Mastering Embedded System Online Diploma

First Term - Final Project 1

High Pressure Detection Project

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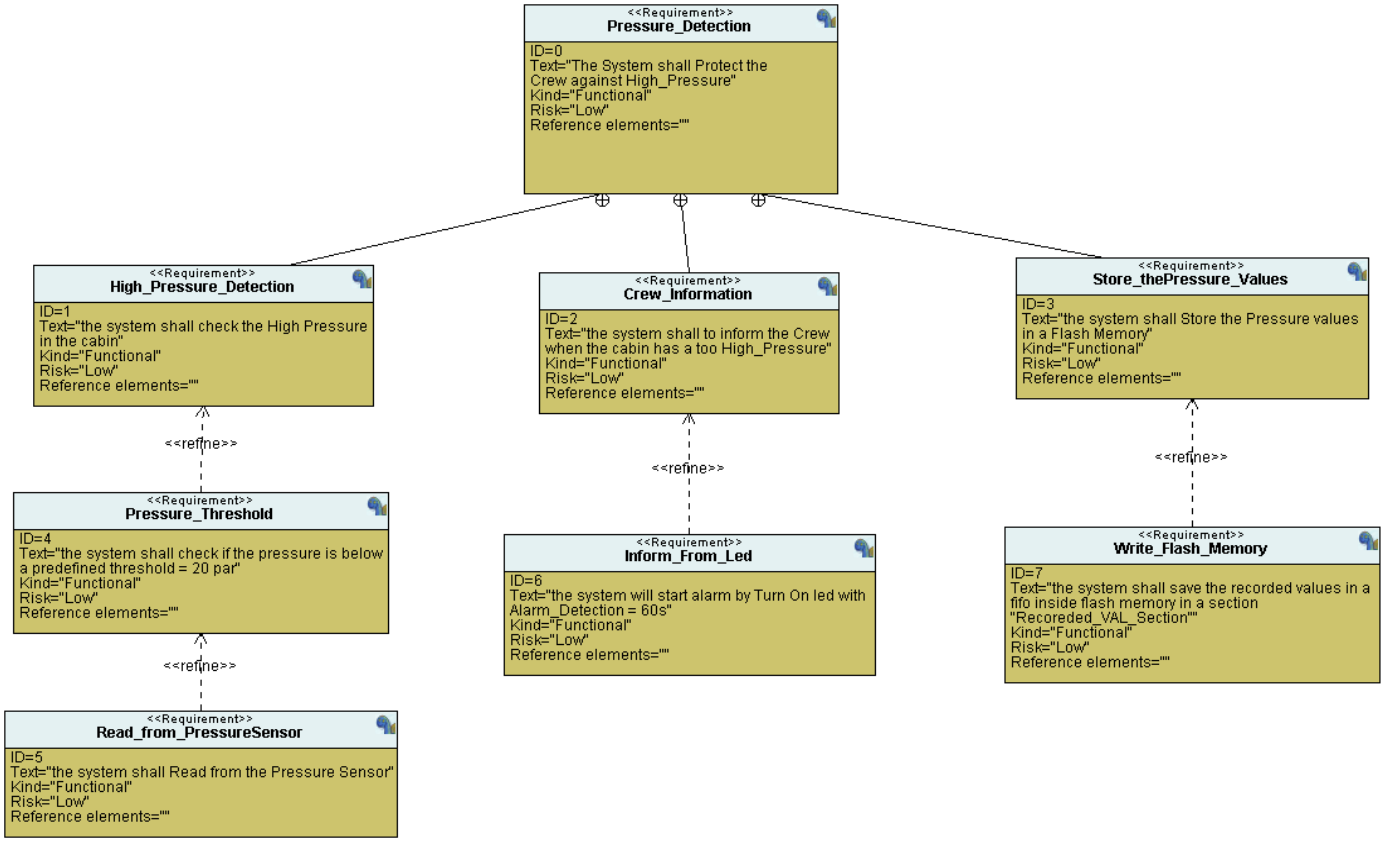
Case Study

- A Pressure Controller informs the crew of cabin with an alarm when the pressure exceeds 20 Bars in the cabin.
- The Alarm duration equals 60 Seconds.
- Keep track of the measured values.

