

**Senior Design Project**

**Healthscope**

*Project Specifications Report*

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**1. Introduction**

Recently, health is one of the topic that mainly took into the consideration by

people. Increasing life expectancy rates is a clear main cause of human effort for making their lives more healthier. People give importance to do sports, to sleep well, care their hygiene and specially to eating healthy foods. In this century, although finding healthy food is easier than before, having a lot of unhealthy products in markets attracts people’s attention to buy more of these unhealthy products.

Healthscope is java based project, running on the Android platform, aims to make people more aware of impact of the products on their health. When customer do shopping, Healthscope identifies the product that customer like and tell him/her whether it is a healthy choice or not according to the customers’ health status which is reflected as codes in our app. As a result, this project would help customers to fill their shopping carts with more healthy foods that improve their medical conditions

* 1. **Description**

Our “Healthscope” application helps user to shop on supermarkets with aware of their medical conditions. Users create their own profile on this application. There are fields for their age, physical appearances (height, weight), diseases, allergies. And our “Healthscope” doctor evaluate every food and their ingredients in the supermarket for our users. There are five levels for every ingredients agreeableness (green, yellow, orange, purple, red). It is very easy to use because users just read the barcodes of each food they want to buy with their androids, ingredients and agreeableness will appear on their screen and they can see appropriateness respect to their medical conditions.

**1.2 Constraints**

**1.2.1 Implementation Constraints**

* The application will be mobile and work on android; thus, it will be implemented in Java. [1]
* Required user information and all the data will be stored in MySQL servers. [2]
* The applications architecture will be built per object oriented design principles.
* Zxing API will be used for barcode scan feature. [3]
* USDA Food Composition Database will be use. [4]
* A version control tool, GitHub, will be used. [5]

**1.2.2 Economic Constraints**

We are planning to use Android SDK with MySQL. They are open source and free; they will not have any effect on economical aspect. Also for food database we will use the database of United State Department of Agriculture which is public and open to use. application will be available at Play Store. The cost of the app is depending on the doctors who are consulting and the maintenance cost of the serves.

**1.2.3 Maintenance Constraints**

The will be no external hardware for the project only the mobile phone that run the application. However, there will be a server to maintain.

**1.2.4 Manufacturing Constraints**

All the work will be done via software, there is no requirement for any other hardware. We only use open source APIs to create our program.

**1.2.5 Language Constraints**

English is today’s world language and to reach the maximum number of

users, application will be in English.

**1.2.6 Social Constraints**

This application should strength the relation between doctors and the patients and link them to share information that is important for patient’s health. Our main purpose make to project useable for people need it.

**1.2.7 Privacy and Security Constraint**

* The database will hold facts about health and related information of the users this information will not be shared expect the doctor who consult the patient.
* Users will access the application with a username and password which will be encrypted and will not be seen by the other people that has access to database.
* All the personal information about the user will be encrypted and only seen by authorized people.

**1.2.8 Time Constraints**

This project must be completed by August 2017

**1.3 Professional and Ethical Issues**

Our projects main objective is help people who wants to eat healthy food. For our system, we need the information about our users and this information like height and weight sometimes not want to share by the users. We ensure that this information never shared to anyone else expect people we state. As mentioned before all vital information about our users will be encrypted and not shared.

**2. Requirements**

**2.1 Functional Requirements**

* Application will allow the user to create a profile including username and password.
* The user will be asked to enter some specific properties. (age, weight, etc.)
* If the user has any illness, the user can specify them in his/her profile.
* When user shows the phone camera to the product after clicking on the app, the application will identify the barcode and present the specifications of the product and suggestion. (whether the product is usable or not)
* App will keep thousands of product properties in database to show product details.
* App suggestion will work by showing products’ detail that should/should not be used for user who have specific illness)

**2.2 Non-functional Requirements**

* App will support Android 4.4 and above.
* App will not work without internet connection.
* App will be user-friendly and will be very easy to use.
* App keep many product information will be updated in the database and become sustainable.
* App will be secure to keep user information in safe.

**3. References**

[1] https://developer.android.com/studio/intro/index.html/, Online, Accessed: 25.02.2017

[2] https://dev.mysql.com/doc/, Online, Accessed: 25.02.2017

[3] https://github.com/zxing/zxing/, Online, Accessed: 25.02.2017

[4] <https://ndb.nal.usda.gov/ndb/doc/index>/, Online, Accessed: 25.02.2017

[5] https://github.com/, Online, Accessed: 25.02.2017