Team TBD
Deliverable #1

Glucosio is a collection of free and open source Android apps for tracking glucose levels for personal use or for diabetes research. There are a few platforms to choose from, but we are going to focus on the mobile Android app. As it is an Android app, the bulk of the source code is written in Java. We will use Android Studio to run the app and its associated tests on an Android Virtual Device.

The project uses Gradle as a build tool, so we thought it would be much simpler to put together than it was. Although we had just forked the repository and not made any changes, the Gradle build kept failing due to a set of “debug” tests in the project. An hour later, we’d successfully imported the code into Android Studio, after which we had to figure out where Android Studio had put the Android SDK, so we could set the ANDROID_HOME environment variable. Then came the setup of the Android Virtual Device, which was its own animal. Only two of our systems were able to get an Android Virtual Device set up; the others’ were deemed incompatible for emulation through Android Studio. Android Studio told us how we could presumably emulate a device anyway, but when we tried, we were greeted with the same error message. It seems that despite being built on top of IntelliJ, which two group members are very familiar with, Android Studio has gone out of its way to make its suggestions remarkably unhelpful.

On the systems for which the Android Virtual Device was supported, the rest of the way was very simple, and the emulation surprisingly fluid. Glucosio has a multitude of (mostly JUnit) tests that we were able to explore. Obviously, all of them pass when the code is unchanged. We played around with some of the Glucose Range tests, changing the values to make them fail.

```
@Test
public void expectOrangeWhenReadingValueIs145WithAACEPreferredRange() {
    glucoseRanges.setPreferredRange("AACE");
    assertTrue(glucoseRanges.colorFromReading(145).equals("orange"));
}

@Test
public void expectGreenWhenReadingValueIs100WithUKNICEPreferredRange() {
    glucoseRanges.setPreferredRange("UK NICE");
    assertTrue(glucoseRanges.colorFromReading(100).equals("green"));
}

@Test
public void expectBlueWhenReadingValueIs71WithUKNICEPreferredRange() {
    glucoseRanges.setPreferredRange("UK NICE");
    assertTrue(glucoseRanges.colorFromReading(72).equals("blue"));
}
```