

Sistemas de Computação Móvel e Ubíqua (2021/22)

The goal of the project is to build a system comprising a mobile application that interacts with an (or more) micro-controllers that sense and act upon the real world. The application's field and purpose are for you to define, considering the published list of requirements.

- **Project Draft:** to be delivered until **April 7th**
- **Project Proposal Presentation:** **April 28th**
- **Project Checkpoint:** to be delivered until **May 19th**
- **Project Delivery:** until **June 5th**

The delivery of all these documents is mandatory, but the project's evaluation will focus exclusively on the final report. The purpose of the intermediate documents is only to ensure that the development is on schedule and it complies to the goals of the assignment. The following sections detail what must be delivered on each date.

Project Draft

The main goal of this document is to give a (non-technical) description of your project. Begin by describing the goal and context of your application. Proceed to describe the main elements of your system and how they relate with each other (you can use an image or schema to better illustrate the system). Finally, describe which functionalities your system will provide, from the end-user's perspective. You must also explicitly indicate how your system complies to all the project requirements.

More specifically, concerning the mobile application: make a brief description of the behavior of your application, you may present some sketches of the user interface. Explain how it connects/communicate with the ubiquitous part of the system and/or server part. Enumerate and describe the main functionalities that you intend to implement and where.

Concerning the Ubiquitous part: enumerate the sensors and actuators that your application requires and, if it is not possible to use such sensors and actuators, elaborate how you plan to simulate them.

Note: If you are not yet sure about the sensors/actuators that you will use, describe what physical phenomena you plan to measure and what actions you want your system to take.

Project Proposal Presentation

Each group must make a brief presentation of the problem they intent to solve, main objectives and project proposal. Maximum duration of each presentation 10 min.

Project Checkpoint

The main goal of this document is to give a technical description of your system's architecture. You must provide a description of:

- the overall architecture, including all its the components, e.g. mobile application, services running in the Cloud (if you need one — note that, for proof of concept, this service may run in your laptop), micro-controller(s), sensors and actuators;
 - the functionality provided by each component
 - the API of each component
- how the system's components communicate and interact with each other (protocols);
- how you will implement your mobile application, including the server counterpart (if such element exists).

Concerning the mobile application, you must present screenshots (or some sketches) of your application and all relevant implementation details that you are planning for you application.