# Mastering Embedded System Online Diploma

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**First term (Final Project 1)**

**Eng. Omar Ahmed**

**My Profile**

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# Chapter One: Requirement Diagram

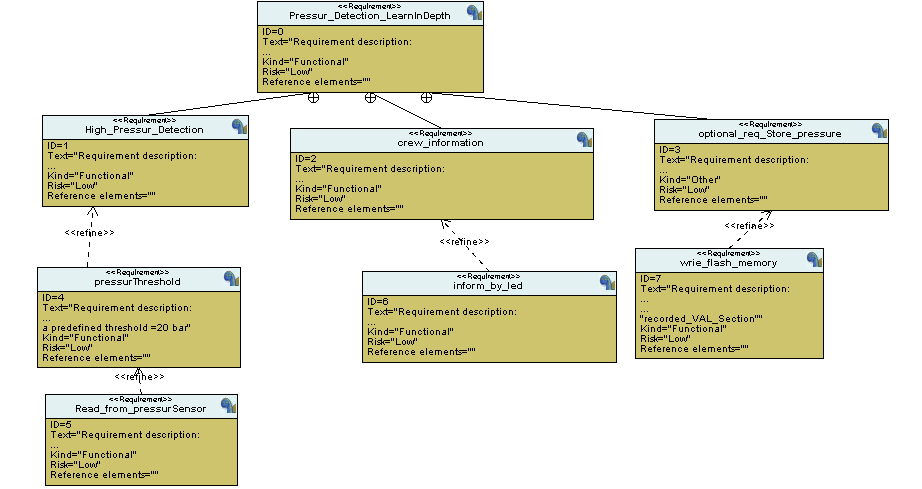
* 1. Case Study:

1. The system shall measure Pressure.

2. Give alarm if Pressure value greater than threshold value.

3. The system shall store pressure Value (not mandatory).

* 1. Requirement Diagram



Assumption about the system:

1. The Pressure Sensor will never fail.

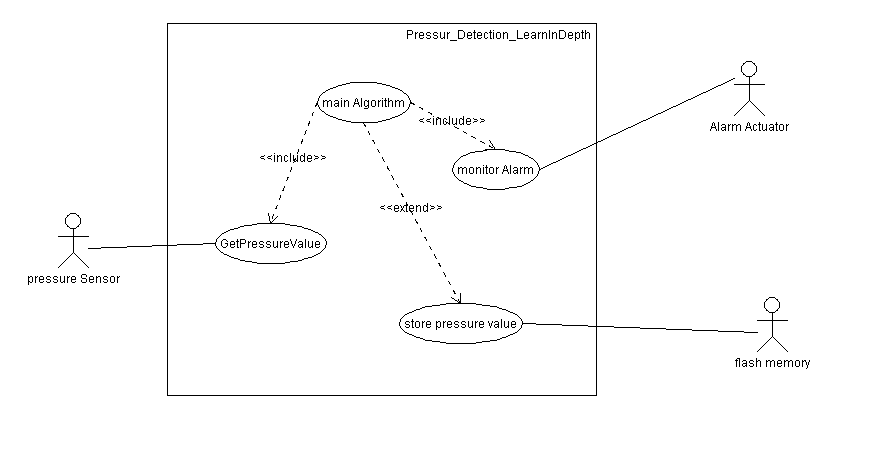
2. The Alarm will never fail.

3. The system is powered on.

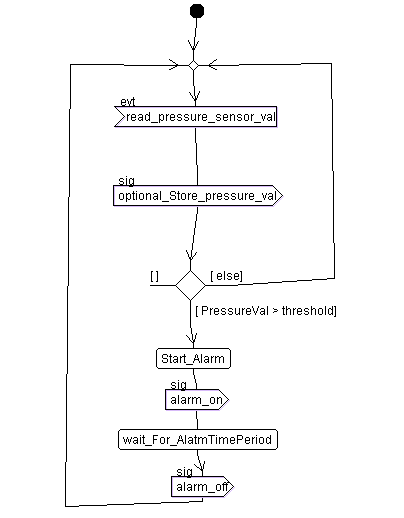
# Chapter Two: System Analysis

2.1 System Analysis:

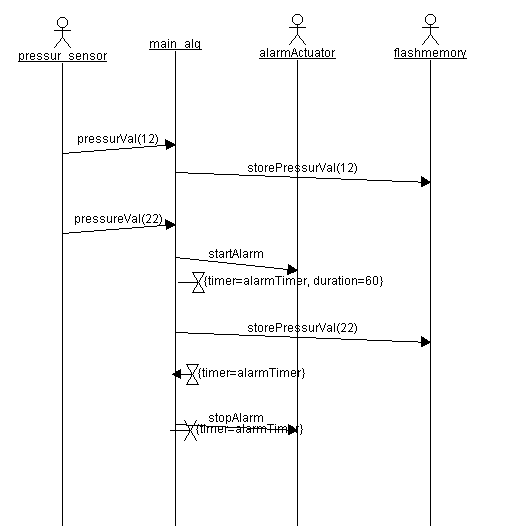
1. Use Case Diagram:



