Milestone #4 Group 5

By: Jacob Rollins, Tina Zhang, Tun Lin Naine
Completed on: March 28th, 2025

The Project's Vision

Project name: Weathering app

Description: A weather app that provides forecasts and storm alerts to keep plans on track.

Key functionalities: Hourly & 7-Day Forecast – Provide short-term and long-term weather predictions.

Severe Weather Alerts – Notify users about storms, hurricanes, heat waves, etc.

Customizable Themes & Widgets – Personalize the app's interface with different themes.

Weather-Based Activity Suggestions – Recommend outdoor activities based on the forecast.

Weather preparedness - suggest items to bring depending on weather(e.g. umbrella(when it rains), hat and sunscreen(when it's sunny))

Repo: here   Milestone: here

The Builders

Name: Tun Lin Naine
Role: Project Manager & UI design + Bug
Issues to work on: create a UI layout, find an api for the website, support and organize time as well as time management

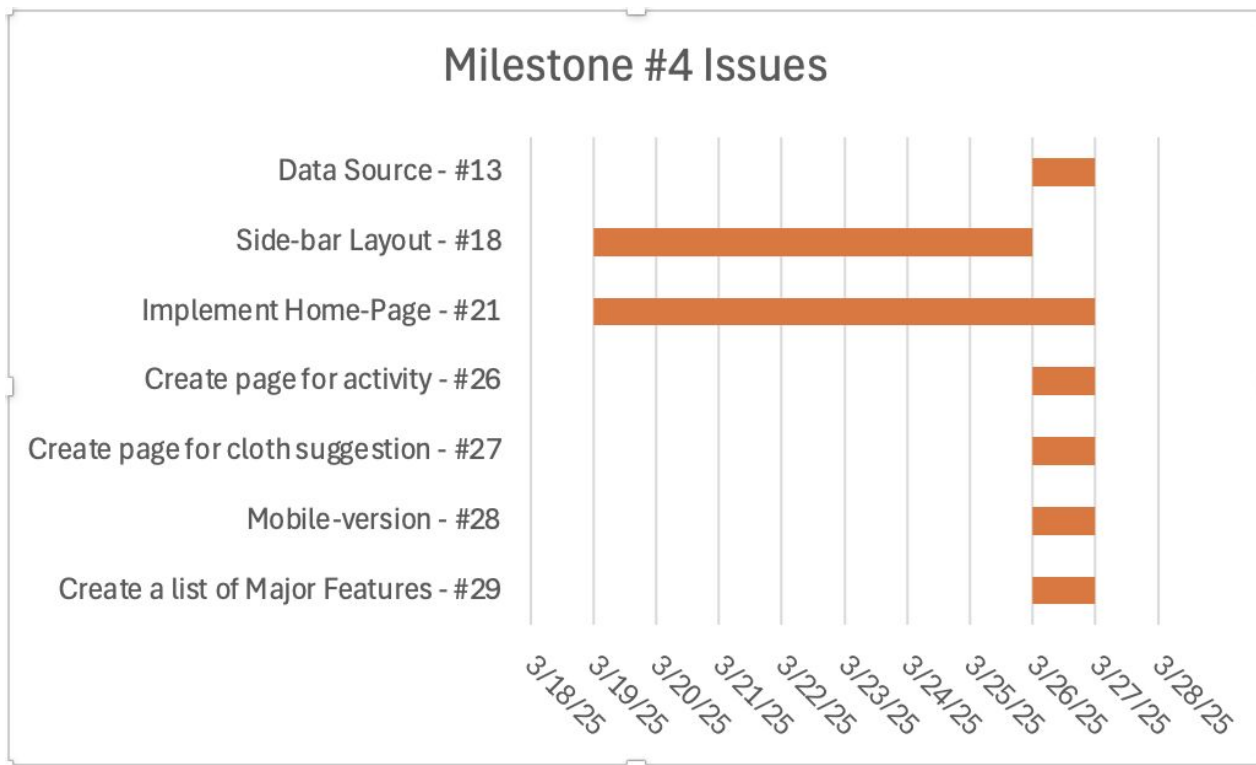Name: Tina Zhang
Role: UI Designer, Time-Tracker, Reviewer
Issues to work on: create a web page that is user-friendly and visually attractive for users, schedule deadlines and ensure each member completes their part before the due date, regularly review code and suggest improvements

Name: Jacob Rollins
Role: Backend, Meetings Scheduler
Issues to work on: Design and manage data structures, handle data flow and local storage, integrate backend with frontend, and ensure efficient data retrieval. Schedule Discord meetings throughout the week to make sure everyone is on the same page.

