Mastering Embedded System Online Diploma

First Term - Final Project 1

High Pressure Detection Project

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Contents

[Case Study 2](#_Toc152105243)

[Assumptions 2](#_Toc152105244)

[Requirements 3](#_Toc152105245)

[System Analysis : Use Case Diagram 3](#_Toc152105246)

[System Analysis : Activity Diagram 4](#_Toc152105247)

[System Analysis : Sequence Diagram 4](#_Toc152105248)

[System Design 5](#_Toc152105249)

[Pressure Sensor 5](#_Toc152105250)

[Main Algorithm 6](#_Toc152105251)

[Alarm Actuator 6](#_Toc152105252)

[Monitor Alarm 7](#_Toc152105253)

[Simulation trace from ttool 8](#_Toc152105254)

[Implementation 9](#_Toc152105255)

[Memory Sections 9](#_Toc152105256)

[Symbol Table 10](#_Toc152105257)

[PROTEUS 11](#_Toc152105258)

[The output in case of Low-Pressure value, so the alarm is OFF 11](#_Toc152105259)

[The output in case of High-Pressure value, so the alarm is ON 11](#_Toc152105260)

# 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.

# A computer screen shot of a computer Description automatically generated with medium confidenceRequirements

System Analysis : Use Case Diagram **A diagram of a company

Description automatically generated**

## A diagram of a flowchart Description automatically generatedSystem Analysis : Activity Diagram

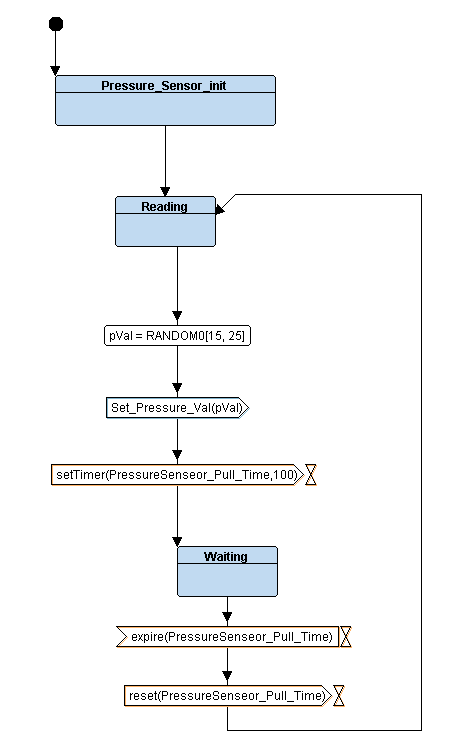
## System Analysis : Sequence Diagram

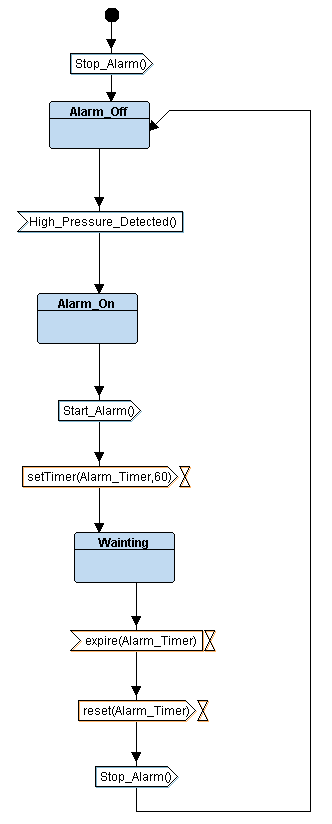
# System Design

## Pressure Sensor

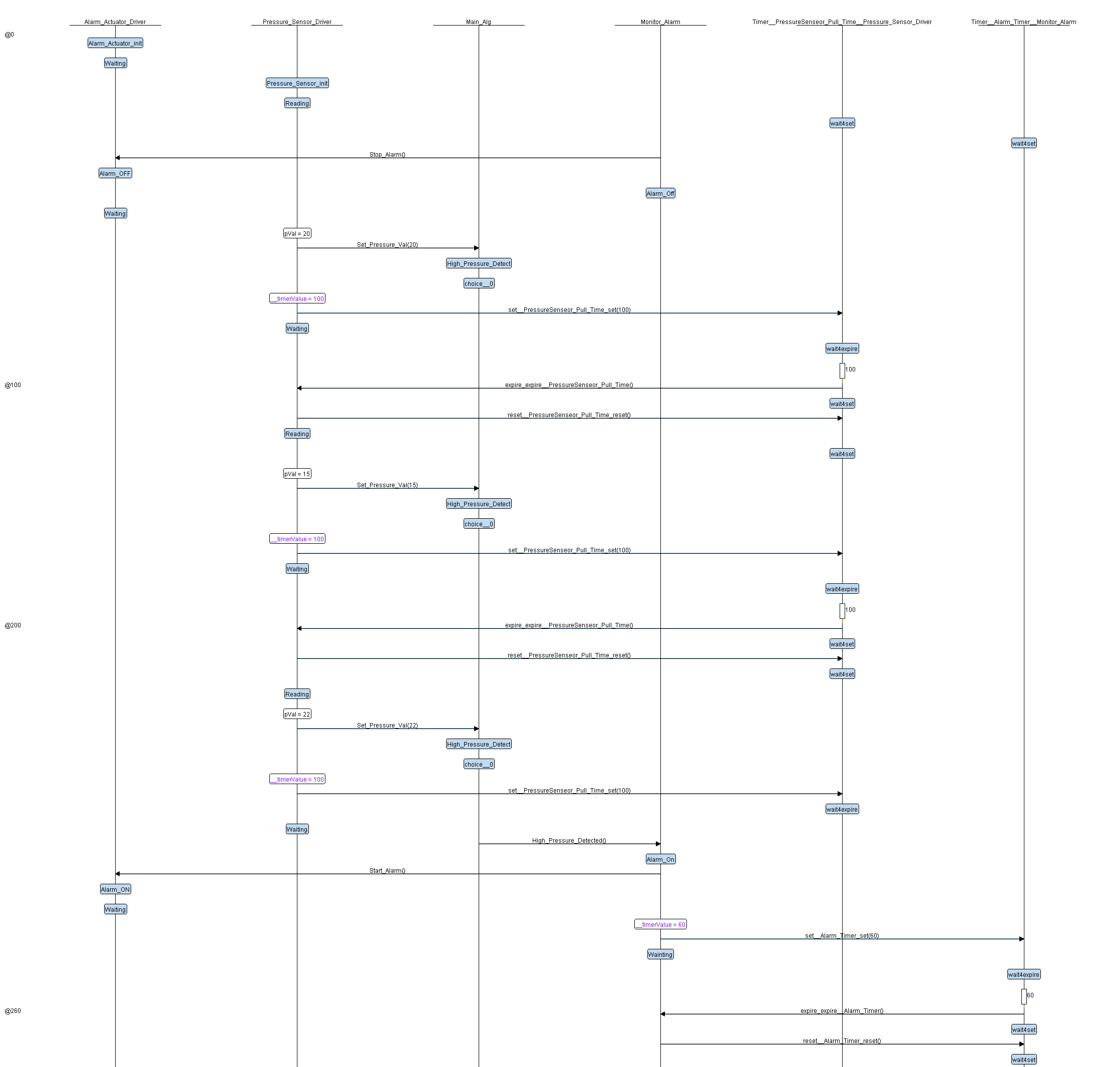
## Main Algorithm

## Alarm Actuator

Monitor AlarmPressure Sensor

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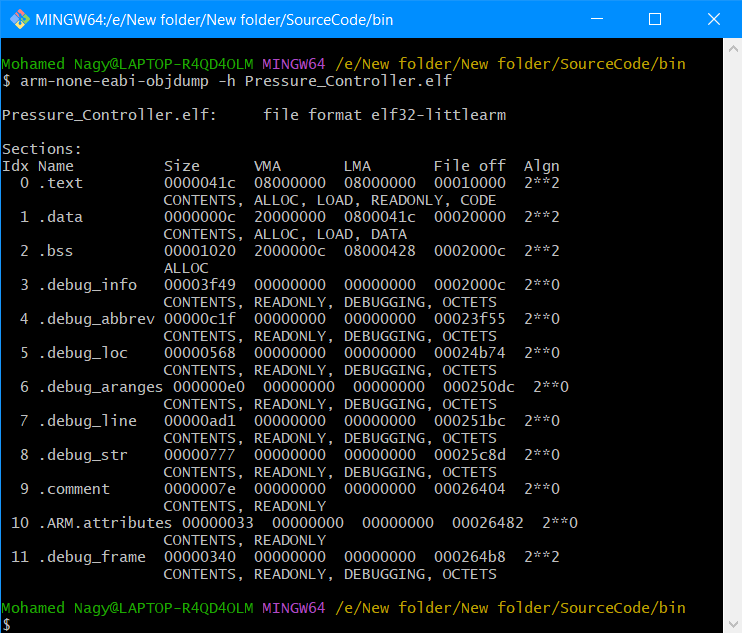
# Simulation trace from ttool

