

# Pressure Detection System

## Specification (from the client)

- **A pressure detection** informs the crew of a cabin **with an alarm** when the pressure exceeds 20 bars in the cabin.
- **The alarm duration** equals 60 seconds. keeps track of the measured values.
- keeps track of the measured values.

# Case Study:

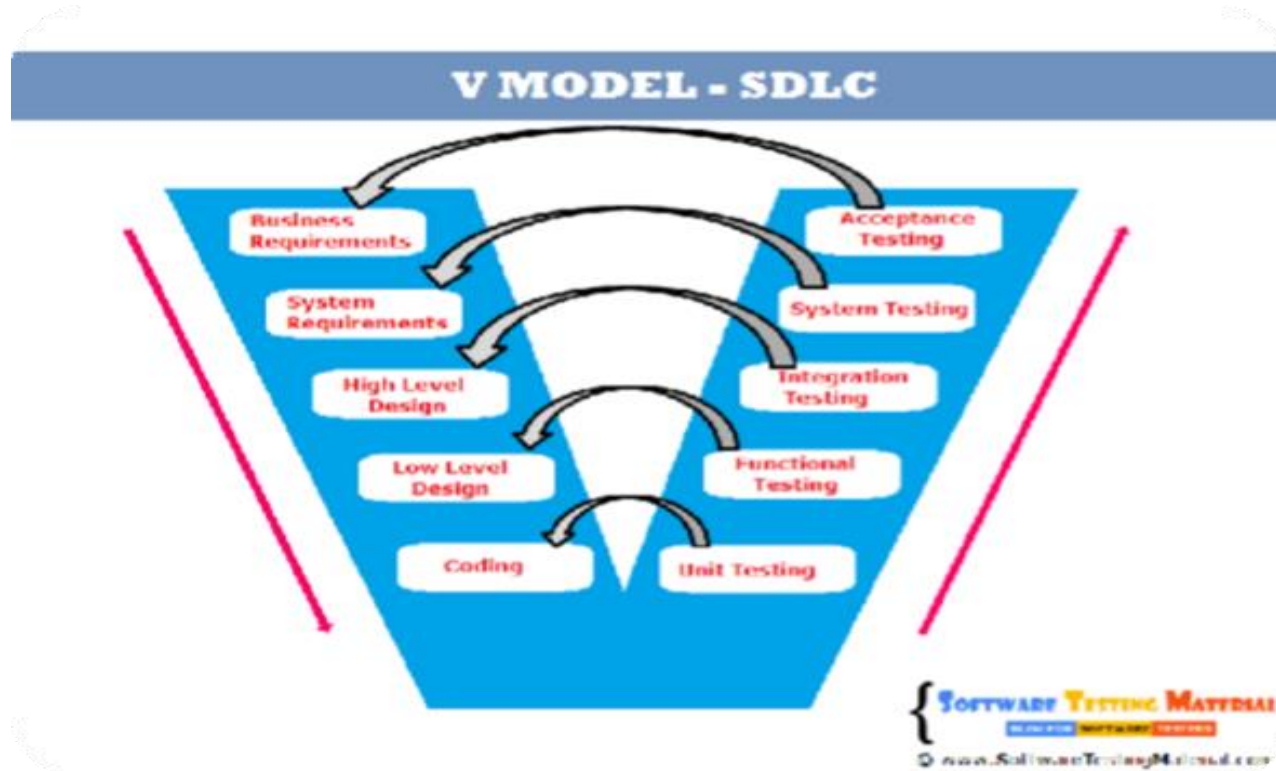
- **Pressure detection: Assumptions**

- The controller set up and shutdown procedures are not modeled
- The controller maintenance is not modeled
- The pressure sensor never fails
- The alarm never fails
- The controller never faces power cut
- The external memory spaces not be handling

