

KIDIABAND

DATA

CLAIRE NICKERSON

QUOTLIB LABORATORIES

HOW THE KIDIABAND CAPTURES AND USES DATA

The Kidiaband constantly gathers data consisting of sweat glucose levels using the sensor described in the section on technological infrastructure. If the level goes below or above a range specified by the child's doctor, Q-Lee (the character on the Kidiaband) gives the child a visual reminder to eat by rubbing his stomach or to take insulin by holding up a syringe. A few minutes later, if the child has not responded, the Kidiaband emits a soft beeping to get his or her attention.

The Kidiaband also sends the data it collects via cell network to a Kidiaband data center, where the servers convert detected glucose levels in the child's sweat to approximate corresponding blood glucose levels, which are the measurement standard used by medical facilities and which parents will be familiar. If the levels remain lower or higher than the range the child's doctor has specified for

over an hour, the server generates a text message to the child's parent. Otherwise, the data is stored on a hard drive at the data center until the child's parent, or someone with whom the child's parent has chosen to share the data, uses the Kidiaband app on his or her cell phone, whereupon the parent's phone sends a request for the data to the Kidiaband API server, which forwards the request to the web service. The web service then generates and responds with a report in JSON format, readable by Kidiaband software and containing the data for which the parent has asked.

The app has two means of displaying data, in table form or as a line graph. Parents can specify a time period over which to view data, either by date range for long periods of time or by the hour for short periods of time, and the web service will choose reasonable increments in which to display the data.

For instance, a request for two days' worth of data would provide eight data points six hours apart, whereas a request for eight weeks' worth of data would provide eight data points that represented the child's average blood glucose each week. If the parent wants more data points over the same period of time, he or she can specify the intervals in the app's settings.

The Kidiaband comes with a serial code that is used to download the app, granting access only to data from that particular child. The parent can share this code with others who should have access to the data the app provides, like a teacher or other caretakers.

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THE SHORT VERSION:

- Kidiaband tracks sweat glucose levels
- Kidiaband provides visual and auditory reminders to the child
- Kidiaband texts parents if glucose levels are abnormal
- Parents use the Kidiaband App to track levels over time
- Parents can share this data with others

