

Madhav Institute of Technology and Science, Gwalior-474005

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

DEPARTMENT OF IT



Minor Project Report

On

Weather Report Website

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Dept.Name: Dept.of IT MITS, GWALIOR

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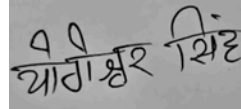
CERTIFICATE

*Certified that the work contained in the project titled
“WEATHERREPORT-WEBSITE”, by AISHWARY BAJPAI
& PIYUSH SINGH has been carried out under our
supervision.*



(Prof. Vikas Sejwar)

Mentor



(Prof. YOGESHWAR SINGH)

Mentor

UNDERTAKING

I declare that the work presented in this project titled "WEATHER REPORT-WEBSITE", submitted to the DEPT OF CSE AND IT, Faculty of Madhav Institute of Technology and Science, Gwalior, M.P for the award of the Bachelor of Technology degree in INFORMATION TECHNOLOGY, is our original work. I have not plagiarized or submitted the same work for the award of any other degree. In case this undertaking is found incorrect, I accept that my

degree maybe unconditionally withdrawn.

JULY–DEC 2021

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I would like to express my deepest appreciation to all those who provided me the possibility and played a crucial role in completing this project. And provides best guidance and keep me motivated and invest their full effort in helping us. A special gratitude I give to our minor projects supervisor Prof. Vikas Sejwar and Dr Yogeshwar Singh whose contribution in stimulating suggestions and encouragement, helped us to coordinate in our project.

Singh

AishwaryBajpai,Piyush

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INTRODUCTION

.Weather forecasting is the application of science and technology to predict the state of the atmosphere for a given location. WEATHER-WEBSITE is the great initiative to find the live condition of weather at any instance of time at any place just by providing the name of the country and we will get to know the live condition of weather of that place

The information this website will be providing include temperature, weather condition, minimum and maximum temperature, and date and day.

The website also have different images for different state of weather like cloud image for cloudy weather, rainy images for rainy weather and so on for the other.

Weather Report project is a web based website through which you will be able to get all the reports related to weather forecasting of any locations. Its geographical locator which will be received through your browser setting and server configuration will automatically identify the location and able to present its weather details such as temperature, weather condition, minimum and maximum temperature, and date and day. Its new avatars and feed burner will also allow its users to get the weather reports directly to just by entering the name of city.

NEED OF WEBSITE:-

This app is first of its type and is designed for fulfilling the requirement of normal people to know the weather condition of any city or country in easiest way

THIS MINOR-PROJECT AIMS AT:-

- 1. Build a Weather App that fetches weather data from an API by using HTML, JavaScript, CSS.*
- 2. To show the weather forecast of a particular region.*
- 3. To show current timing and date*

Course Outcomes Addressed

- 1. Create interactive web pages using program flow control structure*
- 2. Implement Arrays and functions in javascript*
- 3. Create event based web forms using javascript*

PROBLEM IDENTIFICATION

In today's time of science and technology we people want to access the facility just by sitting at our place and this website provides the live weather condition of any city or any place at any point of time, instead of

depending on the news for weather forecast. Weather forecasts provide critical information about future weather (in the parameters of degree celcius etc.).

HARDWARE AND SOFTWARE REQUIREMENT

HARDWARE

For Windows:

64-bit Microsoft® Windows® 8/10

x86_64 CPU architecture; 2nd generation Intel Core or newer, or AMD CPU with support for a Windows Hypervisor

8GB RAM or more

1280x800 minimum screen resolution

SOFTWARE

Frontend: HTML, CSS,

Visual Studio Code is used to write the code.

FRONTEND:-

We have used HTML and CSS codes for user interface.

HTML:-

HTML is an acronym which stands for **Hyper Text Markup Language** which is used for creating web pages and web applications. Let's see what is meant by Hypertext Markup Language, and Webpage.