2. Activity Diagram:

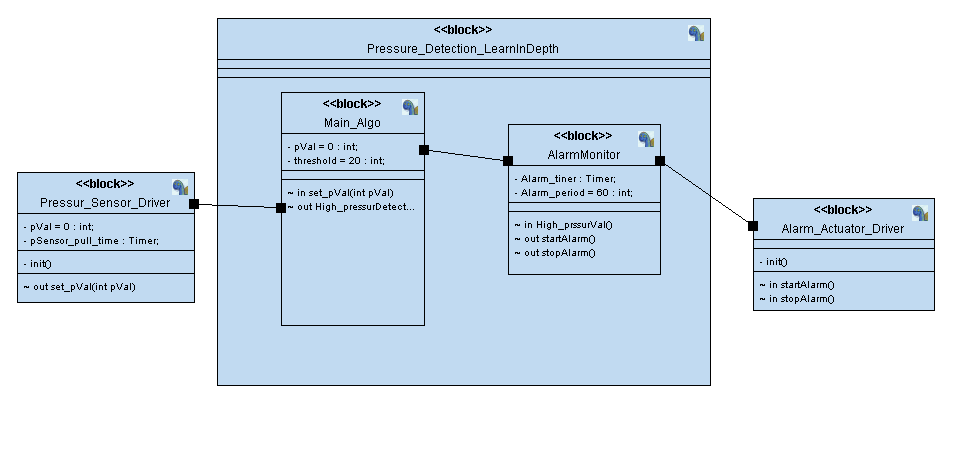


3 . Sequence Diagram :

