Senior Design Project

Healthscope

Final Report

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Content

1.Introduction

1.1.Executive Summary

In this project, we try to give the quality of food product according to user specific details. We are planning to solve this problem with the help of mobile application called “Healthscope”. In this project, people sign in to application, create profile with their names,gender,age, height,weight,personal diseases (options are: diabet, cholesterol diet , heart disease,diet option). These information are used to match what product suitable for user. User scan the barcode the food product which is desired to taken and application give advice to user whether this product should be taken or not(range of 1-10) in terms of several aspects.

1.2.Product Scope

The final product of the project is an Android application to give point to user in terms of protein,protein, lipit, carbonhydrete .After use signing in the application, personal detail of user are declared in to database. These details are stored in “firebase authentication” part.

For scanning product detail, we use MangoD to reach variables of the scanning product.Two of databases are directly accessible for anyone besides development team. For this reason, any kind of updates, additions and removals related to any data residing in the database will be done in the supervision of development team.

1.3.Project Purpose

Nourishment is one of the most crucial part of human life. People pay attention what they take because of personal disease or diets. Because of this need, people shoud

informed whether should take desired product or not. User after scanning the product, take values of each aspects of nutrition such as protein, carbohydrate and so on.

2. Final Status

At this stage, we have implemented our functional requirements, scanning a product interact with mongodb, create user profile and save it in database and can modify to our database. End of the scanning, our algorithm decide and give points to product according to suitability of product with respect to user profile.

3.Final Architecture

3.1. Overview of Architecture

Generally mobile applications are multi layered as user experience,business and data service layers[1].Since healthscope is a highly data dependent mobile application. Its main task are data retrieving from user database and product database comparing values those values with our algorithm which is giving advice to user.

3.1.1. Data Persistency Subsystem

This subsystem is composed of Firebase Api and MongoDB. Data persistency subsystem is used to store and serve crucial data about users, user information and product.

3.1.2. Recommendation Subsystem

This subsystem occurs where the calculations of recommendation procedure is completed.Recommendation subsystem uses our algorithm with two databases variables.

4. Solution Developed in Project

4.1.Global Context

Main purpose of Healthscope give doctor advice for people when they are shopping food products.People who have same sort of disease like diabetes, cholesterol can safely use Healthscope.For now these are heart disease, diabetes, cholesterol and diet options are available. Thanks to Healthscope, people have no worry about what product should be taken or not. Also, it is time saving for people such that people do not not want to call the their doctor or search for the web for certain product whether they can consume the product or not. It is easy to reach, you only need internet for using this product. Easy to use, you only once fil your personal information and that is it for the rest you only scan the barcode and application give advice for this product whether you should use this or not with respect to range of 1 to 10.

5. Tools and Technologies Used

5.1.MongoDB

MongoDB is an open-source document database and leading NoSQL database. We have deployed MongoDB as our data persistency subsystem.

