

“Clean My Campus”

Mobile Application & Web Portal

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Team MoGreen

Overview

Flagstaff is a beautiful place to live but as a college town and tourist destination, more travelers and students means individuals feel less personal responsibility for taking care of our home. In order to have healthy and resourceful communities we need to cultivate a culture of sustainability.

Problems

NAU strives to be green and sustainable, but as its population increases so does litter and basic maintenance problems. Our sponsors rely on an outdated, unintuitive, and an underutilized website where students can report the litter and maintenance problems they notice on campus.

Solution

Our team has created a mobile application and administrative website to work in conjunction. Our app is a portable and intuitive replacement for NAU's current website, and the website allows campus employees to take control of how their campus is viewed and interacted with on the application.

Our mobile application will:

- Display a map of campus with colored zones
- Allow users to make quick reports of problems that require staff attention, and full, detailed reports with a description and photo attached
- View markers denoting campus resources

Our administrative website will:

- Allow employees to draw custom zones and place custom markers on campus map
- View application reports as checkable tasks
- View application traffic and task data

Outcomes

This software is a modern and portable solution for NAU as it provides easier task management for maintenance employees and boosts visibility of resources for students. Our software will facilitate community engagement at NAU by creating a culture of sustainability and enable us to take responsibility for the campus that many of us call home.

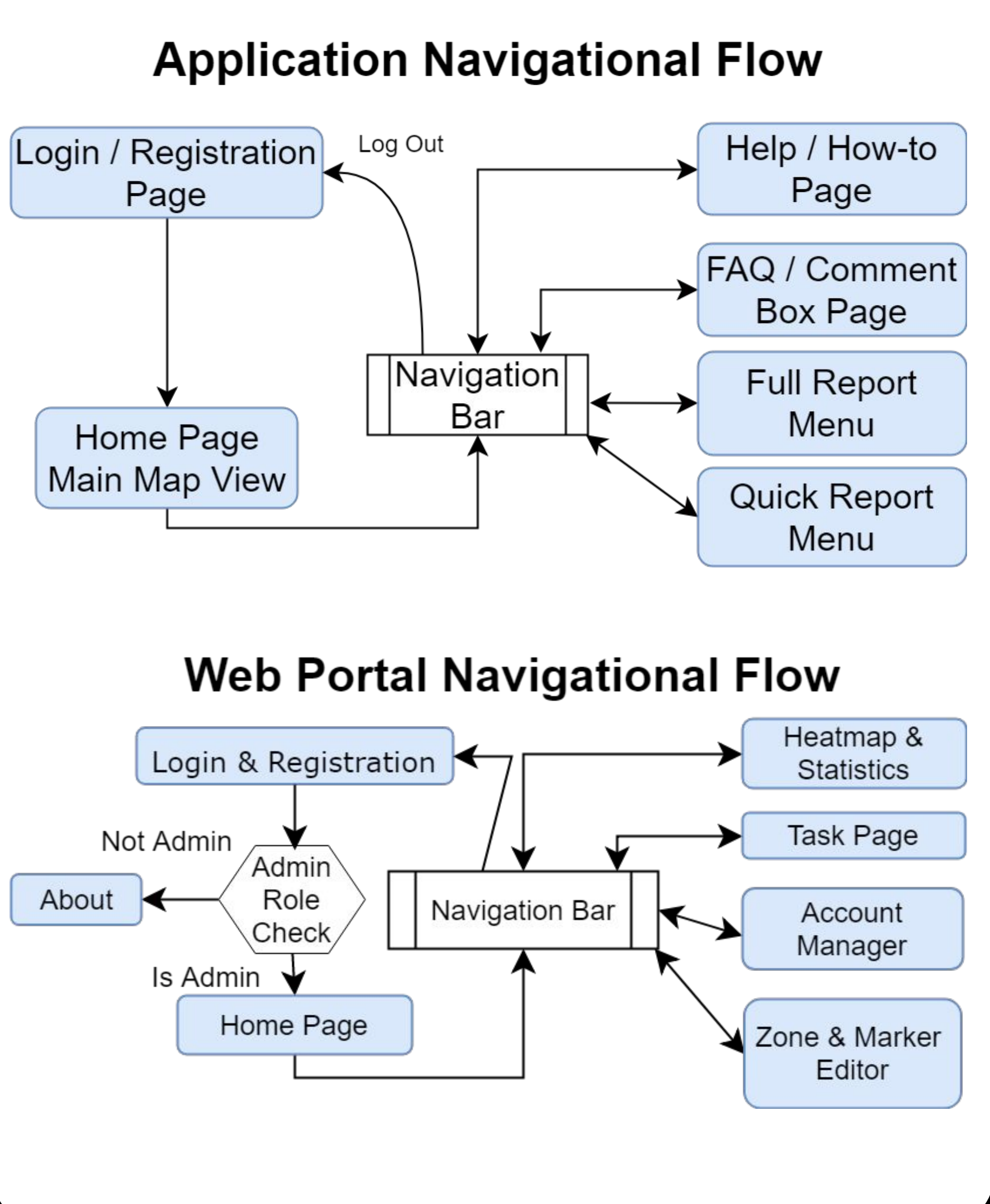
The above screenshot is our website 'Task Manager' page. Here, reports made on the application are shown as checkable tasks for NAU's maintenance staff.

