**High Pressure Detection System Report**

**Embedded Systems Online Diploma**

**Eng. Mahmoud Essam Mahfouz**

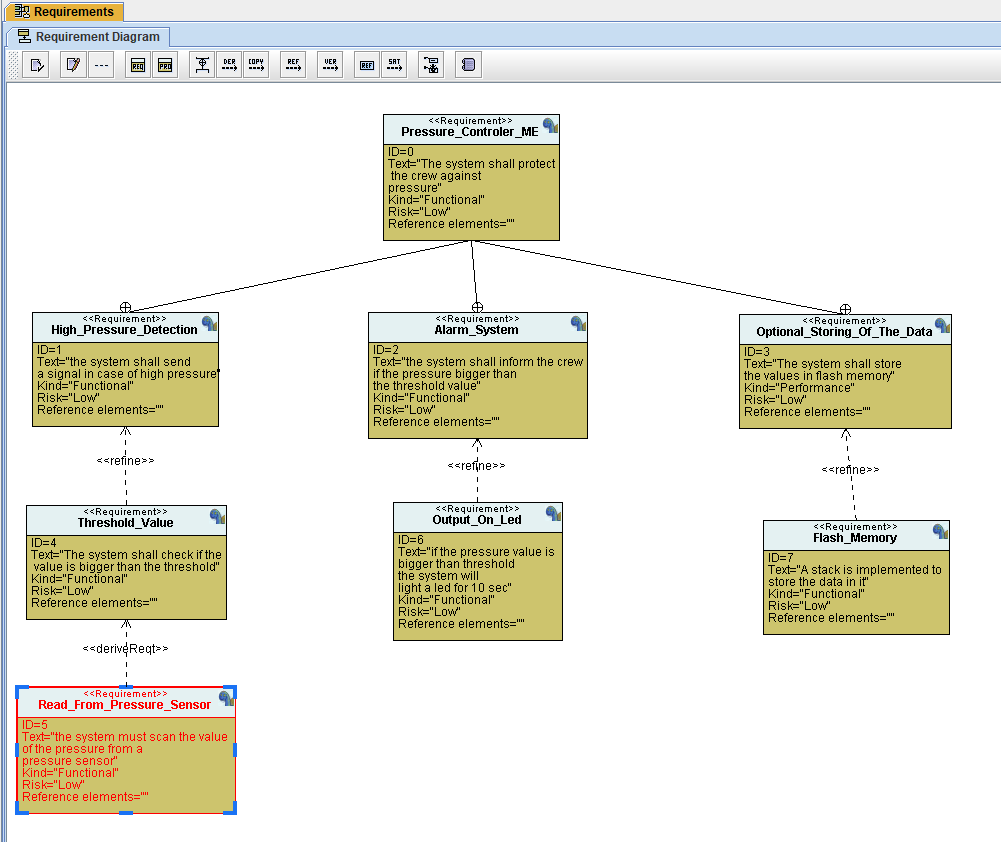
[**Progress Page**](https://www.learn-in-depth.com/online-diploma/mahmoud1mahfouz%40gmail.com)

**6/12/2022**

# **System Requirements :**

1. The System Shall Measure the pressure through a pressure sensor
2. If the pressure value is greater than threshold system will inform the crew
3. The system will inform the crew threw a led that will on for 60 seconds

