



## Sprint 3 Delivery

MINF UDL 20-21

Ubiquitous and embedded systems

Team 1

### Content:

- a. Backlog tasks;
  - i. Dedication to each task;
- b. Sprint definition;
- c. Percentage of Sprint Completion;
- d. Sprint Review
- e. Next Sprint goals

Effort obtained through poker strategy of scrum time, being a medium between all members' opinions (range between 1-9).

### a. Backlog tasks:

- i. How to -> LCD Screen - **Effort: 2** - (Ron)
- ii. How to -> I2C protocol - **Effort: 8** - (Yoon/Danillo)
- iii. How to -> PCF 8754 - **Effort: 4** - (Ron)
- iv. R.Pi <-> Arduino interaction - **Effort: 9** - (Yoon/Danillo)
- v. Presentation - **Effort: 2** - (Danillo)

## b. Sprint definition

Sprint 3: "The goal of this sprint is to develop some important features needed to the final project, such as graphical representation and interaction between the components of the main part of the project"

i. Related User Stories:

### 1. Operator requires graphical representation of the temperature and humidity , obtained within the last 24h, in the controller.

a. Acceptance criteria:

- i. The Temperature and Humidity must be shown in the LCD Screen
- ii. The communication between the components using i2c must be well defined.

b. Related tasks:

- i. How to -> LCD Screen
- ii. R.Pi <-> Arduino interaction

### 2. Operator requires information of the current tank container level in real time and it must be shown in a led bar present in the controller.

a. Acceptance criteria:

- i. The LED Bar should represent the level compound
- ii. The variables must be received inside the i2c system to distribute to each respective graphical representation

b. Related tasks:

- i. How to -> I2C protocol
- ii. How to -> PCF 8754

## c. Percentage of Sprint completion

- i. How to -> LCD Screen - **100%**
- ii. How to -> I2C protocol - **100%**
- iii. How to -> PCF 8754 - **100%**
- iv. R.Pi <-> Arduino interaction - **100%**

## d. Sprint review / Sprint goal

"The goal of this sprint was to research and fully understand the components included in the main project communication, such as the i2c communication, raspberry and LCD integration, so in that way we can in the next sprint implement all the knowledge and achieve the final graphical representation needed for the project."

## e. Next Sprint goals

Sprint 4: “The goal of this sprint is to develop the final layer of components of the project using the obtained knowledge, which consists of the LED Bar representation and the LCD Screen.”

Sprint 4 Tasks:

- Data log and Screen representation - **Effort: 3** - (Yoon)
- Ultrasonic <-> Led bar representation - **Effort: 5** - (Danillo)
- Final project assembly - **Effort: 8** - (Group)
- Presentation - **Effort: 2** - (Ron)