Project 1

Pressure Detection Project Report

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Case Study

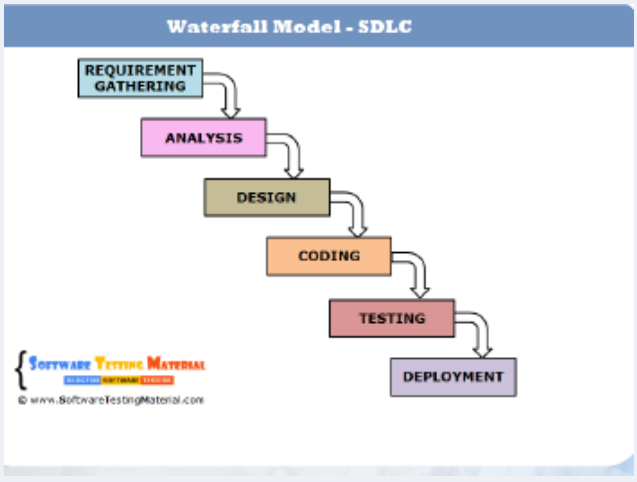
A pressure detector that's supposed to inform the crew when the pressure exceeds 20 bars and turn the alarm on for 60 seconds.

Assumptions

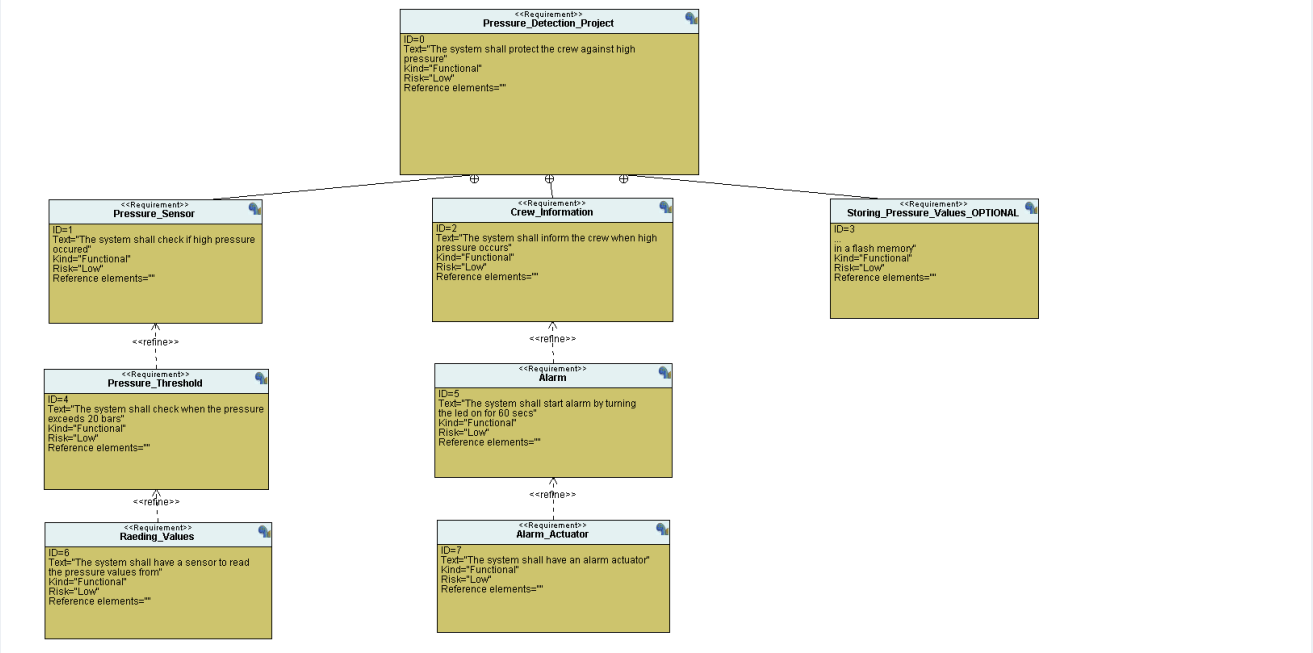
- *Sensor never fails*
- *Alarm never fails*
- *The system doesn't witness power cut*

