Internet Software Architecture

Individual Report

ON

Weather Application

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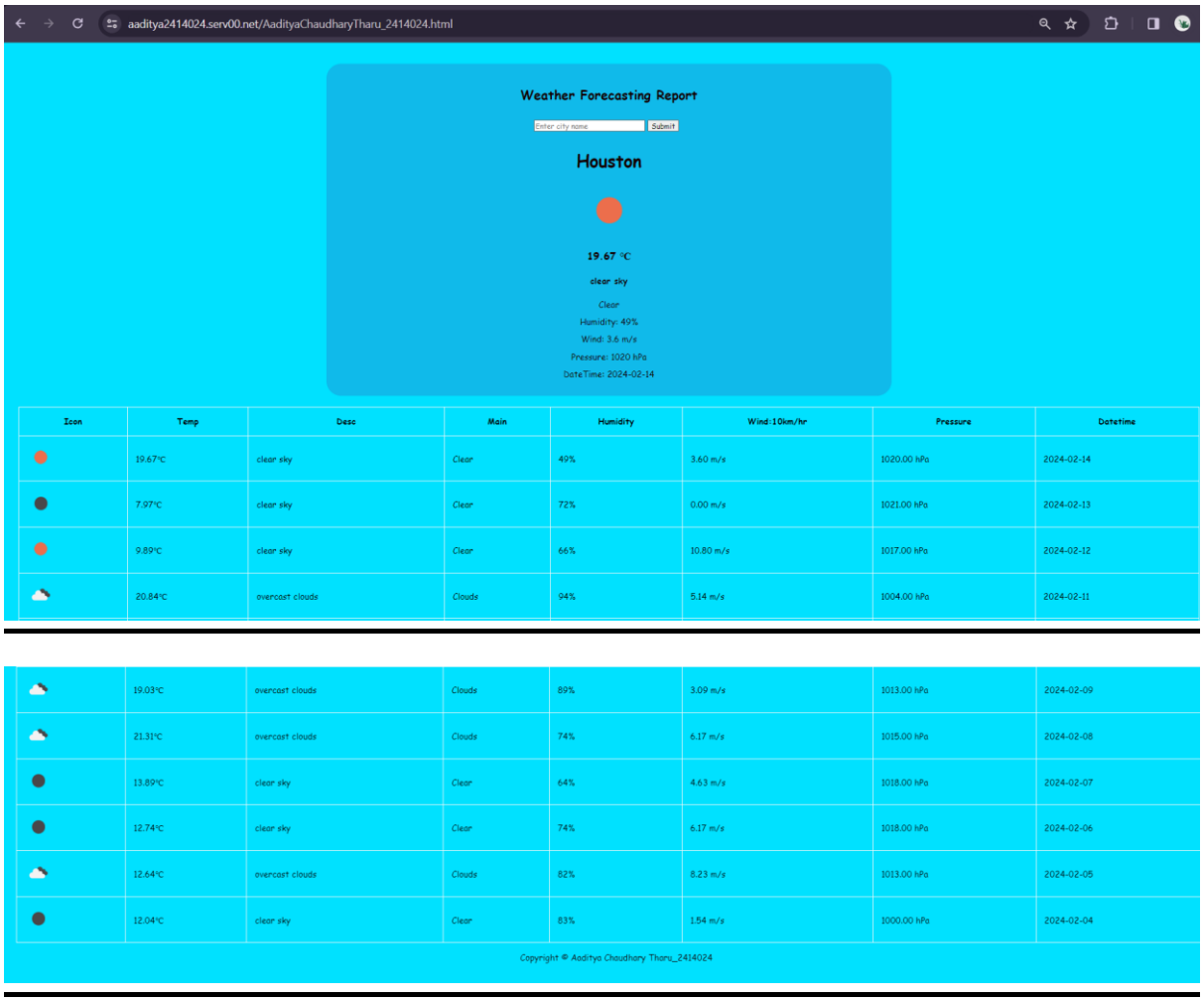
1.INTRODUCTION ON FINAL PROTOTYPE:



