Progress Report 2

COSC 4P02

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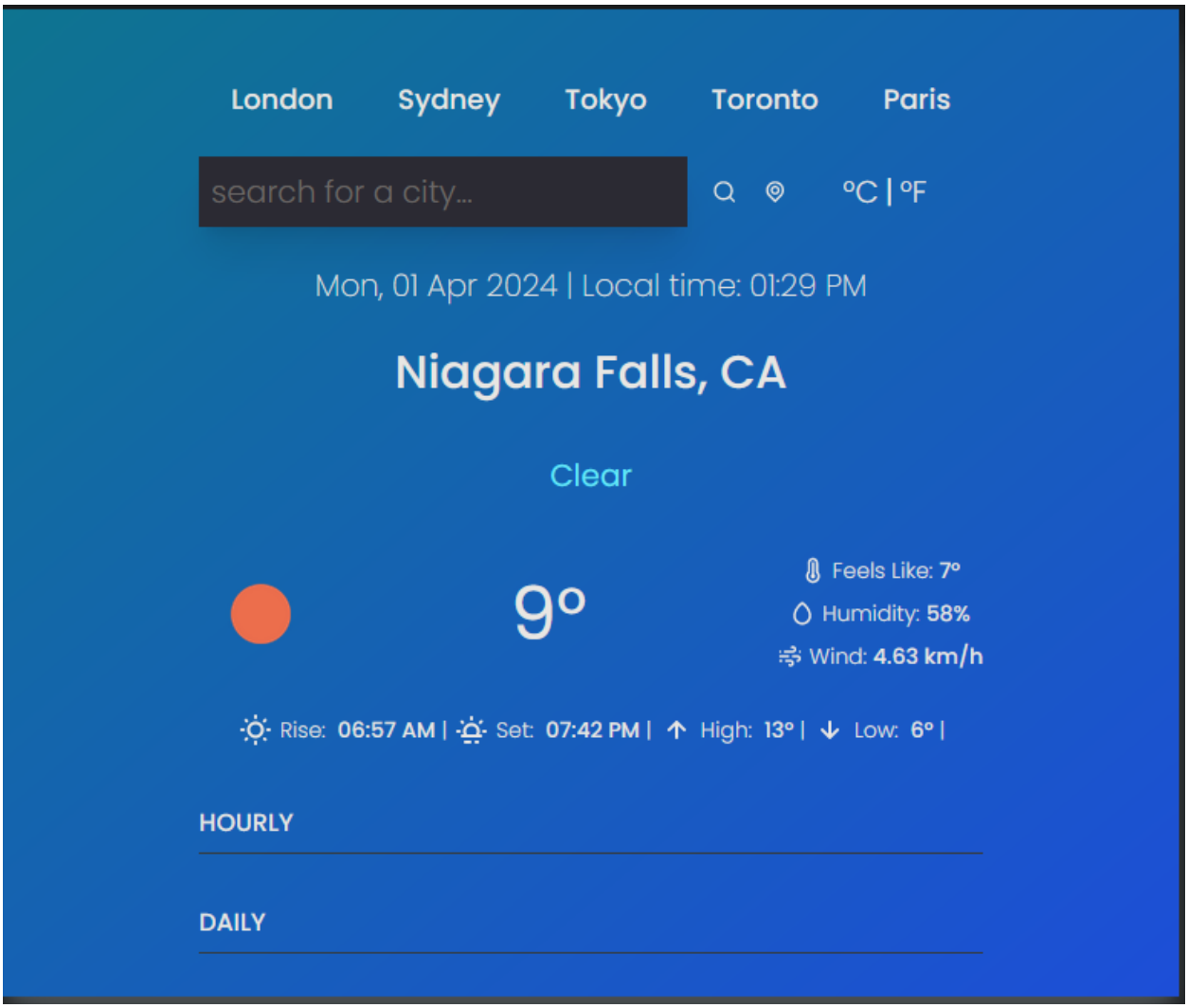
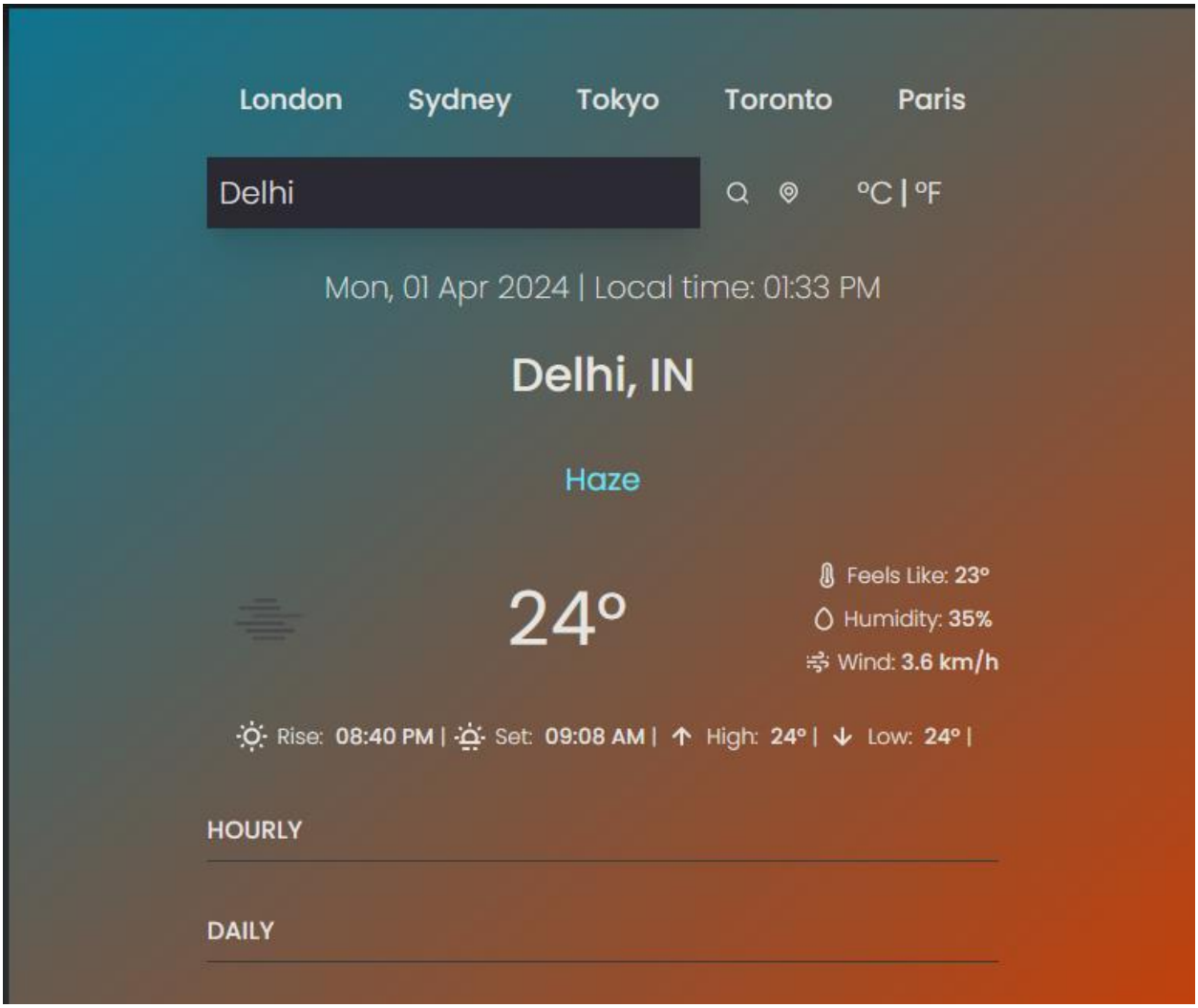
Details of System