5.2.Firebase

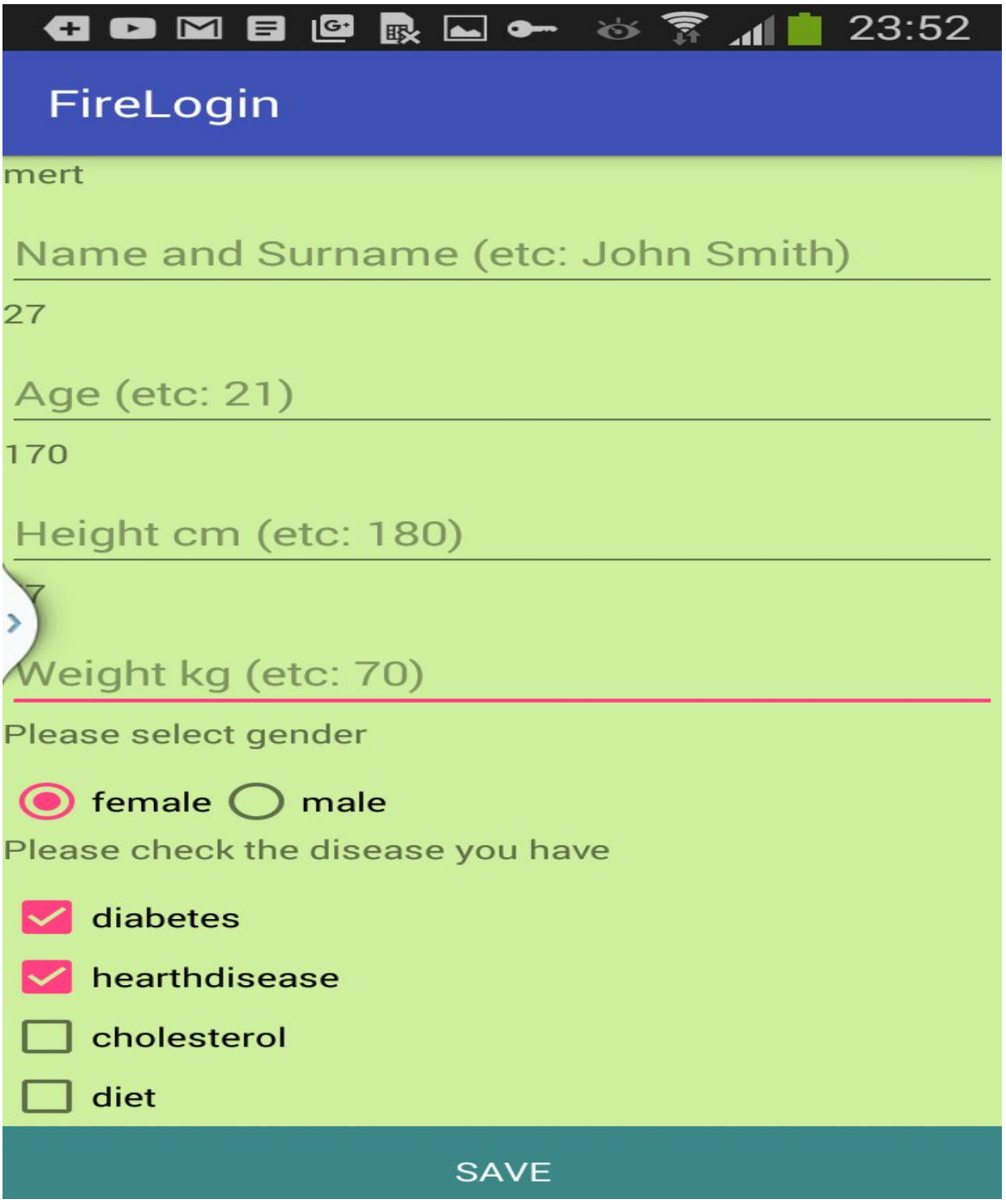
Firebase is a technology that permits us to make server applications with no server-side programming. We hava deployed Firebase as our data persistency subsystem.

5.3. Visiual Studio

Visual Studio is ASP.NET, JQuery, AngularJS web service tool.We used it to specialize the product information.