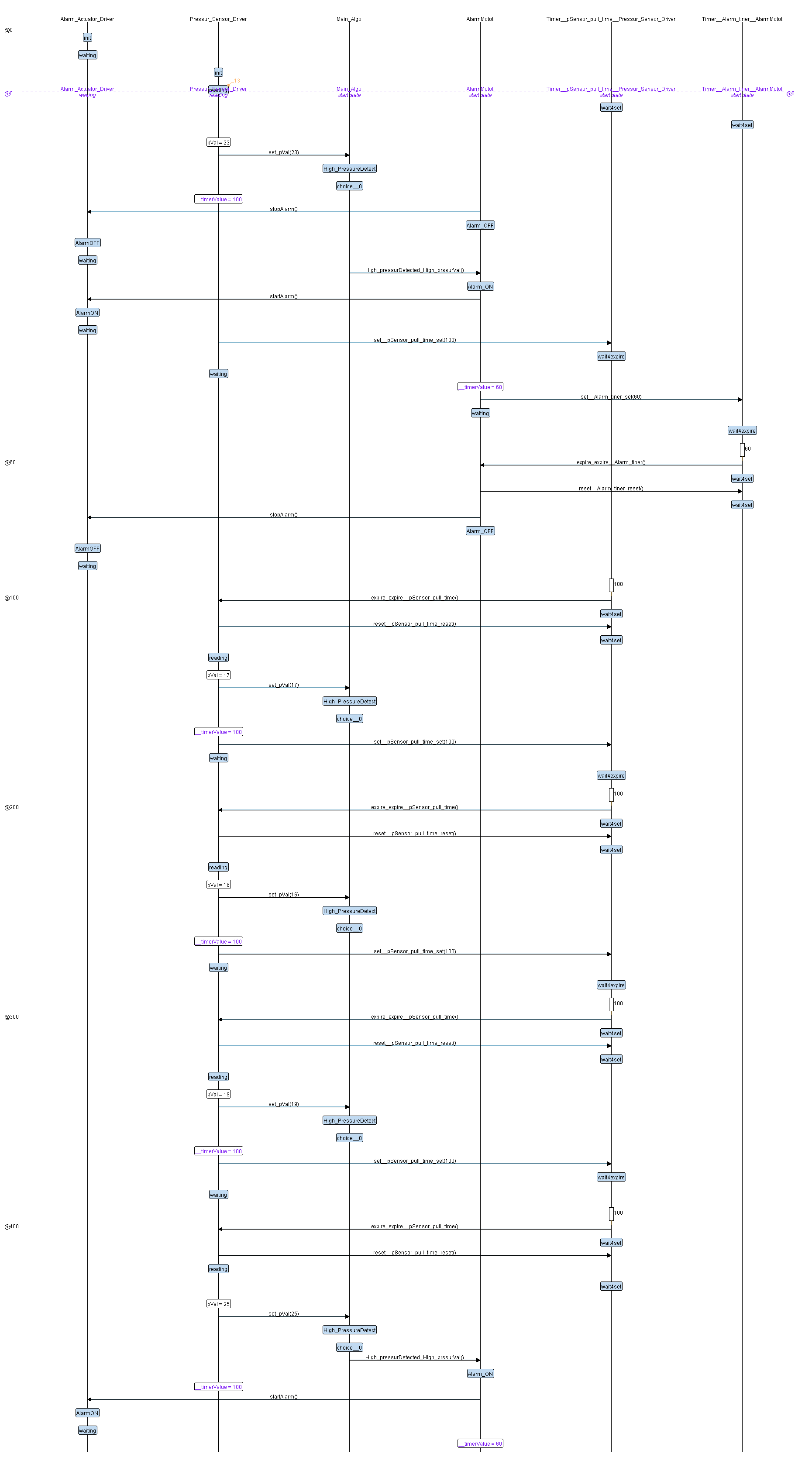


# Chapter Three: System Design

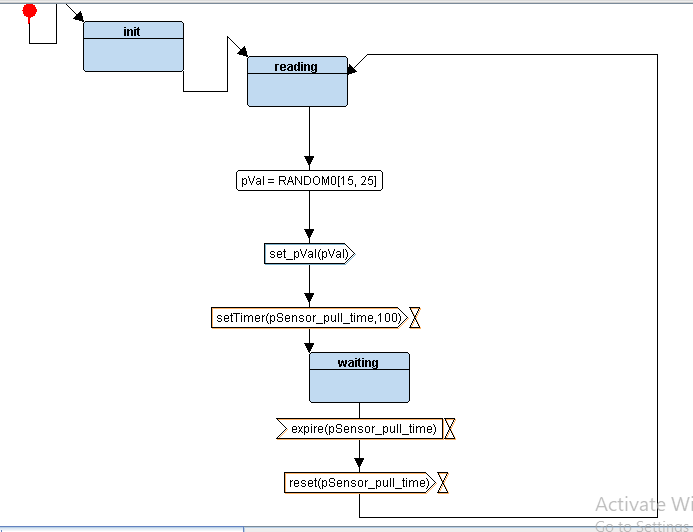
3.1System Design



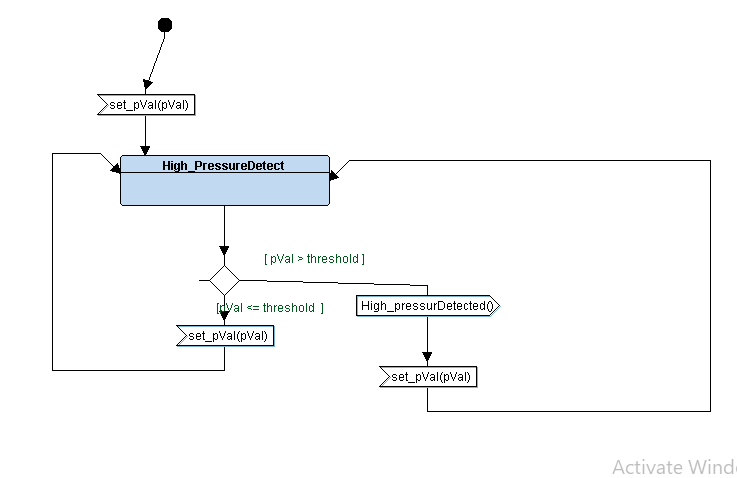
3.2 Simulation Diagram



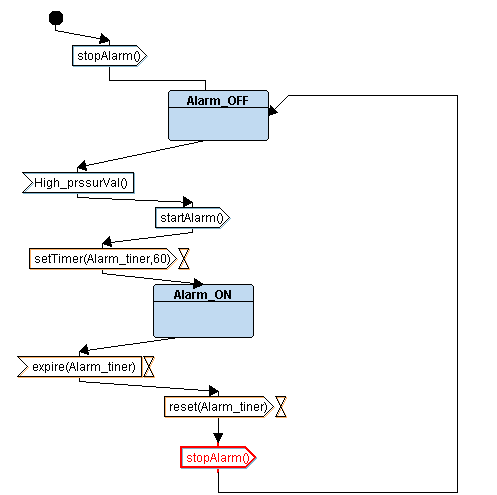
3.3 Pressure Sensor Driver



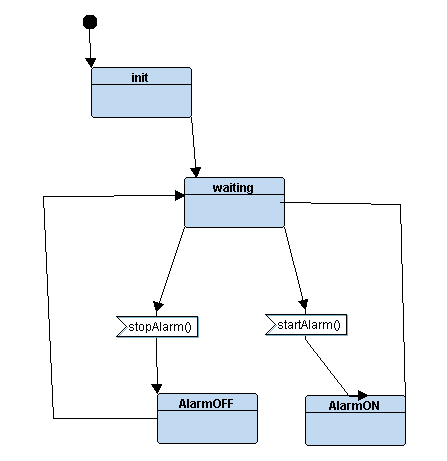
