

Goal:

This project is a mobile application that aims to collect data about an user and create relevant statistics over the accumulated data.

As a next step to the statistics the application should be capable of identifying abnormalities over real . Also this application wants to allow doctors to monitor patients remotely and keep track of their vitals .

Limit:

The limits of this application can be smart devices that cannot monitor the necessary information at any time.

Finding the customer:

The client can be any android user who downloads the application.

3. Requirement identification

We can categorize the requirements making analysis process much simpler and clear for all the involved stakeholders.

- **Business Requirements:**
 - ✓ Develop an application that gathers user's health data.
 - ✓ Create relevant statistics over the accumulated data.
 - ✓ Present the information for both patient and doctor.
- **User Requirements:**
 - ✓ As a doctor, the user shall have access to a list of patients, being able to add a new one and view their health data and abnormal situations.
 - ✓ As a doctor, the user needs to log in/ sign up.
 - ✓ As a patient, the user shall have access to his health data, to statistics day over day/ week over week.
 - ✓ As a patient, the user needs to log in/ sign up.
- **Solution Requirements:**
 - ✓ Registered users shall be able to login with valid username/email and password
 - ✓ On successful login, the user shall be redirected to an appropriate home page (patient/doctor).
 - ✓ New users shall be able to register by clicking on the "Sign-up" button.
 - ✓ The authenticated user (patient) shall have access to different pages of the application: home page, statistics page, settings page, "Log-off" button.
 - ✓ The authenticated user (doctor) shall have access to different pages of the application: home page, the page with the list of patients, settings page, "Log-off" button.
 - ✓ The authenticated user (doctor) shall receive notifications regarding abnormal situations in their patients' profiles.
- **Technical Requirements:**
 - ✓ The health data shall be gathered from smart sensors, health trackers.
 - ✓ The data shall be stored in cloud.
 - ✓ The application needs a statistics module.
 - ✓ Developing a web or mobile application (preferable mobile).
 - ✓ A preferential feature would be speech interaction with the application (in Romanian).

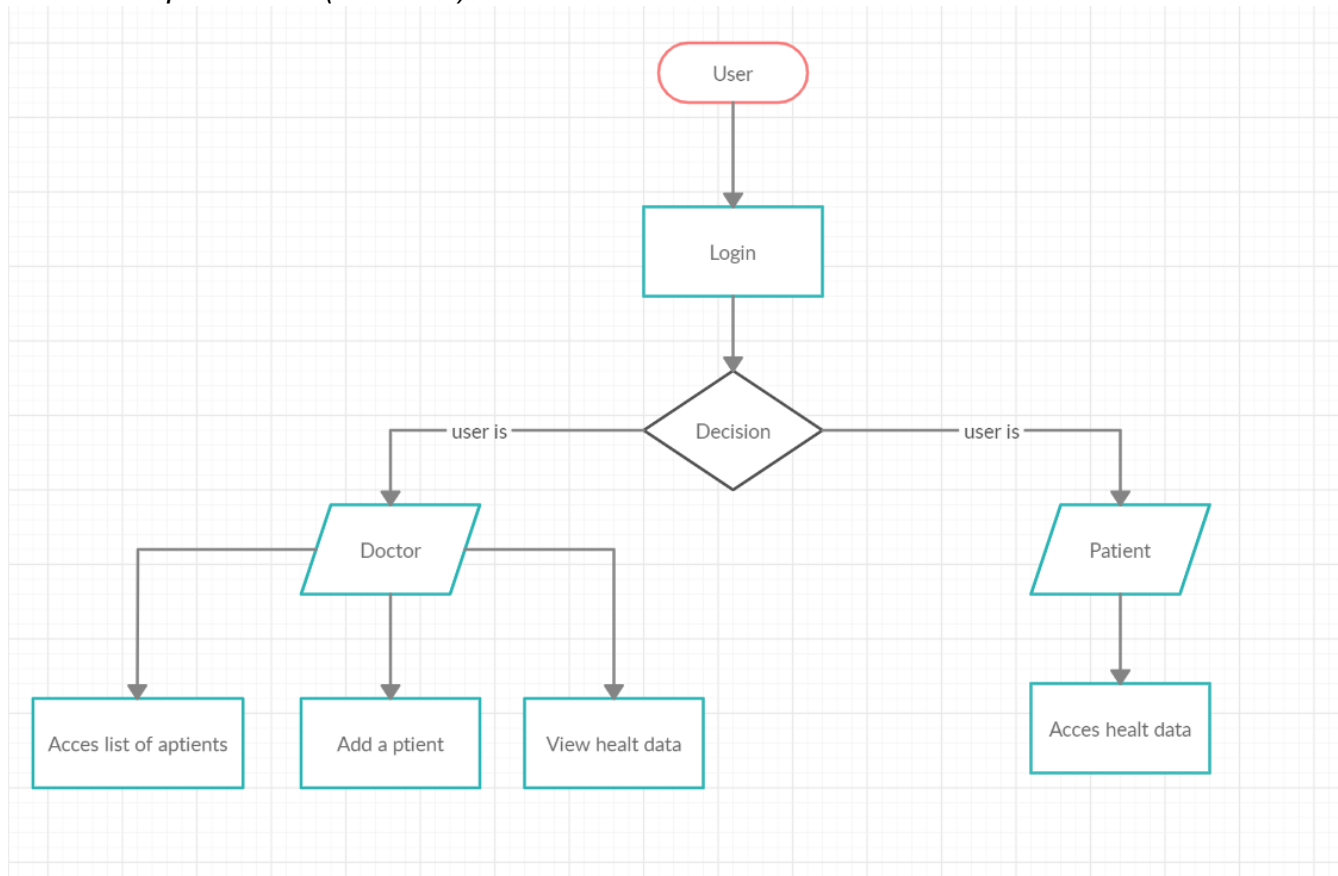
4. Requirement analysis process (Rap)

