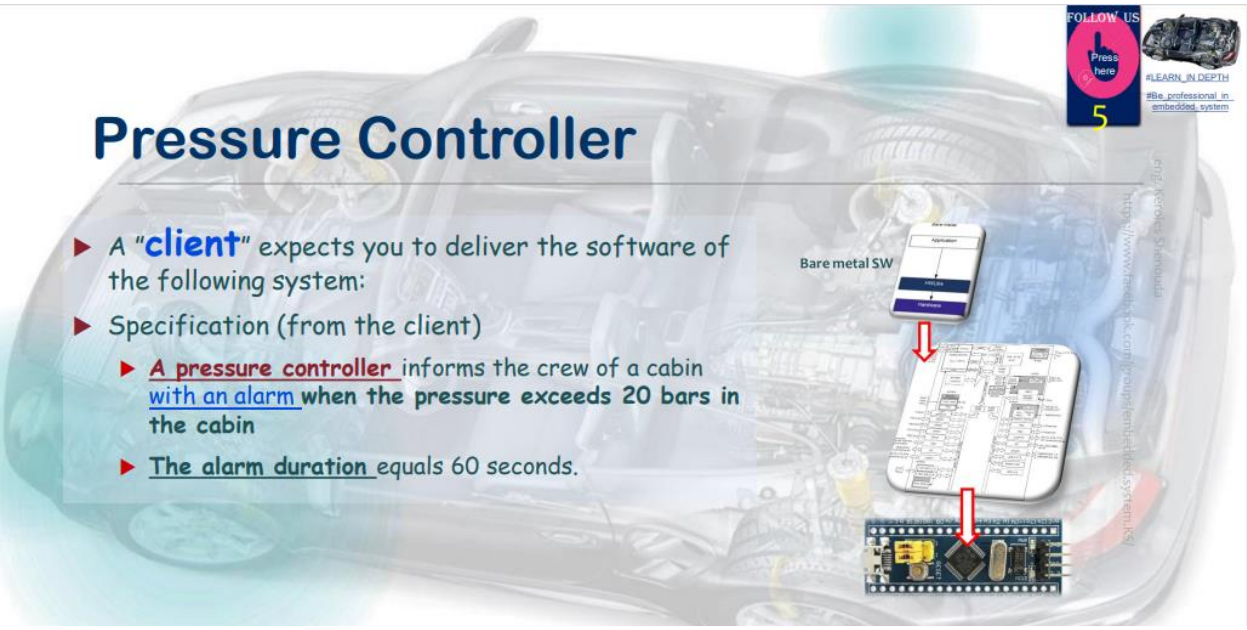
First_Term_Project1



Files Created:

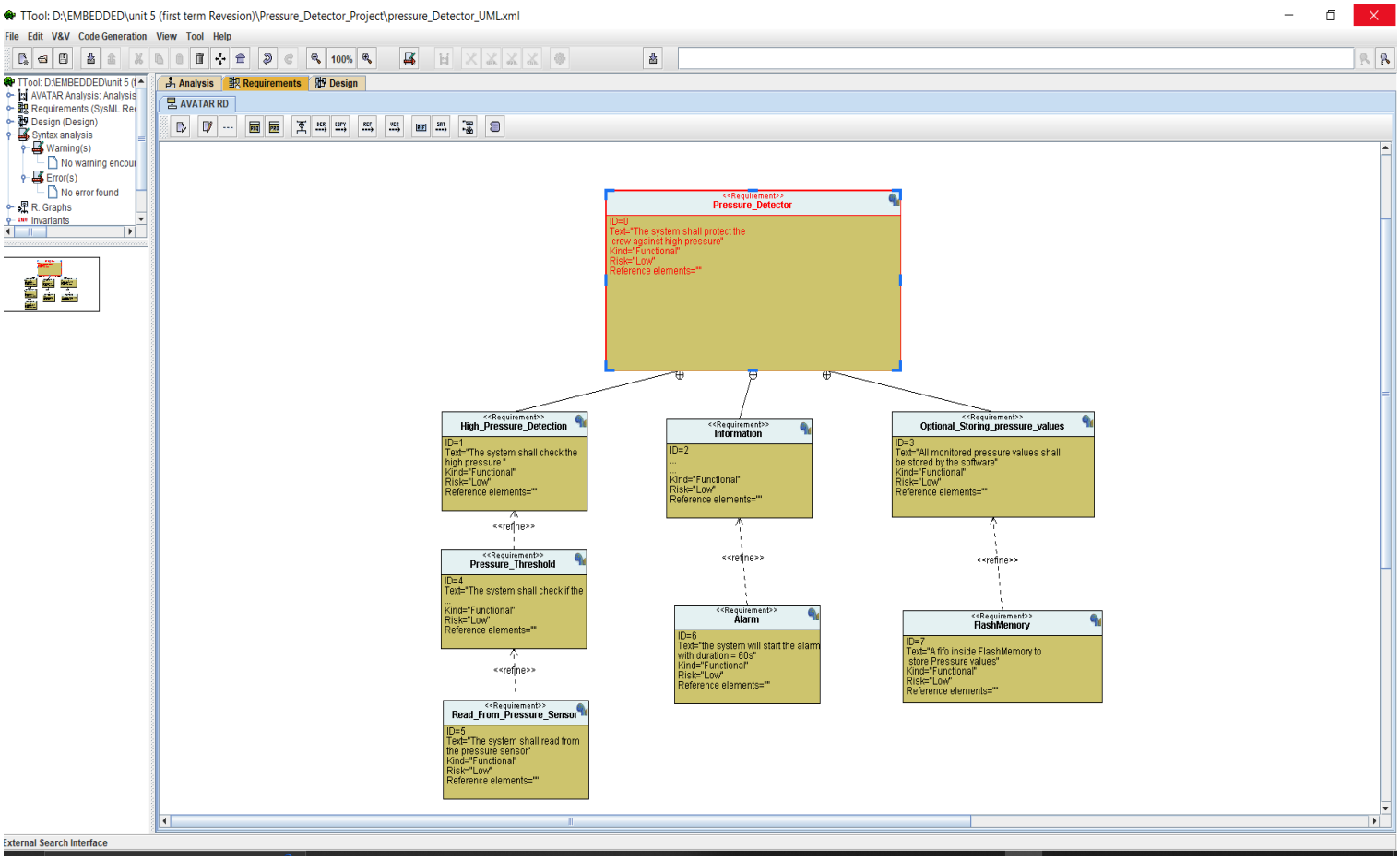
- main.c
- linker_script.ld
- startup.c
- Makefile
- alarm.c
- alarm.h
- Pressure_Sensor.c
- Pressure_Sensor.h
- Stm32_f103C6_Drivers.h