HyperText:

HyperText simply means "Text within Text." A text has a link within it, is a hypertext. Whenever you click on a link which brings you to a new webpage, you have clicked on a hypertext. HyperText is a way to link two or more web pages (HTML documents) with each other.

Markup language:

A markup language is a computer language that is used to apply layout and formatting conventions to a text document. Markup language makes text more interactive and dynamic. It can turn text into images, tables, links, etc.

WebPage:

A webpage is a document which is commonly written in HTML and translated by a web browser. A webpage can be identified by entering an URL. A Webpage can be of the static or dynamic type. **With the help of HTML only, we can create static web pages.**

CSS:-

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages

presentable.

CSS handles the look and feel part of a webpage. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used,

layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.

CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

Advantages of CSS:-

CSS saves time – You can write CSS once and then reuse the same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.

Pages load faster – If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule for a tag and apply it to all the occurrences of that tag. So less code means faster download times.

Easy maintenance – To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.

5. Better Device Compatibility

People use different smart devices to view a particular website. It can be a smartphone, PC or laptop. For this purpose, websites are required to be device compatible. CSS ensures that the task is done smoothly by providing better compatibility.

6. Positioning of Design Elements

You can change the position of an HTML tag with the help of CSS. You can place the elements like an image on any part of the web page as and when required.

JAVASCRIPT:-

JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side scripts to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities.

JavaScript was first known as **LiveScript**, but Netscape changed its name to JavaScript, possibly because of the excitement being generated by Java. JavaScript made its first appearance in Netscape 2.0 in 1995 with the name **LiveScript**. The general-purpose core of the language has been embedded in Netscape, Internet Explorer, and other web browsers.

VANILLAJS:-

Using "VanillaJS" means using plain JavaScript without any additional libraries like jQuery. People use it as a joke to remind other developers that many things can be done nowadays without the need for additional JavaScript libraries.

API:-

API stands for application programming interface. The most important part of this name is "interface," because an API essentially talks to a program for you. You still need to know the language to communicate with the program, but without an API, you won't get far.

When programmers decide to make some of their data available to the public, they "expose endpoints," meaning they publish a portion of the language they've used to build their program. Other programmers can then pull data from the application by building URLs or using HTTP clients (special programs that build the URLs for you) to request data from those endpoints.

Endpoints return text that's meant for computers to read, so it won't make complete sense if you don't understand the computer code used to write it.

TL;DR: An API allows one program to request data from another.

APIs provide a layer of abstraction for the user. Abstraction hides everything but what is relevant to the user, making it simple to use.

If you have a smart home plug like this one, there's a lot of complexity going on inside!

All software that you can interact with through code has some form of an API, so you'll see the term pop up in many places.

When web developers talk about "hitting an API," they usually mean a web service that lets you send requests and receive data in return. We'll touch on these soon.

Whenever I'm wondering, "How do I get this code to do what I want?" I search for the API documentation related to that code.

METHODOLOGY:-

We learn how to build a simple, yet fully functional weather app with JavaScript. First things first, we have to find a provider that will let us incorporate its weather data into our app. Luckily enough, there are several different providers out there for developing weather apps. Most of them include a free package along with premium subscriptions that scale depending on the services/features. In our case, we're going to use OpenWeatherMap, one of the most popular free choices. To take advantage of its capabilities, first, we have to sign up for an API key

The Page Markup:

The first section will include a heading, a search form, and an empty span element. This element will become visible with an appropriate message under certain conditions. Specifically, if there isn't any weather data available for a requested city or the data for this city are already known.

