
MASTERING EMBEDDED SYSTEM ONLINE DIPLOMA

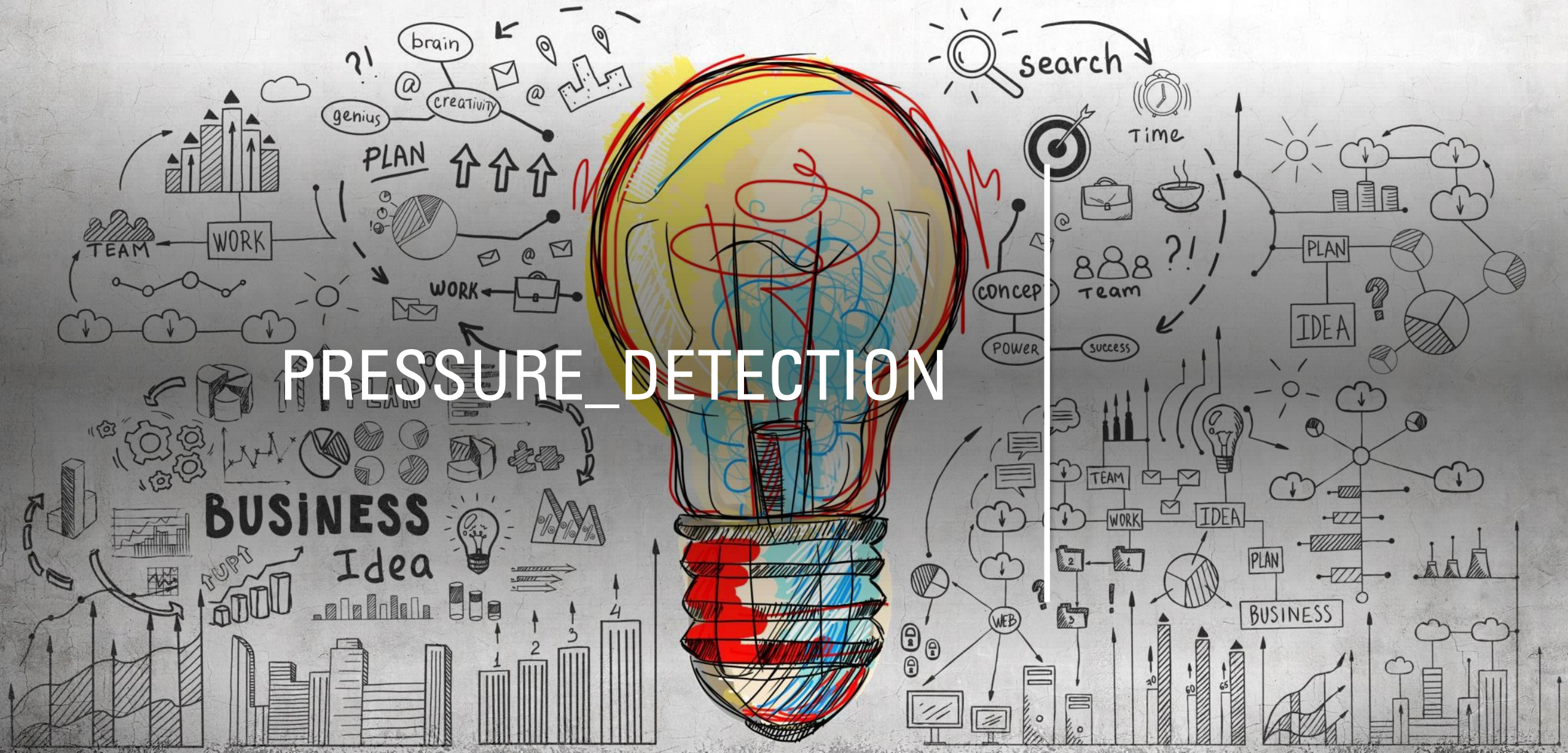
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FIRST TERM (FINAL PROJECT 1)

