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HERALD
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Internet Software Architecture

Individual Report

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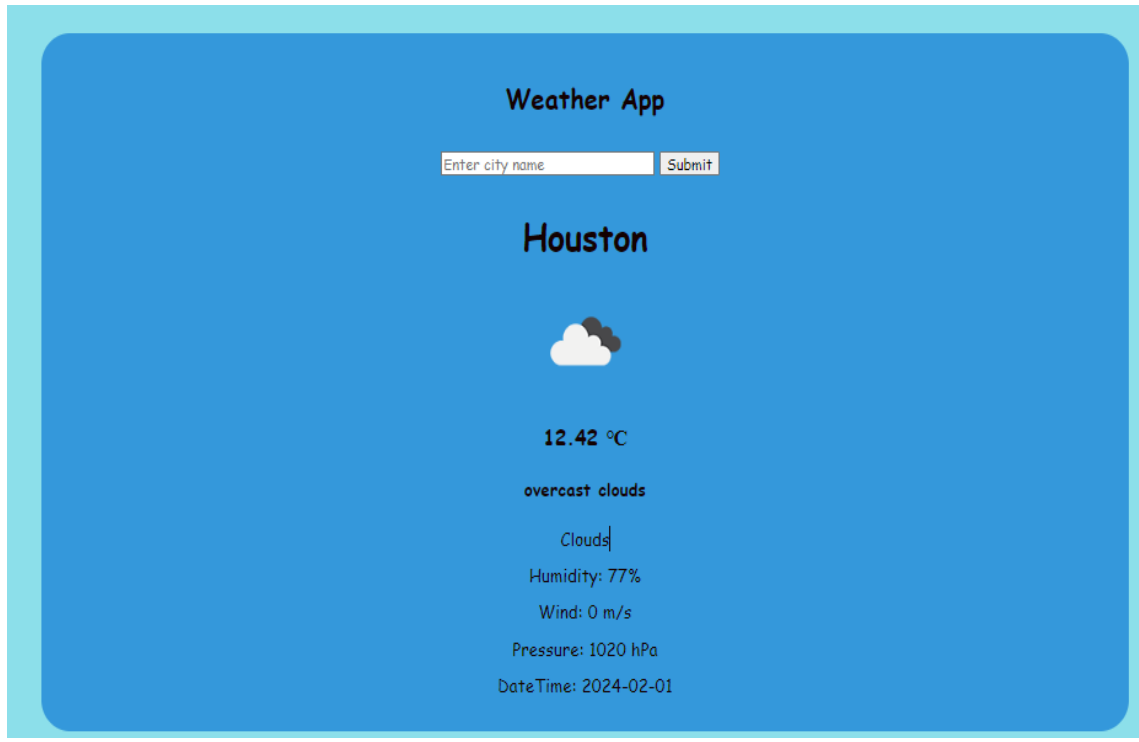
Group: L4CG1

Lecturer: Bishal Khadka









Tutor: Jenish Maharjan

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INTRODUCTION:



This is my first prototype of a weather forecasting app. I have tried to do a simple design of weather app which I have divided into three parts **head**: heading, **body**: Container, and **footer**: Copyright. As in header I have tilted my project information, in body there are many elements like search icon image which changes by preference of weather condition, time, day, date and on the other hand, I also mentioned about **Humidity**, **Wind-speed** and **atmospheric pressure**. The Weather App project that emphasis on the development of a user-friendly application that collect and presents real-time weather information. Assigned as an individual Project as I was assigned weather condition **Houston** city, the objective of this project is to assist an understanding of website development by using **HTML**, **CSS**, **JavaScript** and **php** computer programming. The created weather application makes it easier to access meteorological information for any searched city in the world. I have also added backend and present 7days data This report analysis the code's advantages and shortcomings and amplify for future development.

Icon	Temp	Desc	Main	Humidity	Wind:10km/hr	Pressure	Datetime
	12.42°C	overcast clouds	Clouds	77%	0.00 m/s	1020.00 hPa	2024-02-01
	73.70°C	Partly cloudy	Clouds	63%	5.80 m/s	1013.50 hPa	2024-01-25
	76.50°C	Thunderstorm	Thunderstorm	80%	4.00 m/s	1012.80 hPa	2024-01-26
	79.10°C	Clear sky	Clear	50%	7.20 m/s	1014.00 hPa	2024-01-27
	74.80°C	Overcast	Clouds	68%	5.50 m/s	1011.20 hPa	2024-01-28
	70.20°C	Light rain	Rain	75%	3.00 m/s	1010.00 hPa	2024-01-29
	78.30°C	Sunny	Clear	55%	6.00 m/s	1012.50 hPa	2024-01-30
	72.50°C	Partly cloudy	Clouds	65%	4.50 m/s	1013.00 hPa	2024-01-31
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Positive Aspect:

- It is well structured and easy to read and understand with simple design.
- The website shows metrological information of different cities in real time.
- You can also see different weather condition like Humidity, Wind-speed and atmospheric pressure.
- It also shows real time and date of searched city.
- The website shows different weather icon that are fetched from localhost.
- By using parameterized queries to protect against SQL injection, database interactions are shown to adhere to security best practices.
- Since files don't need to be uploaded to a remote server for testing, local servers allow for a quicker development cycle. Changes made locally can be immediately observed by developers.

Negative aspect:

- Localhost applications are limited to use on the local computer. When cross-device testing or collaboration is necessary, this can be a constraint.
- When the program is deployed to a live server, potential problems could develop since local servers might not accurately mimic the production environment.
- The developer's computer powers the local servers. The development process may be hampered if the equipment has hardware malfunctions or other problems.
- The whole website is operated by internet.
- Free open weather API has very slow server and may not function properly sometime.

Conclusion:

Ultimately, my website has a meticulously organized and streamlined style, prioritizing simplicity and user-friendliness. The inclusion of a real-time weather display on the site enhances its functionality by providing users with current weather information for various cities, so adding both dynamism and utility. PHP functions as the backend language, allowing for dynamic server-side processing and aiding the smooth retrieval and processing of real-time meteorological data. This decision enhances the overall functionality of the website. Nevertheless, the presence of API performance concerns and sporadic instability of the free API are recognized. Our future plans entail the possibility of shifting to a paid API to enhance performance and overcome the constraints of the

existing design by integrating symbols, background elements, and hover effects. Furthermore, continuous improvement of the PHP backend is crucial for ensuring speedy server-side processing. By taking into account these factors, the website is positioned for ongoing enhancement, guaranteeing a strong, aesthetically pleasing, and easy-to-use platform in the coming years.

Acknowledgement:

I want to say a big thank you to everyone who helped me finish this weather app story.

First and foremost, I want to thank my mentor and guide, [Jenish Sir], from the bottom of my heart for all the help, support, and motivation they gave me during the development and documentation process. Their knowledge and ideas have been very helpful in creating this project.

We want to thank Module leader Bishal Khadka for giving us the accurate and up-to-date weather data that our app is built on. Their dedication to accuracy and meeting deadlines has made our project much better overall.

Last but not least, I want to thank everyone in the college community for making it a good place to learn and grow. The things I learned and the skills I developed during this project will definitely affect what I do in the future.