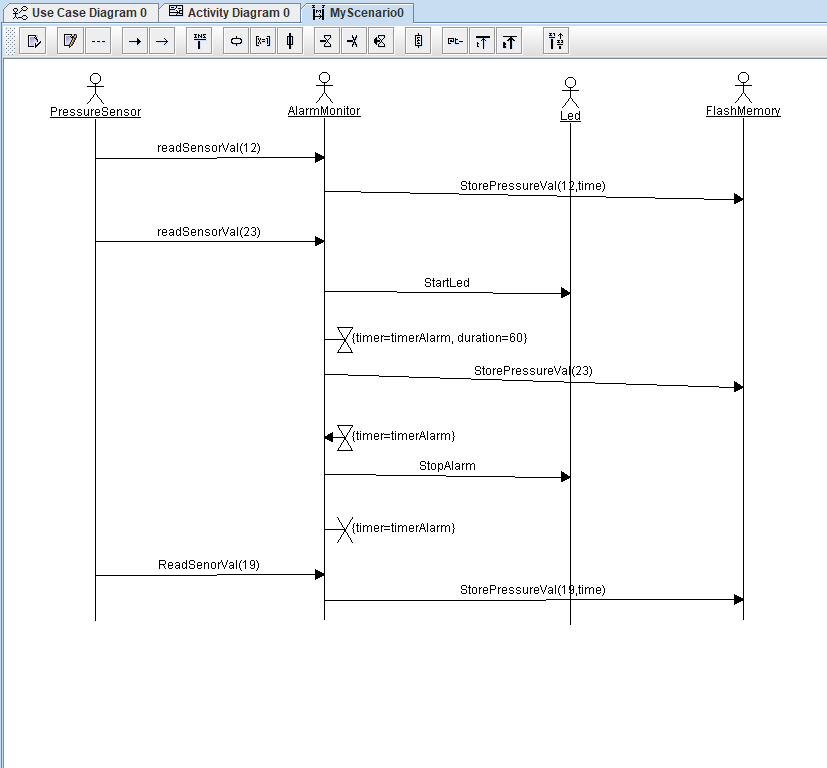
## **Requirement Diagram**



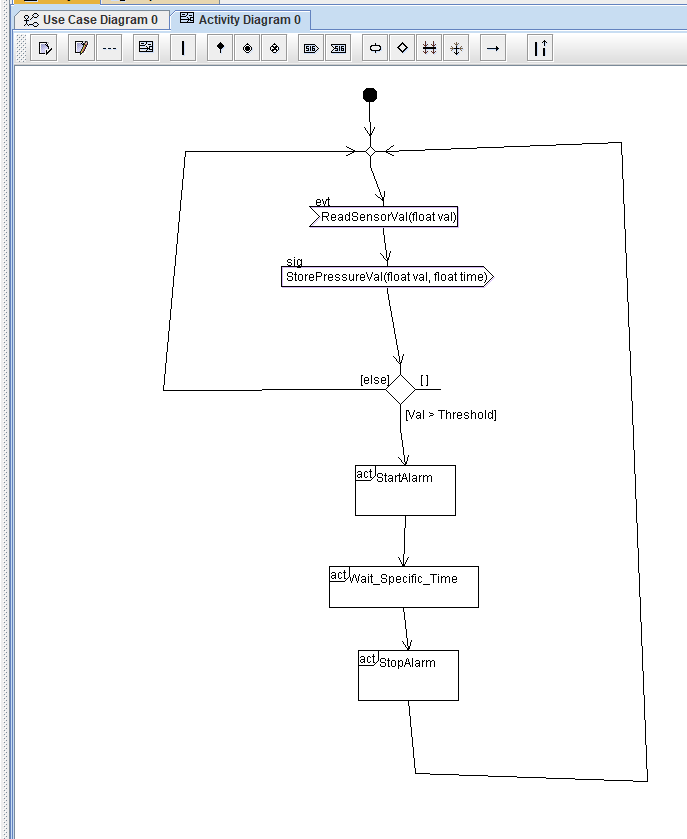
# **System Analysis :**

## Use Case Diagram

## Sequence Diagram

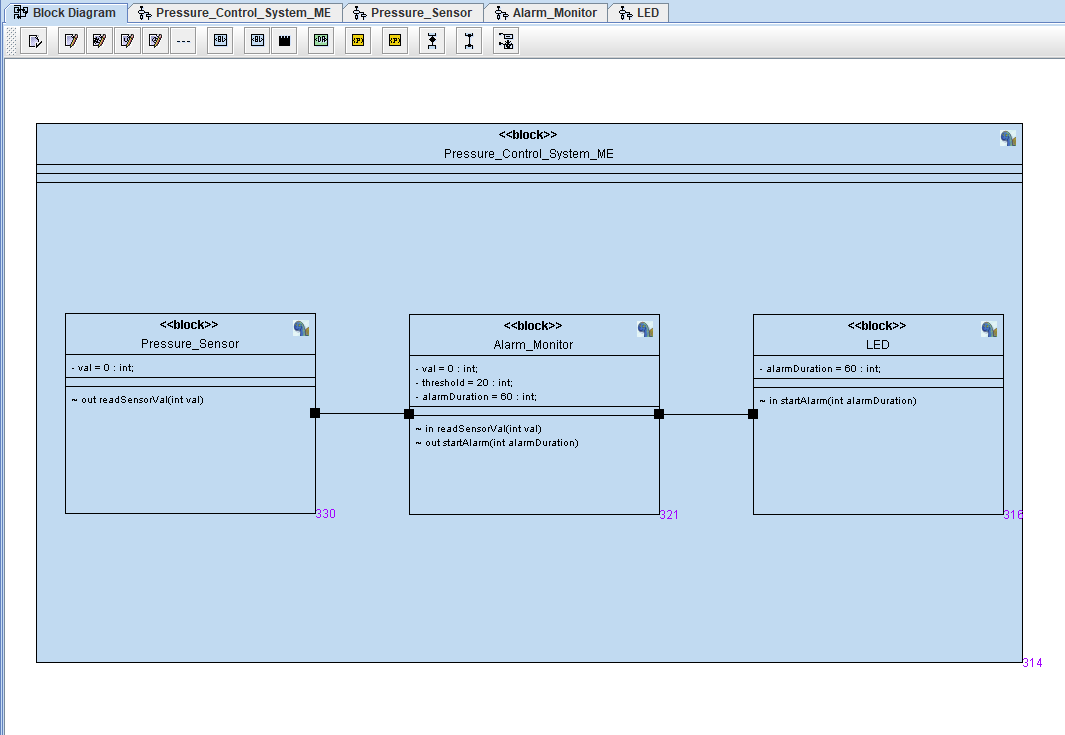