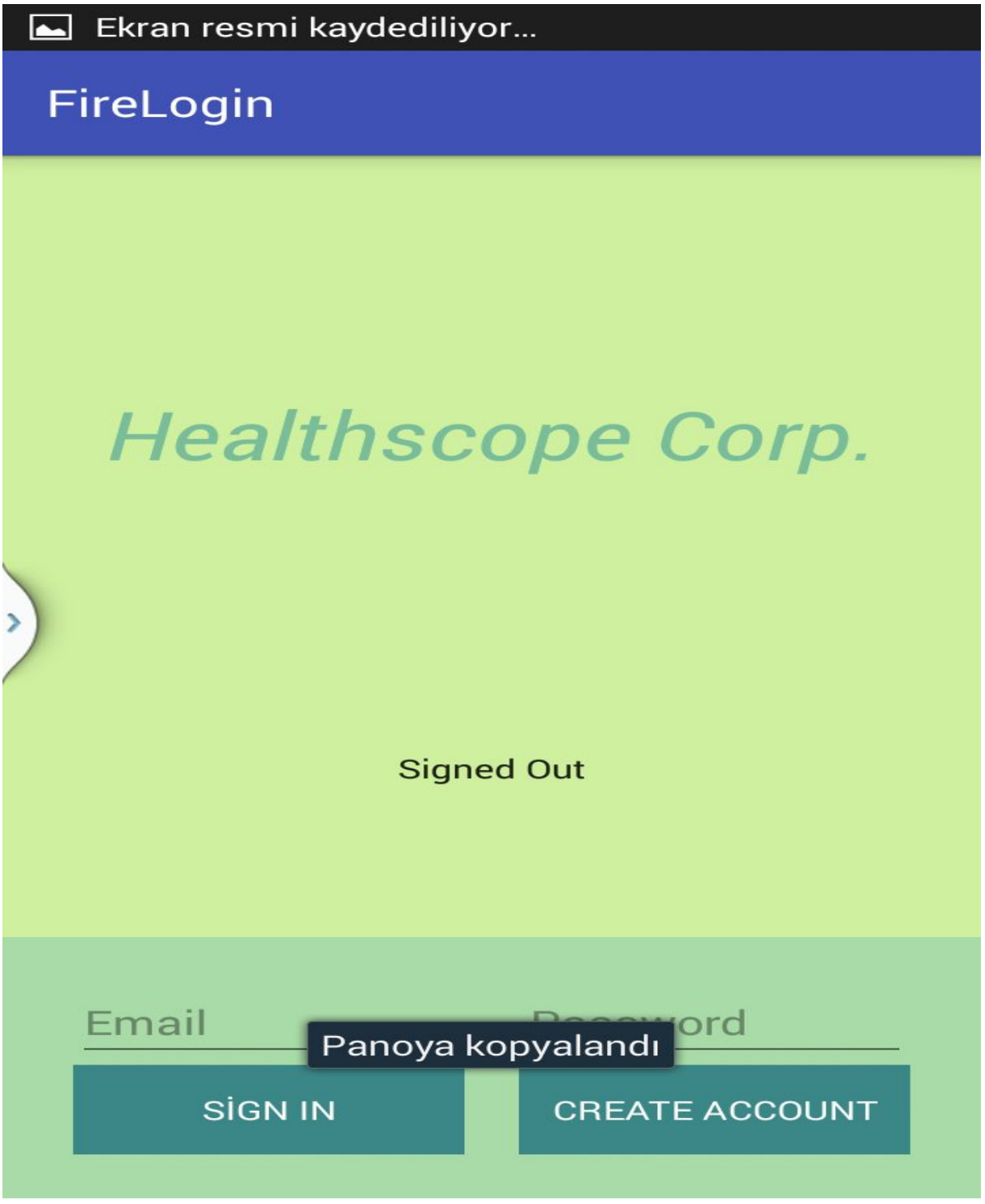
6. Software User Manuel

6.1.Login



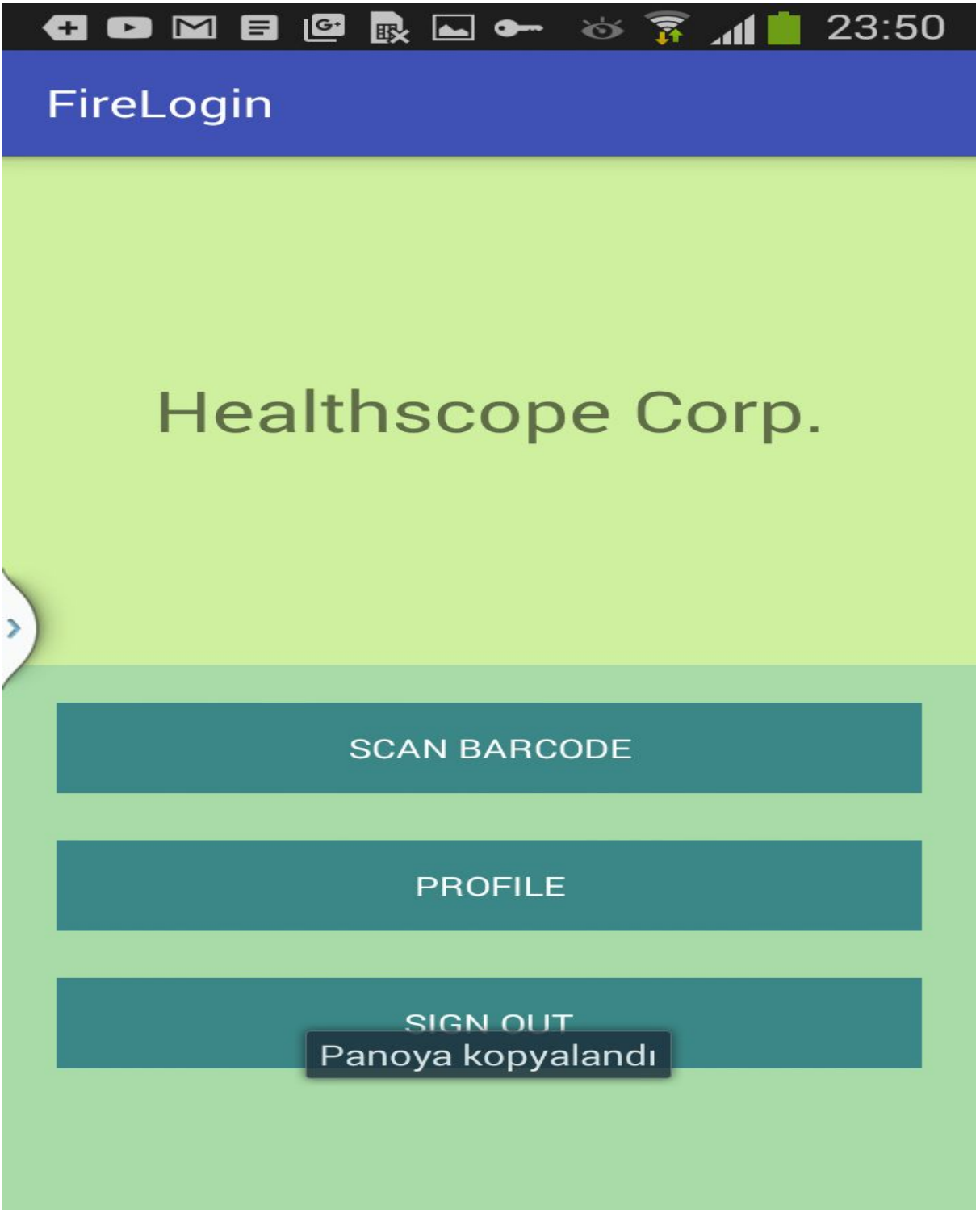
Users enter their personal information such as age, height, weight, gender and disease they have and click save button to create their profiles.

6.2. Sign up



There are two options which are sign in and create accound if users have account enter their e-mail and password and click sing in for further process(main menu). İf not create click create account button and fill their information.