- stm32_f103C6_GPIO_Driver.c
- Stm32f103x6.h

Executable Files:

- Pressure_Detector_Project.elf
- Pressure_Detector_Project.bin

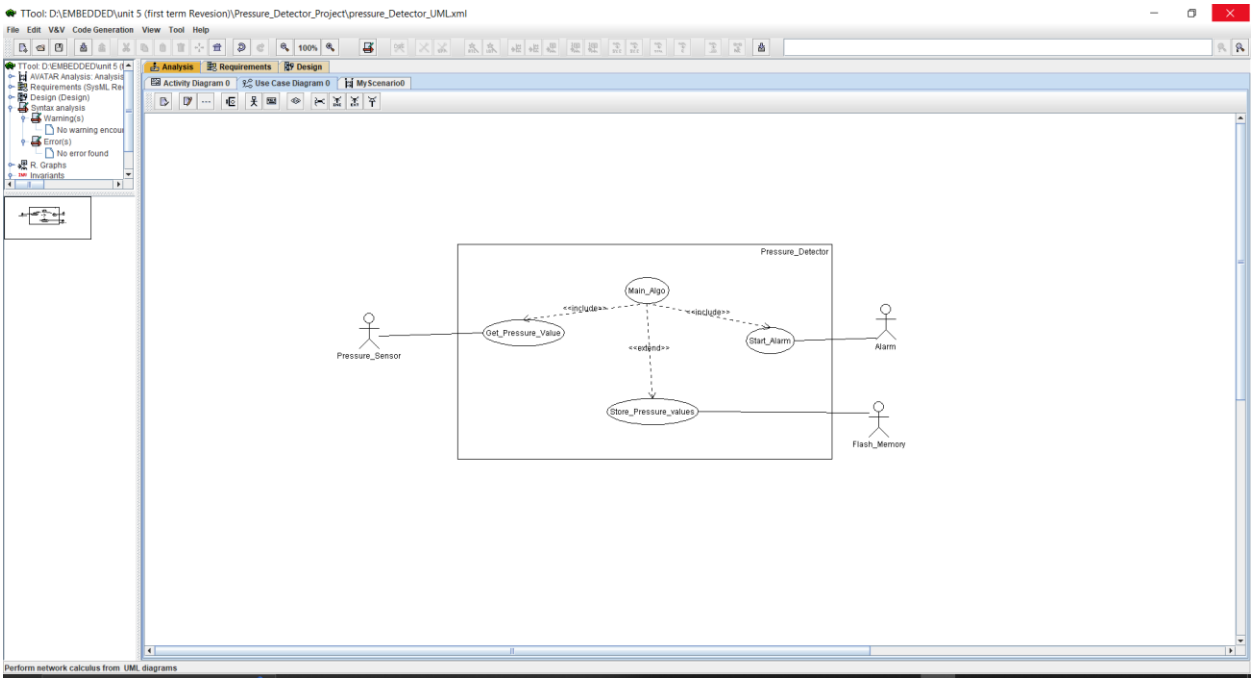
Name: Hady Samir Abdelfattah

➢ requirements Diagram

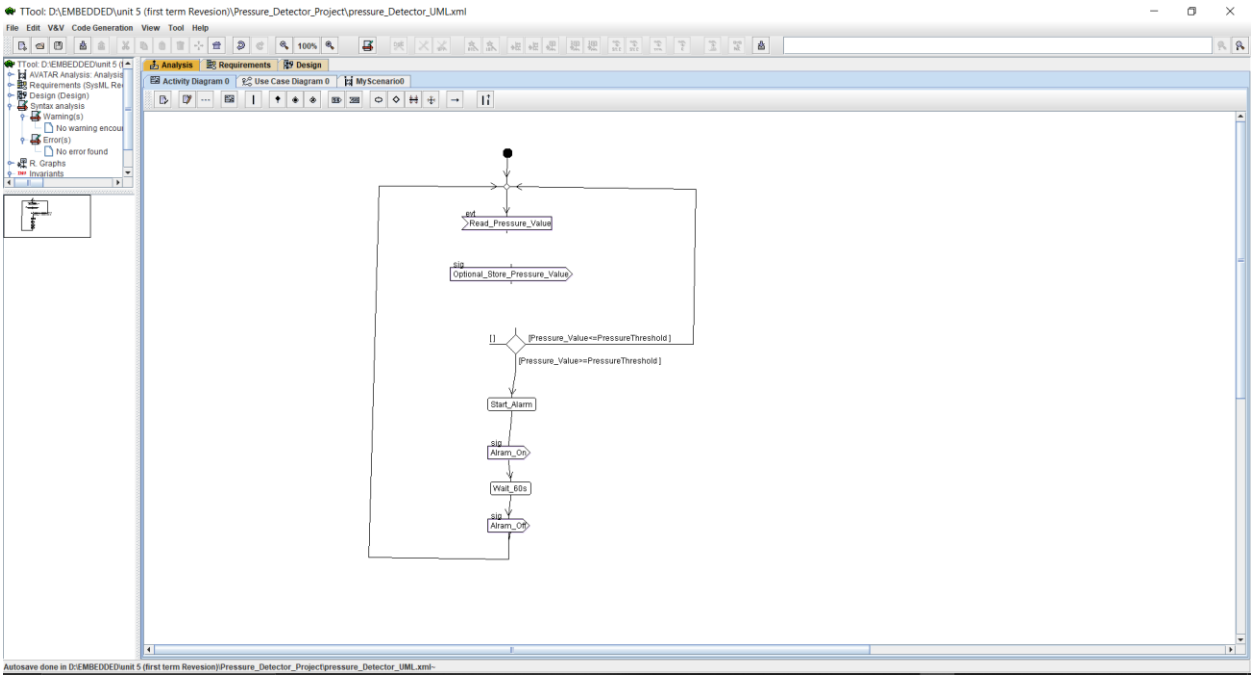