## Activity Diagram

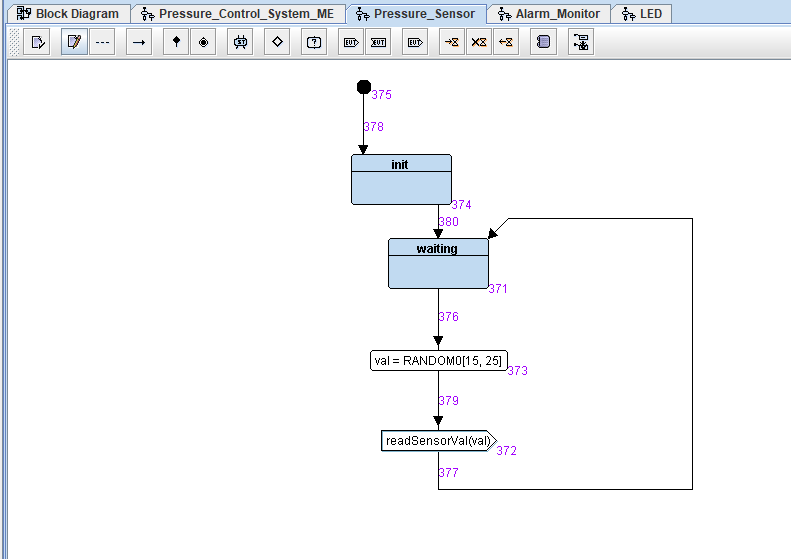


# **System Design**

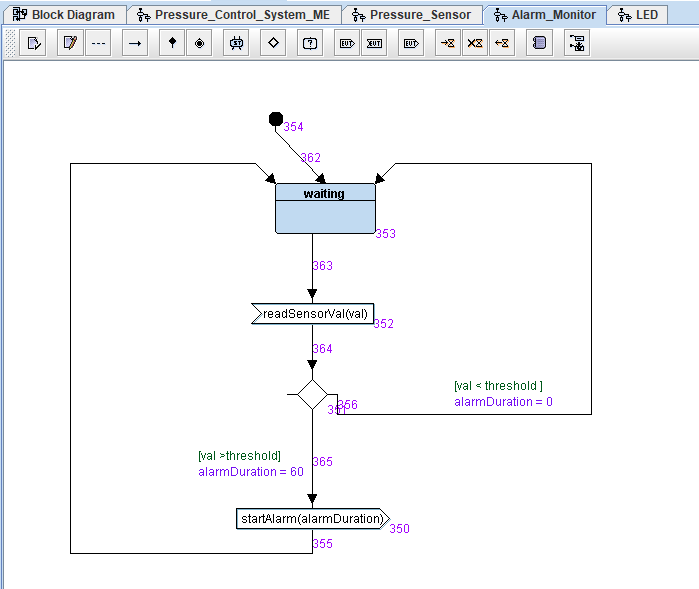
## System Modules



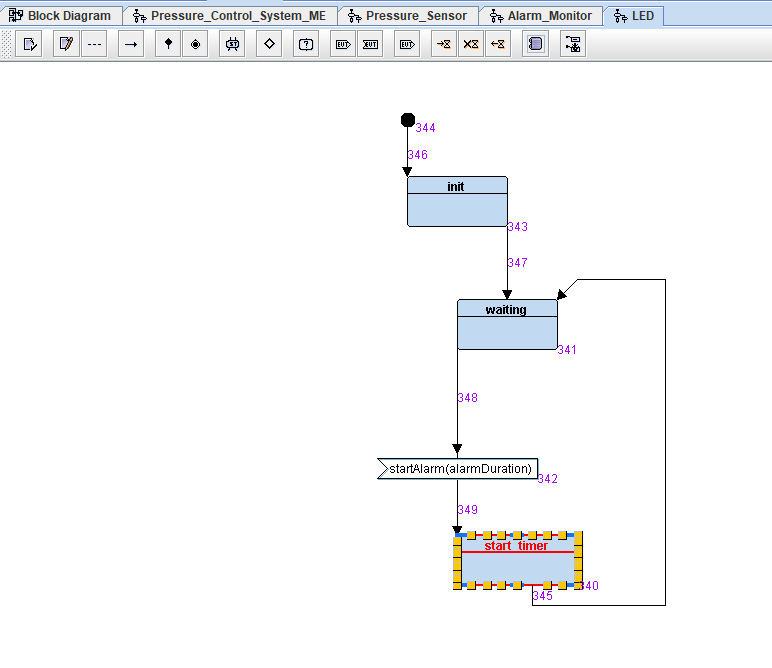
### Pressure Sensor Diagram