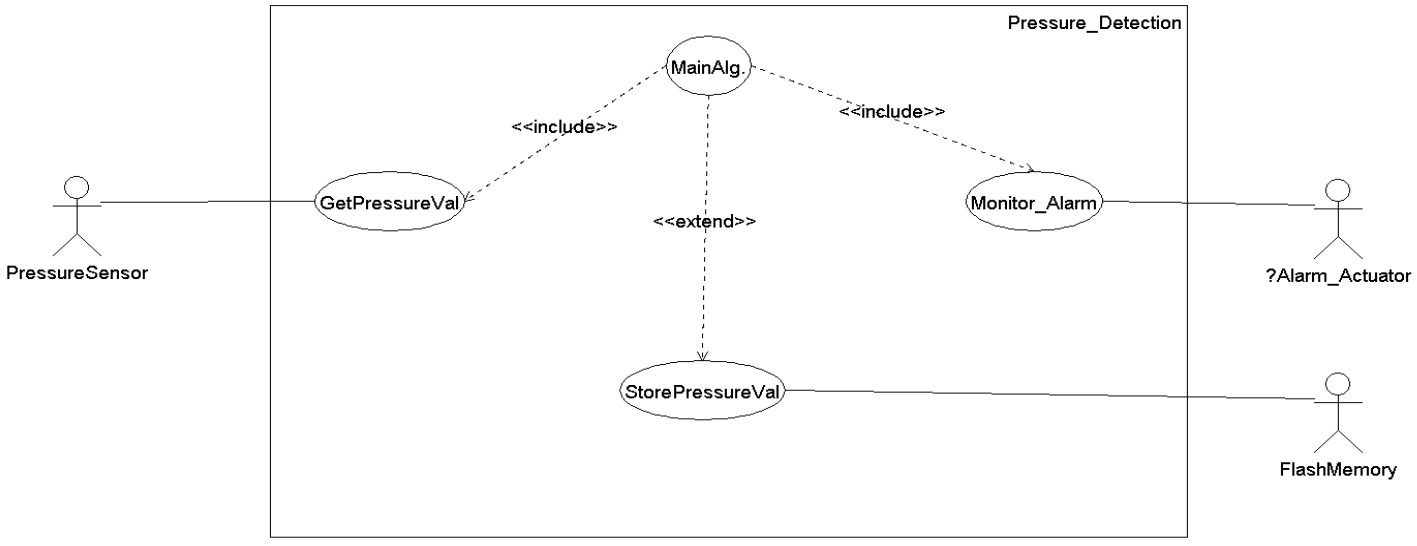
Assumptions

- The System setup and shutdown procedures are not modeled.
- The System maintenance is not modeled.
- The Pressure Sensor never fails.
- The Alarm never fails.
- The System never faces power cut.

