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Week of February 3rd:

Over the break I started development on the android app.

- The app is currently capable of showing the user a map and the user can place/move circular zones on the map, which will be used to tell the BigBrother device where it's allowed to be.
- I have also programmed in functionality to read NFC tags, but I won't been able to test whether it actually works until we get some for it to scan.

Over the course of programming the app, I have had to think about how exactly the device and the phone will communicate with each other.

- The best option would be a direct connection between the two devices over internet, but that wouldn't work when both devices were connected to 3G/4G because the device acting as the server needs to be connected through Wi-Fi, making a direct connection impossible outside of a Wi-Fi network.
- The alternative solution, which we will probably have to use, would be to have a server facilitating communication between the two devices. We can use GitHub's student developer pack to get \$50 of credit for Digital Ocean's server hosting service, which should be plenty to last us through the semester.
- The phone and the BigBrother device will both connect to the server. When the phone wants to "connect" to the BigBrother device it will send the "name" of the device, which will just be some string that it reads from the NFC tag, to the server and the server will then begin forwarding any messages from the app to the device, and vice versa.