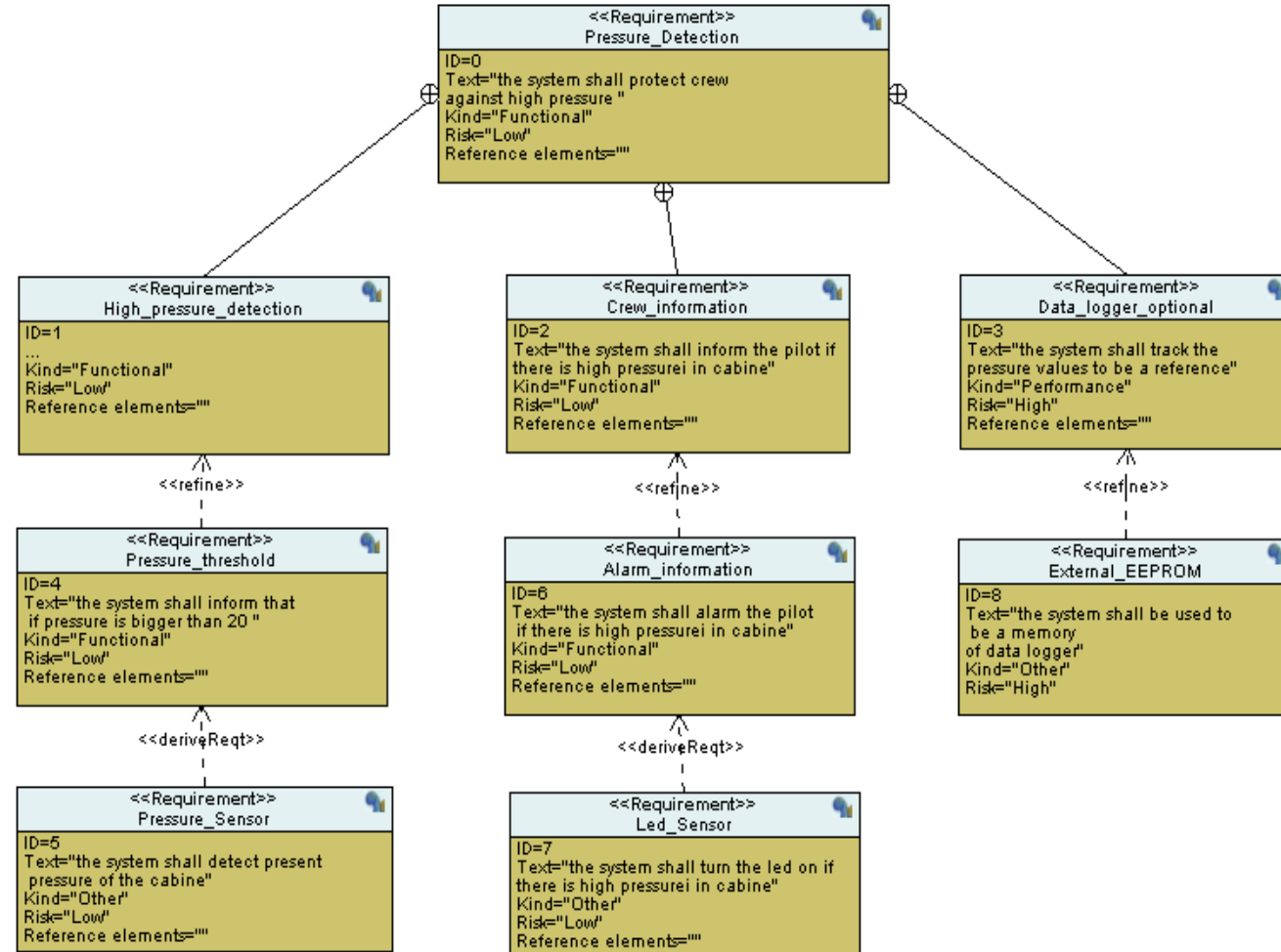
- **Versioning**

- The "keep track of measured value" option is not modeled in the first version of the design

