MINI PROJECT REPORT

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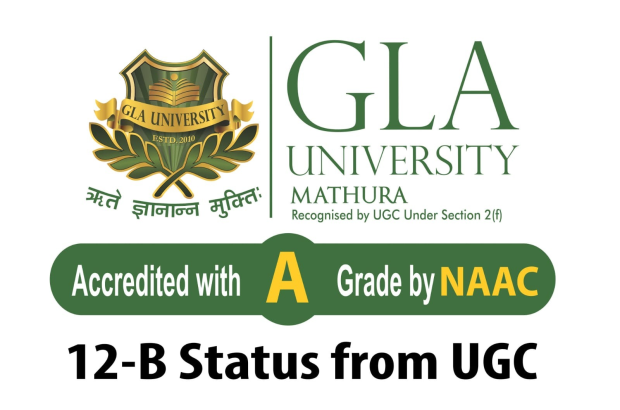
**Weather Forcasting**

**SUBMITTED BY**

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# 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 Mr. Bhanu Kapoor, 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.

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**ABSTRACT**

Weather forecasting is the application of science and technology to predict the state of the atmosphere for a given location.Ancient weather forecasting methods usually relied on observed patterns of events, also termed pattern recognition. For example, it might be observed that if the sunset was particularly red, the following day often brought fair weather.However, not all of these predictions prove reliable. Here this system will predict weather based on parameters such as temperature, humidity and wind. User will enter current temperature; humidity and wind, System will take this parameter and will predict weather(rainfall in inches) from previous data in database(dataset). The role of the admin is to add previous weather data in database, so that system will calculate weather(estimated rainfall in inches) based on these data. Weather forecasting system takes parameters such as temperature, humidity, and wind and will forecast weather based on previous record therefore this prediction will prove reliable. This system can be used in Air Traffic, Marine, Agriculture, Forestry, Military, and Navy etc.

**Declaration**

We hereby declare that the work which is being presented in this Project “**Weather Forcasting App**”, done at place where the project is done, has not been in any case duplicated to submit to any other university for the award of any degree. To the best of my knowledge other than me, no one has submitted to any other university. This is an authentic record of our own work carried by the team members under the supervision of our mentor Bhanu Kapoor Sir.

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# INTRODUCTION

Weather simply refers to the condition of air on the earth at a given place and time. It is a continuous, data-intensive, multidimensional, dynamic and chaotic process. These properties make weather forecasting is a formidable challenge. Forecasting is the process of estimation in unknown situations from the historical data. Weather forecasting is one of the most scientifically and technologically challenging problems around the world in the last century. To make an accurate prediction is indeed, one of the major challenges that meteorologists are facing all over the world. Since ancient times, weather prediction has been one of the most interesting and fascinating domains. Scientists have tried to forecast meteorological characteristics using a number of methods, some of these methods being more accurate than others.

**SOFTWARE AND HARDWARE REQUIREMENTS**

* VS Code
* Oracle 8i
* Ethernet Adapter
* 512 MB Ram
* Window 10

## PROJECT DESCRIPTION

Weather Report project application is a web based application through which you will 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, direction of wind, rains, humidity etc. To change the location you will just have to select the options provided below to get its details. Its new avatars and feed burner will also allow its users to get the weather reports directly to their mail, when they were not able to access this particular domain or even when the server is down.

Its weather watch gadgets in animated form will able to notify about weather for particular date and time also. It will also able to focus on critical weather condition for a particular gadgets through this gadgets.

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**WORKING**

Building a Weather app with JavaScript is an excellent project for beginners. It helps to understand the core basics of the DOM and teaches how to use fetch API, to call and get data from a third-party service.

In the above code, you can see we are using multiple divs with classes and IDs. The classes and IDs are important because we will be using those to interact with the DOM. In the HTML file, we link the CSS file called styles.css and the JavaScript file called scripts.js. The whole information section is wrapped under a div named container. The container contains an image tag with a blank src attribute, another div with an ID of location. The div has a text saying "Unable to fetch weather". A desc class is added under the location that will show the summary of the weather. And then, we are wrapping the temperatures inside a div called weather. The weather class consists of three classes to show Celcius's temperature, Fahrenheit, and a div to separate them. Finally, two divs are used to indicate sunrise and sunset timing.

After Applying styling to the html file uing css get the data, we are dependent on a third-party service. We will use a website called [OpenWeatherMap](https://openweathermap.org/). OpenWeatherMap is a service that provides various weather data through API. We can integrate the API into our app and can use the data on our website. An API is like a waiter, it works as a medium between the server and the client to serve the data to the client according to the client's request.

In this app, we get the **user's geolocation** to show weather data according to the user's place. To get the geolocation data, we first have to know about the **navigator object in JavaScript**. The navigator object in JavaScript is used to fetch information related to the user agent or the browser. This object has a property called geolocation. By using this property, we can get the user's latitude and longitude.

## IMPLEMENTATION

* Fetch user's device position. If you're unable to get the user's position, set any place as the default location.
* Fetch weather data (forecast data and current weather data) of the location from weather API
* Format the data into charts
* Display the chart and current weather

## REFERENCES;

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Duane K Fields

Mark A Kob

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**Faculty Guidelines:**

Mr. Bhanu Kapoor (Technical Trainer in GLA University)