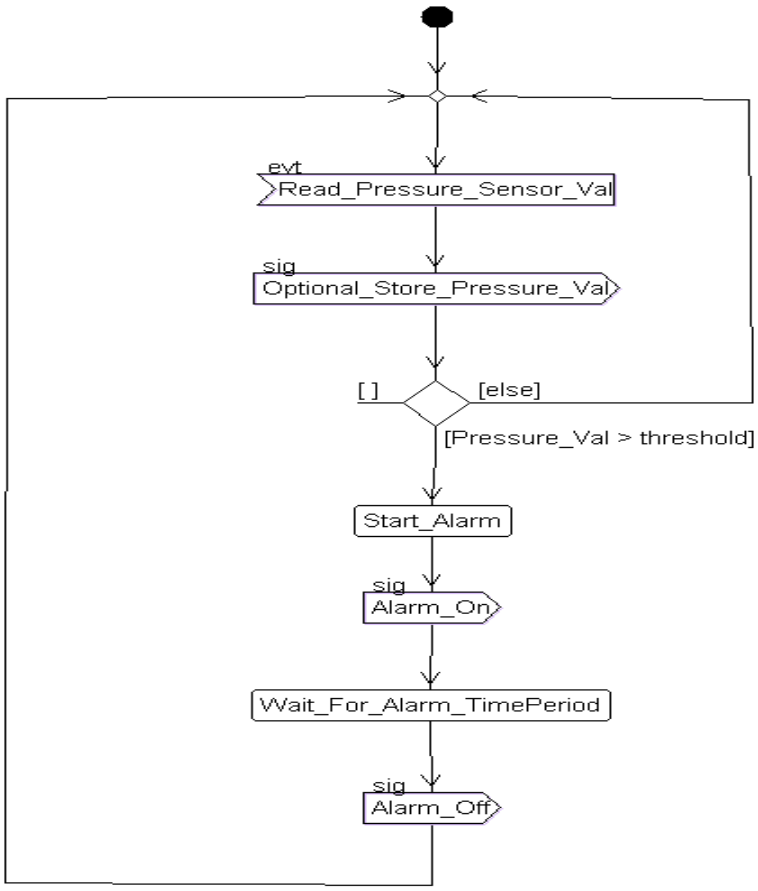
Requirements



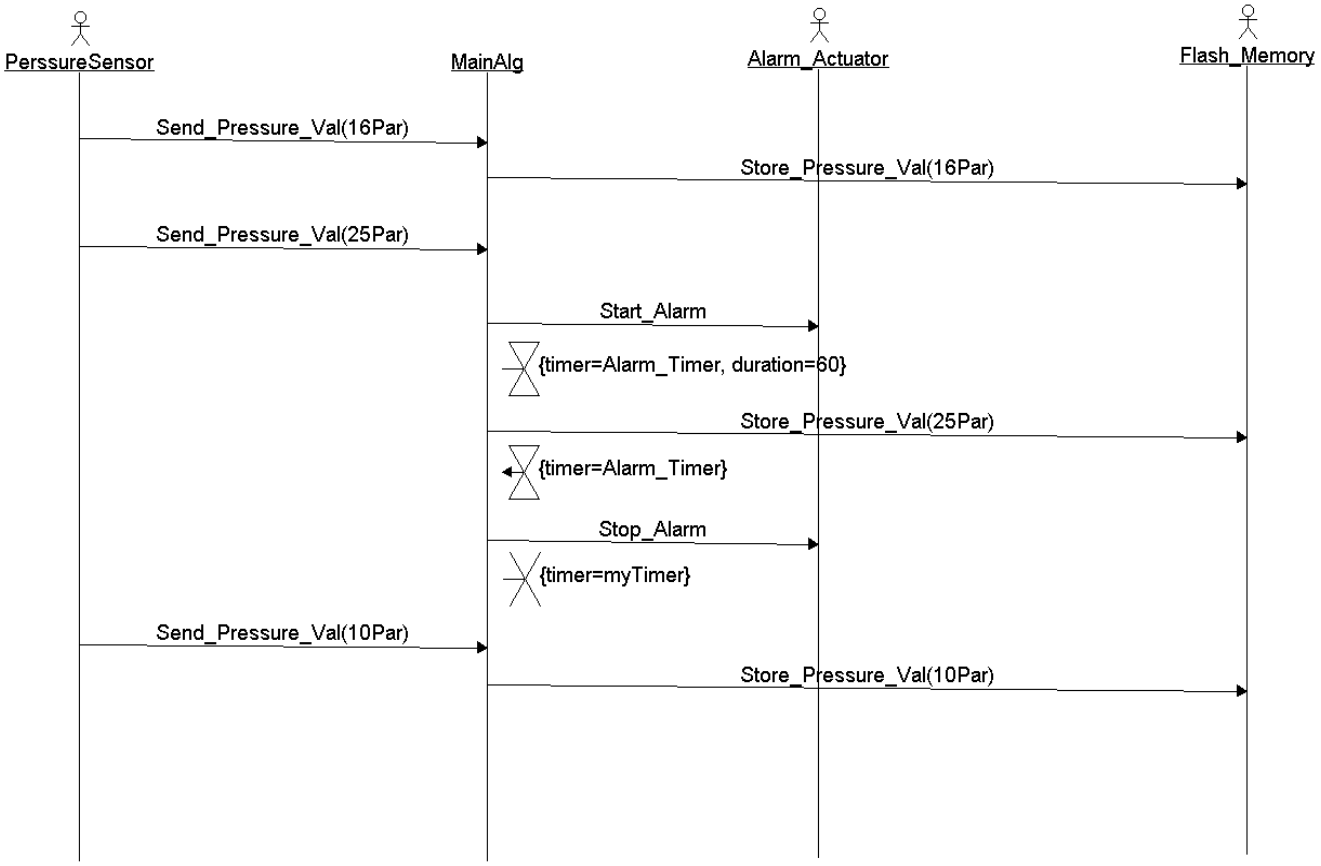
System Analysis : Use Case Diagram