6.3 .Main Menu

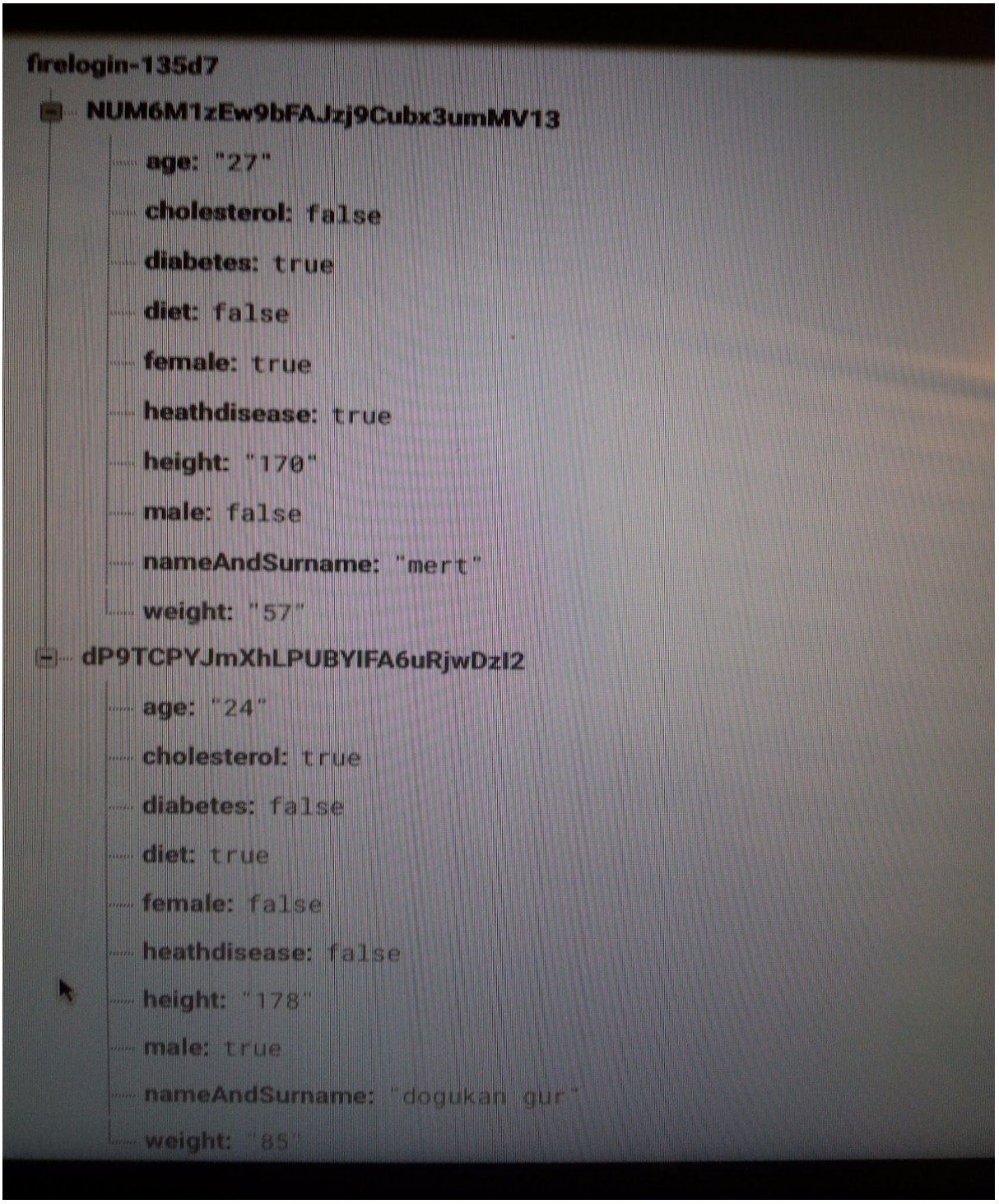


There are three options in main menu which are scan barcode, profile and sign out .

