1. Hello, my name is Anastasia Repina. I am the student of the group 143. Today I would like to give you a general overview of my graduation project whose main goal is to create an android application for young mothers.
2. I’m going to develop four main points. First, I’ll tell you about similar projects and application which were already done by other people. Then, I’ll speak about the survey which I done before the coding started. The next point is connected with the application itself and the final one is the technologies which are used for the application creation. If you have any questions I’d be grateful if you could leave them until the end.
3. In research the preparatory step is very important. During this step it is necessary to analyze the already existing projects and understand what their benefits and drawbacks are. So, later, you will be able to create your own work taking the problems of competitors into account. None of the products which I have looked at (you can see them on the slide) solve the problem which I would like to solve with the help of my application. The existing projects usually just monitor mother’s OR baby’s health whereas I want to do these two parts inside one project. This step will let young mothers analyze not only her child but also her own health, so it will be possible to see the correlation between the changes of mood, health, nutrition of mother and baby. That is why I decided to include monitoring of baby’s AND mother’s health as well as opportunities to analyze the data and collect information from wearable devices. In order to do it, it is also necessary to choose the parameters which will be collected and analyzed.
4. That is why the next step was to conduct a survey. 40 young parents have answered several questions connected with health and nutrition of them and their baby’s. On the slide you can see the aggregated results which helped to reveal key characteristics, which were later added to the application. The survey was conducted in Russian, so the presented charts are in Russian.
5. This leads me to a point connected with app architecture and design. On the slide the DB diagram is presented together with the primitive scheme of the data flow inside the app. As you can see the Firebase service was chosen as the data storage, here I save all the information related to health and nutrition. The main source of data for mothers is wearable devices whereas the baby’s data is added manually. There are a lot of different wearable devices and trying to connect all of them inside the project will be very complicated, so I decided to solve this problem with the help of Google Fit service, which already has functionality which enables connecting bands and watches and downloads some data from them. So, I use Fitness and History APIs in order to collect all the necessary parameters.
6. Of course, all the mentioned steps will be impossible to perform without the help of a variety of technologies. Now we are talking about them. In order not to lose anything I use GitHub. The programming language is Java and I use Android studio to write my code. I have already mentioned Google Fit and Firebase during my speech. And the MPAndroidChart is a fantastic library for graphs and charts drawing.
7. Let me remind you what we have looked at today. I am creating an Android application for both young mothers AND their babies which will help to monitor health and nutrition as the baby’s health is being highly linked to the mothers, so it may be really helpful to see the correlation inside one application. With the help of the technologies like Google Fit, Google Firebase and MPAndroidChart the main goal of this project will definitely be achieved.
8. Here you can see the literature and Internet resources I have already used during my work.
9. Thank you for your attention. If you have any questions I’d be happy to answer them.