➢ System Analysis

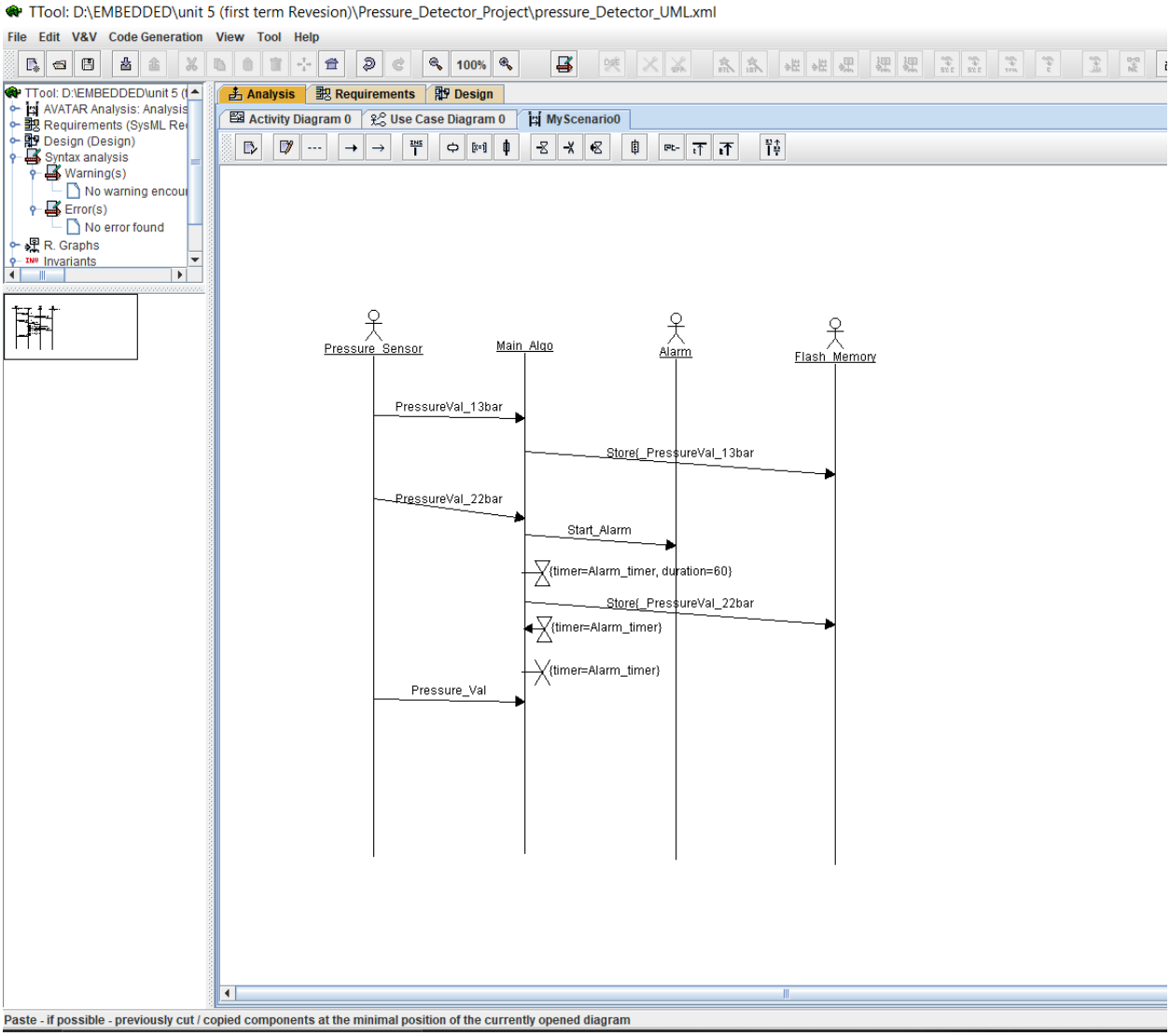
1. Use Case Diagram



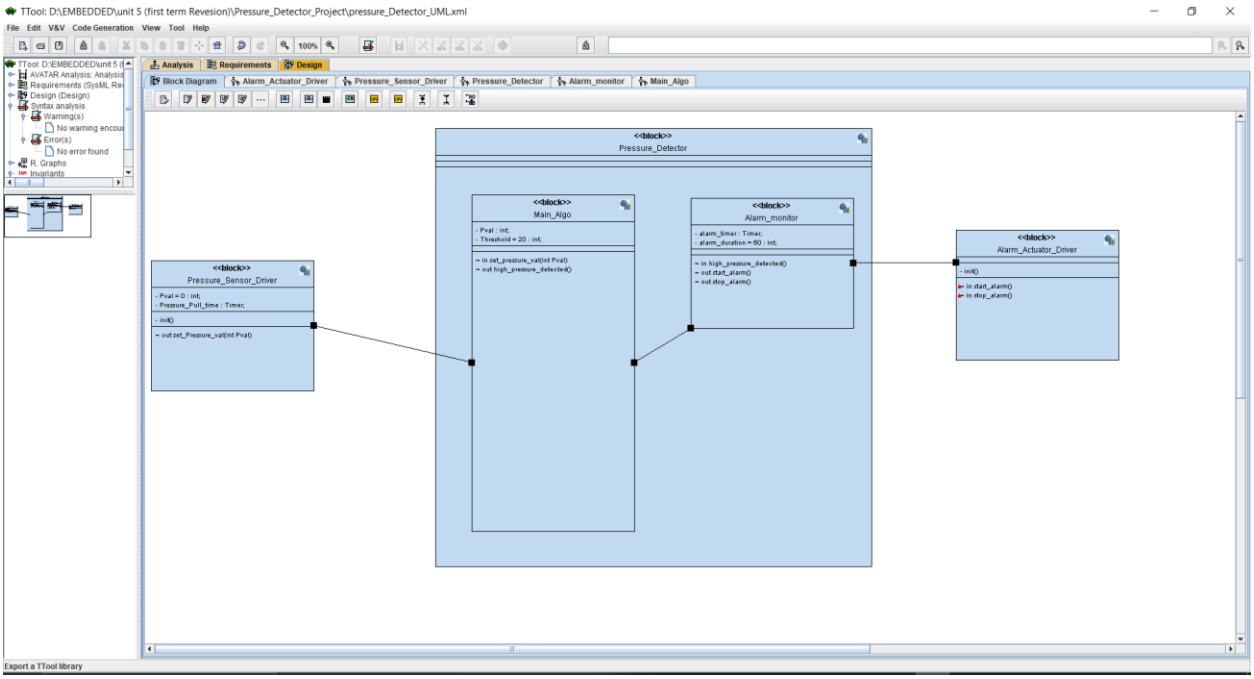
2. Activity Diagram

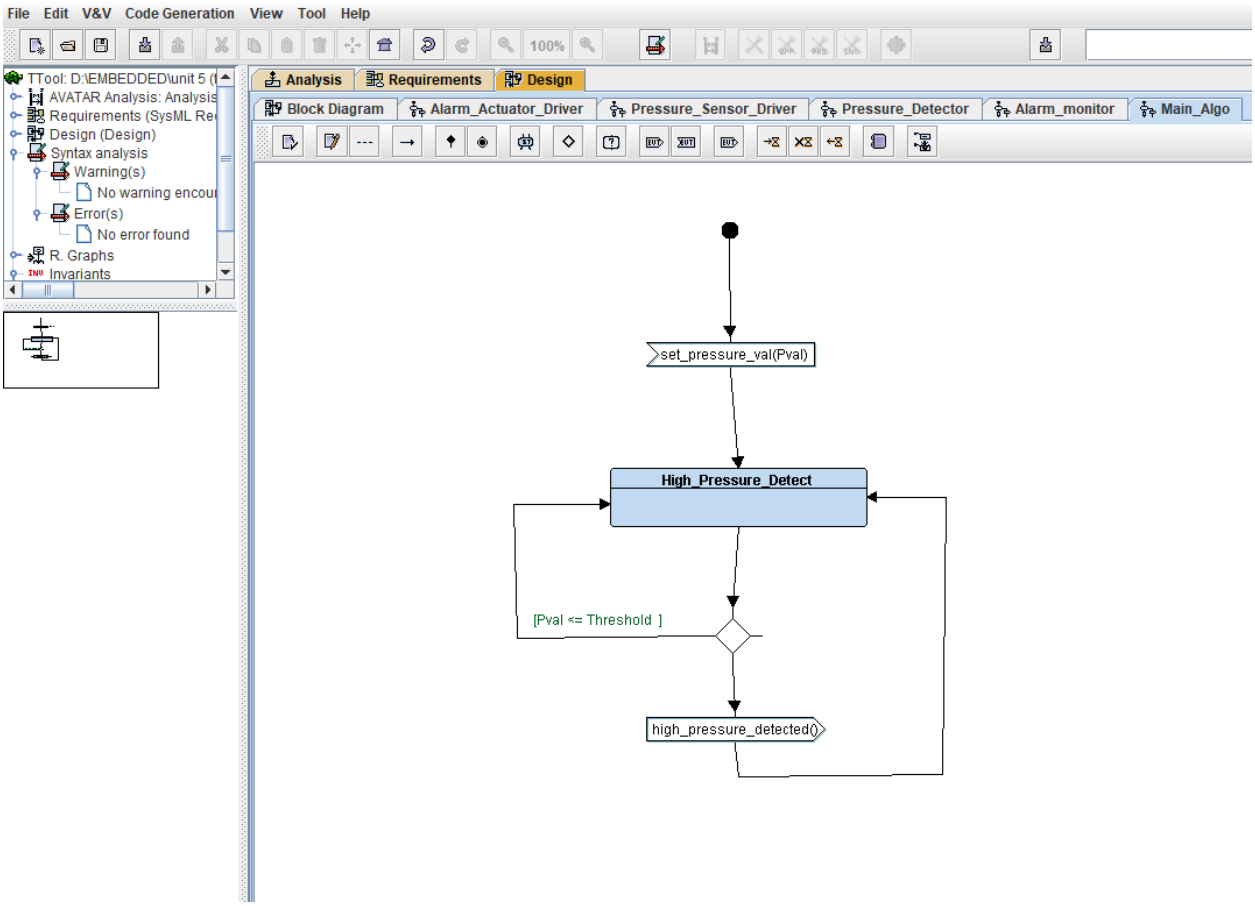


3. Sequence Diagram



➢ System Design