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PRESSURE_DETECTION



SYSTEM DESIGN SEQUENCE

- Case Study
 - Method
 - Requirements
 - Space Exploration
 - System Analysis
 - System Design
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CASE STUDY

- The controller set alarm when the pressure is above 20 bar
- The alarm duration is 60 sec
- Track the measured values (optional)

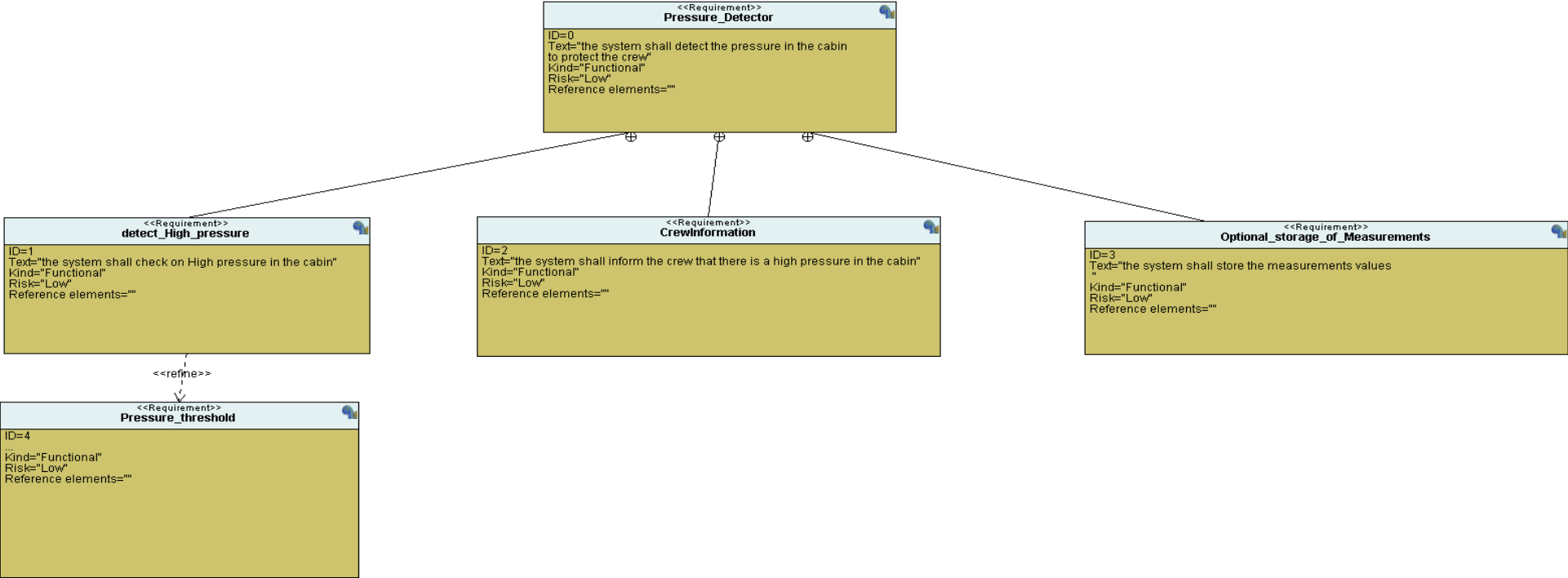
METHOD

- SDLC :software Development life cycle



REQUIREMENTS

- Requirement Diagram



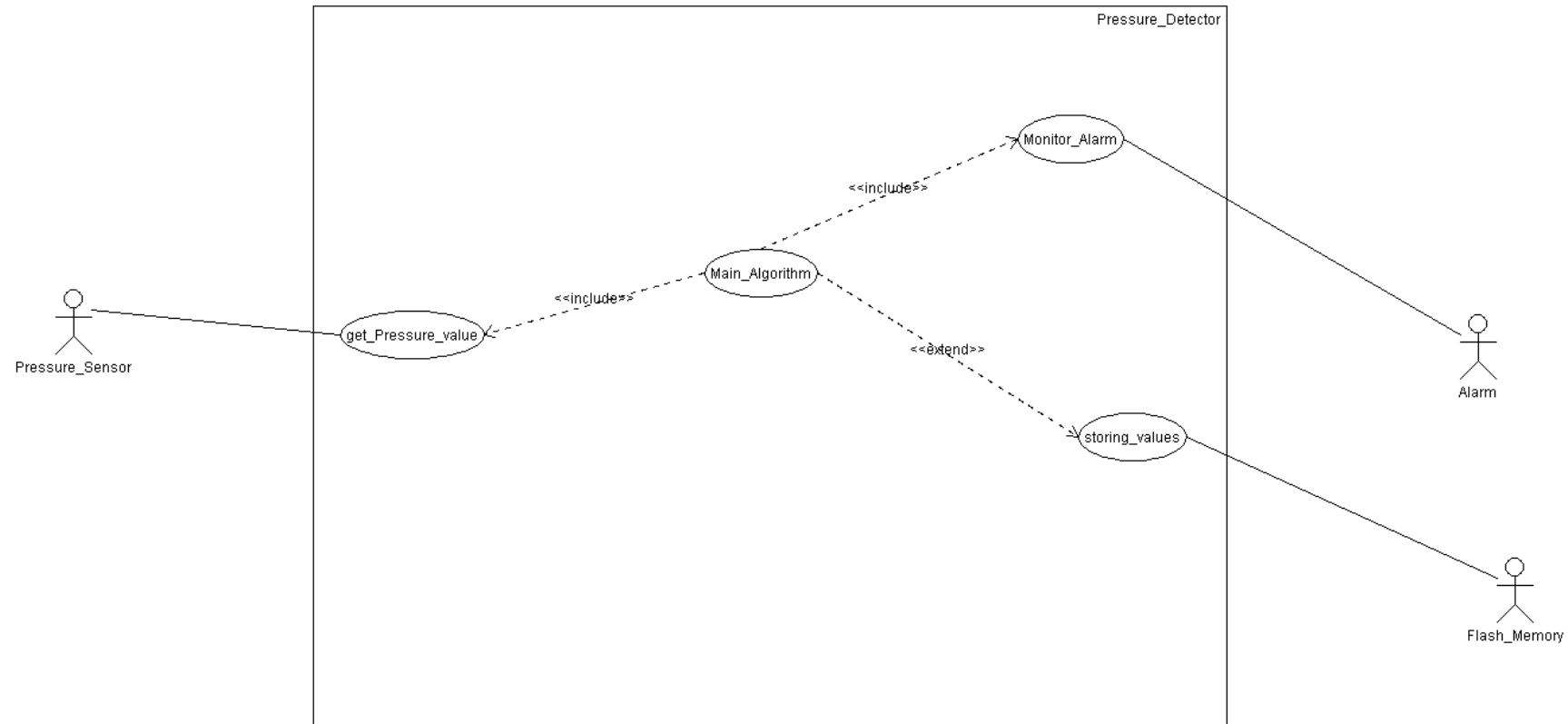
SPACE EXPLORATION