### Alarm Monitor Diagram

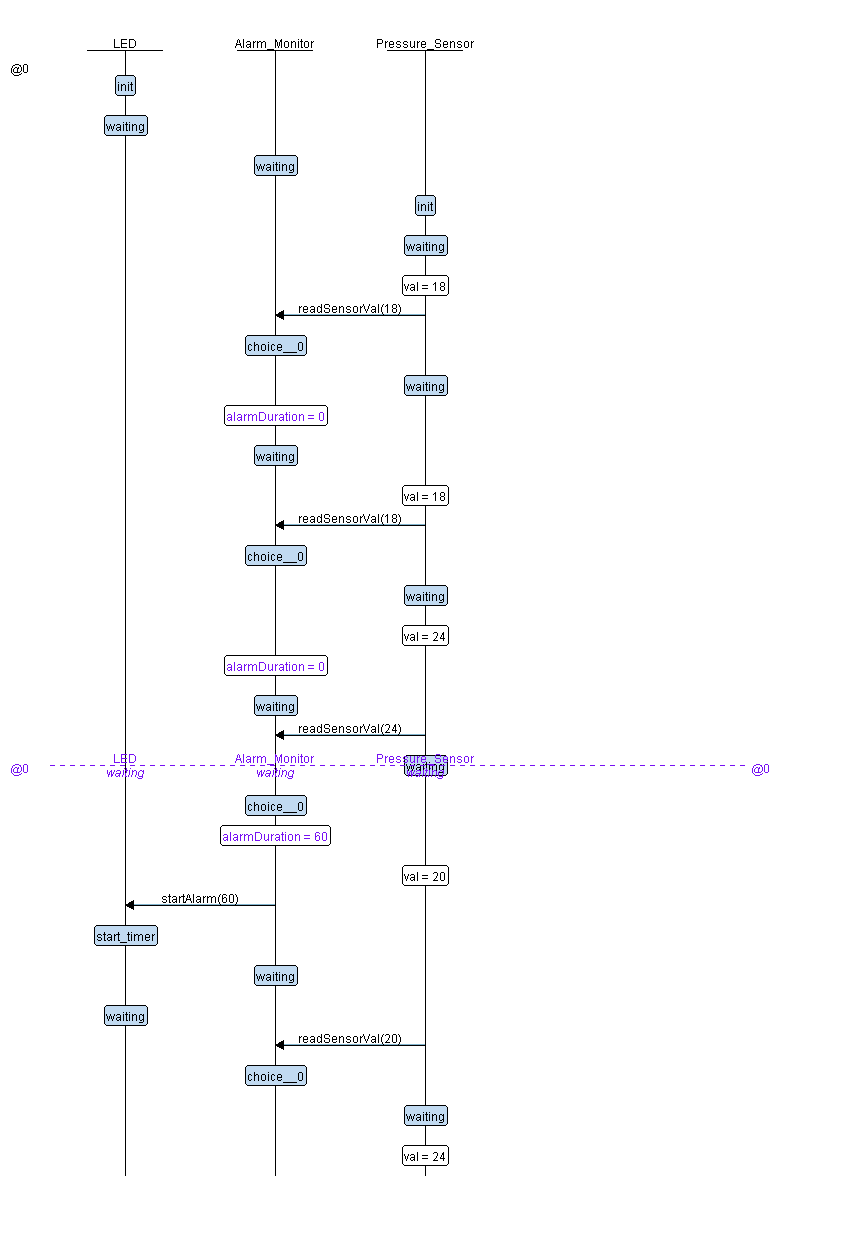


### Led Diagram

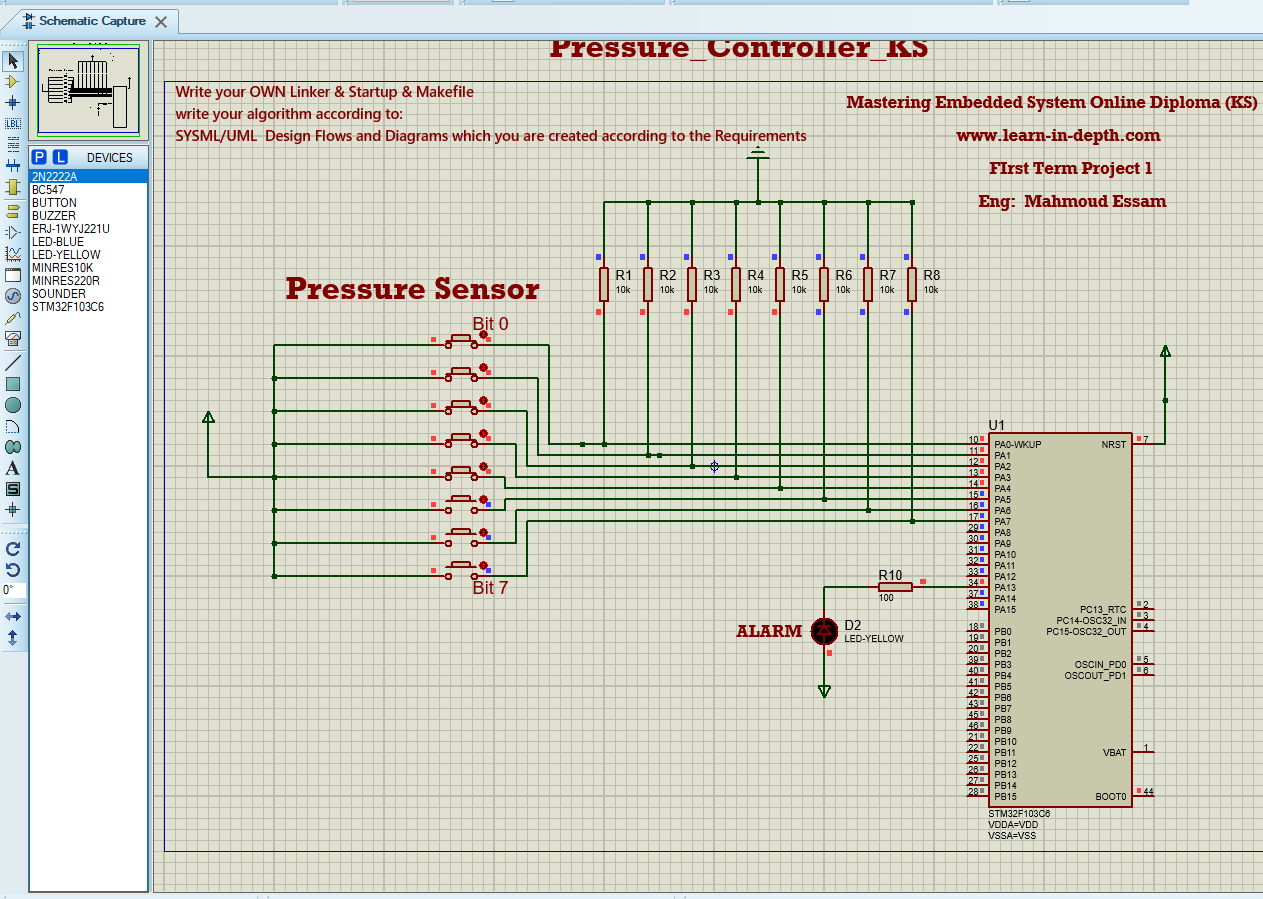


# **Simulation**

## **Diagrams Simulation**

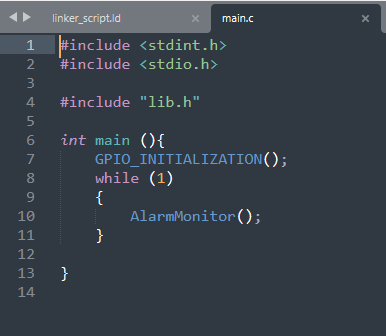