Historical Timeline

Milestone #4 Issues

Data Source - #13	
Side-bar Layout - #18	
Implement Home-Page - #21	
Create page for activity - #26	
Create page for cloth suggestion - #27	
Mobile-version - #28	
Create a list of Major Features - #29	

3/18/25 3/19/25 3/20/25 3/21/25 3/22/25 3/23/25 3/24/25 3/25/25 3/26/25 3/27/25 3/28/25

Work Summary - Tina Zhang

Assigned Issue:

- Home-Mobile-Version
- Suggestion-Mobile-Version
- Activity-Mobile-Version
- Air-Condition-Data-Structure (not closed)
- Create List of Major Features

Branches Created:

- Mobile-Version
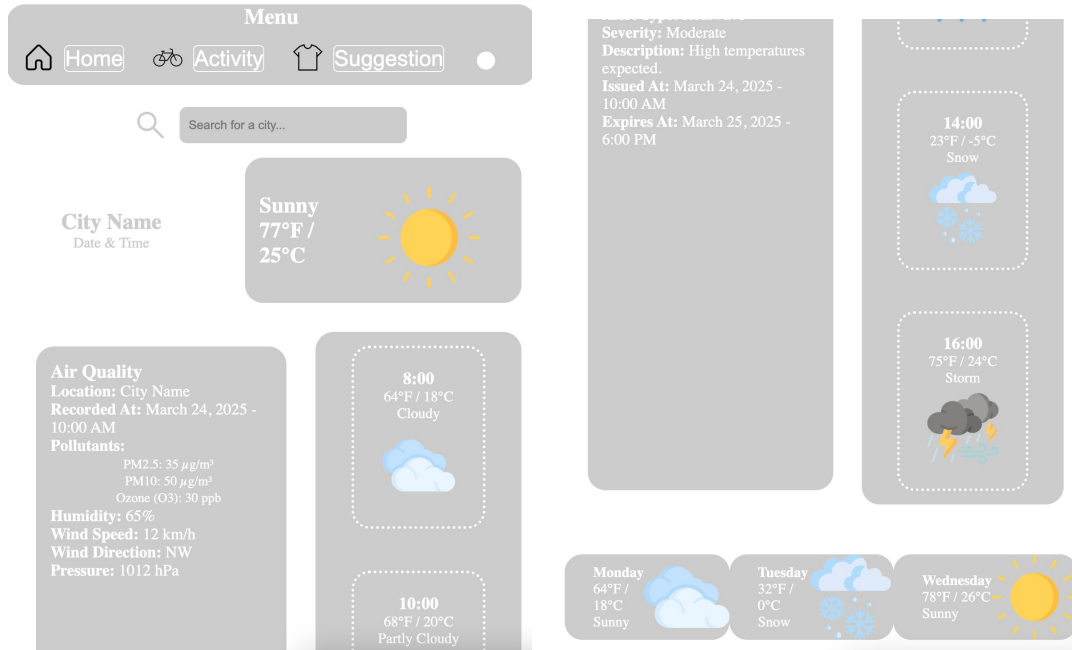- Sugg-Mobile-Version
- Activity-Mobile-Version

Pull Request Created:

- Implemented Home Mobile Version
- Implemented Suggestion Mobile Version
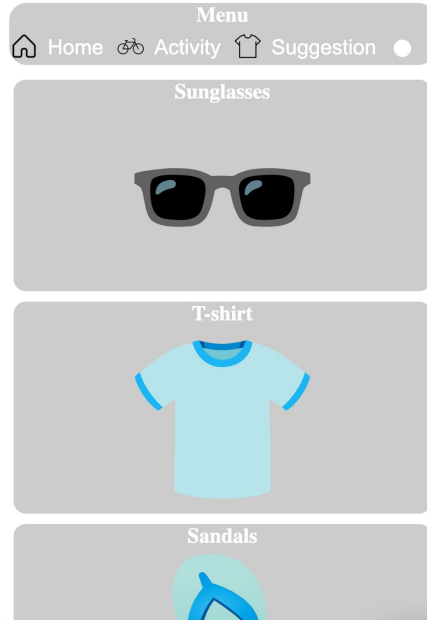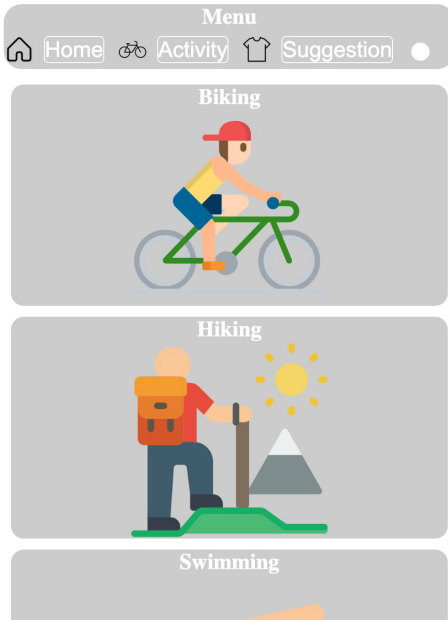- Implemented Activity Mobile Version

Summary: For this milestone, I was mainly responsible for creating mobile version for all three pages (home, suggestion, and activity). I was also responsible for implementing air condition feature that displays air quality according to the current day, but this feature requires api and javascript so I won't be able to implement it in this milestone. Finally, I also created a design-plan file that list features and its functionality more in depth.

Screenshot & Demonstration 1 - Tina Zhang

This is the main page when shrunken down to show what it would look like on a mobile device. (Original layout was created by Tun Lin.) It follows the UI diagram I designed back in milestone 3.

Screenshot & Demonstration 2 - Tina Zhang

Menu

🏠 Home   🚲 Activity   👕 Suggestion   ⚪

Biking

Hiking

Swimming

Menu

🏠 Home   🚲 Activity   👕 Suggestion   ⚪

Sunglasses

T-shirt

Sandals

This is the activity page (on the left) and suggestion page (on the right) when shrunken down to show what it would look like on a mobile device. Originally, we did not have these two pages in mind. We decided to change our sidebar menu to these option to make it more fun, visually appealing and interactive for users.

Code & UI Explanations - Tina Zhang

```
@media (max-width: 767px){
  .container{
    display: flex;
    flex-direction: column;
    height: auto;
    padding: 10px;
    gap: 1rem;
  }
  /* ========== Sidebar Section ========== */
  .sidebar{
    order: -1;
    width: 100%;
    overflow: hidden;
  }
  .sidebar ul{
    display: flex;
    justify-content: center;
    padding: 0px;
  }
  .sidebar li{
    margin: 2px;
  }
  .side-icon{
    width:30px;
    height:30px;
  }
  /* ========== Main Content Section ========== */
  .body-grid{
    display: flex;
    flex-direction: column;
  }
  #temperature{
    height: 10rem;
    width: 90%;
  }
  .today-content-con{
    display: flex;
    flex-direction: row;
  }
```

The key part for this code lies in the first line (@ media) when the page width is smaller than the set size it adjusts according to the following styles that are defined in the block. Within the block, I essentially used display flex for containers and set the direction of the flex accordingly, while ensuring no overflow happens. The issue I encountered was getting the air quality container and today's forecast container side-by-side. It took me a while, but I eventually realized that there was no container surrounding both. So I surrounded both with div container (in html file) then flex it horizontally to get it like the way I wanted.