Method

the system was designed using the Waterfall model , following the UML standards

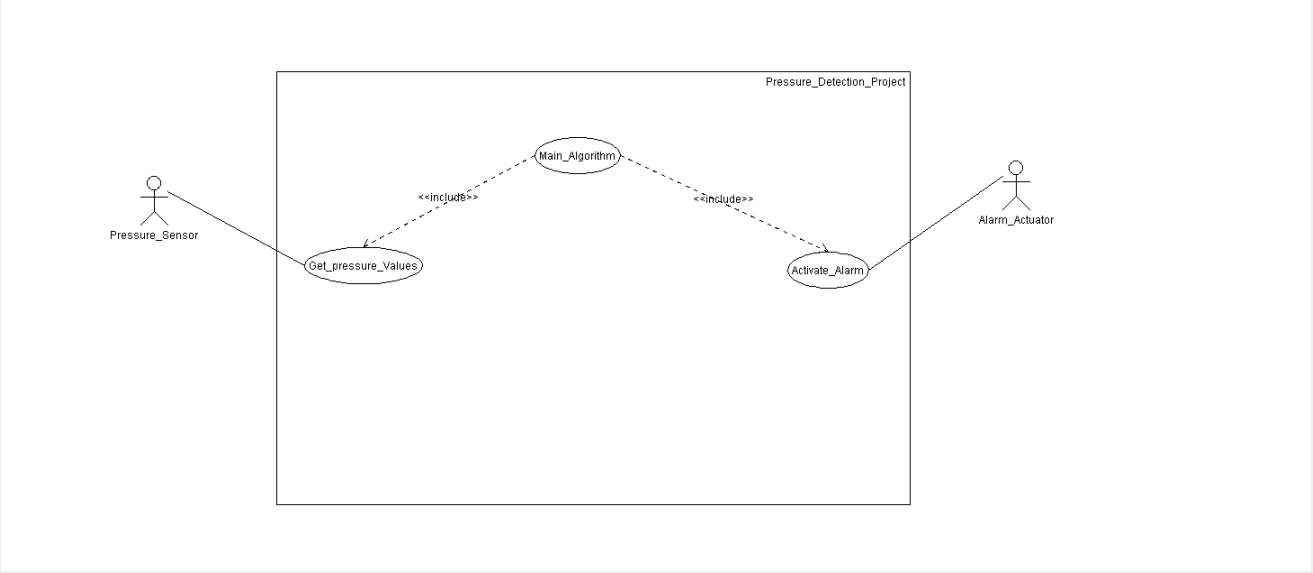


Requirements Diagram

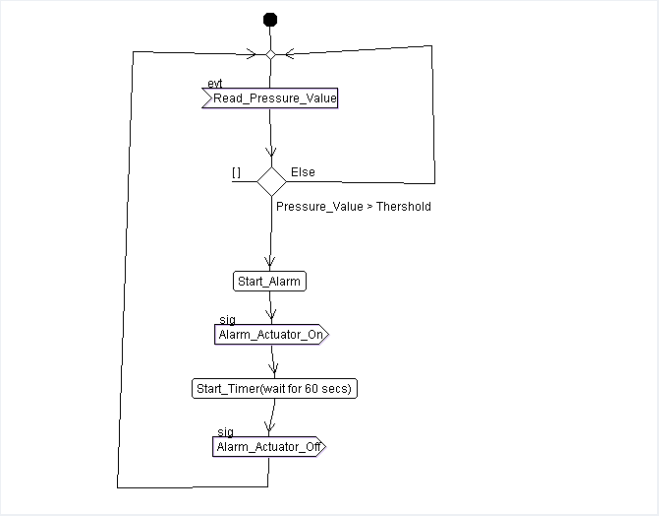