## **Protues Simulation**

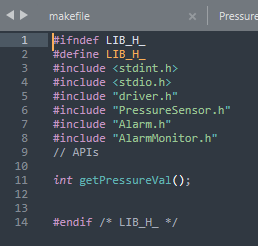


# **Code Screenshots**

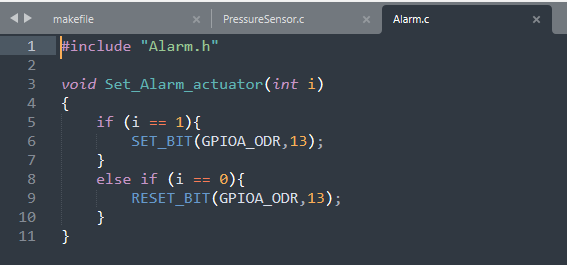
## **Main.c**



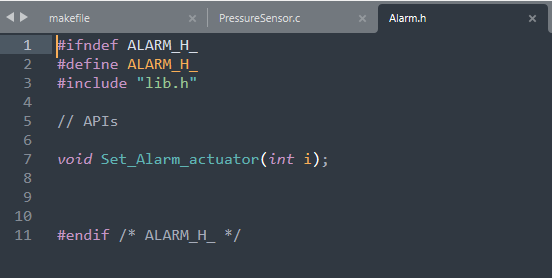
## **Lib.h**



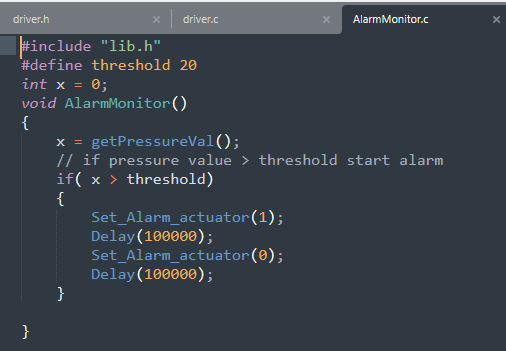