Since the last report, the team has been working on getting the system implemented, and adding the features that were designed in the planning phases. The implementation has been coded in JavaScript using React.

Currently the application can give you weather information of the city of your choice. By default, it will show the weather for Niagara Falls, but the user can either click popular cities on the top bar or search for a city of their choice. The main UI provides temperature, feels like, humidity, wind speed, sunrise and sunset times, and high and low temperatures for the day.



The theme of the UI is also adaptive, and will change colour scheme based on the weather.



The user is able to switch between viewing the weather in Fahrenheit or Celsius. The data for the weather is pulled from the AccuWeather API.

Some features in the current application still need to be fully fleshed out, such as the hourly and daily forecasts, the current location button working accurately, and the search feature working with the Enter key on the keyboard (instead of having to click the search icon).

One of the major features that is currently in the works is the mapping and routing feature. One fork of the project is being used to implement the feature using Google Maps API. While it is not pretty looking right now, you are able to enter a place you want to drive to, and it creates a route using Google Maps. An algorithm then breaks down the route into smaller segments and can estimate your location at a given time. This will then be used in conjunction with the weather API to pull weather data for that location and time. Eventually

this will be a separate tab within the main UI.

Once that feature has been implemented, we plan to evaluate what else is feasibly added. Getting the maps API will allow us to fetch the user's current location for weather data and make that the default page. We also want to add notifications for users using the location data and have the routing feature automatically programmed based on the users schedule.

The app is being hosted on Netlify and the link can be found within the GitHub repository.

Software Process

Since our last progress report, we have been staying on track with our weekly sprints. During our meetings on Tuesdays, we discuss what has been finished in the previous sprints and what might need to be moved to the next one. Then we find what can be moved from the backlog into the next sprint, and what new tasks need to be created. Tasks are divided amongst the developers. If challenges arise and somebody needs help completing the task, we may assign two people to work on it. This has also allowed us to progress on the application iteratively and incrementally. Everyone can have their own fork of the project and work on the part that they are assigned.

Different iterations of the application have been made and refined. Originally, the application was very barebone and did not present information in a nice manner. The API was not implemented, and weather information was just cosmetic. We then iterated upon this and were able to implement the weather API to pull real time weather information. We also refined the UI to be more visually pleasing. Then, features were implemented such as searching and changing cities, more weather details, and unit changing.

Another part of the software process that we know is integral and are planning to add more of is testing. We are currently having some people focus on writing unit tests and creating a test suite to find bugs and ensure stability of the application. We are also adding telemetry to monitor the application

Challenges

While focusing on the software process is important for us, we did struggle slightly on coherence of the code after two different versions were made. For example, two different UIs were originally made which required us to focus on which one we wanted to use and iterate from, then make sure that had all the features of the other one. Since there were overlaps in work done, we are trying to spread work more evenly and have people focus on different areas or features of the app going forward.

Some features that were planned are needing to be reevaluated in terms of the feasibility. While we wanted widgets and user customization on the main page, we are realizing that it may not be possible within our current design. So, while we did spend some time working on that feature, the implementation of it did not seem to fit with our current theme. Overall, we are happy with the current look of the UI and believe the widget feature could provide more user customization, but at the expense of visual appeal so the widget feature is likely to be scrapped.

Hosting the site was also a slight challenge for us. We realized that having everyone run the app locally was not a reliable way to do so forever. Thus, we looked into a few different services for hosting. We would like to have a more appealing URL, but the costs of hosting a site were too steep and had to committed for a year. Ultimately, we decided to use Netlify, a free hosting service. Deployment on Netlify was not something our entire group was comfortable with, so there was a slight learning curve to learn how to make changes in deployment.

Contributions

Matthew Berger

- Organize meetings and write reports
- Maintain backlog and add new tasks to Jira
- Manage Jira dashboard and tasks
- Assign tasks for sprints

Duncan McDonald

- Write and share meeting notes
- Maintain and Organize GitHub repo
- Help with pushing others work to GitHub
- Consolidated codebase
- Creating demonstration videos of application

Matty Slyzyz

- Designed and added icons and logos to application

Azeel Jivraj

- Used Google Maps API to begin work on the routing feature

- Coded algorithm to break route into chunks and get times

Hamza Chaudhry

- Created initial UI using React

Michael Conroy

- Created initial testing suites
- Adding telemetry to application

Denali Bailey

- Contributed to writing unit tests

Harman Barpaga

- Created current UI look
- Added weather features to application
- Added searching feature
- Hosted application on Netlify