This is an amazing weather app that was made by a student. It combines HTML, CSS, JavaScript, PHP, and MySQL in a way that works well together. It is stored on the web and uses Houston as its default city. The application's MySQL interface keeps the database organized so that data can be managed efficiently, which makes it easier to expand. The student has wisely added local storage using JavaScript, which lets users save their own settings locally. This add-on adds another level of customization, letting users keep their tastes and changes for a more personalized experience. In conclusion, this weather app not only gives correct and up-to-date information, but it also shows how good the student is at web creation by having a default city setting that makes the weather experience smooth and personalized.

2.Positive Aspect:

- The HTML layout and entry parts help make the weather app's design flexible and easy to use.
- Using CSS for flexible design makes sure that the weather app works well on a range of screen sizes and devices, making the experience better for users on all of them.
- The code is easy to understand because it is broken up into functions. Each function is responsible for a certain task, like getting weather data, changing the current weather UI, and updating the past weather UI.
- The code includes ways to handle errors, show warnings when there are problems getting data, and send helpful notes.
- The methods updateCurrentWeatherUI and updateHistoricalWeatherUI change the UI on the fly depending on the weather data they receive, showing weather information in real time.
- You use MySQL methods with tailored searches to help protect against SQL injection flaws.
- The code is easy to understand because it is broken up into functions. Each function is responsible for a certain task, like getting weather data, changing the current weather UI, and updating the past weather UI.

3.Negative aspect:

- The whole website is operated by internet.
- When the program is deployed to a live server, potential problems could develop since local servers might not accurately mimic the production environment.
- If styles are hardcoded without using a preprocessor or CSS variables, it might make the application less flexible and harder to keep the design uniform.
- You might want to improve how errors are handled when connecting to the database. If the link fails, it would be helpful to record the problem message or give a more detailed answer.
- The code uses both HTTP and HTTPS. To avoid security problems and make sure your site works with current web standards, it's best to use a consistent protocol, like HTTPS.

4. web Hosting

Introduction: Ser00.com is a web hosting service providing a user-friendly interface and affordable pricing plans for individuals and businesses to make their websites accessible on the internet. Due to my stronger online visibility, this project has given me the chance to show my website to people all over the world. The website InfinityFree.net has been a great choice for people and small businesses like mine. This is mainly because of its easy-to-use design and reliable hosting features, which have made it easier for us to establish our online personalities.

Positive Aspects: Ser00.com offers reliable customer support, affordable pricing plans, one-click installations of applications, and robust security measures, making it an attractive option for users with varying technical expertise.

Negative Aspects: Users have reported occasional performance issues during peak traffic hours, and limitations in customization and scalability might be a concern for businesses with rapidly growing websites.

Conclusion: Ser00.com is a suitable choice for individuals and small to medium-sized businesses seeking accessible and budget-friendly hosting solutions. However, users should consider potential performance limitations and scalability concerns based on their specific needs. The platform's evolution and responsiveness to user feedback will likely shape its competitiveness in the dynamic web hosting landscape.

After using ser00.com as a web service, everything went smoothly and without any problems. Due to my stronger online visibility, this project has given me the chance to show my website to people all over the world. The website InfinityFree.net has been a great choice for people and small businesses like mine. This is mainly because of its easy-to-use design and reliable hosting features, which have made it easier for us to establish our online personalities.