System Analysis

a) Use Case diagram

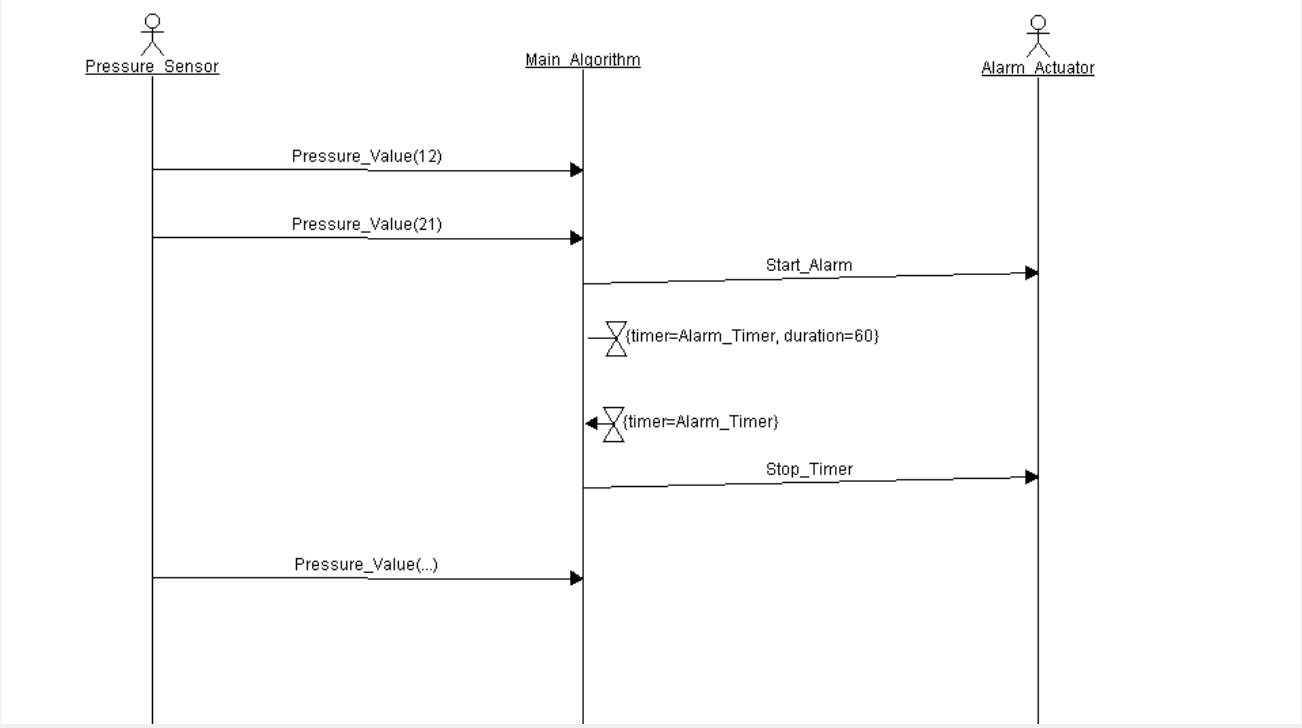


b) Activity diagram

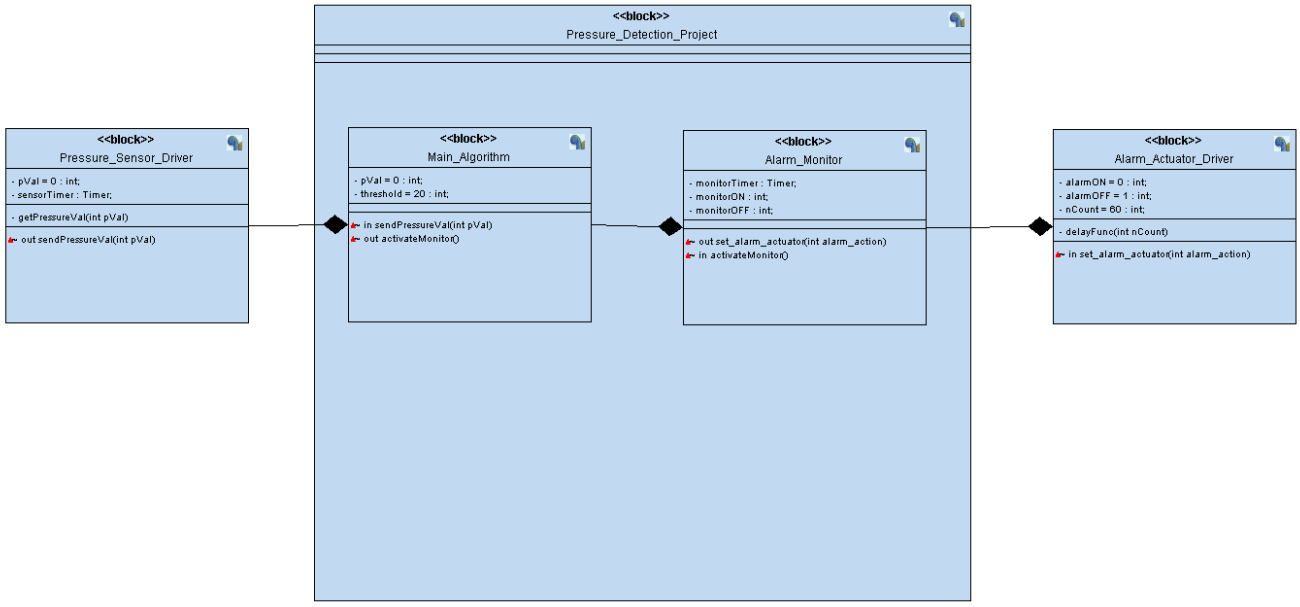


System Analysis