- Use one microcontroller (STM32F103C6) to get the sensor values and set alarm

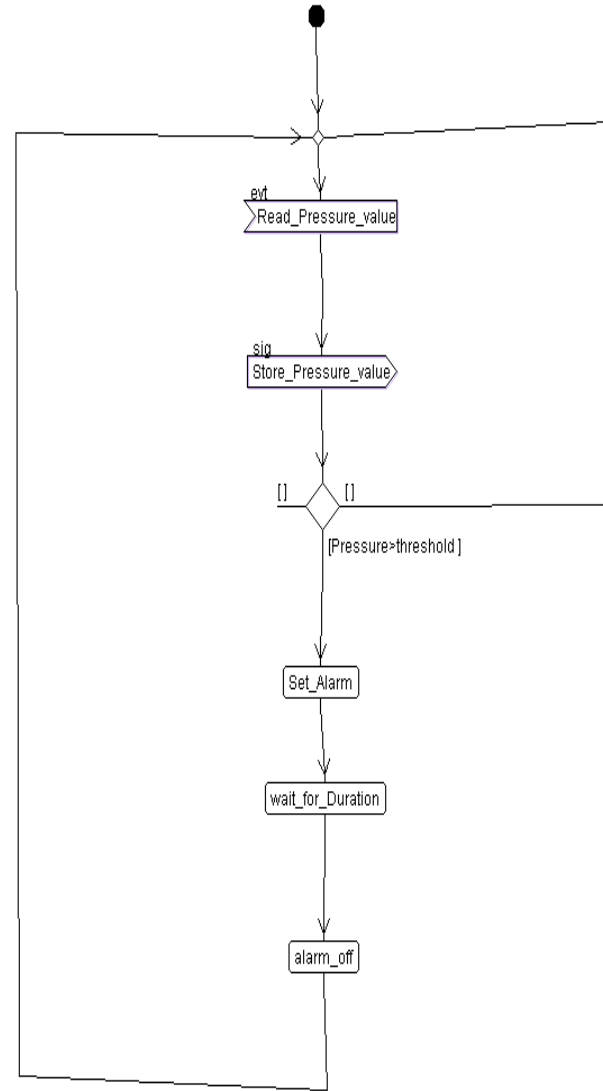
SYSTEM ANALYSIS

- USE CASE DIAGRAM
 - ACTIVITY DIAGRAM
 - SEQUENCE DIAGRAM
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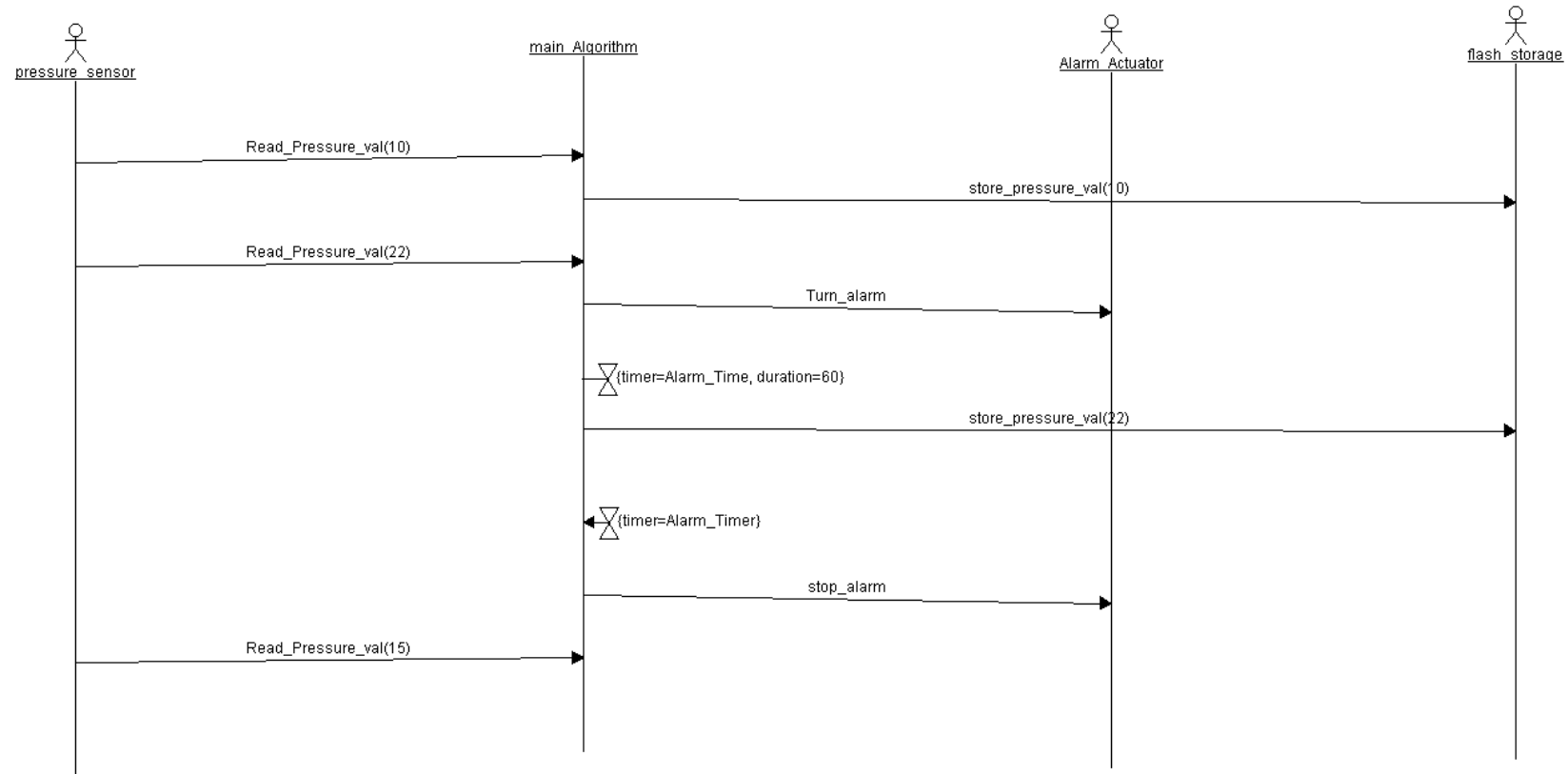
USE CASE DIAGRAM