3.4 main Alg



3.5 Alarm Monitor

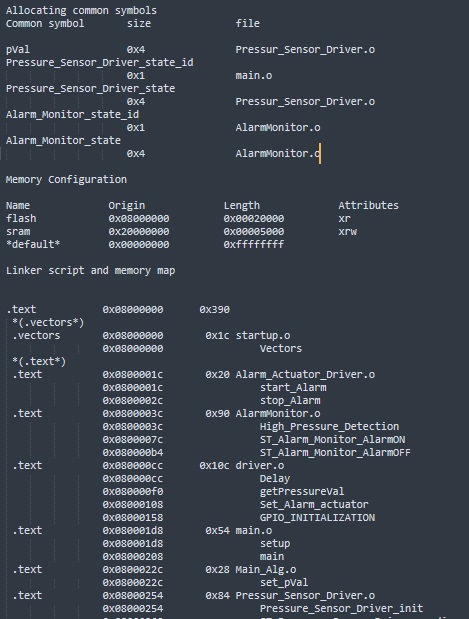


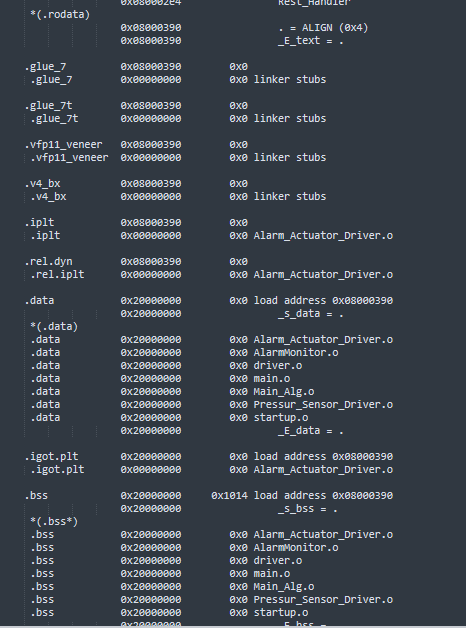
3.5 Alarm Actuator Driver



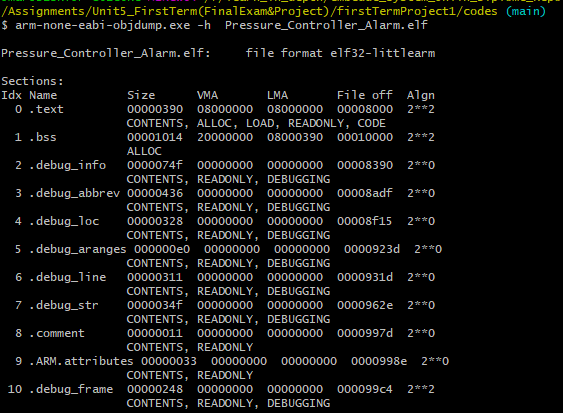
# Chapter four: Code Analysis

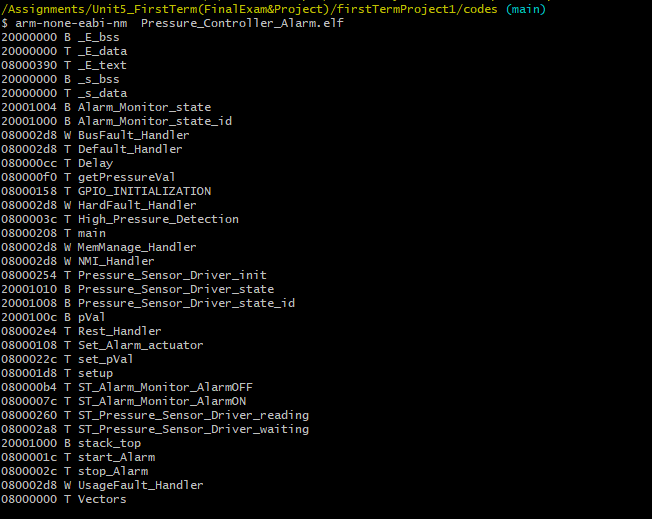
4.1 Map File