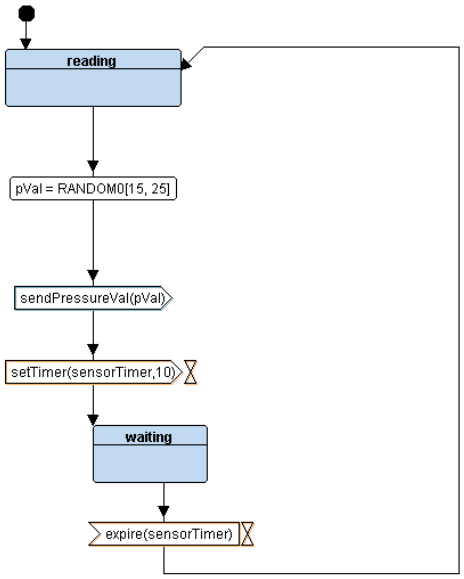
c) Sequence diagram



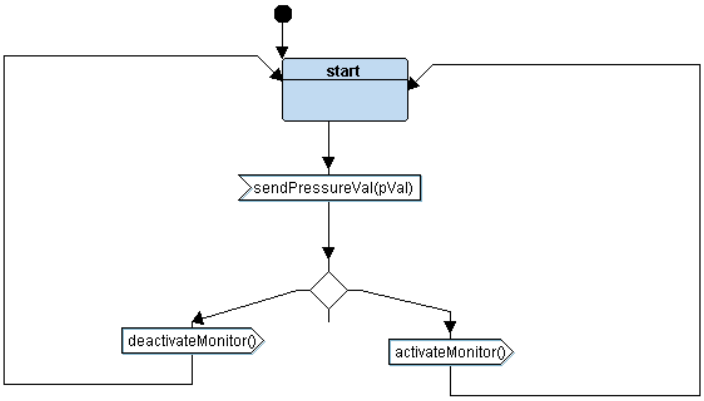
Block Diagram



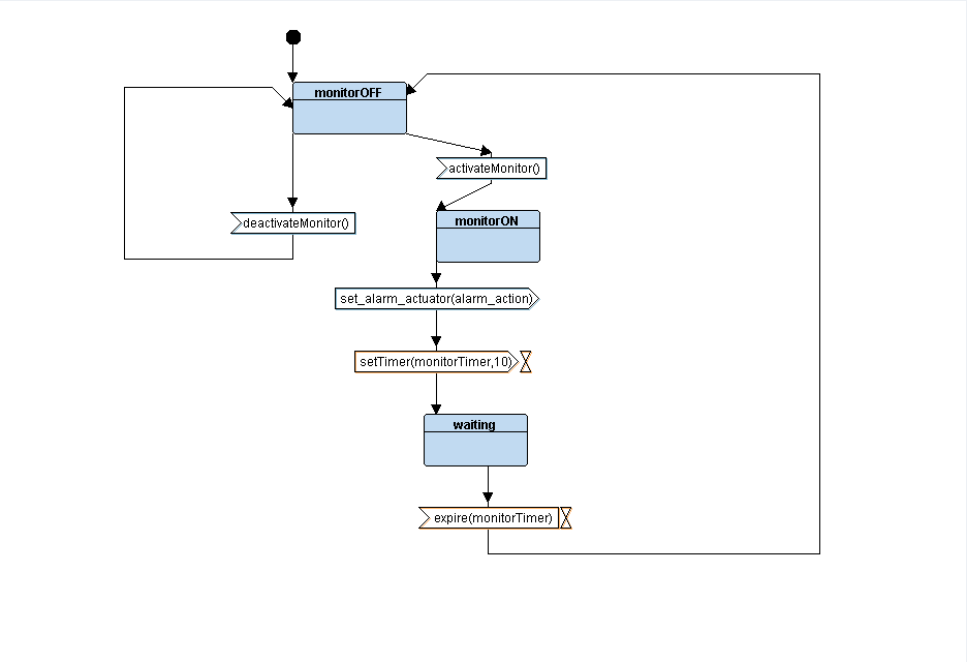
a) Pressure sensor driver