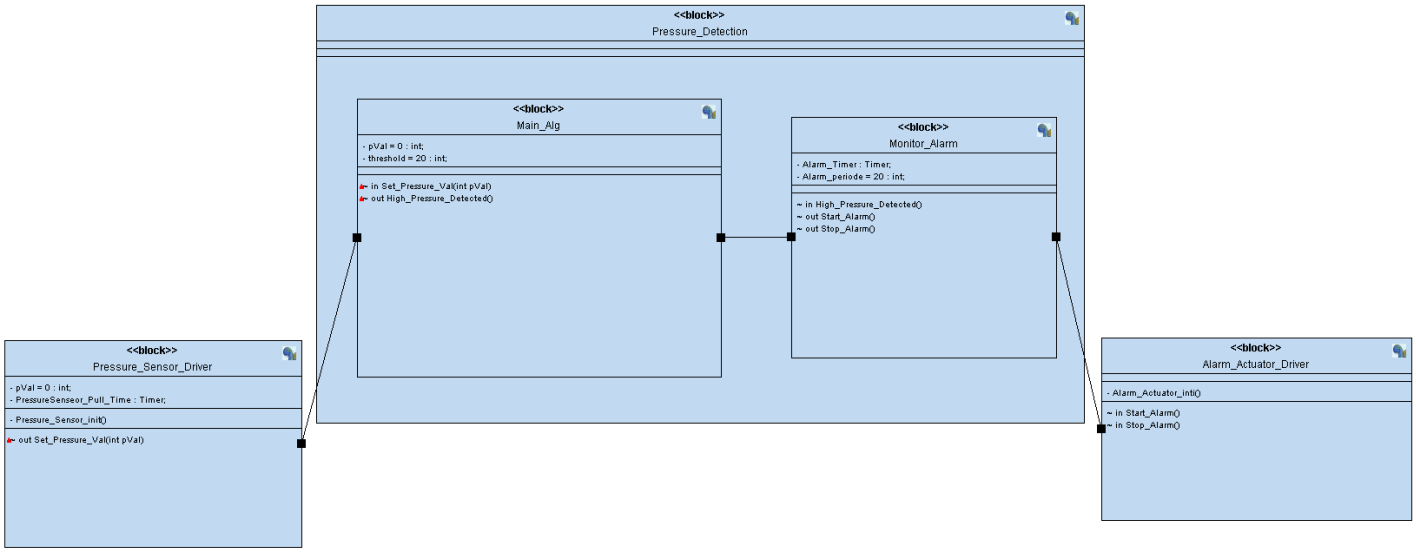
System Analysis : Activity Diagram



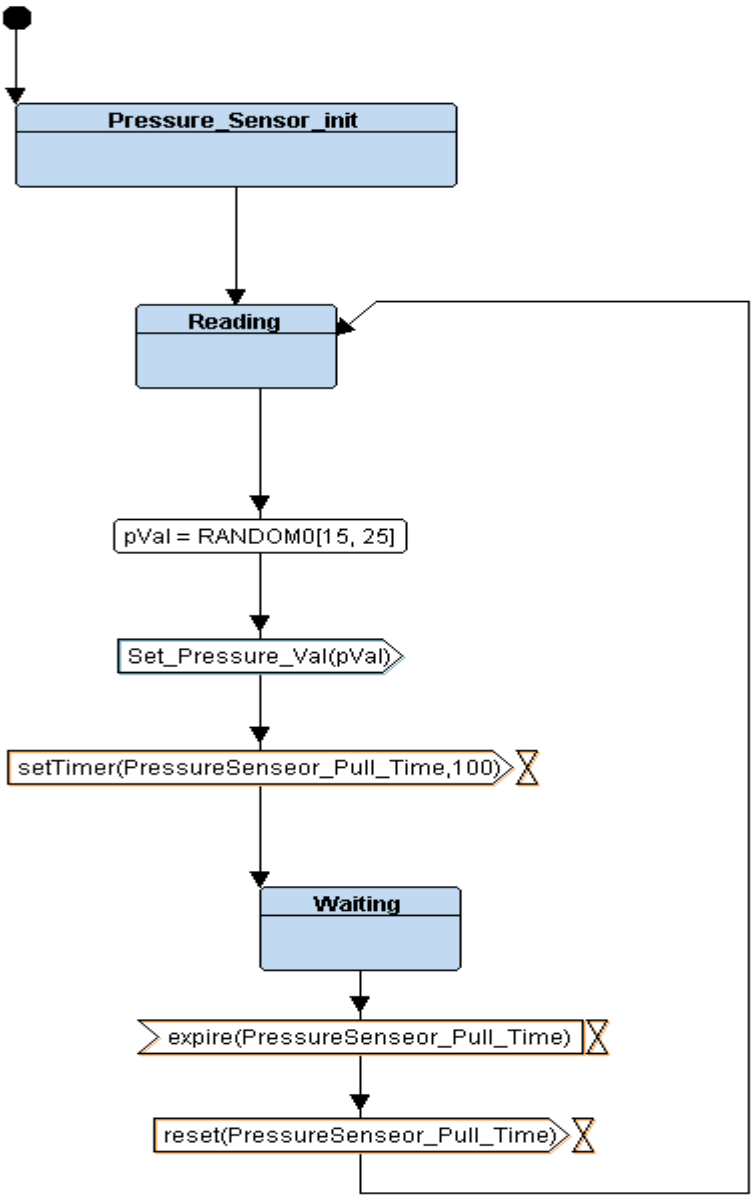
System Analysis : Sequence Diagram