Some Basic Styles:

With the markup for the app ready, we'll forge on with the CSS. The first step, as always, is to specify some CSS variables and common reset styles:

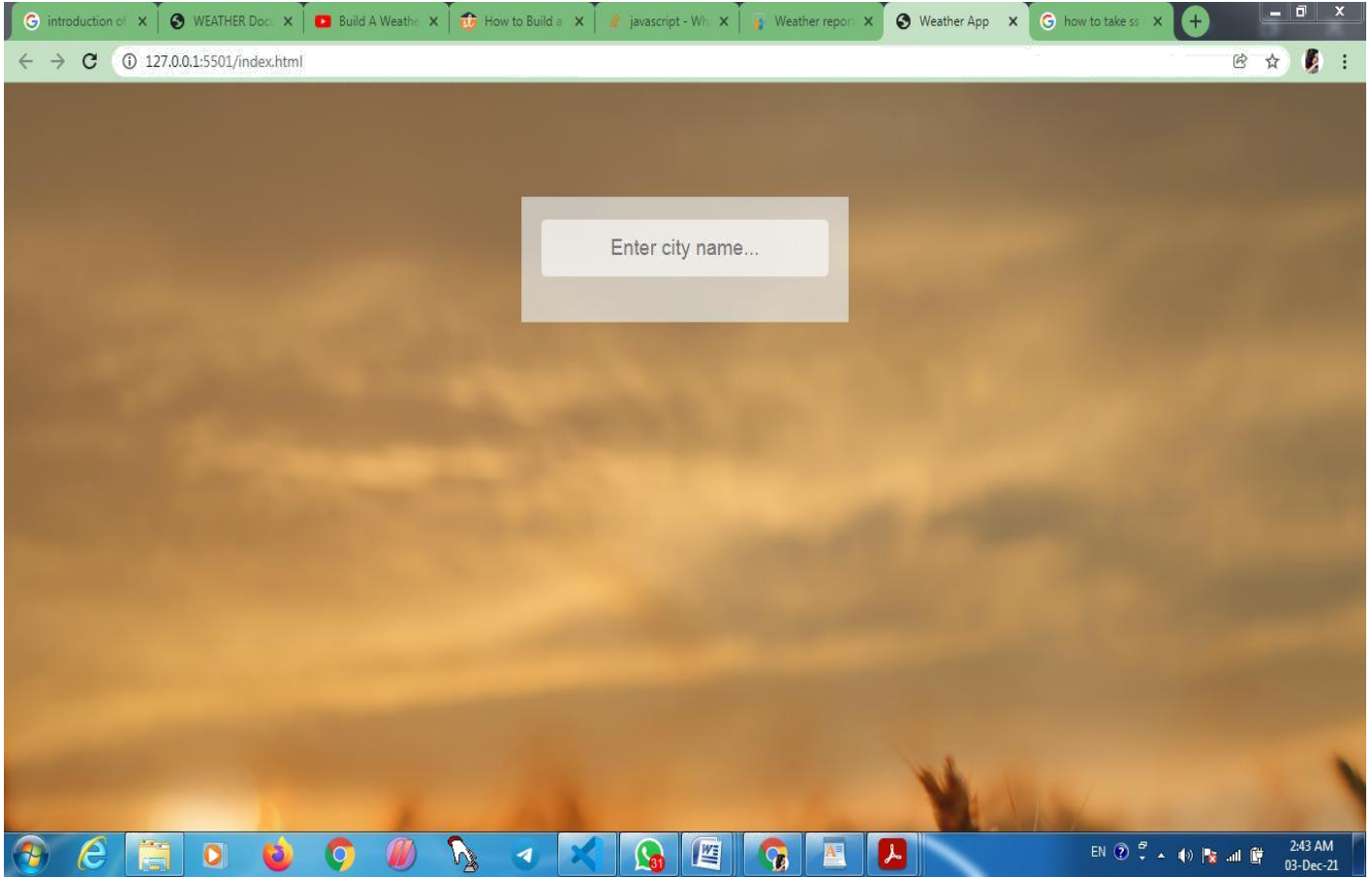
Add the JavaScript:-

JavaScript defines the functionality of our page. What response will get by the user

On Form Submission

Each time a user submits the form by pressing the **Enter** key we'll do two things:

1. Stop the form from submitting, hence prevent reloading the page.
2. Grab the value which is contained in the search field.