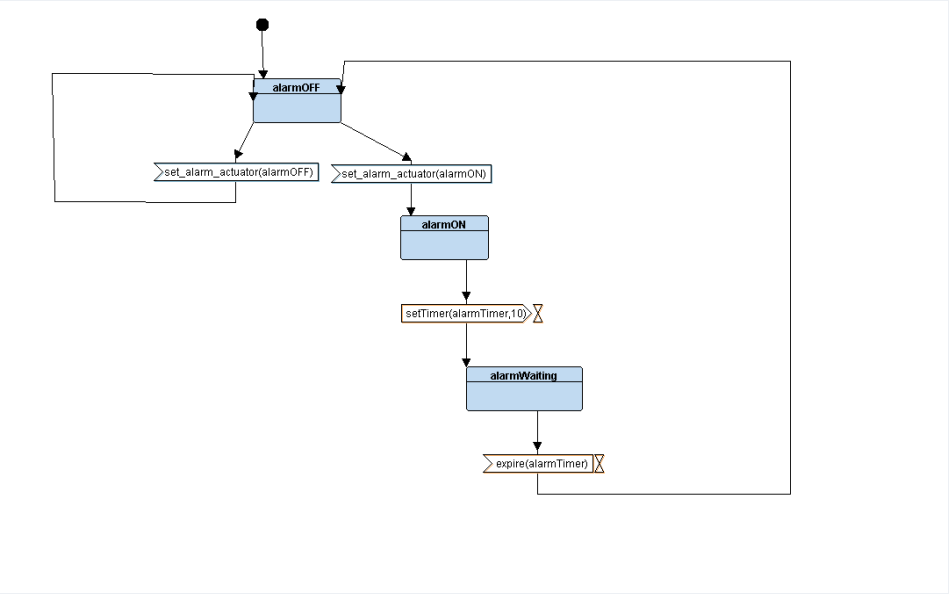
b) Main algorithm



c) Alarm monitor

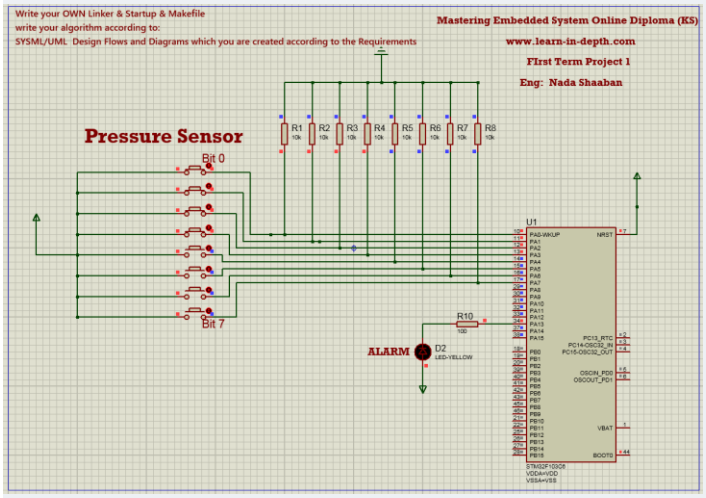


d) Alarm actuator driver



Simulation

Pressure = 15 <20



Pressure = 31 > 20