The above screenshot is our website 'Map Editor' page. Here, campus admins can draw (and delete) new zones, markers, and define how long it takes for the zone color to change.

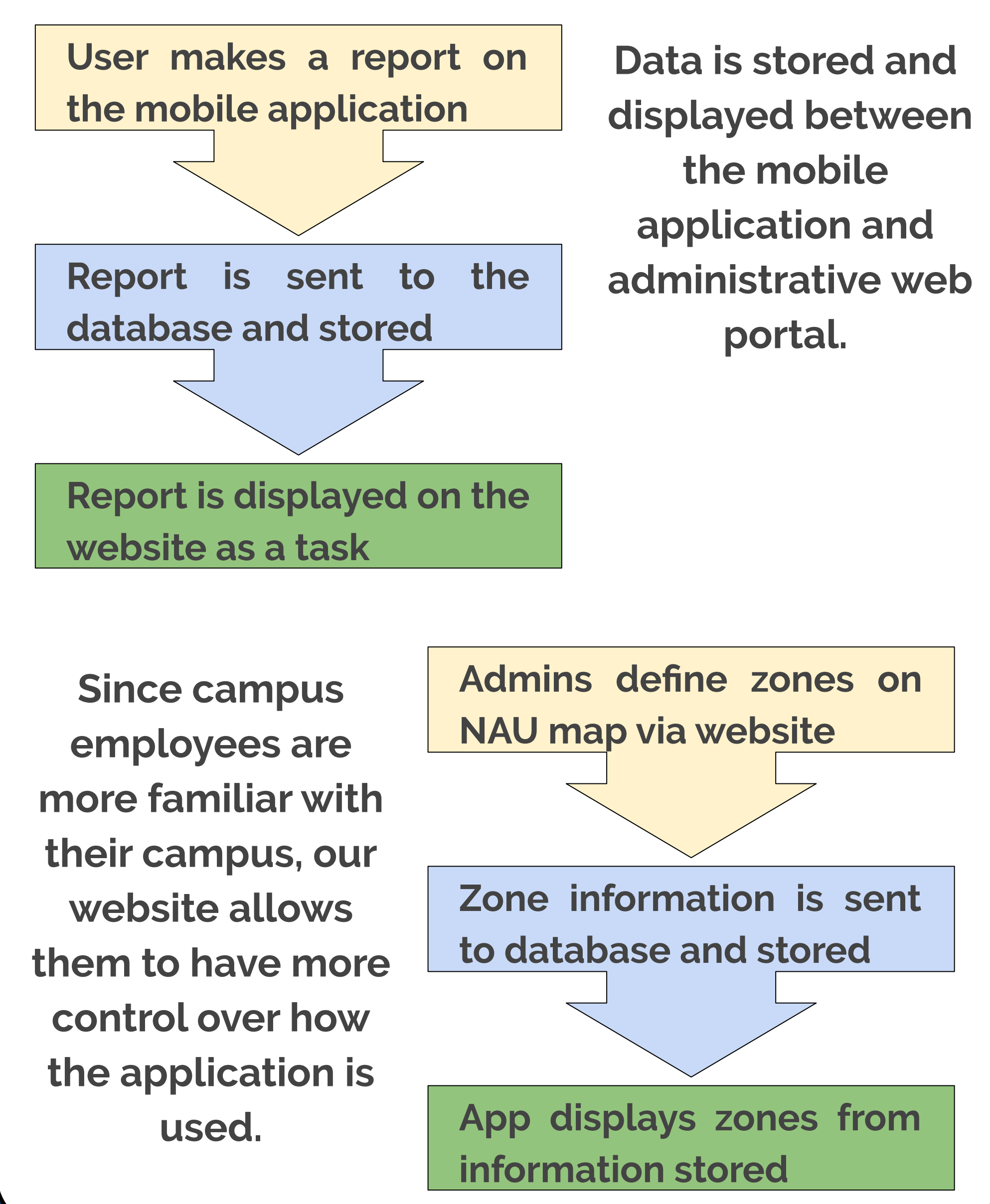
The screenshot to the left is the main map view on our mobile application. On it you can view defined zones, colored to indicate their status, and markers denoting campus resources.