Challenges & Insights - Tina Zhang

The biggest challenge I had with this milestone was just being able to format things properly. Especially, getting two containers side by side (like I mentioned in previous slide). Originally, my partner did not create the container around the two so when I try to flex it, the format became sloppy. So I had to create another div container to get them them side by side. This took me a little longer than I needed mainly because I am not familiar with CSS. There are many styling options that I still need to learn and I wonder if there is another way to solve this issue without touching html (solely relying on css). Another challenge I had was remembering github commands like creating a new branch or pushing it into remote repo. I had to ask ChatGPT for the commands for a few times. After a few practice, I got the hang of it and I am gradually getting more familiar github.

Working in group on a single project is new to me, but I would say it has been extremely helpful. When I have an issue or question I can go directly to them. Instead of getting frustrated, I can quickly reach out for advice, which speeds up the process of solving the issue and I can also learn from different perspectives.

Future Improvements & Next Steps - Tina Zhang

The alert block seems unnoticeable. I think we can make it pop out more since it's a big part of this application and it involves the user's safety. We want to make sure that it is eye catching (for e.g. putting a red exclamation mark or caution sign in the container). Another possible improvement is we can make the weather icons move (e.g. wiggle) when user's mouse hovers over it to make it more interactive.

Created issue:

- [Make Alert More Noticeable](#)
- [Make Icon More Interactive](#)

Work Summary - Jacob Rollins

Assigned issues:
- [Create page for cloth suggestions](#)
- [Implement home page layout using html](#)
- [Autocomplete bar underneath search bar](#)
- [Severe Weather Alert Data Structure](#) (not closed)
- [Weather Forecast Data Structure](#) (not closed)

Branches Created:
- [Search-bar-suggestions-layout](#)
- [Clothing-suggestion](#)
- [Side-bar](#)
- [layout-with-data](#)

Pull Requests Created:
- [Implement Clothing Suggestion page](#)
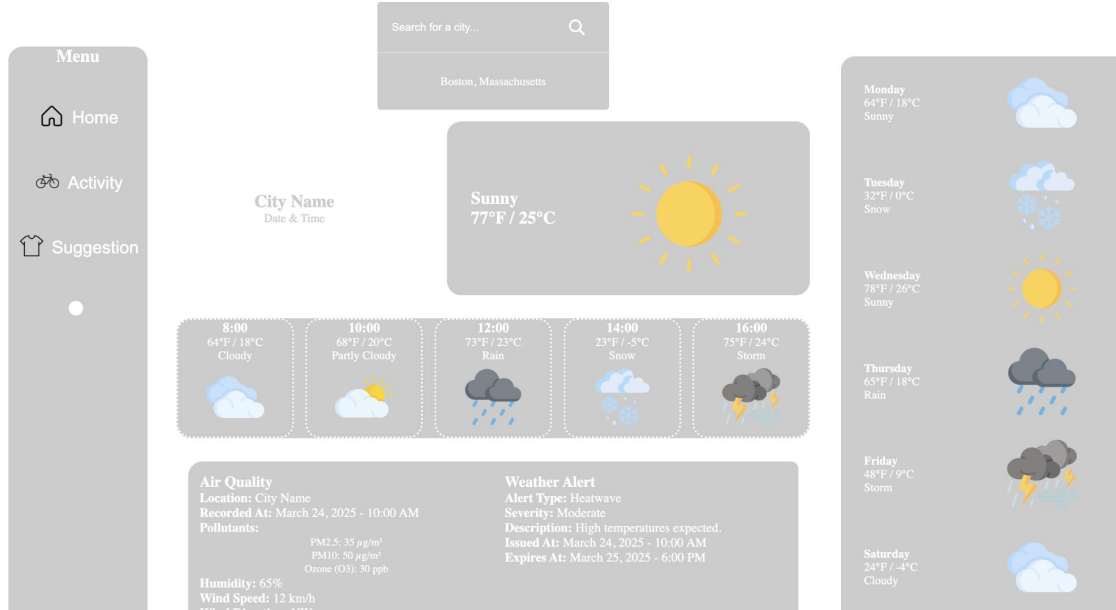- [Added sample data to layout/Formatted css](#)