Build A Weather App With JavaS... x Current weather and forecast - C x Microprocessor interview questio... x Weather App x +

http://127.0.0.1:5501/weather-app-in-vanilla-javascript-master/index.html

Apps Gmail YouTube Maps Introduction to poi... New Tab https://whimsical.c... https://a2oj.herokuapp... https://whimsical.c... https://www.youtub... Reading list

russia

Russia, RU
2 December (Thursday),
2021

-13°C

-13°C (min)/ -12°C
(max)


Snow

Windows taskbar: Search, Task View, File Explorer, Mail, Edge, Teams, OneDrive, WhatsApp (6), Chrome, VS Code, System tray: ENG IN, 10:49, 02-12-2021

Build A Weather App With Javas... x Current weather and forecast - C x Microprocessor interview questio... x Weather App x +

← → ↻ http://127.0.0.1:5501/weather-app-in-vanilla-javascript-master/index.html ☆ ≡ 🌐

Apps Gmail YouTube Maps Introduction to poi... New Tab https://whimsical.c... https://a2oj.heroku... https://whimsical.c... https://www.youtub... Reading list



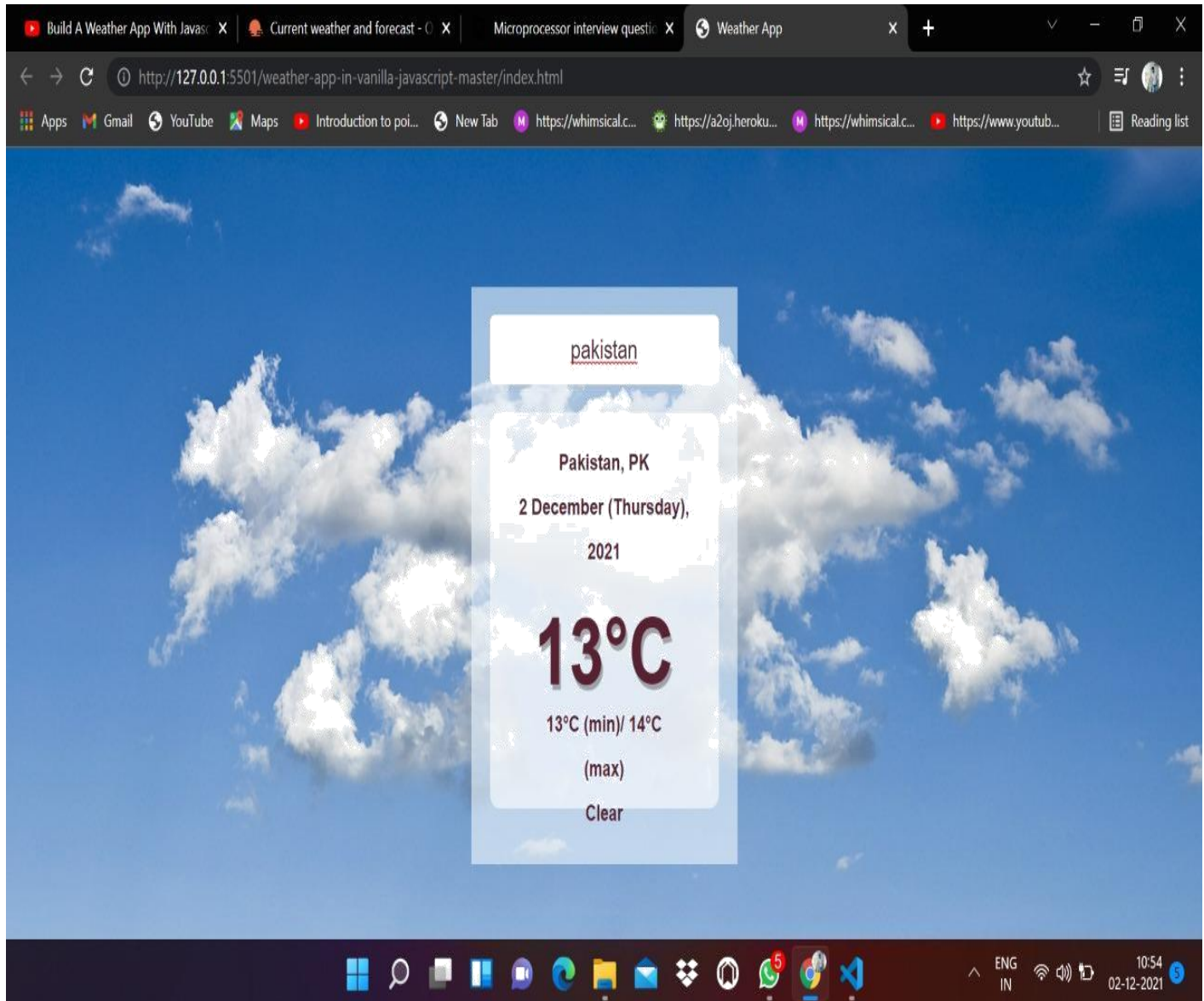
The image shows a web browser window displaying a weather application. The background is a dark, cloudy sky. In the center, there is a white weather card for Gwalior, IN. The card displays the current temperature as 18°C, with a minimum of 18°C and a maximum of 19°C. The date is 2 December (Thursday), 2021, and the weather condition is Clouds.