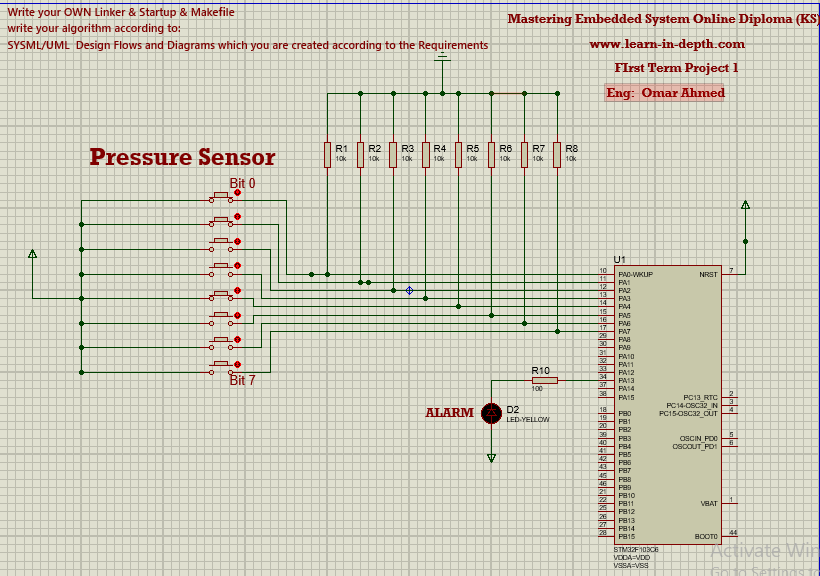
4.2 Pressure Controller Alarm Sections

4.3 Pressure Controller Alarm symbols

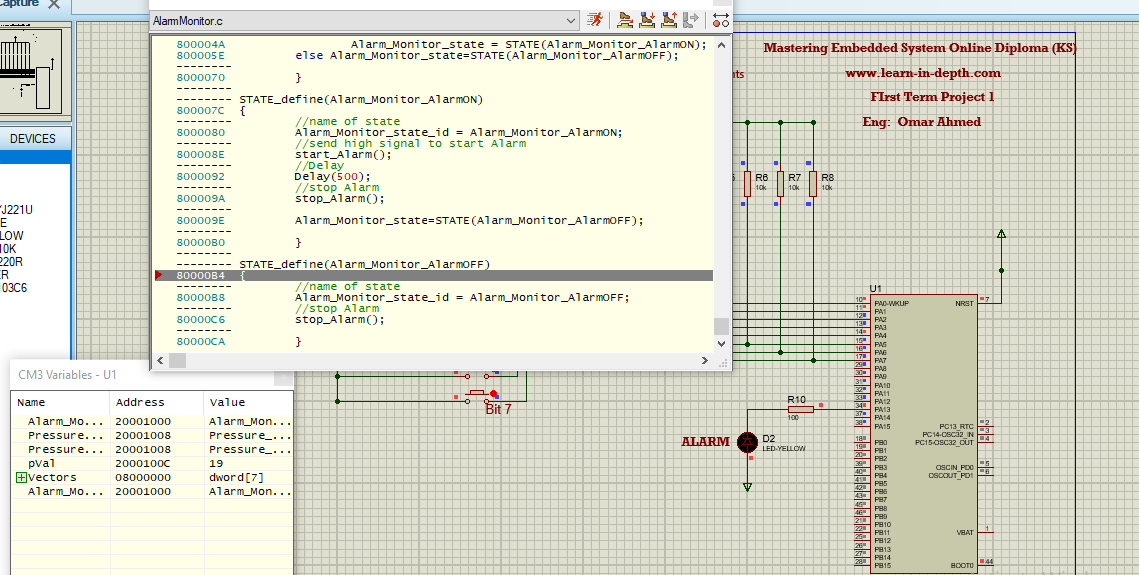


# Chapter 5: Simulation

5.1 main circuits



5.2 In case pressure value less than threshold



5.3 In case Pressure value greater than threshold

