# Planning

This document contains the planning for the “Proyecto Integrador” which will be the final product to the customer. It also includes sections to specify details like objectives, resources, dates, main tasks, roles and responsibilities.

### Documents Related:

* 20190527 Requisitos del proyecto integrador CESEQ: The requirements of the customer.

## Objectives:

Complete the design, development and testing of the “Proyecto Integrador” in time and with quality to the customer.

As derived objectives: Implement the task according to the milestones with the standards described in this document.

## Resources:

The development team has the following participants:

* Jesús Ramírez Solano
* Luis Erick Sánchez
* Jesús Tadeo

The following list is the hardware resources that the development team has

* Development kit: RENESAS YSSKS7G2E30
* Display: 320X240, 2.4’’
* CESEQ\_P001 as power device
* CESEQ\_C001 as device to be controlled
* UTEQ laboratory as facilities with multimeter, Oscilloscope, cables, etc.

## Milestones:

In this section are considered the milestones to ensure that the “Proyecto Integrador” is on track and as a result will be delivered on time.

In the following chart are listed the main tasks, related tasks, and dates to complete them. The details of those tasks will be described in Activities, Tasks, And Priority sections.



## Activities:

The activities mentioned in this section are considered critical to the “Proyecto Integrador”. So, they are listed with a description in order to clarify the activity.

* Start the project: This date is considered the first day of the project.

## Tasks:

This section includes the activities that they are very well defined and they have a deliver to increment the capabilities of the “Proyecto Integrador”. Are considered two type of tasks:

* Tasks Related to the project: Which are tasks that impacts directly to the project and also are important to the customer.
* Tasks Derived: These types of tasks are not necessarily visible to the customer, but they are needed to develop the “Proyecto Integrador”.

All the task (listed in the Gantt Chart in section Milestones) are classify according with the types mentioned in this section.

## Priorities:

The “Proyecto Integrador” requires to prioritize the tasks (listed in the Gantt Chart in section Milestones) in order to keep the project on track.

The priority is considered a live item in the Gantt chart because at the planning the activity could be considered with an estimated priority and during the execution of the project, the activity or its time to be complete it can cause to have a different priority.

The priorities used in this project are:

* Priority A: Is a must for the project and a milestone.
* Priority B: Is important for the project but can wait if a priority A needs to be attended
* Priority C: Is not important for the project but can be useful for the team.

## Roles and Responsibilities:

### Responsibilities

The team will decide who will be the responsible to complete a task. This means that not necessarily that person will do the task. The column “Assigned to” (in the Gantt Chart in section Milestones) contains the name of the team’s member that is responsible of that task.

### Roles

The nature of the project requires the following Roles:

* Configuration Management Leader: This role includes:
  + Git management, the creation of the branches, merge the branches, and give general support to the rest of the team members.
  + Define and implement the software delivering process. Define, create, and use the process to generate the releases of the project.
* System Engineer: This role is in charge of generate the high-level requirements. This means that this role will take system decisions, high-level design, and system testing. Since the team is using Scrum as Agile methodology, the System Engineer is also considered the Project Owner.
* Developer: This role is considered low-level implementation, design and testing. This means that the developer will design how to solve a code tasks (code module), implement them, and test them as units. Report the metrics and use the configuration management defined by the team.
* Quality: This role will evaluate, report and suggest any consideration to mitigate any risk of loss of quality to the project. Also, is in charge to consolidate the metrics of the project and keep track of them.
* Team: All the team members are responsible to complete any task assigned, and play any role assigned with responsibility. Any team member can rise the hand to the responsible or to the team in case that something is not according to the plan or is not in the plan, as well as, any matter that needs attention from the team in order to achieve the objectives of the project.

According to the skills of the team members, the team has decided that at beginning of each task the team will evaluate the resources, skills, and priorities to have a better fit between the task and the resources available.

Any other aspect not defined in this document, will be discussed in the team to assign its responsible and duties.

## Standards for evaluation and control:

Each task needs to be evaluated to kwon if the estimation was correct or the team needs to improve its estimations, knowledge, etc. The mechanism to improve the team is taken from the Agile Scrum methodology.

The metrics to control and know if the team is according with the plan are:

* Time of development: The hours expend to complete a task.
* Lines of code: To keep track if the complexity of the modules (cyclomatic complexity)
* Static analysis: Use a tool to correct the standards for the code files and keep them in 0 per code file.
* Complexity: the estimated complexity vs real complexity.