Pull Requests Closed:
- [create activity-page with four activities suggestion](#)
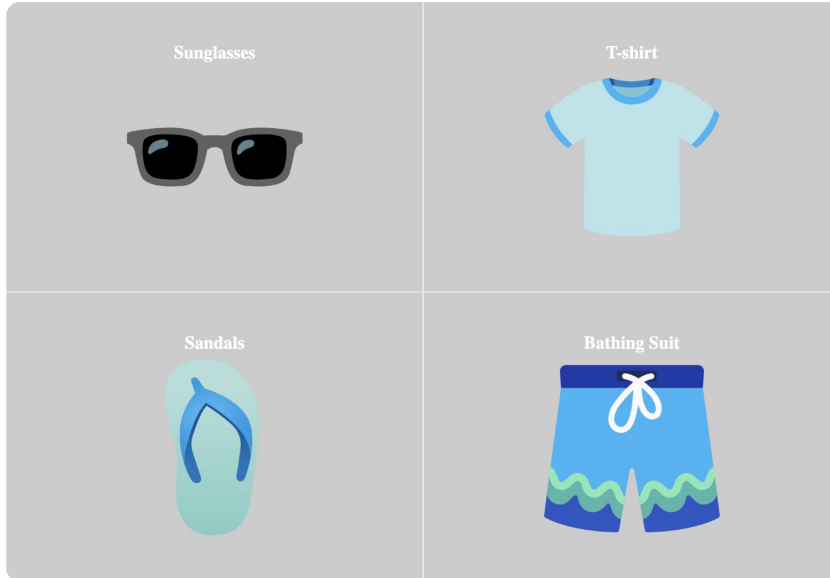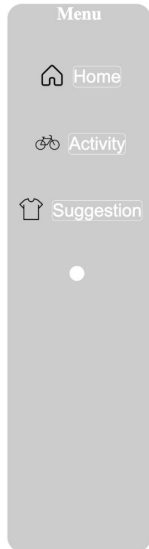
Description of tasks completed:
I made the layout for the search bar and the auto-completion that will go underneath it. I made a layout for the clothing suggestions page based on the weather. I helped implement the side-bar style although it was later changed. I added all of the sample text in the layout to show what the homepage looks like with data.

Screenshots & Demonstration 1 - Jacob Rollins

I implemented the search bar with the auto-complete at the top and I styled the side bar (later got reworked by Tune). I added all of the weather text as an example of what the sight would look like with data from an api.

Screenshots & Demonstration 2 - Jacob Rollins

Menu

🏠 Home

🚲 Activity

👕 Suggestion

Sunglasses	T-shirt
Sandals	Bathing Suit

I implemented the grid on the right with the images of what you should wear for something like a summer day. Behind the scenes I made a library of all the images that we need for all of the types of days.

Code & UI Explanation - Jacob Rollins

```html
<!-- Search Box -->
<div class="search-con">
    <div class="row">
        <input type="text" id="input-box" placeholder="Search for a city..."
        autocomplete="off">
        <button><i class="fa-solid fa-magnifying-glass"></i></button>
    </div>
    <div class="result-box">
        <ul>
            <li>Boston, Massachusetts</li>
        </ul>
    </div>
</div>
```

```css
button{
    background: transparent;
    border: 0;
    outline: 0;
}
button .fa-solid{
    width: 25px;
    color: white;
    font-size: 22px;
    cursor: pointer;
}
::placeholder{
    color: white;
}

.result-box ul{
    border-top: 1px solid white;
    padding: 15px 10px;
    margin: 0;
}
.result-box ul li{
    flex: 2;
    list-style: none;
    border-radius: 3px;
    padding: 15px 10px;
    cursor: pointer;
}
.result-box ul li:hover{
    background: gray;
```

I know this doesn't look like much right now, but I implemented the layout for an autocomplete box that will be under the search bar. It's not fully implemented because we can't use js but it is very important because searching for a place is pretty much the only thing that the user needs to fill out and making that easier is very important. One challenge I had with this was trying to get the magnifying glass to be the color I wanted. I ended up using the fontawesome library and customizing it in css. Another was getting the suggestions to be underneath the search bar instead of next to, it was a simple fix that took me a while to realize, just needed this line: flex-direction: column;.

Search for a city...