Technique: Translate to semiformal language using diagrams.

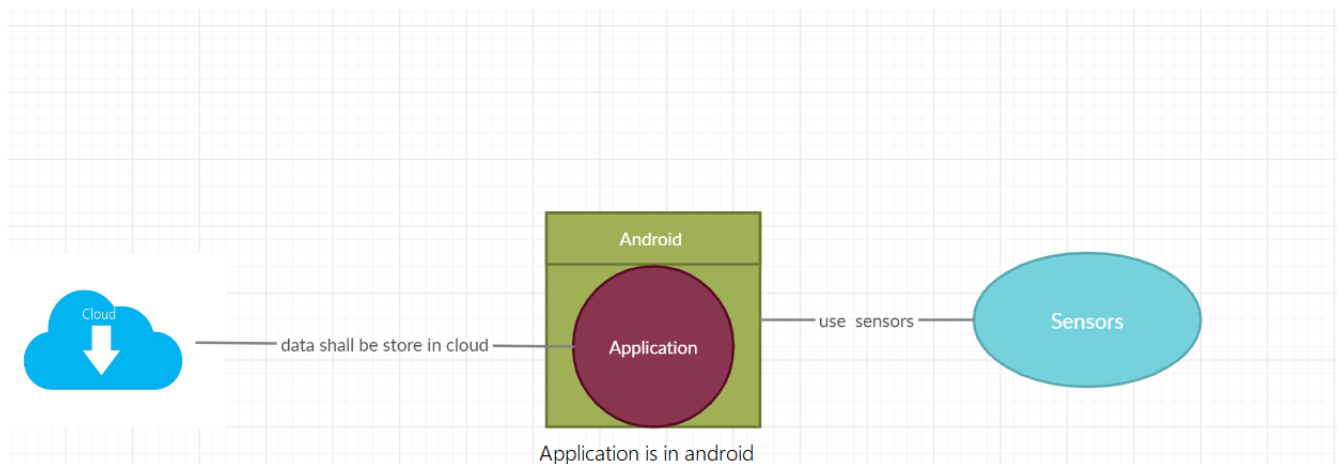
Let's note with "A" the set of Business requirements, with "B" the set of user requirements, with "C" the solution requirements and with "D" technical requirements.

Every element from those sets are unique identified. And sets A, B, C are in traceable relation. The set D is disjoint with A, B and C because in D we have technical requirements which are related to efficiency, or used platform like "The data shall be stored in cloud".

User Requirements (low-level) V 1.0



Tehnical Requirements (low-level) V 1.0



Specification of requirements

A module to create statistics (eg: day over day, week over week with the values received from the sensors)

Building a user profile that contains health scores associated with the statistics / data extracted for his account (determines if the data communicated by the devices are in normal parameters or if they may indicate certain conditions eg. heartbeats that may indicate an arrhythmia heart) mobile interface through which the user communicates with the application.

The profile of the doctor who has access to a list of patients, can add new patients and can receive notifications for abnormal situations detected in the profiles of his patients.

The data will be exported in JSON format

Requirements management

Inside the project the "scrum" methodology is approached, reason for which the adjustment of the project can be done continuously based on the client's requirements.