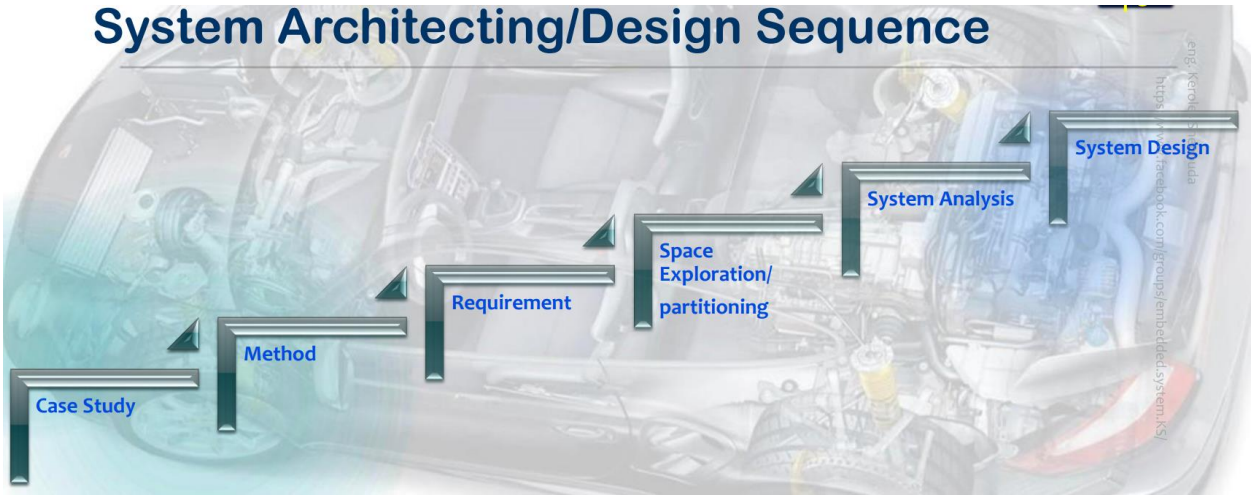


Case study

Requirements

- A pressure controller informs the crew of a cabin with an alarm when the pressure exceeds 20 bars in the cabin
- The alarm duration equals 60 seconds.
- keeps track of the measured values.

Assumptions

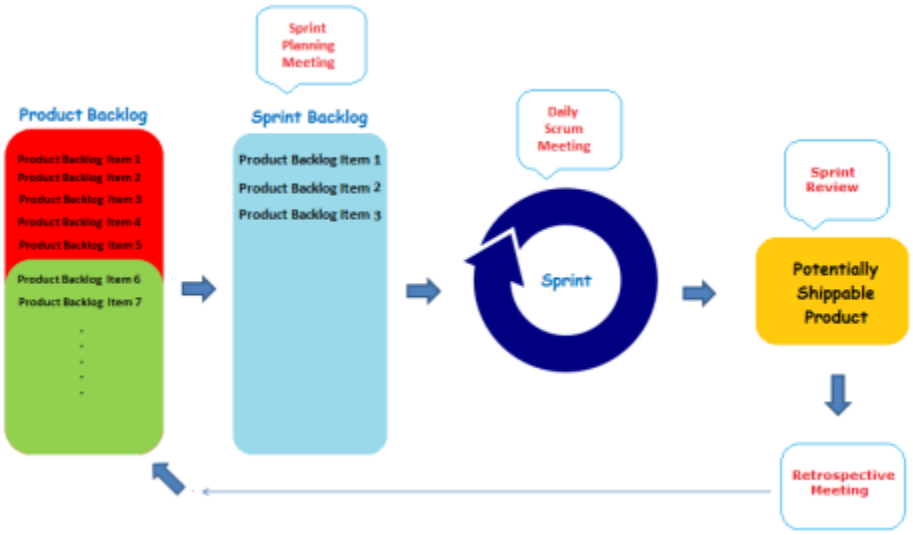
- The controller set up and shutdown procedures are not modeled
- The controller maintenance is not modeled
- The pressure sensor never fails
- The alarm never fails
- The controller never faces power cut

Versioning

The keep track of measured value option is not modelled in the first version of the design