## **Alarm.c**



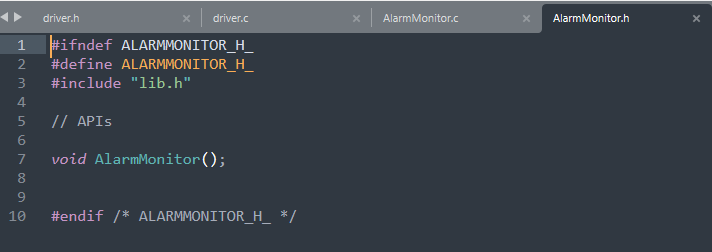
## **Alarm.h**



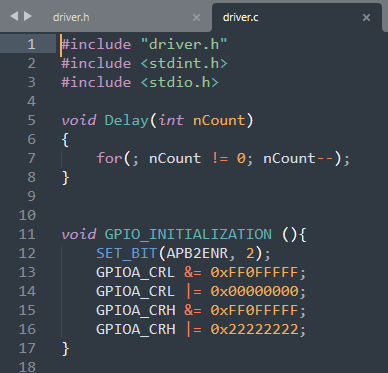
## **AlarmMonitor.c**



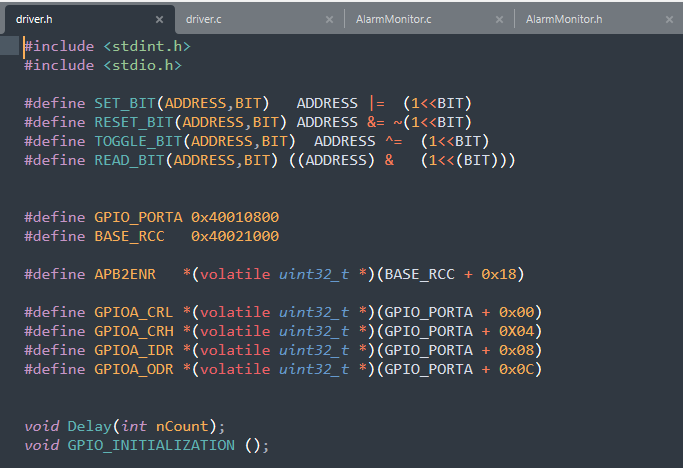
