

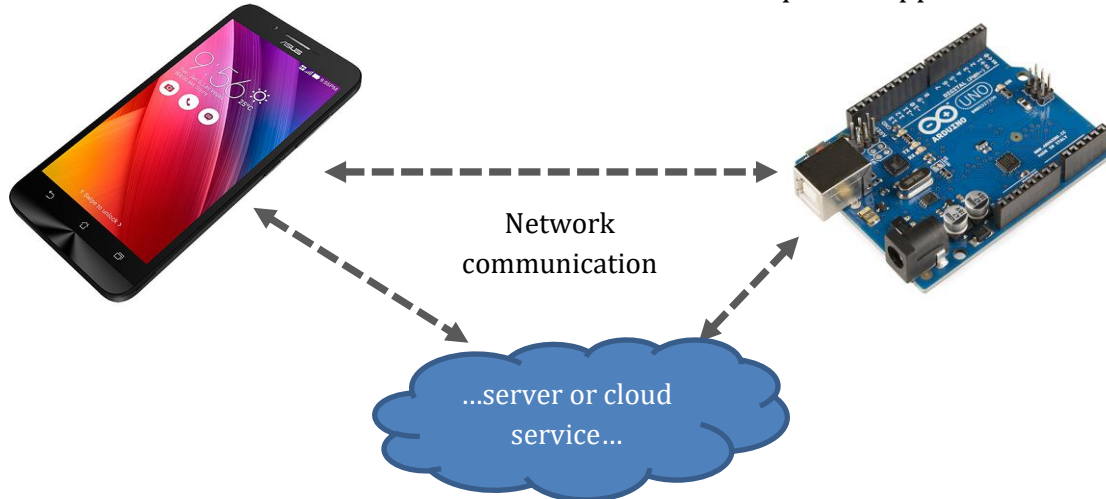
Sistemas de Computação Móvel e Ubíqua (2021/22)

Lists of requirements for the project

Suggested Basic Architecture:

Mobile application: user interaction

Ubiquitous application: sense and act



Concerning the system as a whole:

1. One of:
 - a. The architecture must comprise a 1 to N relationship between the mobile, servers and the controller (Arduino or other). It may be a 1 client to N services or a N clients to 1 service relationship. Naturally N to M relationships are also allowed, and even valued.
 - b. The system can present automatic behaviors depending on the user location or sensing information, e.g. on a smart house, “play personal music playlist” for a user entering the room.
2. Remote communication between the mobile device(s) and the others using WiFi.

Concerning the mobile application:

1. Carefully design the graphical interface.
2. Associate meaningful behavior(s) to:
 - a. the values read from a sensor available in the mobile device (e.g. GPS, accelerometer, etc)
 - b. or to the detection if the device is connected to a particular WiFi access point.

Concerning the ubiquitous application:

1. Use, at least, two different types of sensors.
2. Use one or two different types of actuators.
3. Support automatic actions consequence of the pre-association of behaviors to particular values read from the sensors, e.g. turn on the light when luminosity is lower than a user-defined value.
4. Support on-demand commands, given by the user from his mobile device or from the server, e.g. turn off the light (now).