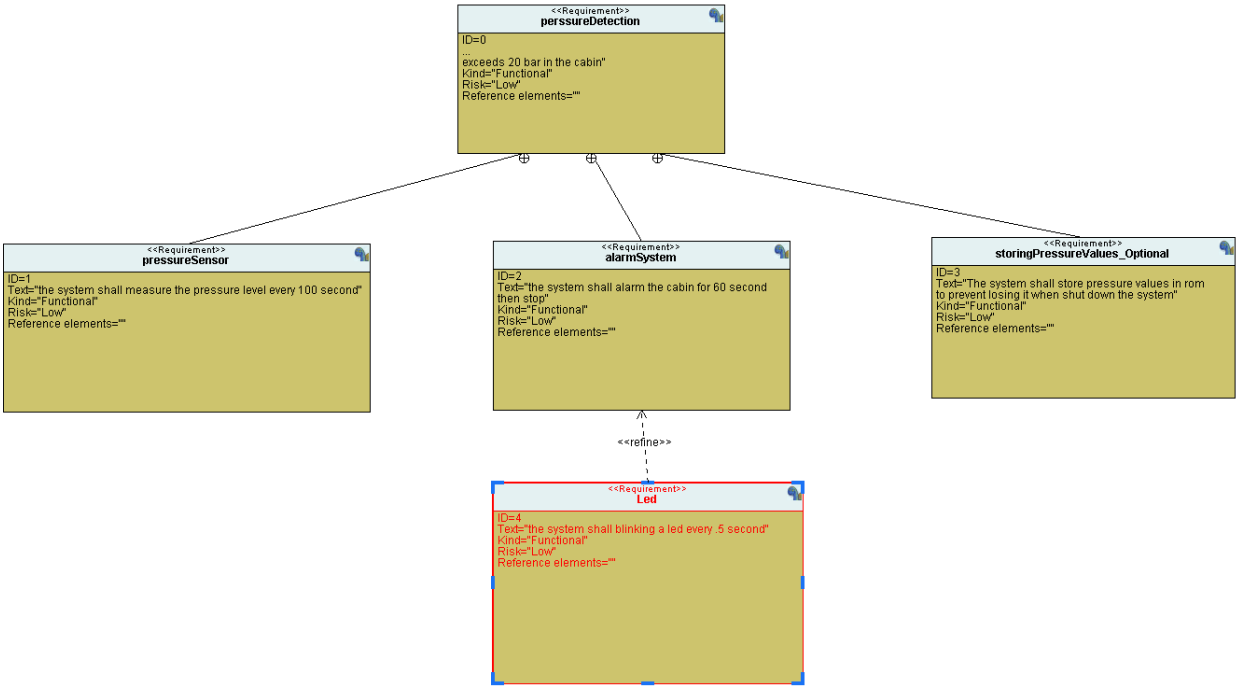
Method

Agile Scurm Methodology

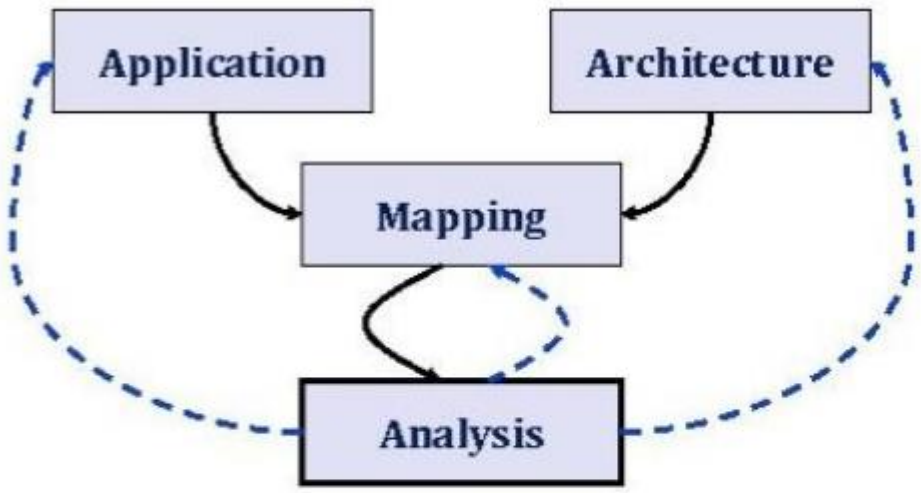


Requirement

Requirement diagram



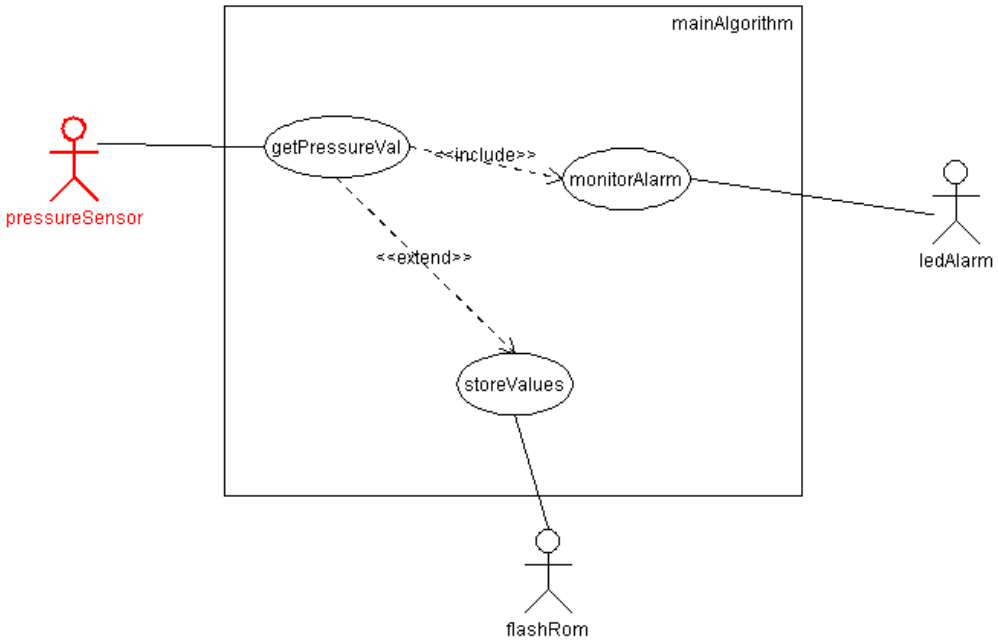