6.4. Scan Barcode Panel

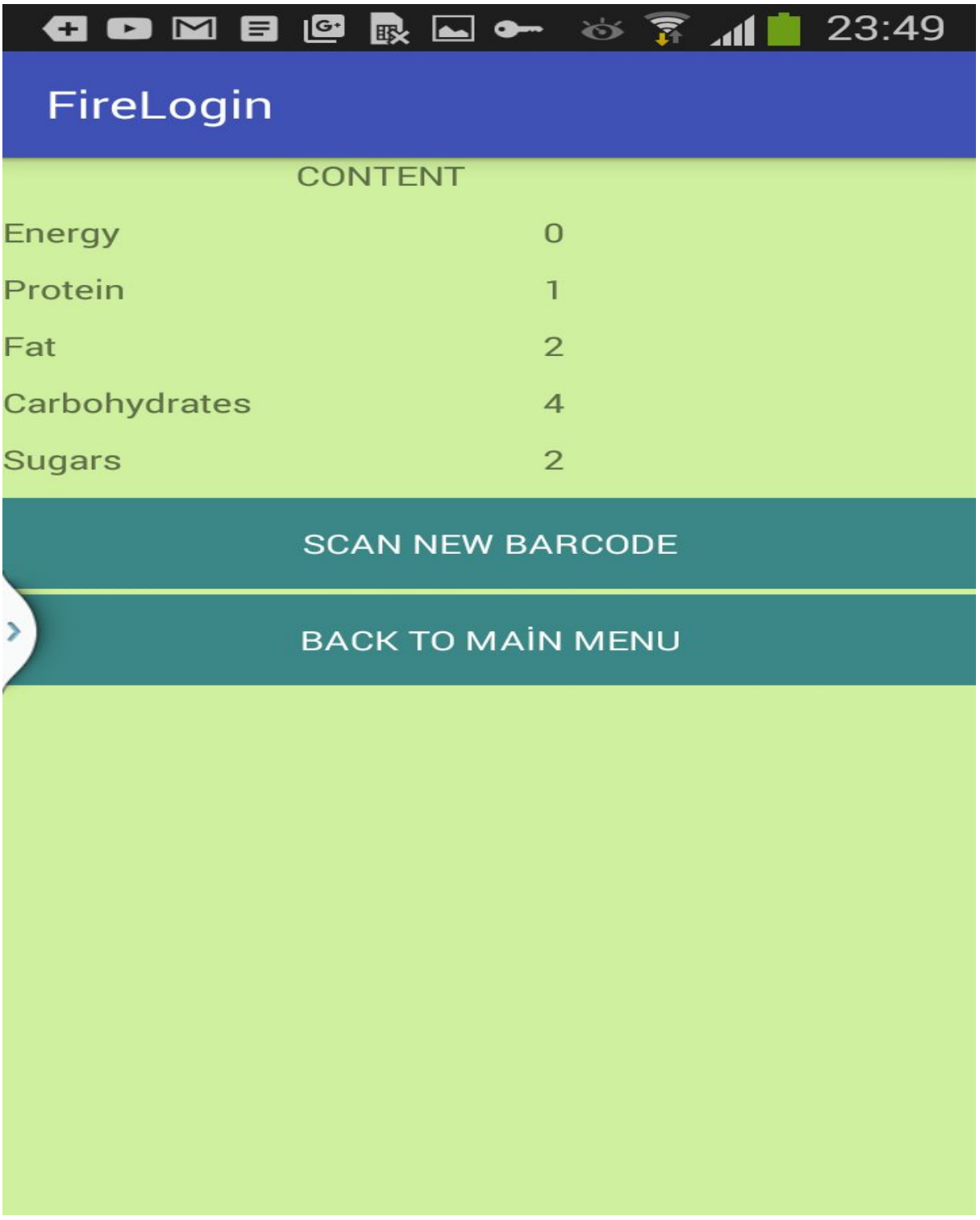
User scans the barcode for desired product as stated.

6.5. Profile Database



This is example of profile database and how its looks.

6.6. Suggestion Panel



End of the scanning process, user receive desired values for each content for now we added energy,protein,fat, carbohydrate and sugar.

7.References

1. ARCHITECTURE OF MOBILE SOFTWARE APPLICATIONS

In-text: (Slideshare.net, 2017)

Your Bibliography: Slideshare.net. (2017). *architecture of mobile software applications*. [online] Available at: https://www.slideshare.net/hassandar18/architecture-of-mobile-software-applications [Accessed 4 May 2017].