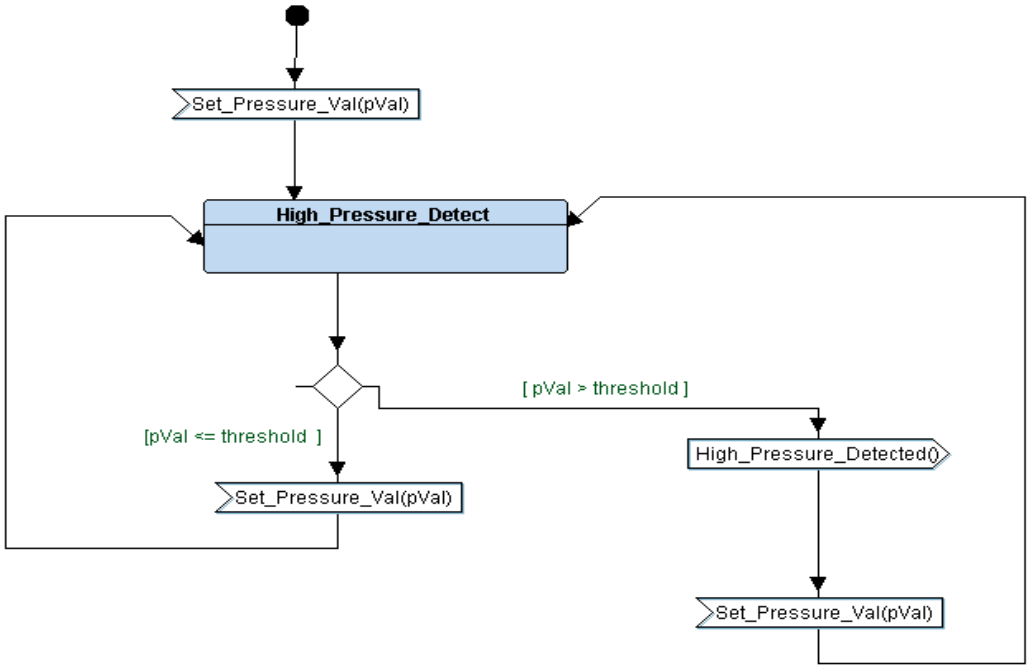
System Design



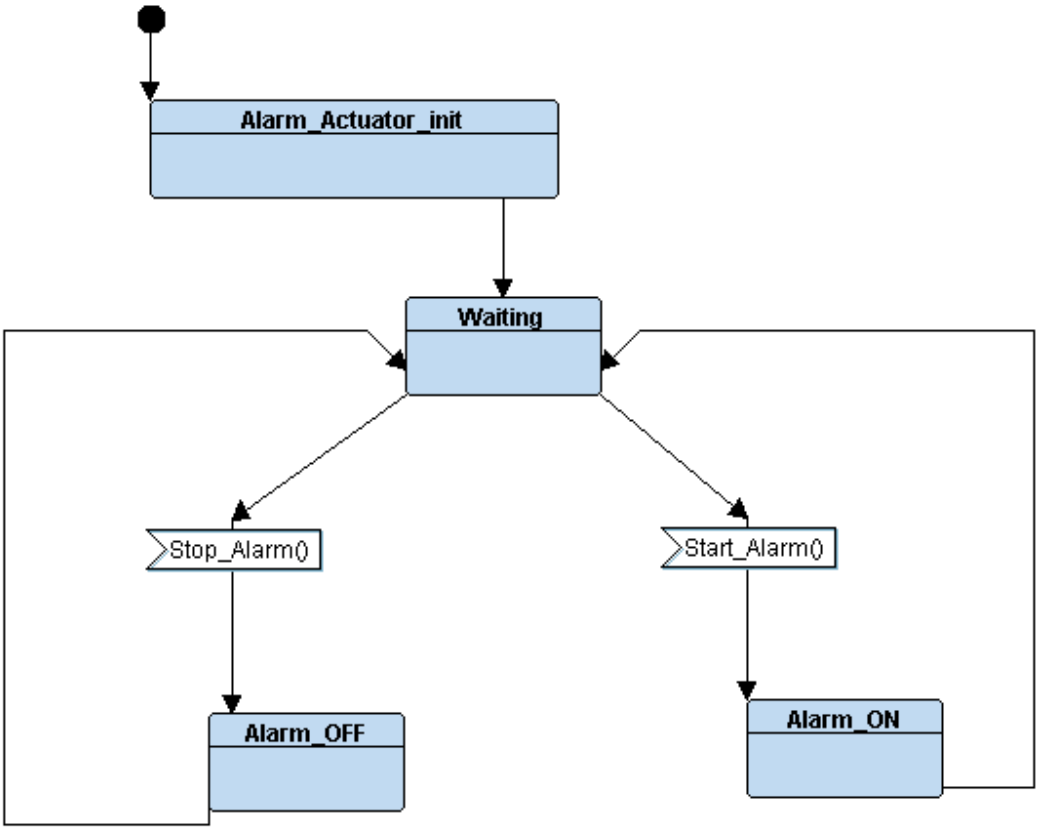
Pressure Sensor



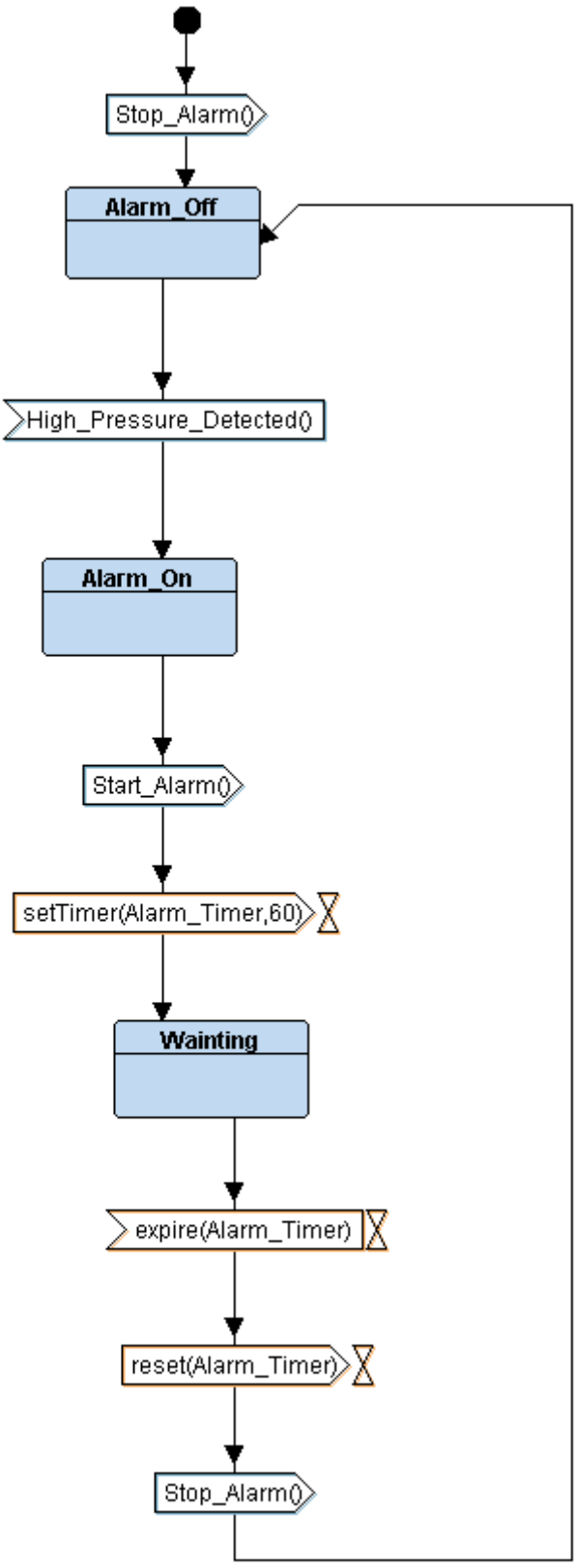
