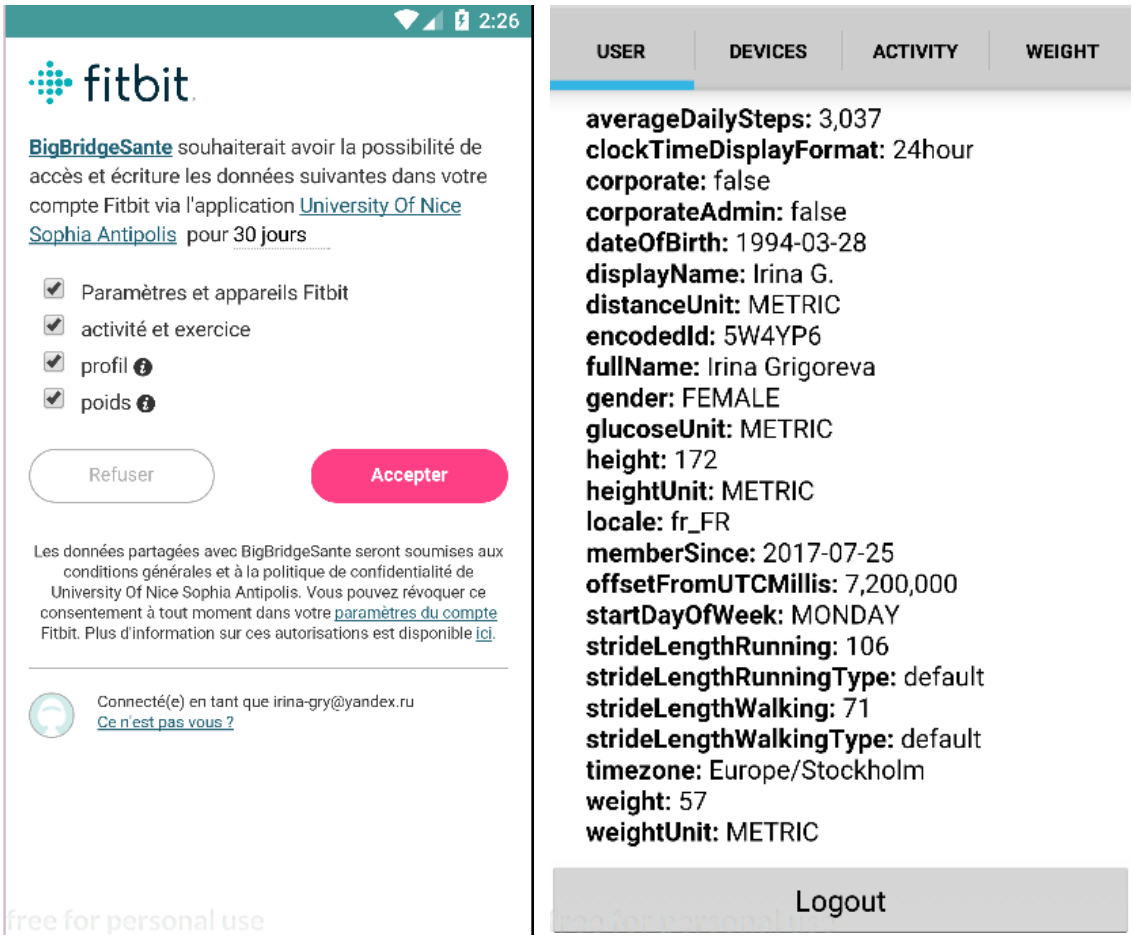
The first task of my stage was to get data from the smartwatch for their further storage in the database and analysis, as well as display in the application. This week I started working with the FitBit API and the OAuth2 library, which the FitBit is currently using for authorization in third-party applications. All the documentation is presented on their website. Since the devices of this company have strict privacy restrictions, I faced some difficulties in obtaining and processing data from smartwatch. Therefore, there are questions that I would like to discuss.

At the moment, I have implemented an Android application that allows to authorize a FitBit user (with an already registered watch in the official application for iOS or Android) and get information about him. Screenshots are presented below in Figures 1 and 2.



Figures 1, 2 – Application for retrieving user data using the FitBit API

But the problem is that this application implements authorization via WebView, which turned out to be forbidden by Fitbit rules. Thus, it is necessary, according to the documentation, to implement it using the Google Chrome browser with a further redirect to the application (and using the OAuth2 library). For now, I don't know how to do this, I need more time.

To get real-time data about the pulse of a person, I had an idea to connect the clock via Bluetooth directly to the app, but, again, because of privacy concerns, the connection of third-party applications is prohibited, which was confirmed by the company. We can receive the pulse from the profile only after synchronization through the official application - a minimum - every 15 minutes (under the condition of constant synchronization). Which also produces some problems.

To save the user data received via the Web API to the database, I need to develop a web service that will receive this data and work with the cluster of MBDS and Oracle NoSQL. Since the final

solution includes the Android application, Web Service + working with databases and analysis with R Language, I would like to clarify which tasks are paramount in my work, since there is not a lot of time.

In my opinion, it is also important to discuss, with the participation of Sergei (for a medical point of view), which analysis will be conducted and what information can be obtained, based on what I can implement. As far as I know, Alison is also now analyzing (including clustering) our old data, perhaps we could use her results in our project.