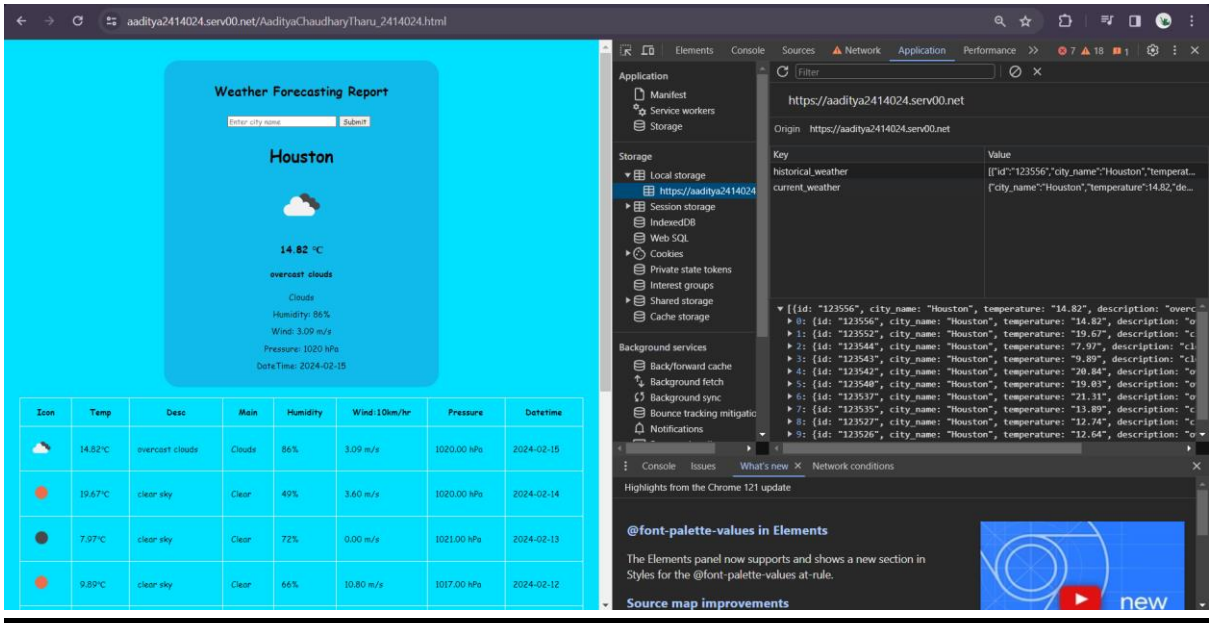
6.Conclusion:

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. The integrated JavaScript and PHP code showcased in this weather application demonstrates a well-structured and modular approach to fetching, displaying, and storing weather data. The JavaScript component effectively manages user interactions and dynamically updates the user interface, providing real-time weather information and historical data. The PHP backend efficiently communicates with the OpenWeatherMap API, securely stores current weather details in a database, and retrieves historical data for display. The code's positive aspects include modularity, error handling, and a user-friendly interface. As with any codebase, potential improvements can be made, such as enhancing database connection error handling. Overall, this application serves as a promising foundation for a weather forecasting tool, and with ongoing refinement, it has the potential to offer a seamless and informative experience to users. 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.

7.Acknowledgement:

