ABSTRACT

This report consists of the advantages and disadvantages of the current weather webpage. It also shows real-time network data.

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A. Introduction

The weather webpage is made with the help of API. It is the third prototype. The city assigned to me is Stockton-on-Tees. The things that are included in this webpage are the current date and day, temperature, weather, humidity, pressure, feels like and wind speed of the assigned city. The structure and process of how this webpage work is in the UML deployment diagram. This webpage has its strengths and weaknesses.

B. Network

Total request made are 8 requests.

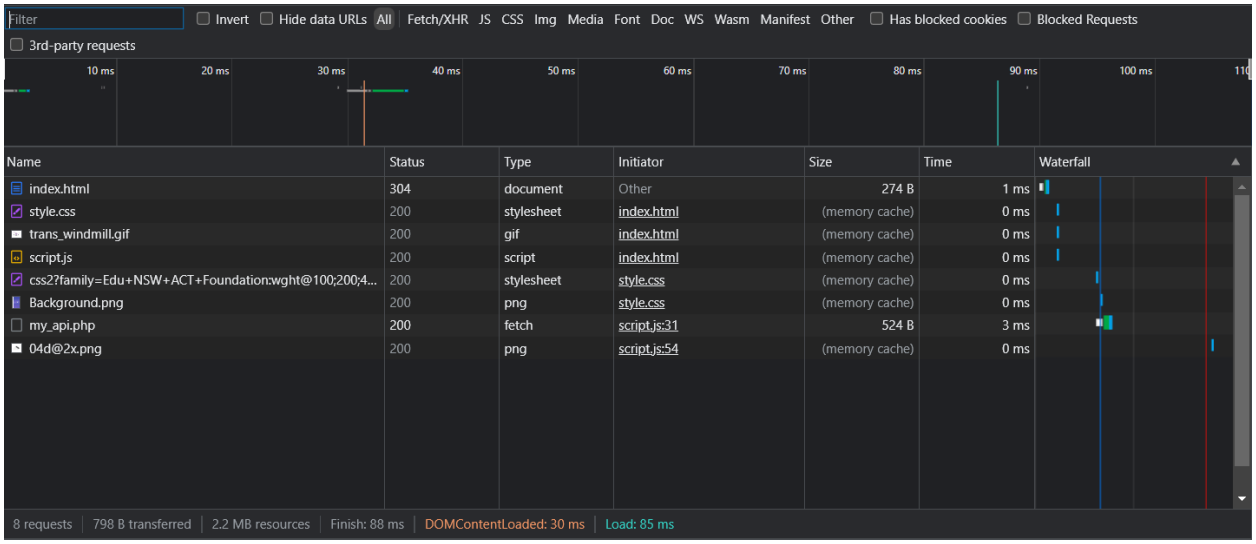
Total of 797 B data is transferred over network.

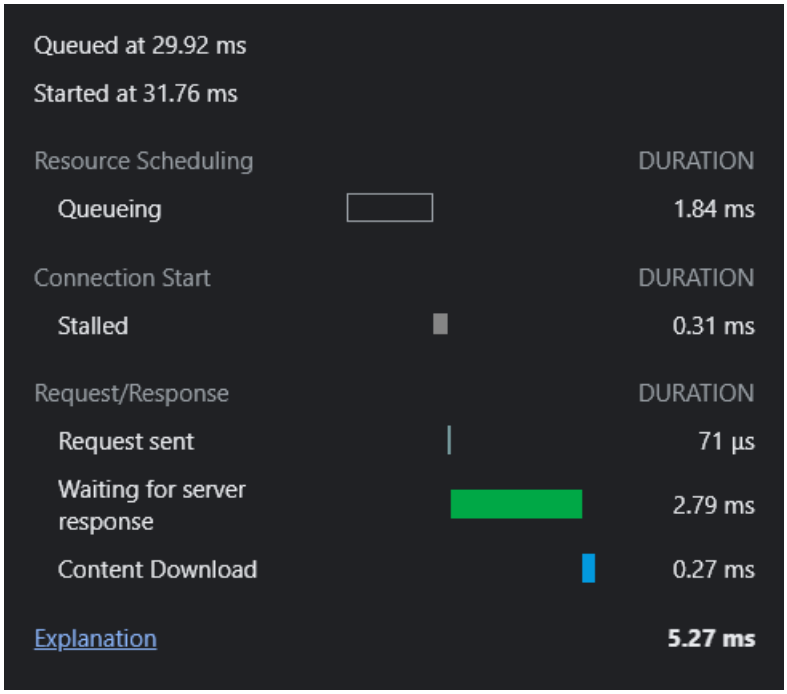
Total of 2.2 MB of resource is used to show data in website.

All process ends initially in 92ms and in 33ms after the value is stored in local storage.