ACTIVITY DIAGRAM

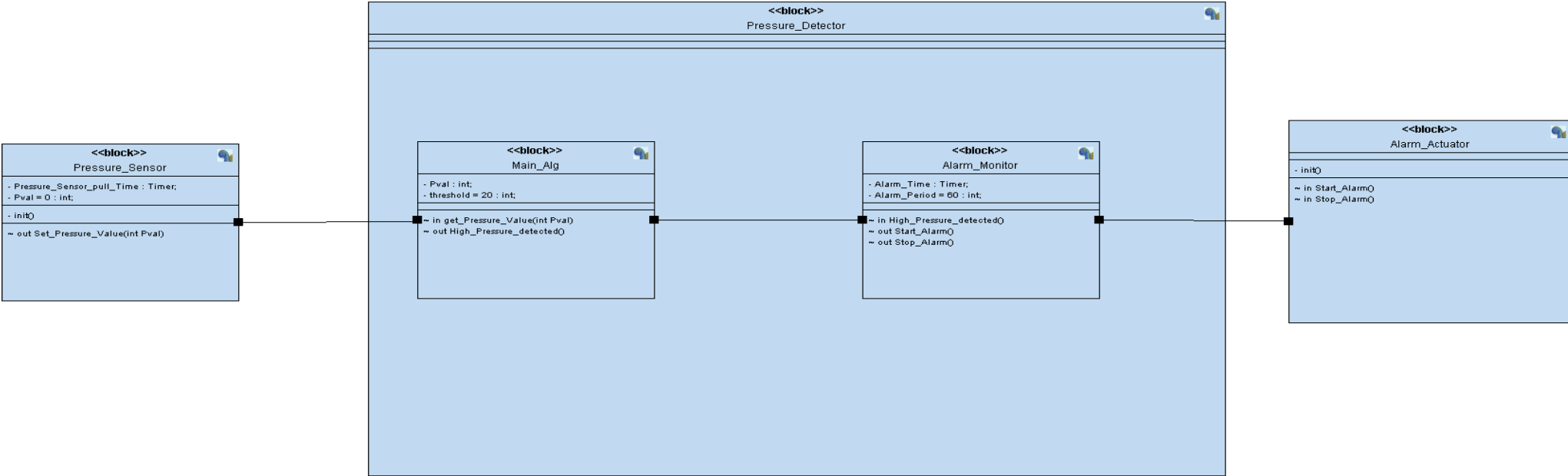


SEQUENCE DIGRAM

