**Data4Help**

Goals :

* Monitor location of individuals
* Monitor health status of individuals

Shared phenomena:

* Registration of individuals
* Registration of third parties
* Acquisition of individuals data
* Access data of specific individuals:

First request:

* World phenomena: third party needs data of an individual (?)
* Shared phenomena: request encoding
* Machine: the request is passes to the individual
* Assumption: the user receives a notification from the machine
* Shared phenomena: the user receives a notification from the machine
* Shared phenomena: user’s choice for his/her data to be seen
* Shared phenomena: request approved or rejected (this notification arrives to the third parties)

Second request:

* World phenomena: third party needs data of a set of individuals (?)
* Shared phenomena: request encoding
* Machine: checks if the request satisfy the constraint
* Shared phenomena: request approved or rejected (this notification arrives to the third parties)

**AutomatedSOS:**

Goal: to offer a personalized and non-intrusive SOS service to elderly people

World phenomena:

* Arrival of the ambulance at a certain location

Shared phenomena:

* Monitors the health status of the subscribed costumers
* Allocation of an ambulance

Machine:

* Checks if the parameters are below a certain treshold
* Reaction time of less than 5 seconds

Assumptions:

* We need a criteria to determine wheter a person is old or not

**Track4Run**

Goals: to track athletes participating in a run

Shared Phenomena:

* The organizers define the path for the run
* The participants enroll to the run
* Spactators see on a map the position of all runners

SCENARIO 1

The mayor of Milan decides to monitor either location and health status of his citizens. He asks for a solution to this problem. Then, one of the collaborator suggests him Data4Help. So, municipality downloads the application in the municipal offices and registers. After that, municipality sends requests to all people living in Milan thanks to the fact that it has data about the fiscal code and corresponding e-mail adress. Then, people who have the application receive the invitation asking them to accept or reject the request; whereas the ones who do not have the application yet receive the invitation to download it.

SCENARIO 2

Gianluca, who already has the application, receives an e-mail from municipality of Milan asking him to share his current data. Then he logs in. If his GPS is disactivated, a message asks him to activate it. In order to answer he is obliged to click on ‘OK’ button. Gianluca chooses whether to accept or refuse the request. He accepts to share his data to municipality. In this way the municipality receives current data and finds out Gianluca is running alongside the Naviglio river and he is really good since his heartbeat is not so high. (aggiungere la parte in cui la terza parte riceve dati costantemente)

SCENARIO 3

Maria is celebrating Christmas’ Eve with her family. One of the gifts she received is a smartwatch. Meanwhile her niece, Giulia, is very curious and switches Maria’s mobile phone on. Giulia finds out Maria received an e-mail from municipality of Milan asking about her location and health status. Maria does not have the application, of course. She is helped by her niece to download it. Then she has to sign up giving as account name the e-mail through which she was contacted and a password. Then she has to provide her age and her fiscal code. She types 78. Then a new functionality is activeted on the application, called AutomatedSOS. The application informs Maria to download the app also on her smartwatch since this new functionality is very useful for elderly people.

After a week Maria is walking to the supermarket. Her smartwatch is tied to her wrist. At a certain point she feels a little weak. The application starts ringing and sends the location to 118 with information about what is happening to Maria. Her parameters are under the thresholds. She faints. When she wakes up, she is on the ambulance trying to understand what happened.

SCENARIO 4

The municipality of Milan wants to make a survey. It is interested in understand which is the best zone where to live in Milan. In order to achieve this problem, the municipality uses the application. For each zone it types on the menu the name of the zone to access to anonymized data of groups of individuals. The output is the average of the health status’s people who have already accepted municipality’s request before.

SCENARIO 5

Adidas is going to organize a race for next summer in Milan. So it defines a path on the app and publishes the event. Gianluca who is interested in running could enroll to the run by choosing the event. Then a number is assigned and sent to him by e-mail.

The day of the race Maria and Giulia are spectators due to the fact Elisa, Maria’s daughter, is running. They are interested in knowing where Elisa is on the track. So, Giulia remembers there is a functionality on the app called Track4Run. She asks her grandmather to give her the phone. She opens the app and searches for Track4Run. Then Giulia types Elisa’s number and the app shows on the screen the status. She sees her mather is running well: she is in second position and she misses 3 km at the end.

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# External Interface Requirements

## User Interfaces

*Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., help) that will appear on every screen, keyboard shortcuts, error message display standards, and so on. Define the software components for which a user interface is needed. Details of the user interface design should be documented in a separate user interface specification.*

## Hardware Interfaces

*Describe the logical and physical characteristics of each interface between the software product and the hardware components of the system. This may include the supported device types, the nature of the data and control interactions between the software and the hardware, and communication protocols to be used.*

## Software Interfaces

*Describe the connections between this product and other specific software components (name and version), including databases, operating systems, tools, libraries, and integrated commercial components. Identify the data items or messages coming into the system and going out and describe the purpose of each. Describe the services needed and the nature of communications. Refer to documents that describe detailed application programming interface protocols. Identify data that will be shared across software components. If the data sharing mechanism must be implemented in a specific way (for example, use of a global data area in a multitasking operating system), specify this as an implementation constraint.*

## Communications Interfaces

*Describe the requirements associated with any communications functions required by this product, including e-mail, web browser, network server communications protocols, electronic forms, and so on. Define any pertinent message formatting. Identify any communication standards that will be used, such as FTP or HTTP. Specify any communication security or encryption issues, data transfer rates, and synchronization mechanisms.*

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