Main Algorithm



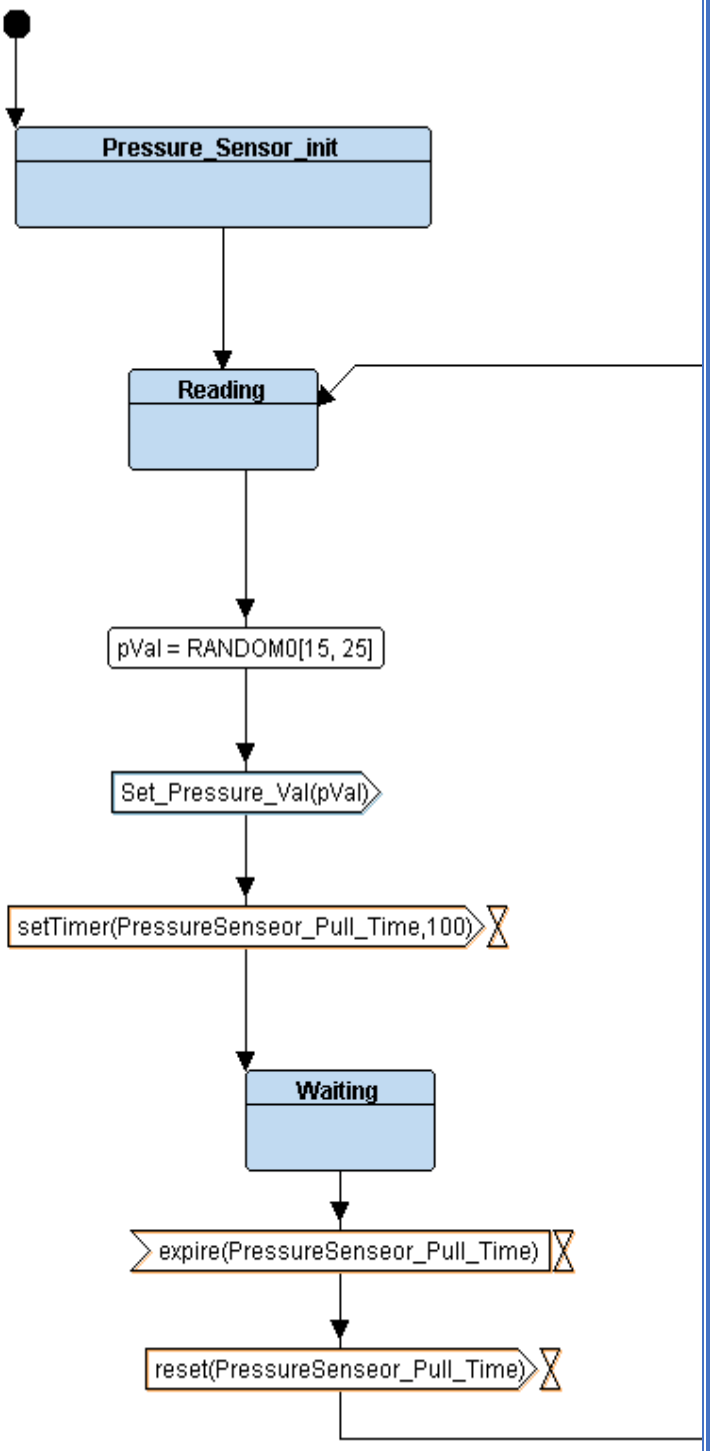
Alarm Actuator



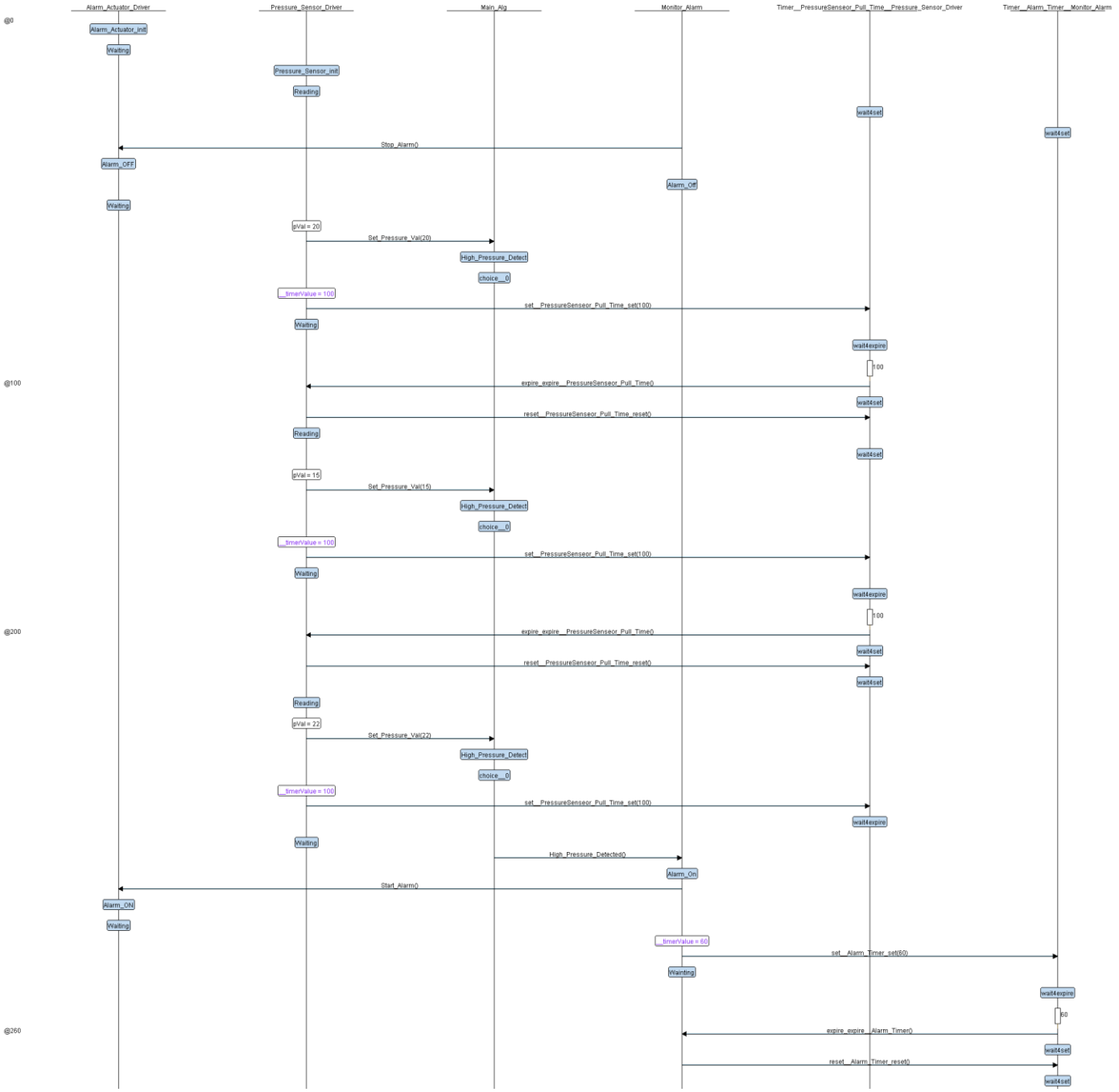
Monitor Alarm



Pressure Sensor