# Method of Software Developing Life Cycle :



# Requirements :

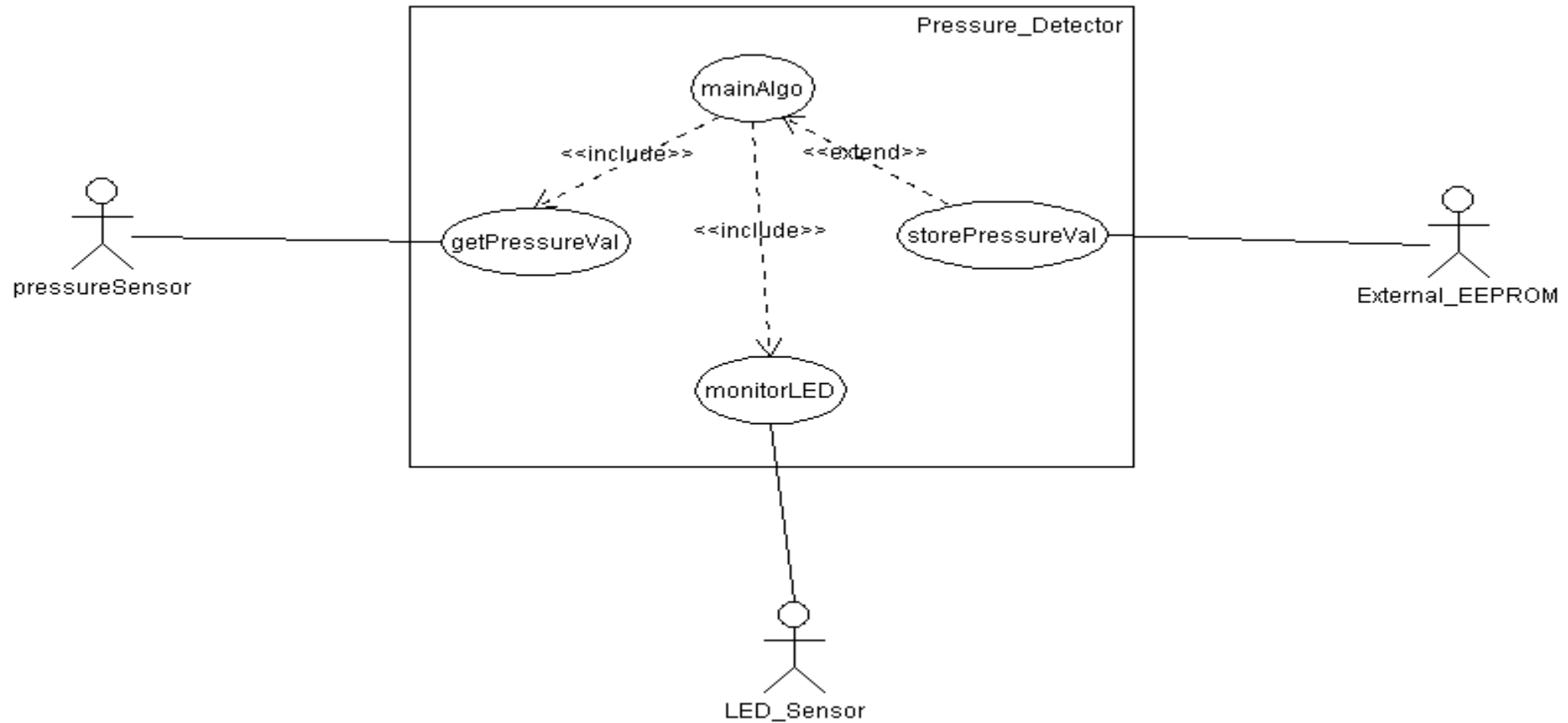


# Space Exploration/partitioning :

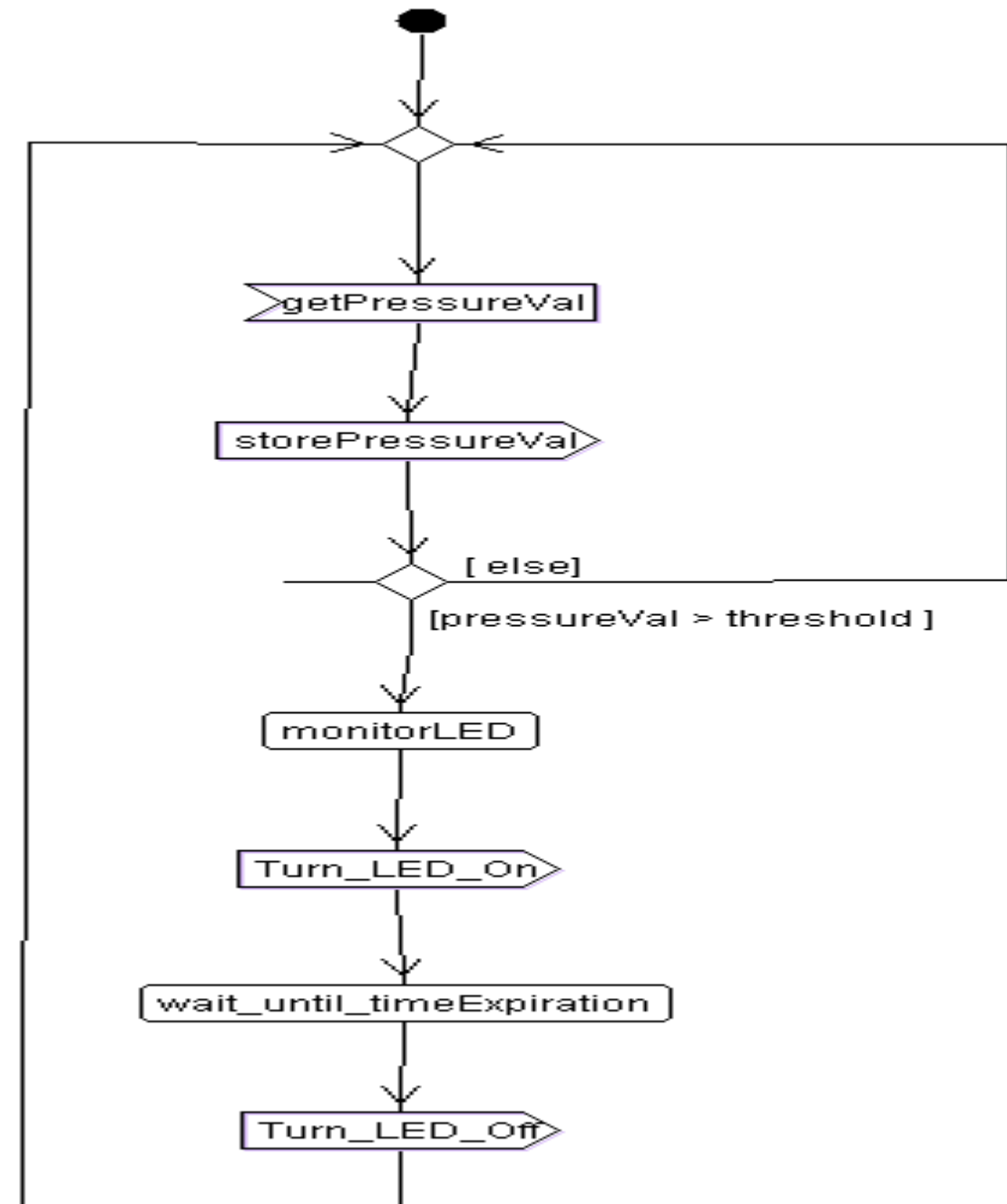
- We choose [STM32F103C8T6](#) as our SOC.
  - **Features** >
    - Core : ARM 32-bit Cortex™-M3 CPU with 72 MHz .
    - Mem: 128 Kbytes of flash memory and 20 Kbytes of SRAM.

# System Analysis :

- Use Case Diagram



- Activities Diagram :



- Sequence Diagram :

