**Assignment 1: First Design Cycle**

**Step 1: Need-Finding**

**Sarah**

* 19-year-old college student at University of Florida, walks/takes the bus to class.
* Prefers a minimalist design.
* Wants to see the current temperature, humidity, and a brief forecast for the next 3 days.
* Likes having visual representation, like an icon, to quickly understand the weather condition (e.g., sunny, rainy) on home screen/widget.
* Currently uses the Weather Channel app.
  + She likes its simplicity on launch.
  + Ads too intrusive and excessive.
  + Hourly forecast takes up too much space on opening screen; only really cares if it’s going to start raining.

**Pedro**

* 41-year-old works at Boeing, lives in Seattle, WA.
* Goes hiking every other week and likes camping now and then.
* Wants to see wind speed, UV index, and a radar map on home screen.
* Wants to have notifications for sudden weather changes (e.g., rain, excessive heat)
* Currently uses Apple Weather
  + He likes the radar.
    - Very detailed, high resolution
  + Wishes there were topographical maps or detailed weather data based on elevation (useful when climbing mountains).
  + Wishes there was a link to the NWS Area Forecast Discussion
    - Useful for more technical information, especially when he’s going off the grid for days at a time in the mountains.
  + Wishes the UV index and wind speed were more prominent.
    - More customizability?
  + Rain forecasts not always accurate to his precise location.
  + Likes that there are no ads.

**Weather App Design**

The home screen of our weather app will cater to a diverse user base, balancing both minimalist and detail-oriented preferences. The default view is tailored for users like Sarah, presenting a minimalist layout. The current temperature is prominently displayed at the top in large, bold numbers, followed by the location, humidity, heat index, high/low forecast, and a clear visual background, such as sunshine or thunderstorm. A swipeable 7-day forecast will be below, offering high/low temperatures and weather icons.

However, recognizing the needs of users like Pedro, a toggle button on the top-right corner allows a transition to a more detailed view. This expanded view showcases wind speed, UV index, and an interactive radar, each in distinct sections. Links to technical NWS discussions will be included, as will a map that allows users to view temperature by elevation if such data is available from the NWS. Users can hide and rearrange these sections as desired.

An integrated notification system offers opt-in alerts for precipitation (beginning and ending), appearing as a notification banner. Severe weather alerts will be delivered as “Critical Alerts” and bypass user’s notification preferences if enabled. The app is optimized for fluid performance, even with its many features.

**Step 2: Low Fidelity Prototypes**

A paper with writing on it

Description automatically generated

A graph paper with writing on it

Description automatically generated

A graph paper with writing on it

Description automatically generated

**Step 3: High Fidelity Prototype**

**A screen shot of a phone

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**Step 4: Discount Usability Testing**

* Add the current time
* Make the top third of the screen bigger and add more useful metrics such as sunrise and sunset to the top.
* Include an hourly forecast and allow users to toggle between an hourly and seven-day forecast.
* Change the basic/advanced view to a View A and View B, allowing users to customize both views separately.
* Remove “news” as it’s not as immediately relevant to most users.
* Add shadows and borders to the widgets so users can modify them more easily.
* Make the weather alerts widget more prominent.

In our recent usability testing for the weather app, several key enhancements have been identified to improve overall user experience. One of the primary suggestions is the inclusion of the current time. This seemingly small addition can provide instant temporal context to users. Moreover, the top third of the user interface could be optimized by enlarging it. Within this expanded space, users have shown a strong preference for the addition of crucial metrics, particularly sunrise and sunset times, offering them insights into the day's natural light cycle.

Flexibility in viewing forecasts is another area for improvement. Users would appreciate the capability to seamlessly switch between an hourly forecast, for short-term planning, and a seven-day overview, for a broader outlook. Instead of the existing basic/advanced view, a more customizable dual-view system, labeled as View A and View B, is proposed. This would empower users to tailor both views to their individual preferences.

The news feature was not favored by most, and it could be replaced with more relevant data such as pressure, AQI, UV Index, and other metrics. Enhancing widget clarity is crucial; therefore, integrating shadows and borders will aid users in distinguishing and manipulating them. Lastly, for safety and awareness, I could also make the weather alerts widget more prominent at the top.