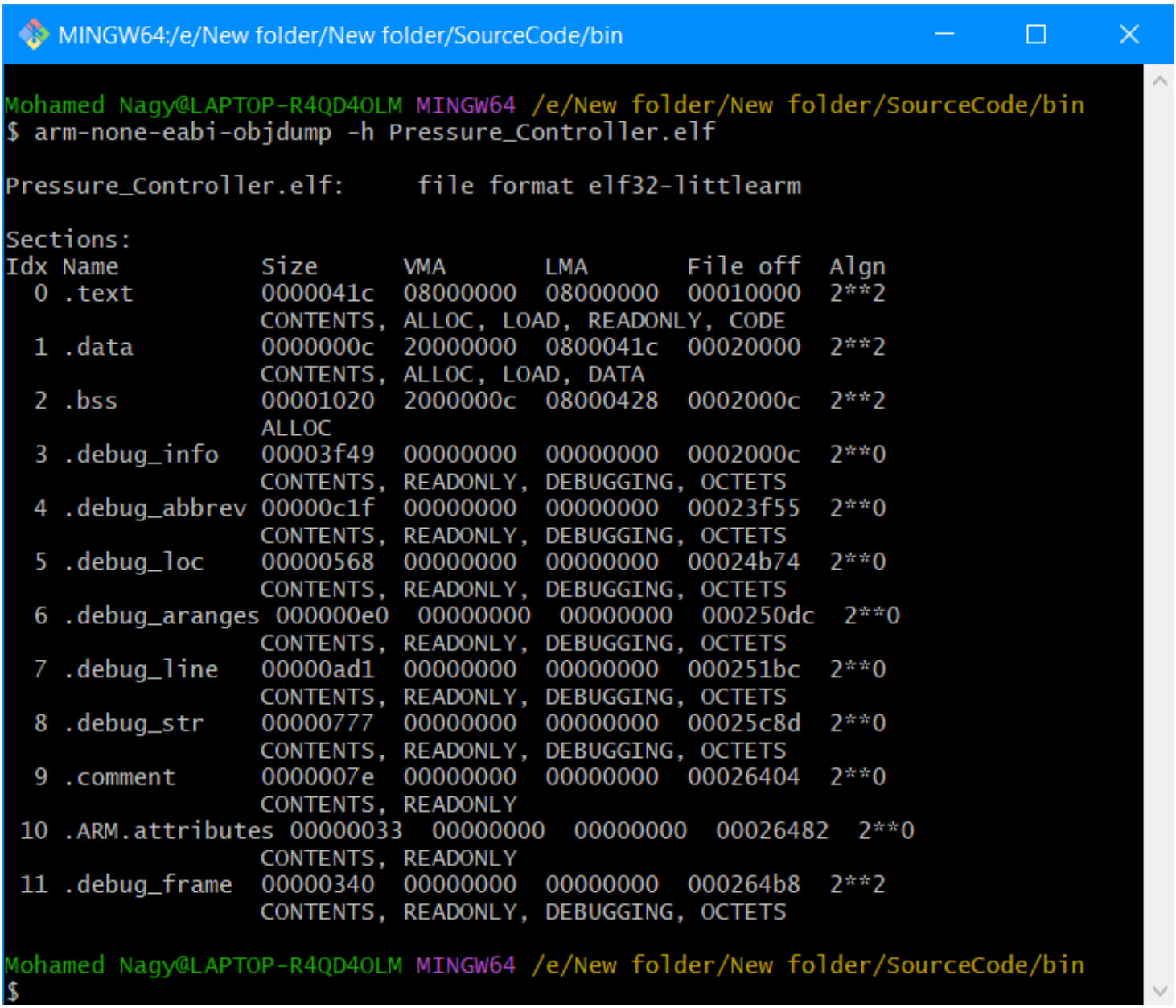
Simulation trace from ttool



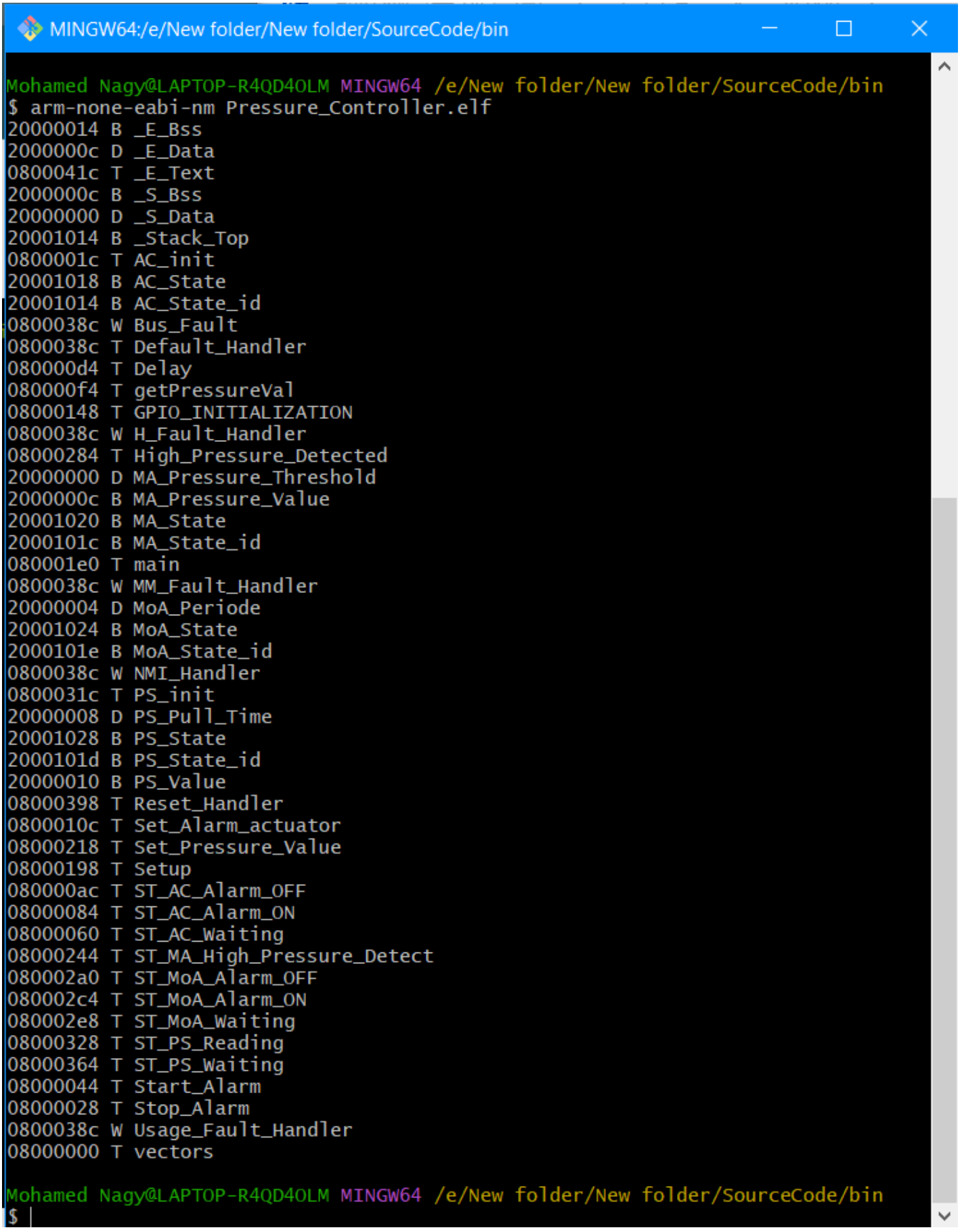
Implementation

Press the Link below.

