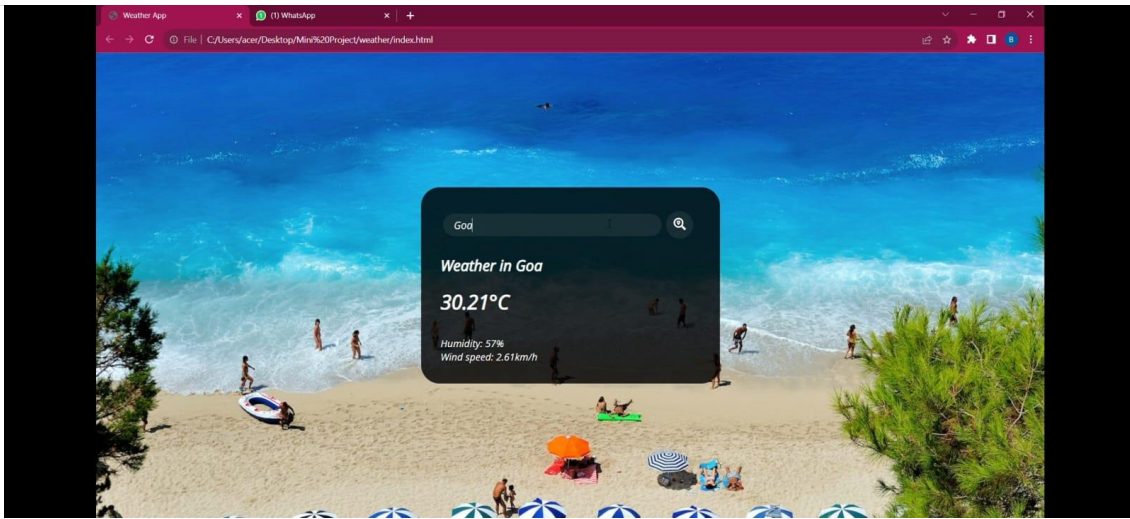
5- Output-

5.1 The Default Weather condition is set to be of Mumbai.



5.2 The Background fluctuates as per the city entered.





6- If irrelevant city is entered then the website wouldn't be able to showcase the result.

III. Data and Sources of Data

a) Current Weather Conditions:

This includes the current temperature, weather description (such as sunny, cloudy, rainy, etc.), wind speed, humidity, and temperature.

b) Weather API:

Weather API offers a simple and easy-to-use API for accessing weather data. It provides current weather, forecasts, and historical weather data for various locations worldwide.

c) Historical Weather Data:

Some weather APIs provide historical weather data, allowing you to display past weather information for a specific location on your website.

d) Geographical Location:

The geographical location of the area for which you are displaying the weather is also crucial. It may include the city name, country, and possibly latitude and longitude coordinates.

e) Humidity:

Show the current humidity level and possibly include a visual representation, such as a humidity gauge, to help users quickly grasp the humidity level.

IV. RESULTS AND DISCUSSIONS:-

Creating a Weather Now using CSS and JavaScript, the result is a dynamic and visually appealing platform that provides users with up-to-date weather information for their desired locations. The website utilizes CSS for styling and layout, while JavaScript is used to fetch and display weather data from an external API. Above is an example of what the website look like:

Result: The weather website has a clean and intuitive interface, displaying current weather conditions, temperature, humidity and wind speed. The layout is user-friendly, allowing users to quickly access the information they need. The website is responsive and can adapt to different screen sizes, ensuring a seamless experience across various devices. The website effectively leverages CSS to create an appealing visual design, ensuring a pleasant user experience. The use of appropriate colors, fonts, and layouts contributes to the website's overall aesthetic appeal. Additionally, the website employs JavaScript to fetch real-time weather data from a selected API, ensuring that the information displayed is always current and accurate. The website's

responsiveness ensures that users can access the weather information on various devices, including desktops, laptops, tablets, and smartphones, without any compromise in functionality or design. This enhances the website's accessibility and usability for a broader audience. Furthermore, the inclusion of descriptive statistics, such as temperature, humidity, wind speed, and precipitation probability, provides users with comprehensive insights into the current and upcoming weather conditions. The concise weather forecast summary allows users to plan their activities accordingly, making the website a valuable tool for anyone needing to stay informed about the weather. Overall, the combination of CSS and JavaScript in Weather Now results in a well-designed and functional platform that effectively delivers relevant and timely weather information to users, thereby enhancing their overall experience and enabling them to make informed decisions based on the weather conditions.

V. CONCLUSION

Creating a Weather Now can be a valuable tool for users, providing them with real-time updates on temperature, precipitation, and other crucial meteorological data. By incorporating user-friendly interfaces, accurate forecasting algorithms, and customizable features, you can enhance the app's usability and ensure its relevance in the market. Additionally, integrating push notifications and user location-based services can further improve user engagement and satisfaction. Weather Now is designed to be responsive and accessible, making it convenient for users to check the weather on the go. The project emphasizes a clean and modern design, prioritizing user experience and accessibility. By leveraging modern web technologies and best practices, Weather Now aims to be a reliable and go-to destination for individuals seeking accurate and up-to-date weather information.

VI. ACKNOWLEDGEMENT

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VII. REFERENCES

Research Papers:

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2. Machine Learning to Improve Numerical Weather Forecasting. Publish on May 18, 2021
3. Designing A Model for Weather Forecasting Using Machine Learning. Published on August 08, 2020.