Boston, Massachusetts

Challenges and Insights - Jacob Rollins

One of the hardest obstacles that I faced was being able to get the style and layout right. It was more of a trial and error kind of thing where I had to just play around with the settings of things. Whether it was the colors I wanted or where things were on the page, it took some time to get right. Not being able to use js yet was also a little bit weird, kind of having to leave things with sample data and not being able to fully implement them just seems like an extra piece of work that I'll have to go back and change later anyways.

While working with the team it was pretty much smooth sailing, i'm just not that used to looking at other people's code and having to build off of it. I found myself having to re-read things multiple times to fully understand the direction they were going which is definitely my comprehension skills and not their formatting. Tune has also been doing a good job of keeping us on track to make sure that everything gets done on time.

Future Improvements & Next Steps - Jacob Rollins

I think that two things that we could implement could be a recent searches section in the sidebar and then maybe a background instead of just white. The background could also be changing depending on the weather which might be cool.

Created issues:

- [Background Image](#)
- [Recents section in the sidebar](#)

Work Summary - Tun Lin Naine

Assigned Issues

- create page for activity
- implement HomePage layout using htm
- Sidebar Layout
- Team Support
- API
- Explanation of Diagram
- Customization Data Structure (not closed, need js)

Branches
- Activity-page
- sideBar
- design-homePage
- layout
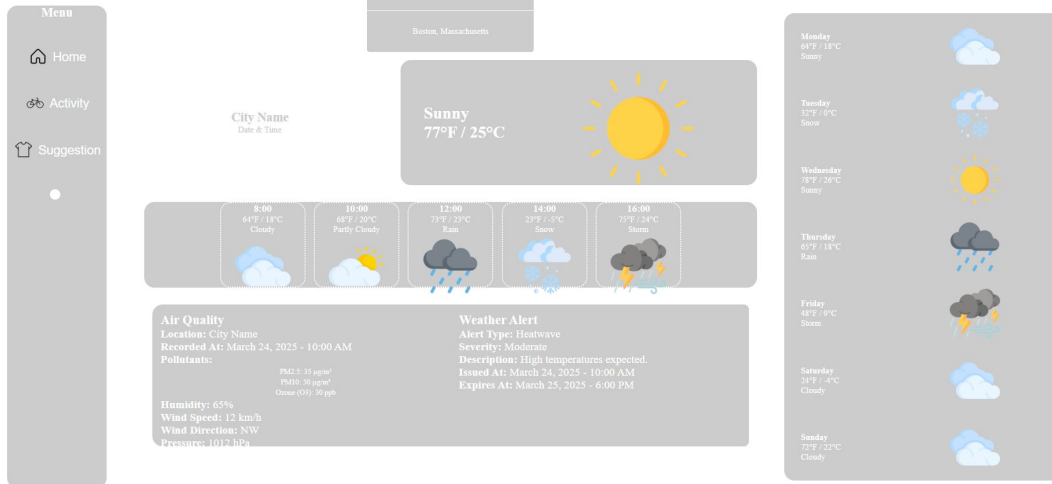
Pull Requests
- create activity-page with four activities suggestion
- create sidebar with icons
- add style for main content and seven-days forecast
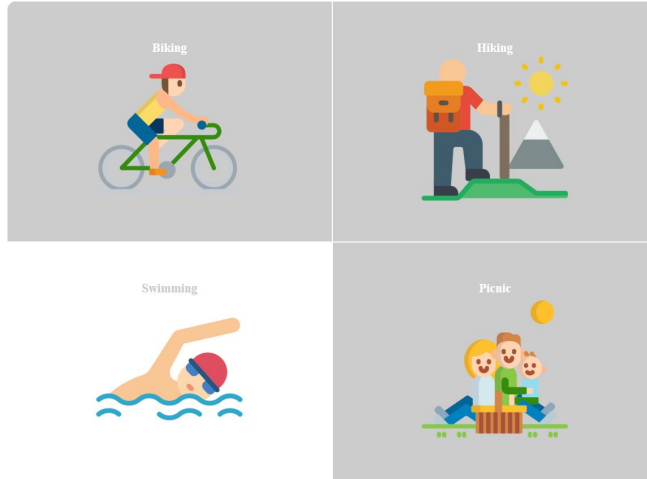- create a general layout

Description of tasks completed
I created the layout for the home page. From there, I styled the containers and positioned them according to Tina's proposed diagram. Then, I added some icons and redesigned the sidebar that Jacob worked on. I also made another page called Activity, which suggests four activities.