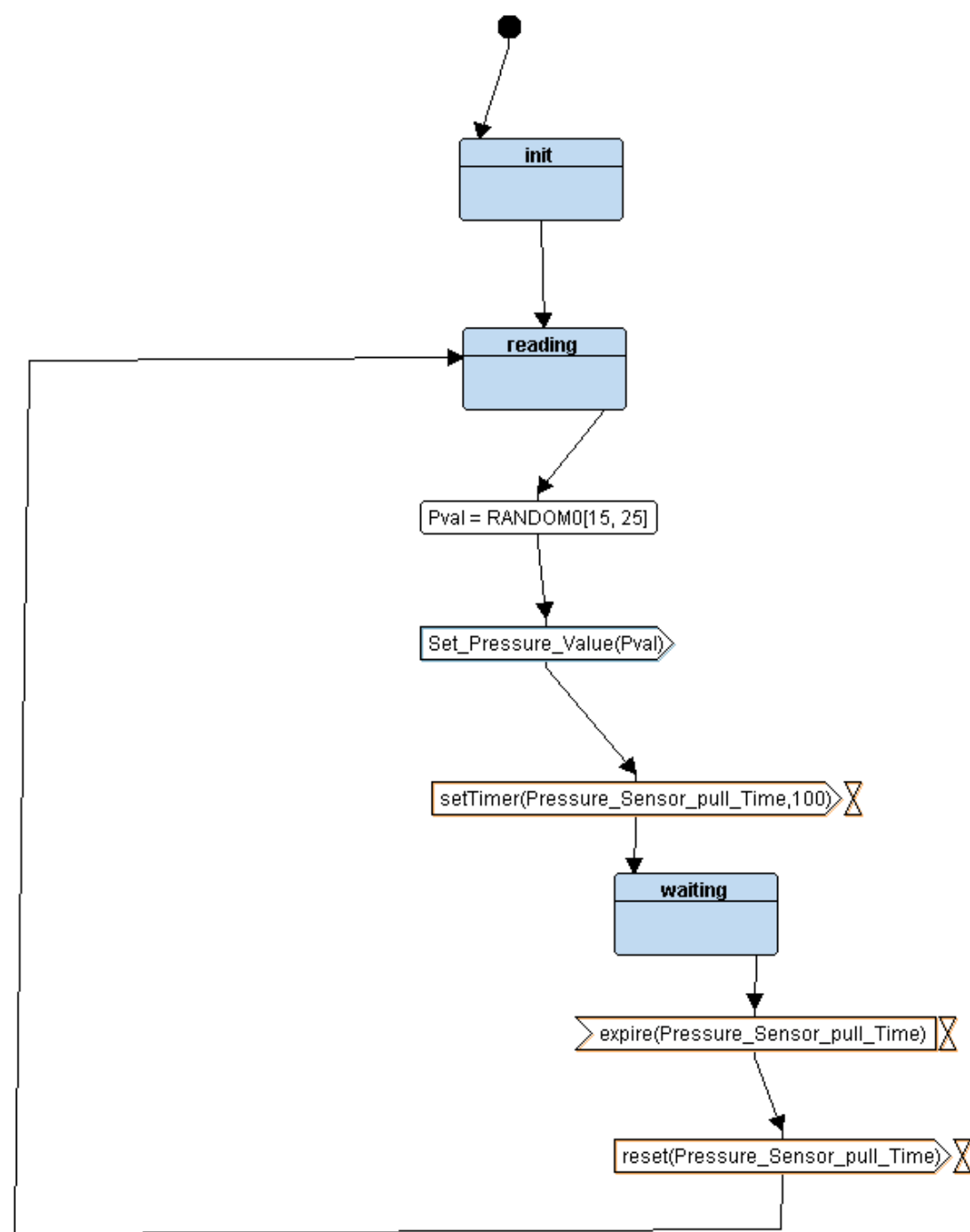


SYSTEM DESIGN

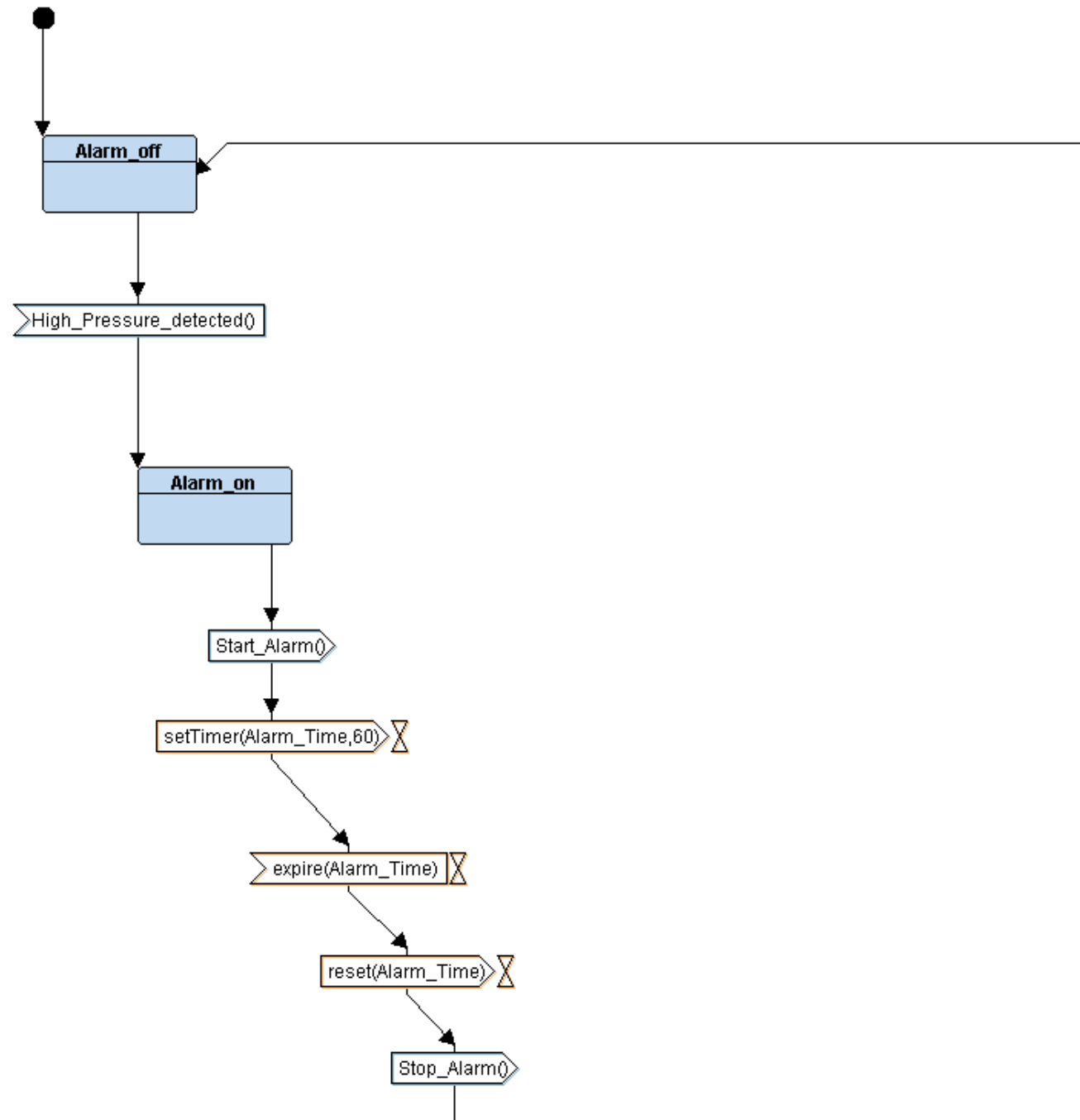