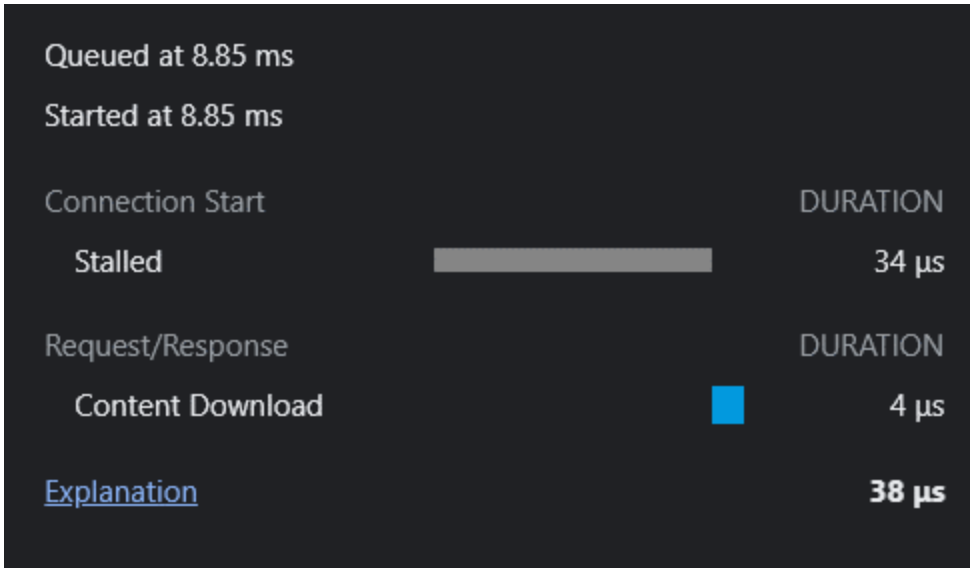
Before storing in local storage:

The time for PHP to call API is 3ms. It took total of 71 µs to send request from laptop, took 2.79ms for server to respond the request, took 0.27ms to download the content sent though server.



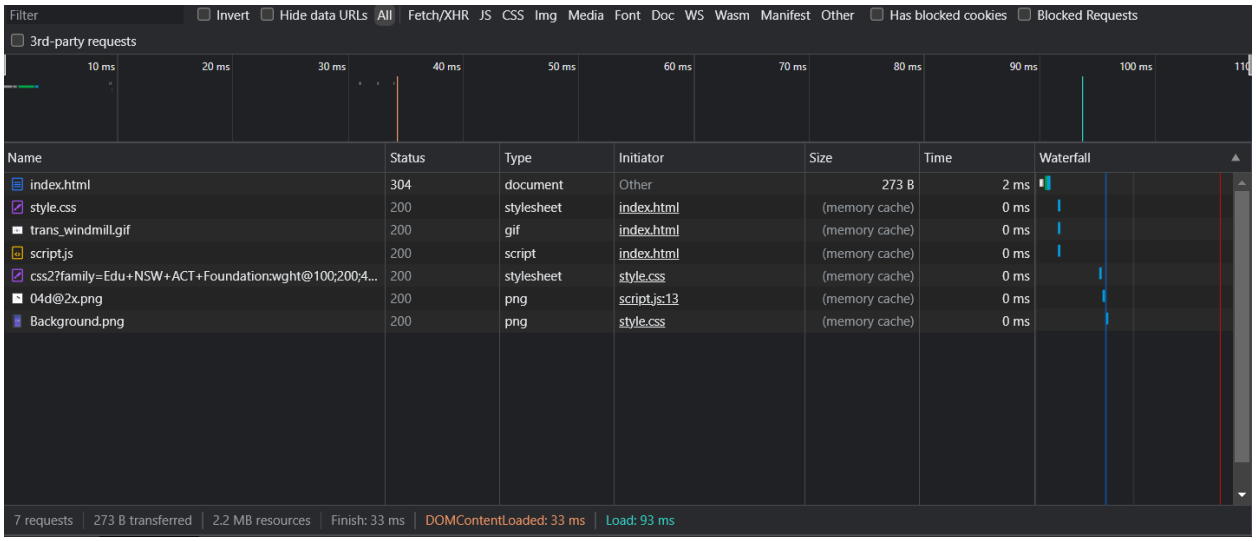


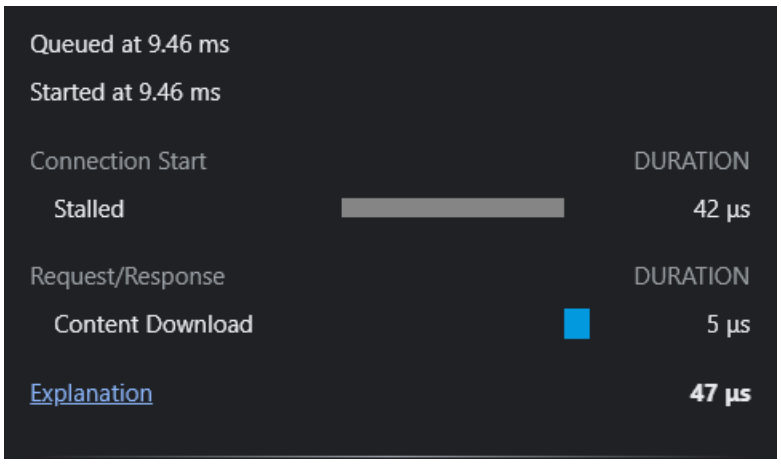
It took 4 µs for java script to download contents from PHP file.