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Design (Design)
Syntax analysis
Warning(s)
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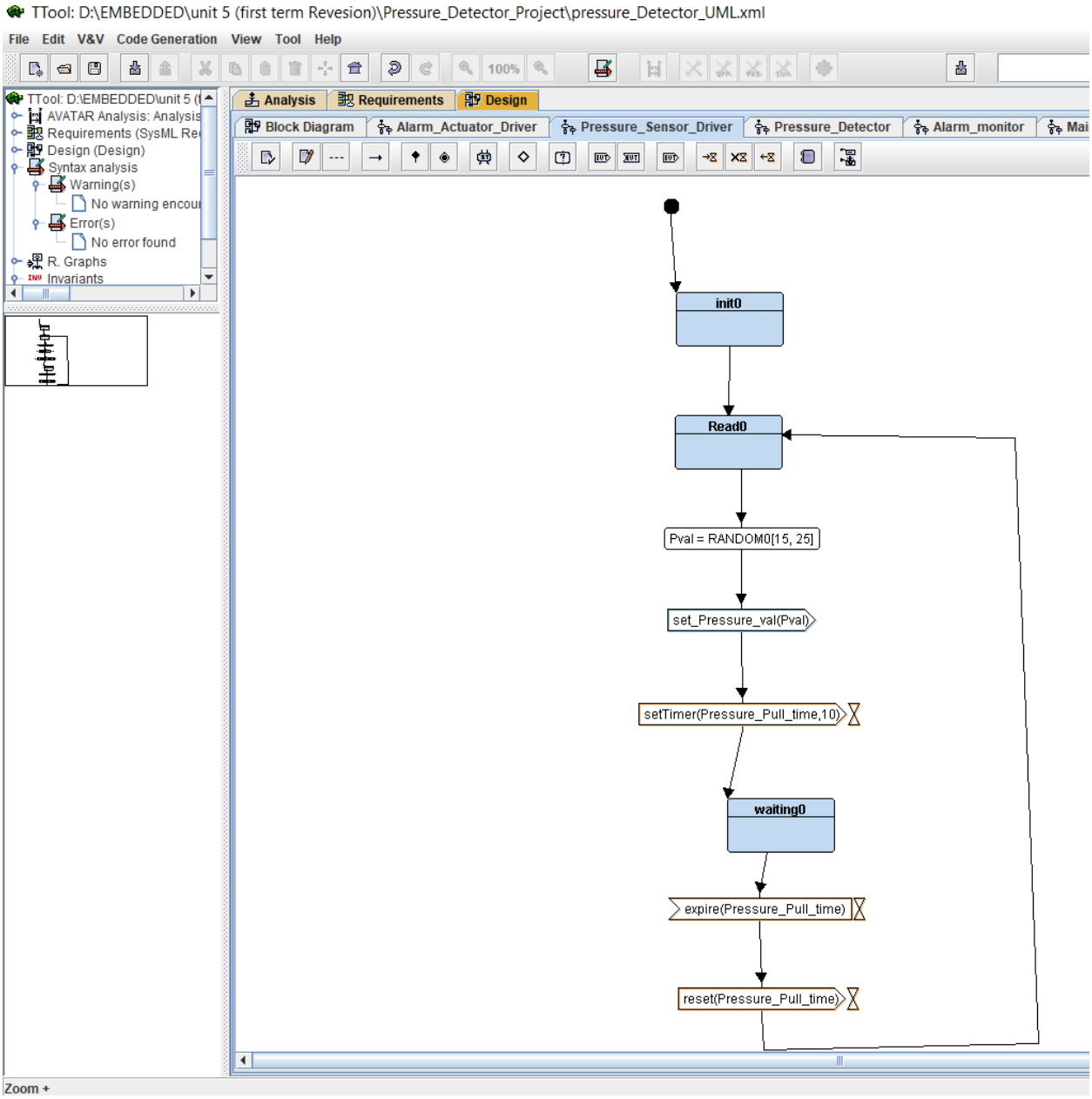
R. Graphs
Invariants
Analysis
Requirements
Design
Block Diagram
Alarm_Actuator_Driver