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# Implementation

[**Press the Link below.**](https://github.com/Ged0oo/LearnInDepth/tree/main/Projects/01_HighPressureDetector/SourceCode)

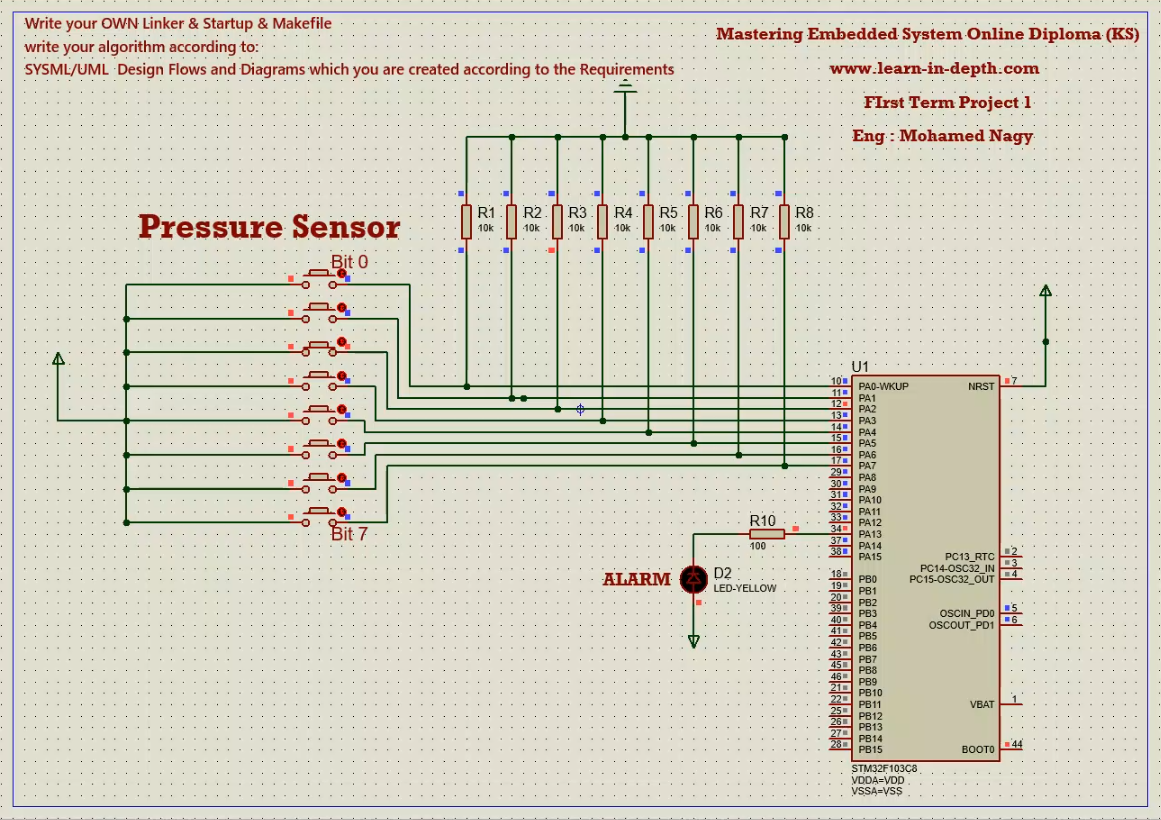
# Memory Sections

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# Symbol Table

# PROTEUS

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

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

A computer screen shot of a computer

Description automatically generated