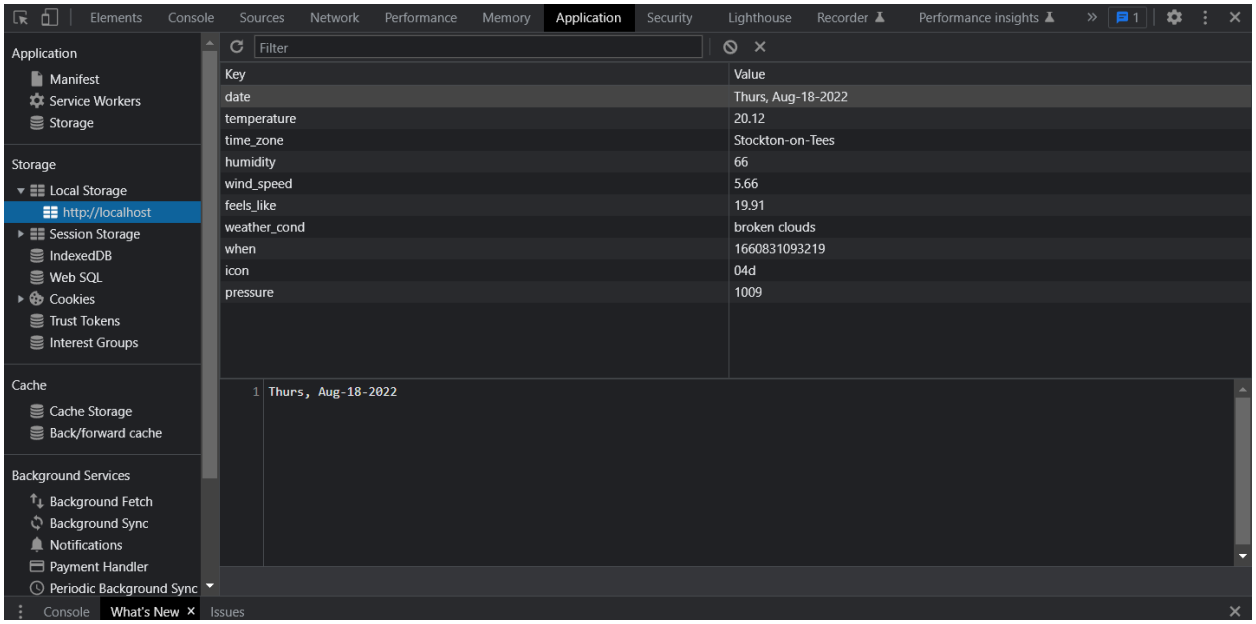


After storing in local storage:

It took 5 µs for java script to download the content and all the data is being retrieved from local storage.







The values are stored in local storage. The local storage refreshes it's value after 10 second.

C. Strength

1. Provides live and accurate weather data of the assigned city.
2. It doesn't call API every time to show in website, it will reduce the internet usage.
3. It consists of rest API.
4. The response time is fast, and the UI of this webpage is simple and easy to navigate.
5. The webpage consists of local storage which also helps to store value locally in user's device and doesn't fetch from the my_api.php file every time user refreshes which saves memory usage of server.
6. There are no external and unwanted things displayed on the webpage that may cause the delay in request and response from the server.
7. Users don't have to log in to see the weather data.
8. There is no delay caused by ads on the webpage since it is ads-free.
9. There are limited users to this webpage so there is less threat of privacy being stolen
10. Users can manipulate the tags and division of the webpage as per need.

D. Weakness

1. It is only limited to those computers with HTML, CSS & JS files locally downloaded.
2. The website is not hosted publicly, hence only a developer can access the website.

3. Local storage can be manipulate, hence if users manipulates the data then the user will not get real time data instead gets the data from the local storage.
4. There is no search option, so it is only limited to a single location.
5. It is not a responsive webpage; thus, this cannot be perfectly viewed on mobile. The background image is not set to be responsive.
6. For other computers (Except for original one), users need to set database manually.
7. There is no option for viewing future weather and there is no database for storing previous data.
8. It becomes hard to solve error if it arises in the middle.

E. Conclusion

This project reflects my understanding of HTML, CSS, PHP and JS. Here, live API is also used to fetch real-time data, store it in database using PHP and calling it using Java Script and using Java Script the data is stored in local storage. The API is fetched through JS and displayed in the webpage with the help of HTML and made the webpage more readable using CSS. When the user wants to retrieve value before 10s of initial refresh then user will get data from the local storage which decreases the load in the server.