Pressure_Sensor_Driver
Pressure_Detector
Alarm_monitor
Main_Algo
set_pressure_val(Pval)
High_Pressure_Detect
[Pval <= Threshold]
high_pressure_detected()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R. Graphs
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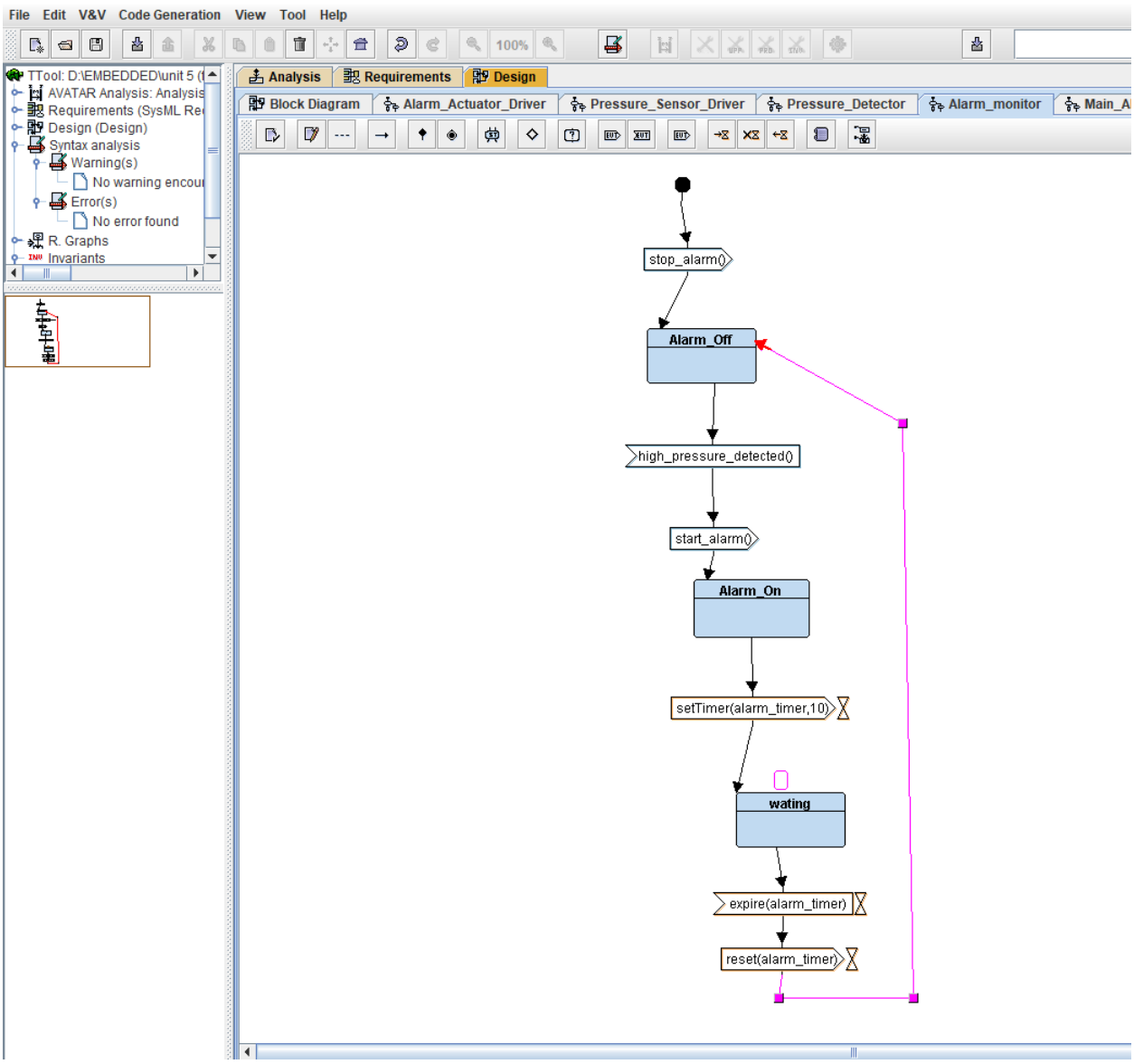
Design
Block Diagram
Alarm_Actuator_Driver
Pressure_Sensor_Driver
Pressure_Detector
Alarm_monitor
init0
Read0
Pval = RANDOM0[15, 25]
set_Pressure_val(Pval)
setTimer(Pressure_Pull_time,10)