The screenshot to the right is a 'full report' pop-up window. Here, users can select a report type from the drop-down menu, enter some details, and attach a photo.

Module Interaction



Architectural Flow



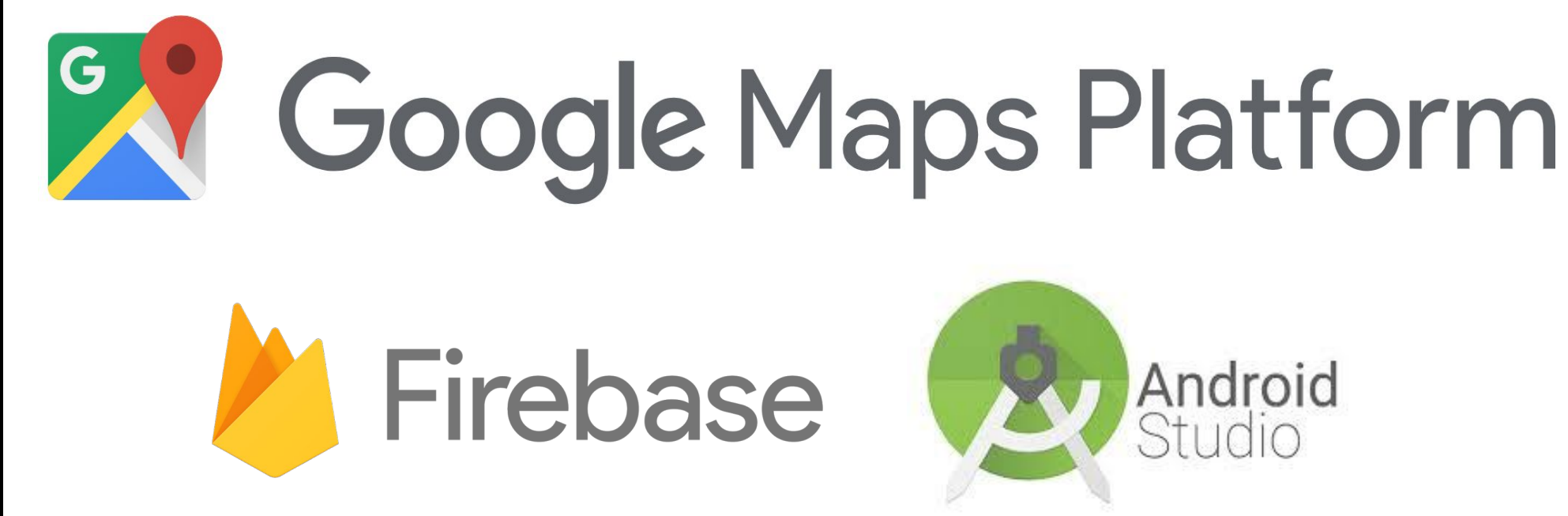
Future Work

This project has numerous useful extensions. Some we did not have time to implement were:

- Points accrual and high scoring system, with points attached to actions on the application
- The ability for users to form teams on the application
- In-depth data analysis and model generation on website