gwalior

Gwalior, IN
2 December (Thursday),
2021

18°C
18°C (min) / 19°C
(max)
Clouds

Windows taskbar: Start, Search, Task View, File Explorer, Mail, Teams, Edge, WhatsApp (5), Chrome, VS Code. System tray: ENG IN, Wi-Fi, Speaker, 10:53, 02-12-2021.



Above are the some interfaces of your website,

when the user enters the name of the city it will show the information of weather of that particular city including date, day, temperature in degree Celsius. We have an image that will change according to the weather. The

locationwilbe

*based on the user's geolocation. Below it is the summary of the weather, the temperature is in both **Celcius** and **Fahrenheit**. And in the end, we are showing the sunrise and sunset time.*

And we are using open weather map API to collect the weather information

*Open weather api: - Open Weather Map is an online service, owned by Open Weather Ltd, that **provides global weather data via API**, including current weather data, forecasts, nowcasts and historical weather data for any geographical location. The company provides a minute-by-minute hyperlocal precipitation forecast for any location. Open Weather Map provides a range of weather-related products in a variable combination of depth and steps of measurement to millions of clients globally.*

*A weather API is an **Application Programming Interface** that allows **weather data to be queried from scripts and code**. Good weather APIs provide both historical weather data and forecast data via an easy-to-use, well-defined programming interface.*

Skills developed out of this project. :-

- 1. Develop a JavaScript Program Using different Concepts*
- 2. Able to debug and run a JavaScript Program*
- 3. Documentation of Project*
- 4. Time management*
- 5. Technical Writing*
- 6. Teamwork*
- 7. Problem solving*

8.LearnaboutAPI

CONCLUSION:-



Weather plays a major role in our daily life, and without the meteorologist and forecaster we would have difficulty planning our daily activities. As we can see, the weather is not as simple a subject like we may have been thinking. The study of weather phenomenon requires the use of science, math, and different types of equipment and technology and data. Even with all these equipment, data, and observation tools, the weather continues to be a topic to study because it is constantly changing. Meteorologists and forecasters predict the weather and its possible changes, but in reality, weather is still unpredictable.

This website helps a lot in developing our skills, by learning HTML, CSS, JS and implementing these skills to solve the real world problem

because in today's time or in increasing era of science and technology so many technologies have been made to make our life easier and convenient. and this website is the example of this.

This website is useful for the farmers also if they know how to operate internet and if they have phones or laptop they can harvest their crops according to the weather by just typing the name of the city.

Just by having mobile phones and laptop with internet connection (in today's time we all have that facility) we can see the weather temperature of any city remotely.

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