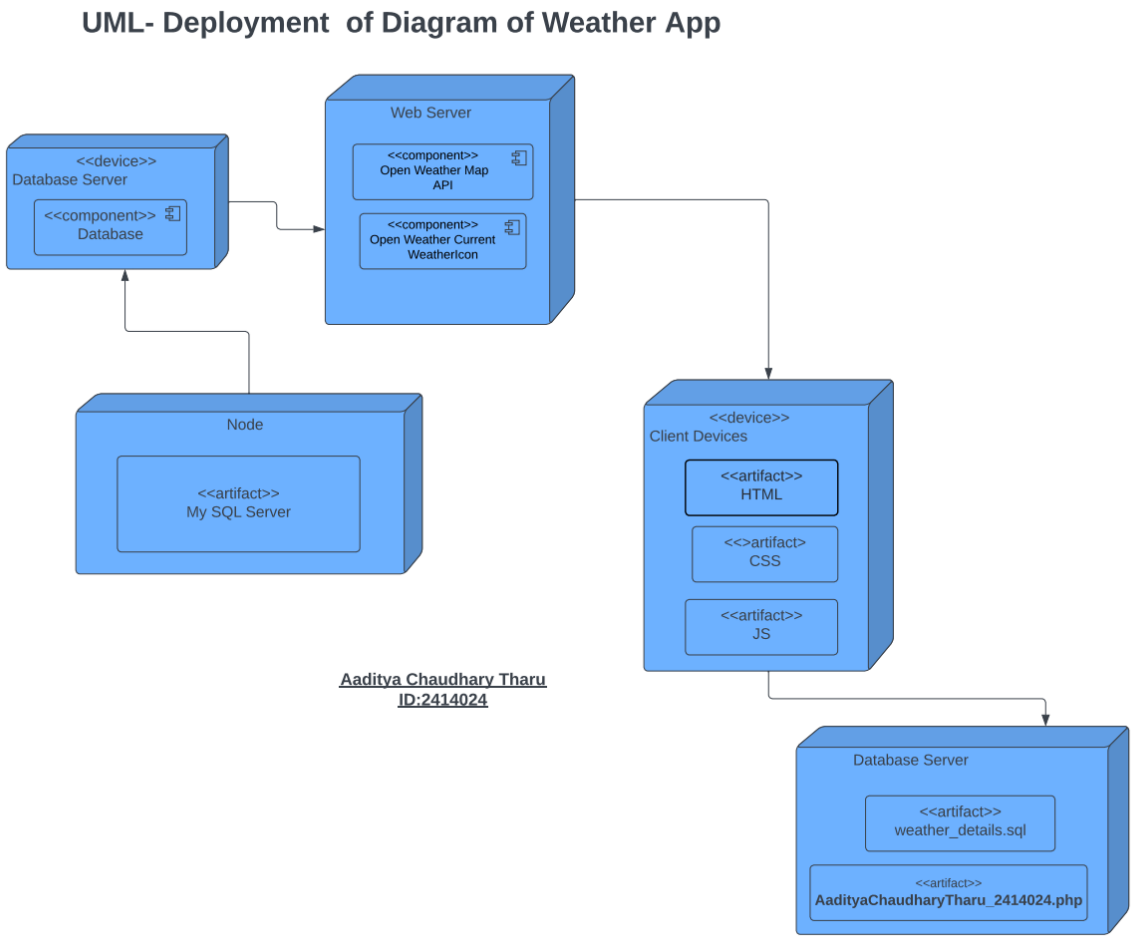
I would like to say a big thank you to everyone who helped me finish this weather app Project. First and foremost, I want to thank my mentor and guide, [Jenish Sir and Jeshmi ma'am], from the bottom of my heart for all the help, support, and motivation they gave me during the development and documentation process. Their knowledge and ideas have been very helpful in creating this project. I would also like 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.

8.Diagram Web Hosted application:

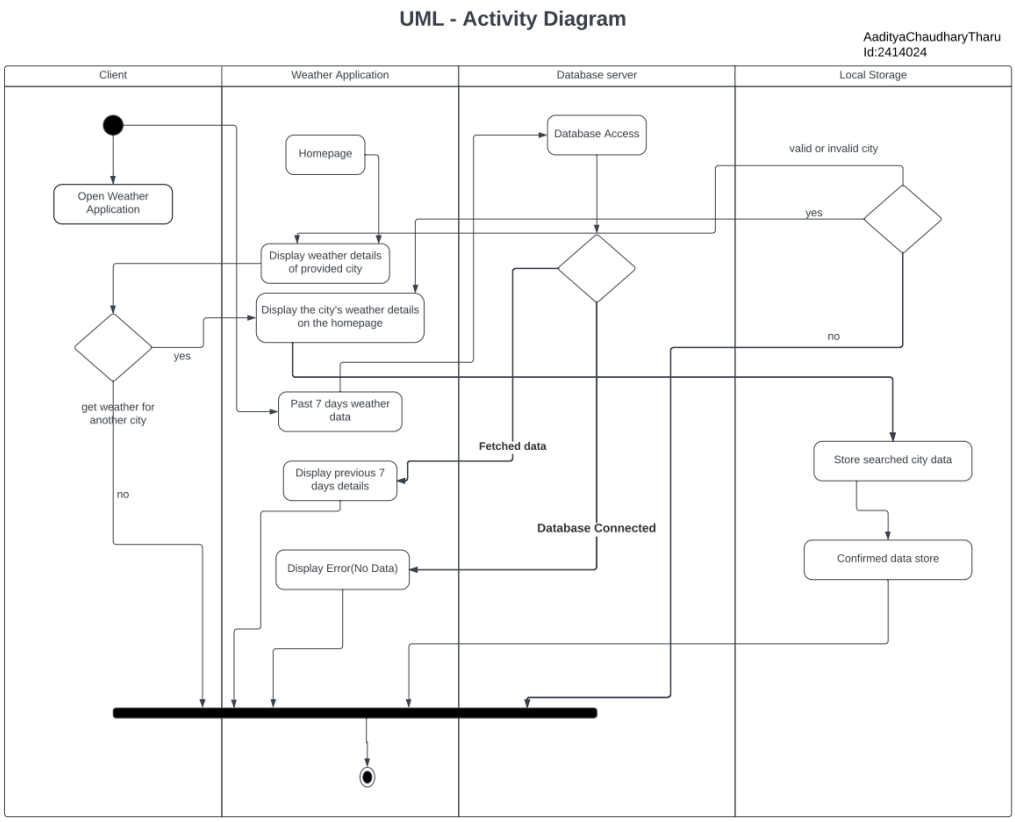


9.UML Diagram of Weather Application

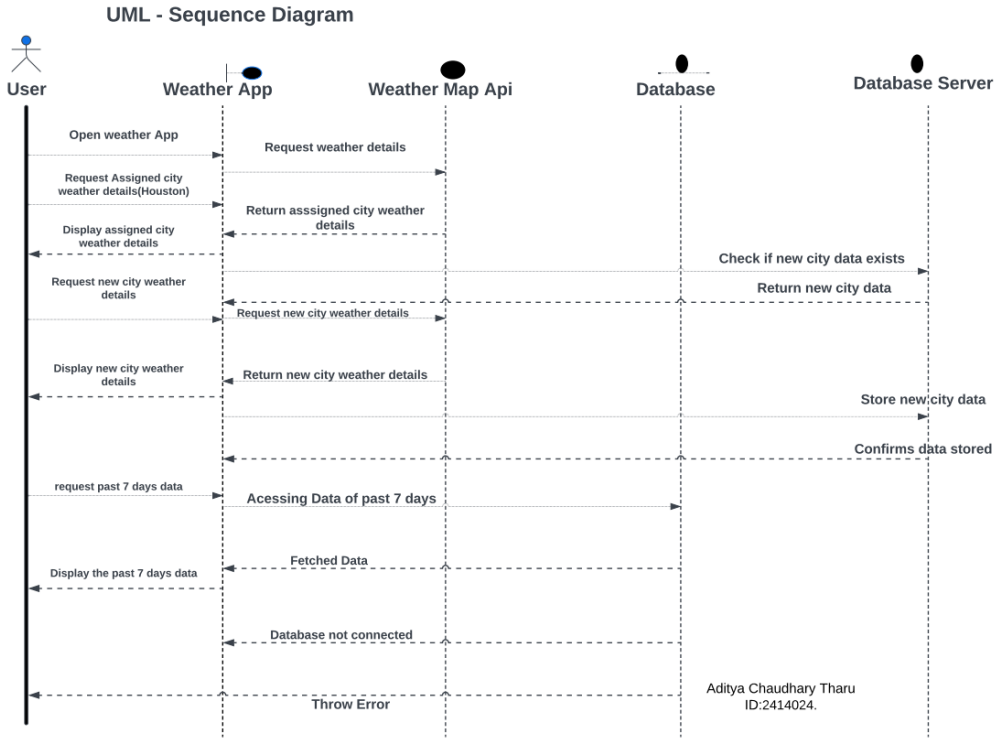
10.Deployment diagram:



11.Activity Diagram:



12.Sequence Diagram:



13.Link to my hosted website (Weather Application)

Link- https://aaditya2414024.serv00.net/AadityaChaudharyTharu_2414024.html