Memory Sections

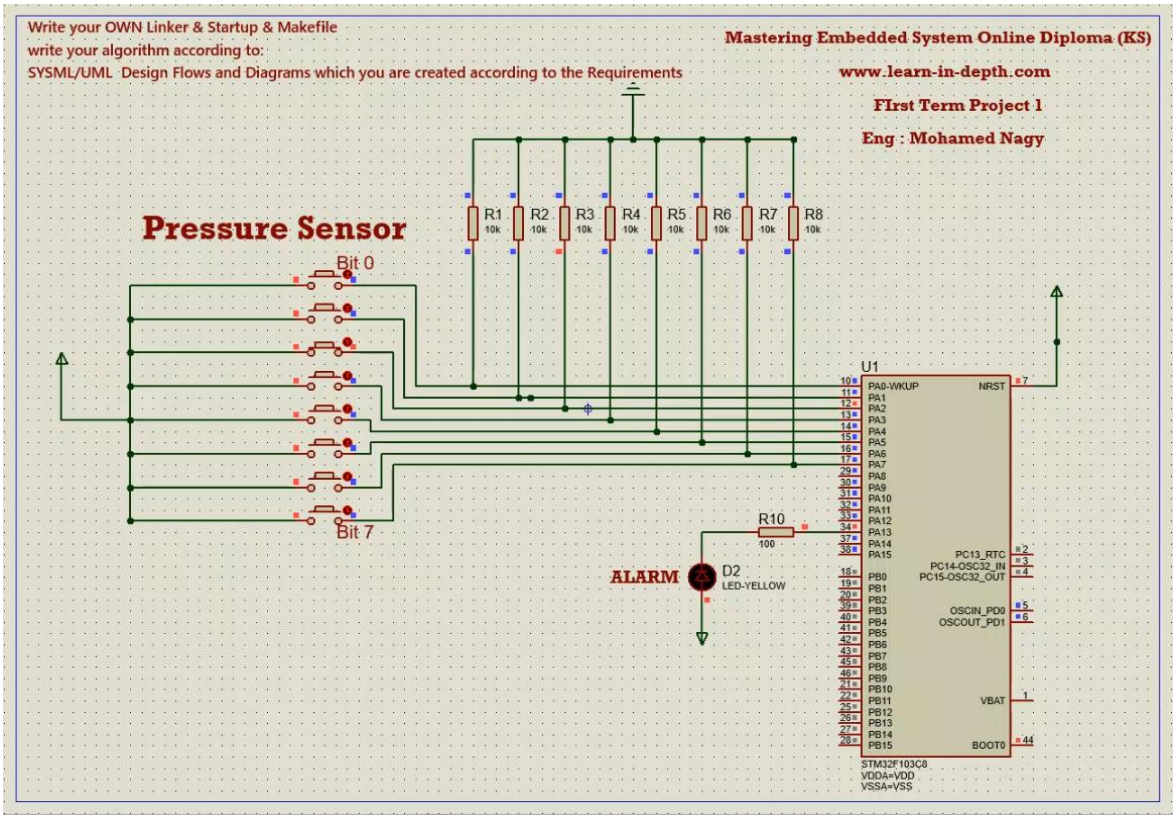
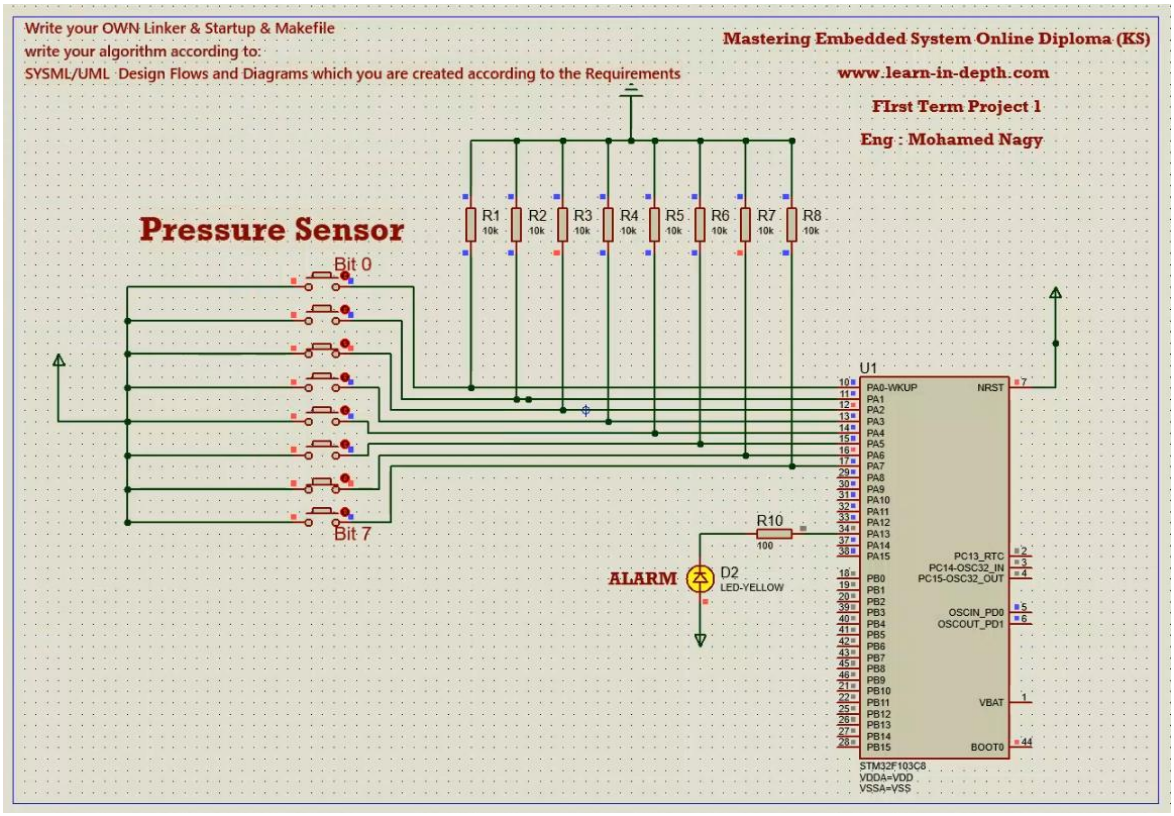


Symbol Table



PROTEUS

The output in case of Low-Pressure value, so the alarm is OFF



The output in case of High-Pressure value, so the alarm is ON