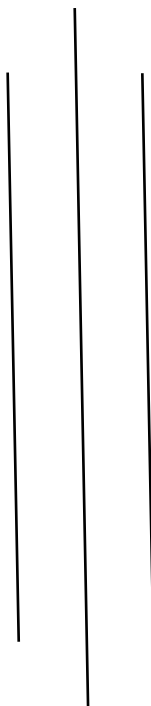


## **4CS017 – INTERNET SOFTWARE ARCHITECTURE**

### **Prototype 2**



**Nijmi Bajracharya**  
**ID: 2508912**

# **A Short Reflective Summary**

## **Introduction**

In this prototype2, I have extended the weather application with dynamic functionality using JavaScript, PHP and SQL database. Now, the weather app shows the real time weather based on default city and also user input. It also checks if the weather data is already stored in the database and if it's still fresh within 2 hours.

## **Strengths**

- a. Simple and easy to debug- As the codes are done in HTML, CSS and JavaScript the codes can be easily identified and debugged. Also, the codes are easy to understand and learn.
- b. Use of backend program- It checks if the weather data is already stored in the database and if it's still fresh (less than 2 hours old).
- c. Use of frontend program- It is visually attractive with the help of CSS codes as it has icons which gets access with links that makes user easy to access and user-friendly. It provides places to display weather data like temperature, city, humidity, etc. Likewise, it displays the default city weather and also the weather of cities that are input from user.
- d. Updating of weather- By using JavaScript and MySQL, it helps to fetch real time update with the help of Open Weather Map API and also weather data less than 2 hours old is considered valid for display. If the existing data exceeds this time threshold, the system should fetch updated information from the Open Weather API.
- e. Proper storage- The SQL database helps to store weather data like temperature, humidity, etc and the time when it was recorded.

## **Weakness and challenges**

- a. Lack of database performance- It makes our system slower when we search for weather of many cities.
- b. Connection system- as it is dependent on internet connection so if the internet is slow the weather data won't be available.
- c. Accuracy of data- The weather conditions might not be accurate for fast changing weather conditions.

## **Conclusion**

This prototype 2 was more complex compared to prototype 2, while combining the frontend and backend logic. I learned how to use PHP to check time and update it. I finally understood how the frontend and back-end systems interact with each other. I also learned how to use PHP to check time and update it.