waiting0
expire(Pressure_Pull_time)
reset(Pressure_Pull_time)
Zoom +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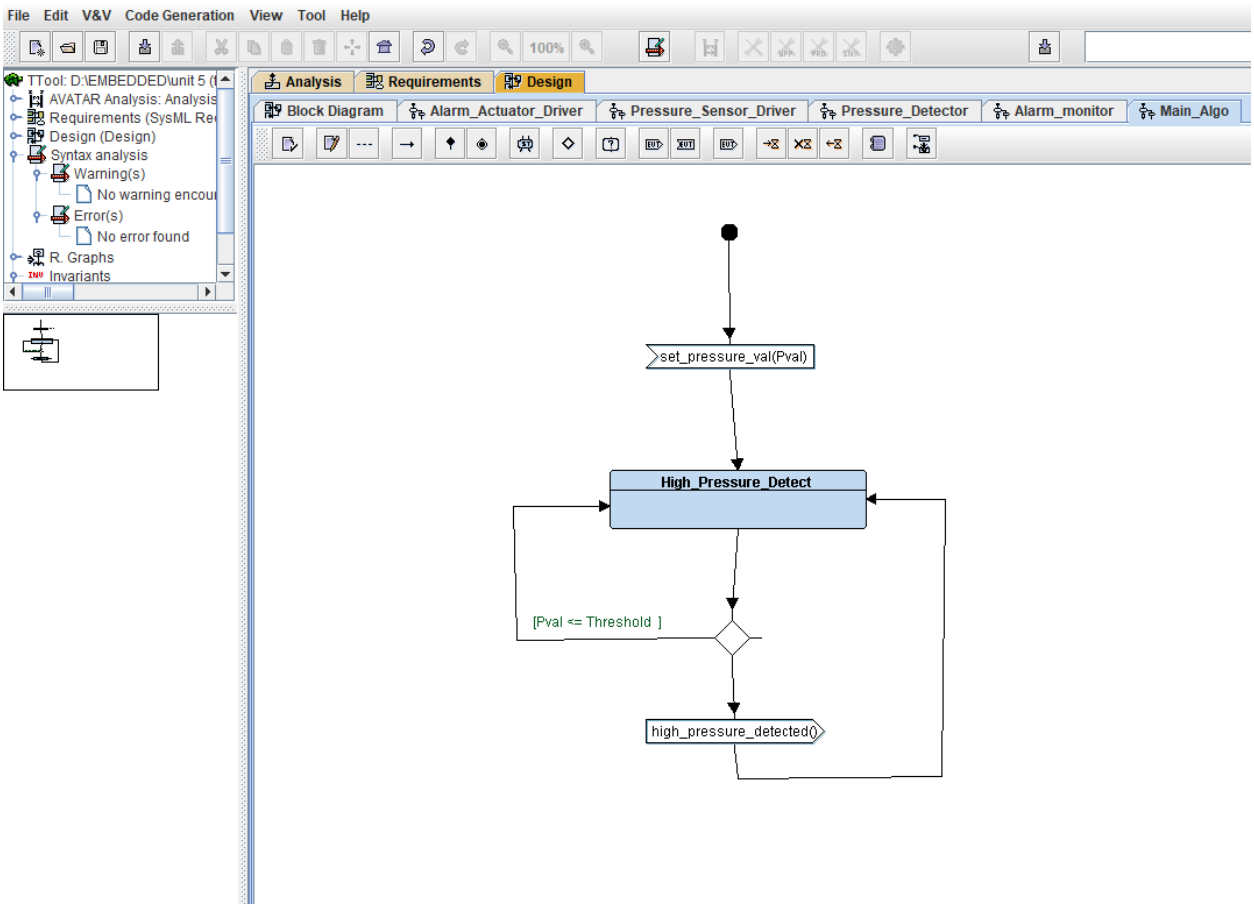
Pressure_Sensor_Driver
Pressure_Detector
Alarm_monitor
stop_alarm()
Alarm_Off
high_pressure_detected()