- Block Diagram



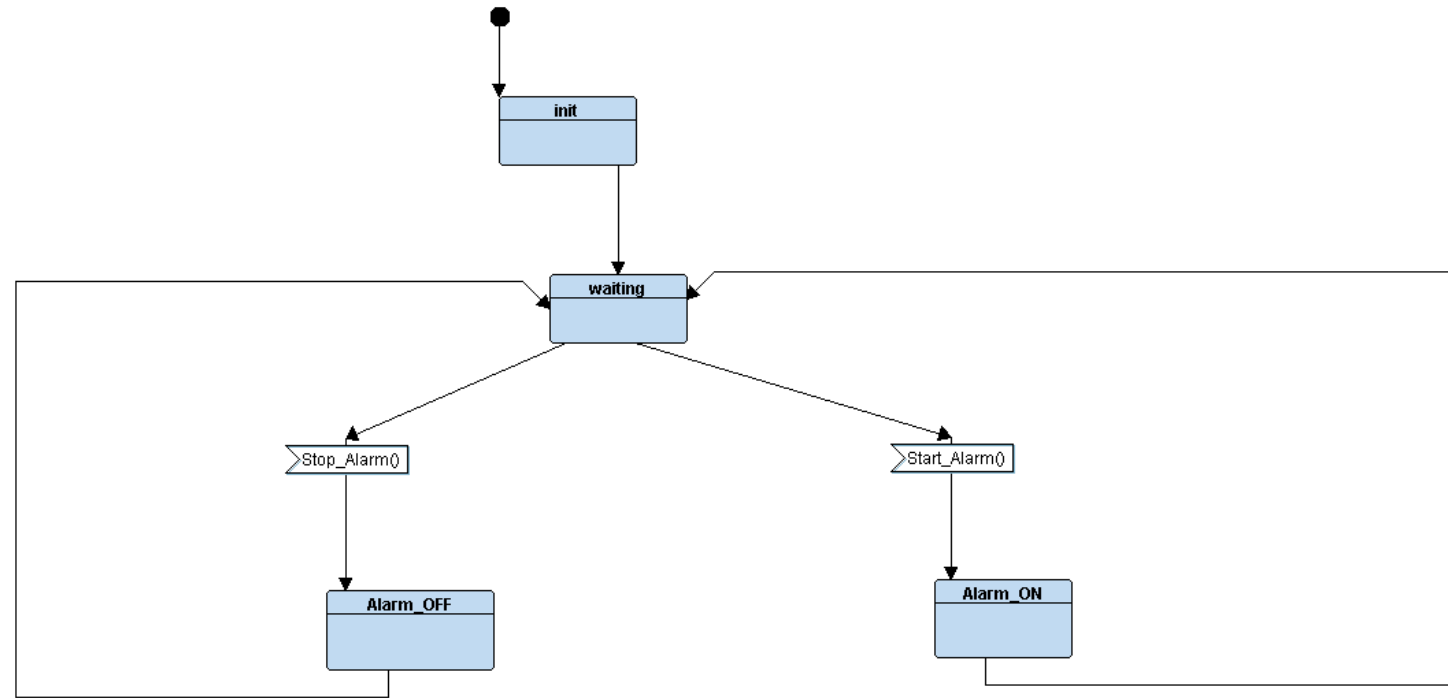
PRESSURE SENSOR DRIVER



ALARM MONITOR DRIVER



ALARM ACTUATOR DRIVER



MAIN ALGORITHM