Screenshots & Demonstration 1 - Tun Lin Naine

I map out the layout using Tina's diagram as a reference. I created the sidebar, the main content, and as well as the 7 day forecast with the help of Jacob who filled in the sample data. The icons and the color are implemented by me.

Screenshots & Demonstration 2 - Tun Lin Naine

I created the activity page which suggests four activities the users can do with the current weather. When the user hovers over the activity, the background and font color will change.

Code & UI Explanation - Tun Lin Naine

```html
<!-- Sidebar -->
<div class="sidebar-con">
    <div class="sidebar">
        <h2>Menu</h2>
        <ul>
            <li>
                <img class="side-icon" src="/assets/home.png" /><button>
                    Home
                </button>
            </li>
            <li>
                <img class="side-icon" src="/assets/bike.png" /><button>
                    Activity
                </button>
            </li>
            <li>
                <img class="side-icon" src="/assets/tshirt.png" /><button>
                    Suggestion
                </button>
            </li>
            <li>
                <label class="toggle">
                    <input type="checkbox" />
                    <span class="slider"></span>
                </label>
            </li>
        </ul>
    </div>
</div>

<!-- Main Content -->
<div class="body">
    <div class="body-grid">
        <!-- Search Box -->
        <div class="search-con">
            <div class="row">
                <input type="text" id="input-box" placeholder="Search for a city...">
                autocomplete="off">
                <button><i class="fa-solid fa-magnifying-glass"></i></button>
            </div>
            <div class="result-box">
                <ul>
                    <li>Boston, Massachusetts</li>
                </ul>
            </div>
        </div>
```

```css
/* ========== Sidebar Section ========== */
.sidebar-con {
    display: flex;
    justify-content: center;
    min-width: 15rem;
}

.sidebar {
    justify-items: center;
    width: auto;
    height: 85%;
    align-self: center;
    background-color: rgb(204, 204, 204);
    border-radius: 20px;
}

.sidebar ul {
    list-style-type: none;
    padding-left: 1rem;
}

.sidebar li {
    font-size: 1rem;
    padding: 0.3rem 0;
    margin-top: 3rem;
}

li {
    display: flex;
    justify-content: center;
    align-items: end;
}

button {
    background-color: rgb(204, 204, 204);
    margin-left: 0.5em;
    color: white;
    border-radius: 5px;
    border: white solid 1px;
    font-size: 1.5em;
    margin-right: 0.5em;
}

.side-icon {
    width: 2em;
}
```

Menu

⌂ Home

🚲 Activity

👕 Suggestion

This is one of the codes that I implemented. This code creates and design the sidebar which is a feature of the home page that will be used for navigation. The challenge that I faced was aligning the icon with the button which was a little difficult. I figure it out by making the container flex and using justify-content and align-self.

Challenges and Insights - Tun Lin Naine

Challenges that I faced was making the content shrink and grow properly. It took me lots of time doing trial and error but eventually, I was able to figure it out. Making the container properly resize took some time but I learned that with patience I was able to complete it. I was also having trouble with using both flex and grid but with practice and time, I was also able to figure it out.

The other hardest thing that I did was working together. GitHub issues, PR, and git commands were all new to me. At times I was afraid to use some git commands because of the fear of messing up a project that our group worked on. But with the practice and guidance of the professor, TA, and helpers, I was able to learn a lot about GitHub and Git which was awesome. I messed up in one of the feature branches and had to resort to copy and paste which isn't good. I accidentally duplicated the code. I fixed it, and everything is resolved.

Future Improvements & Next Steps - Tun Lin Naine

The air quality and the alert section seem plain. For improvement, I was thinking that we could add some sort of images of the wind blowing or big warning-size flashing in their respective section. This would make it more appealing to the users. They can also be background instead if that would be more apealing to the users.

Created Issue
- [animated images for alert and airconditon](#)