Technologies

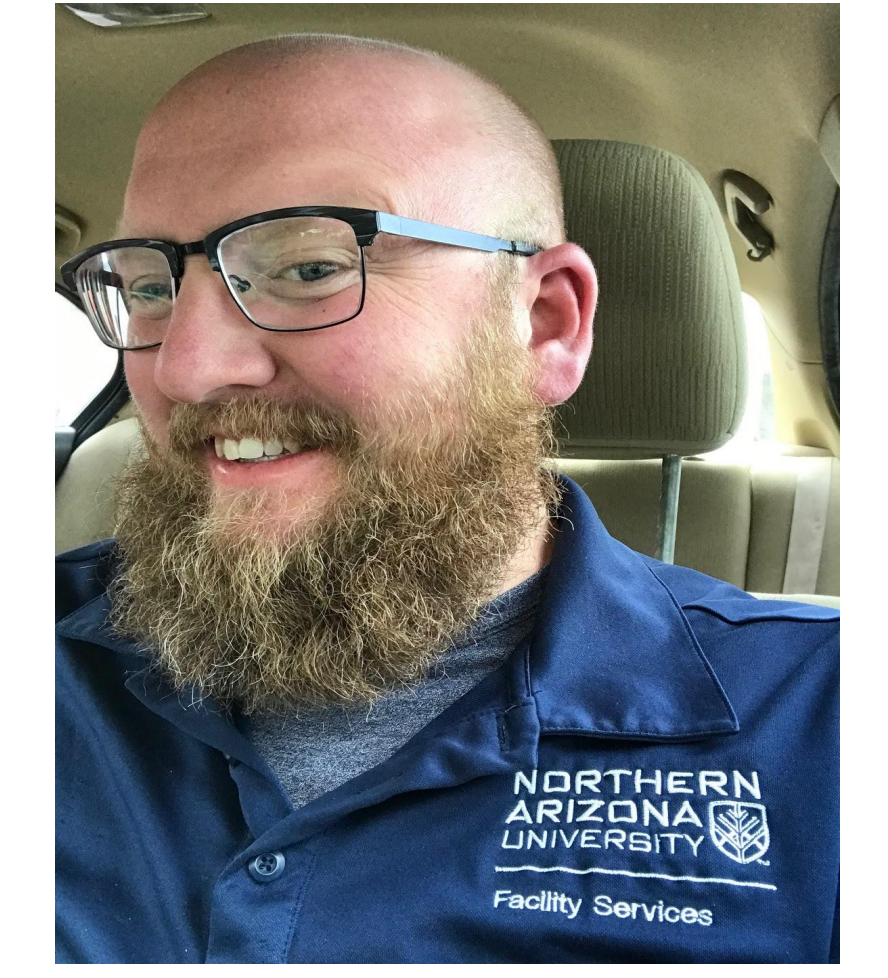
Our mobile application is written in Java using Android Studio. Our administrative web portal is written using HTML, CSS, and JavaScript. We use Firebase as our database and to host our website.



Sponsors



Ellen Vaughan is a former manager for NAU's Office of Sustainability.



Brock Brothers is a supervisor for NAU's Moving & Recycling Department.

Contact Us

If you have any further questions, our team can be contacted at:

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