start_alarm()
Alarm_On
setTimer(alarm_timer,10)
wating
expire(alarm_timer)
reset(alarm_timer)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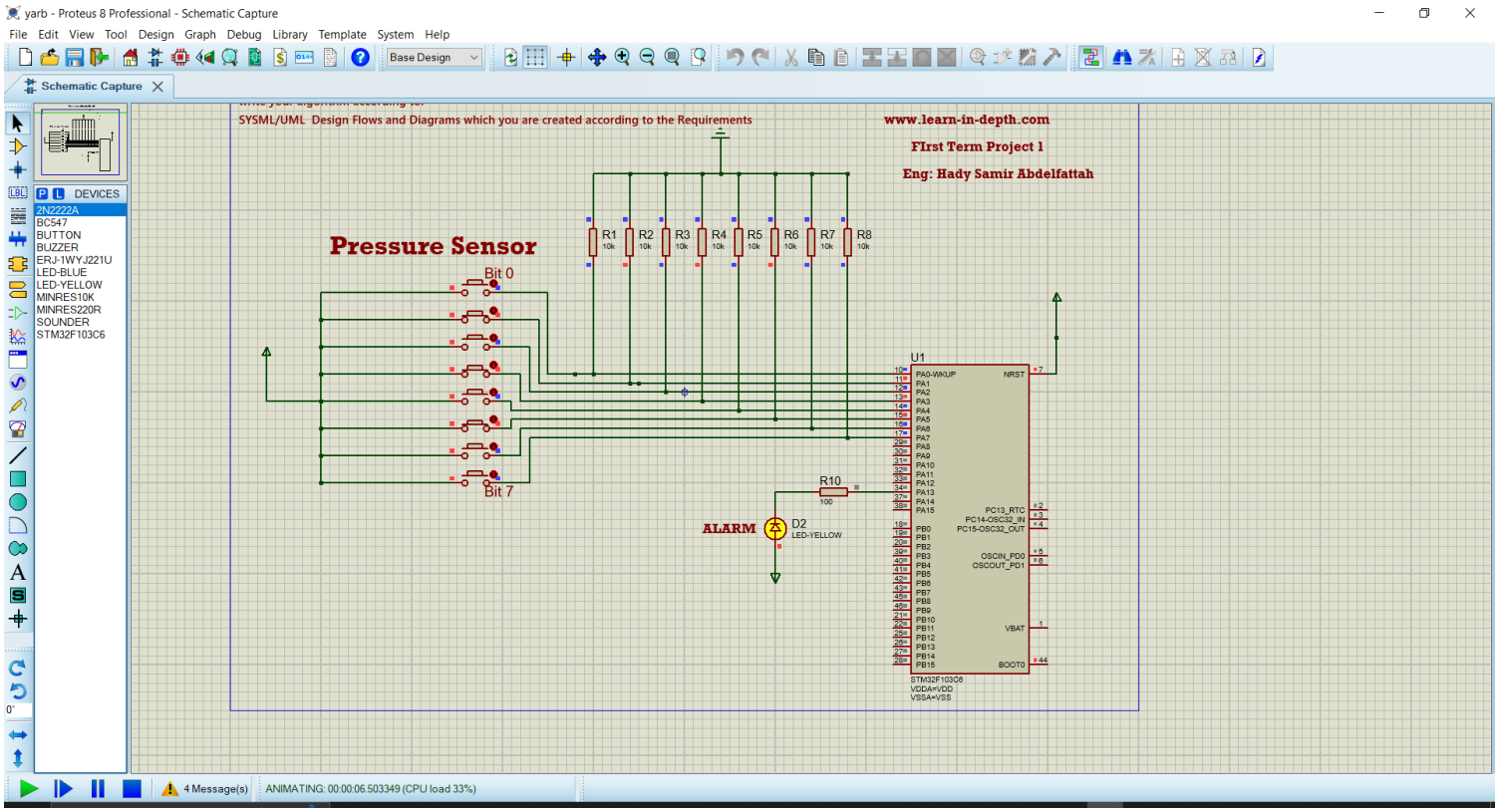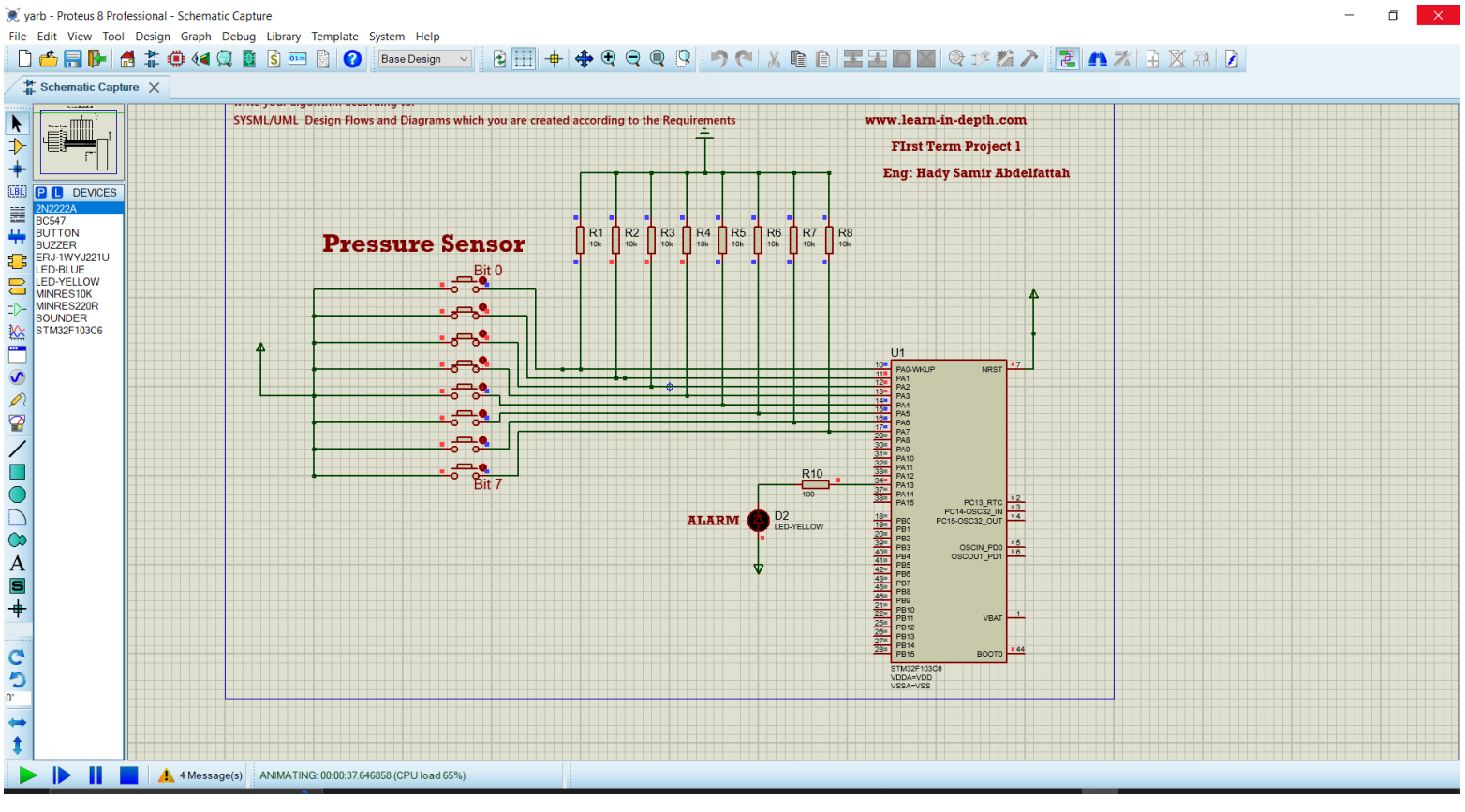
➢ Project_Simulation