## AlramMonitor.h



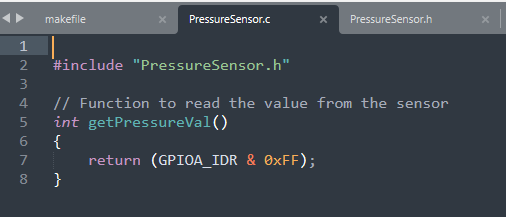
## **Driver.c**



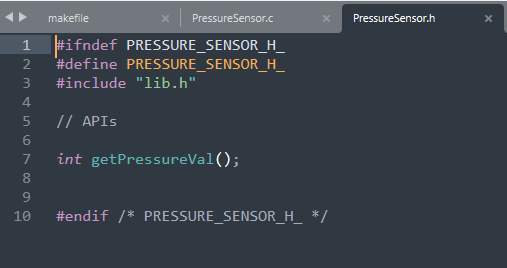
## **Dirver.h**



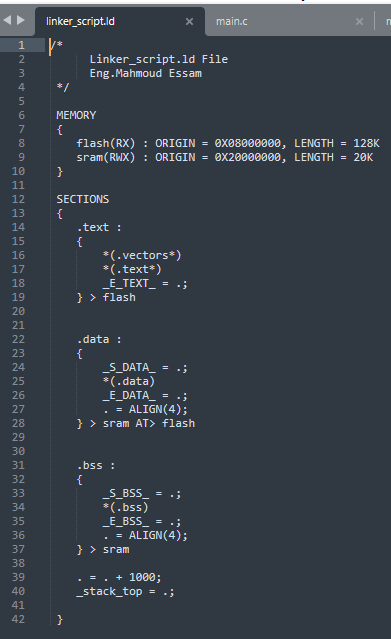
## **PressureSensor.c**



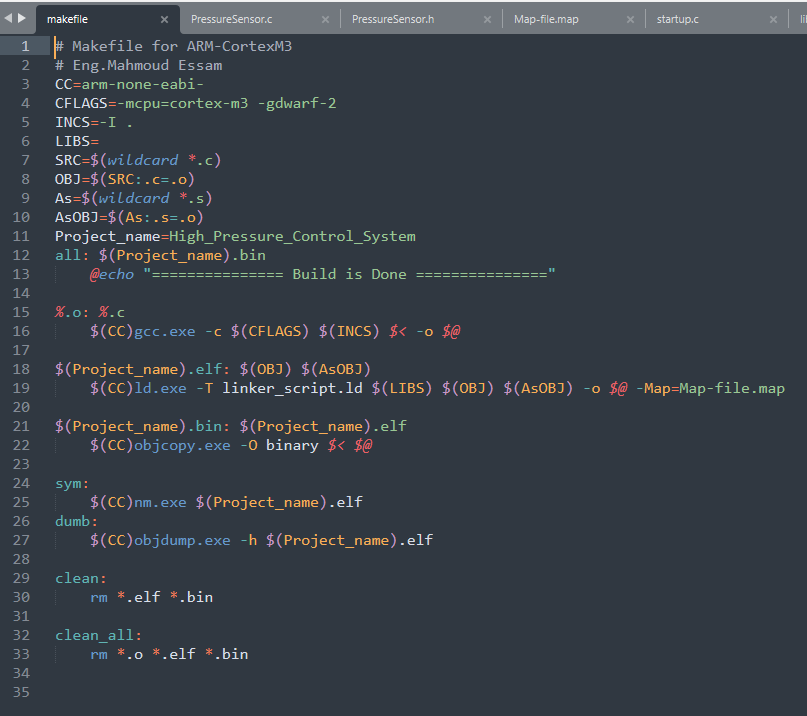
## **PressureSensor.h**



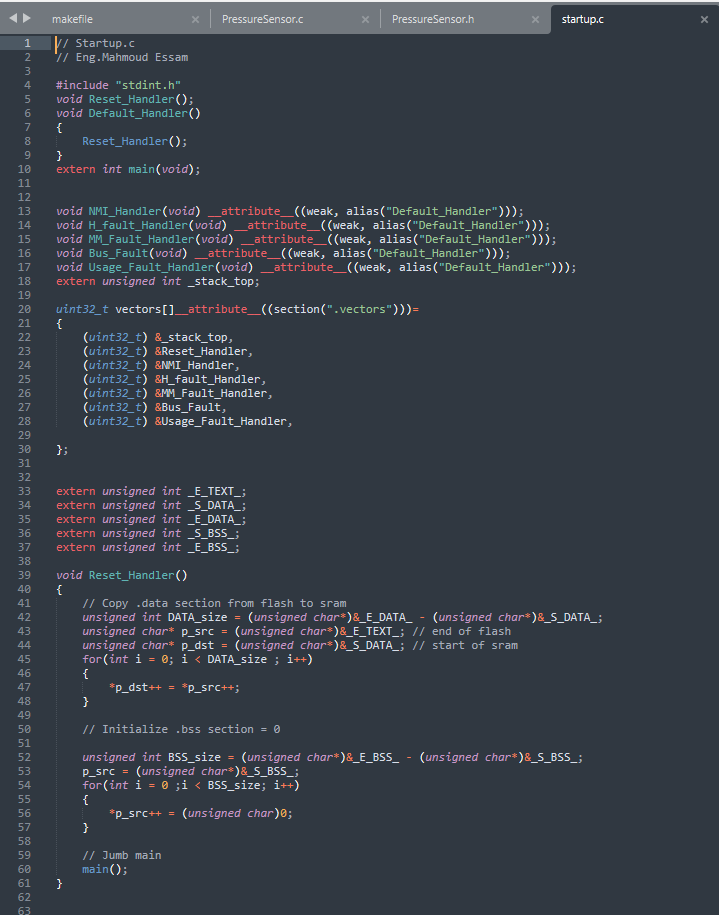
## **LinkerScript.ld**



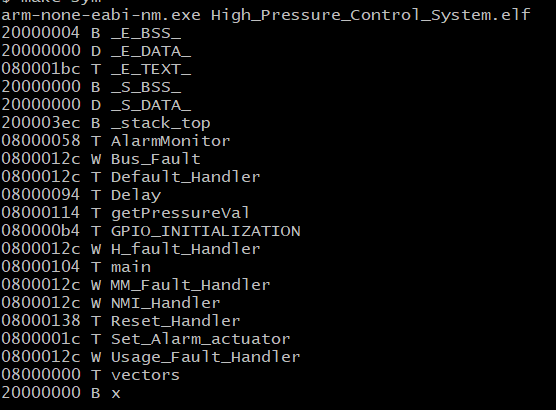
## **MakeFile**



## **Startup.c**



## **Sympols**



## **Code Sections**