Space Exploration/partitioning



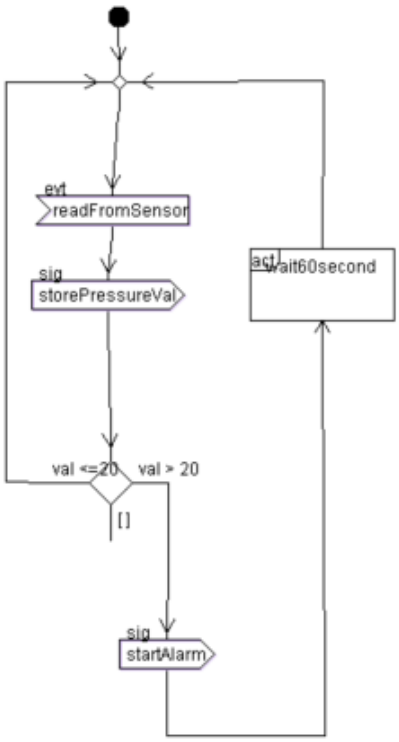
This talk: Exploration and Analysis on a high level of abstraction.

System Analysis

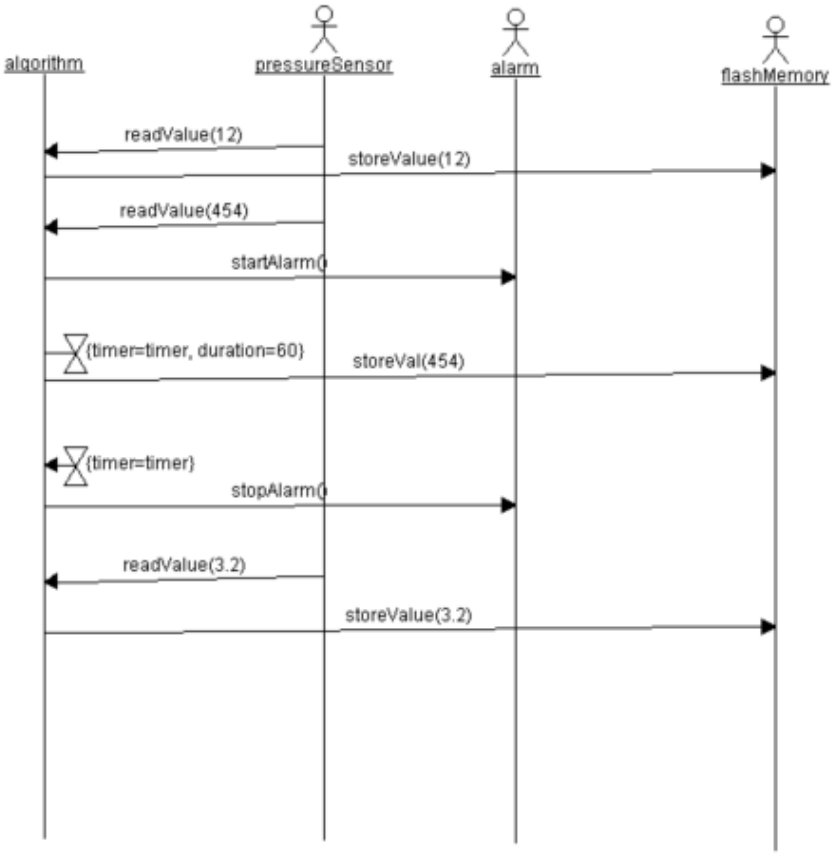
1)Case Diagram



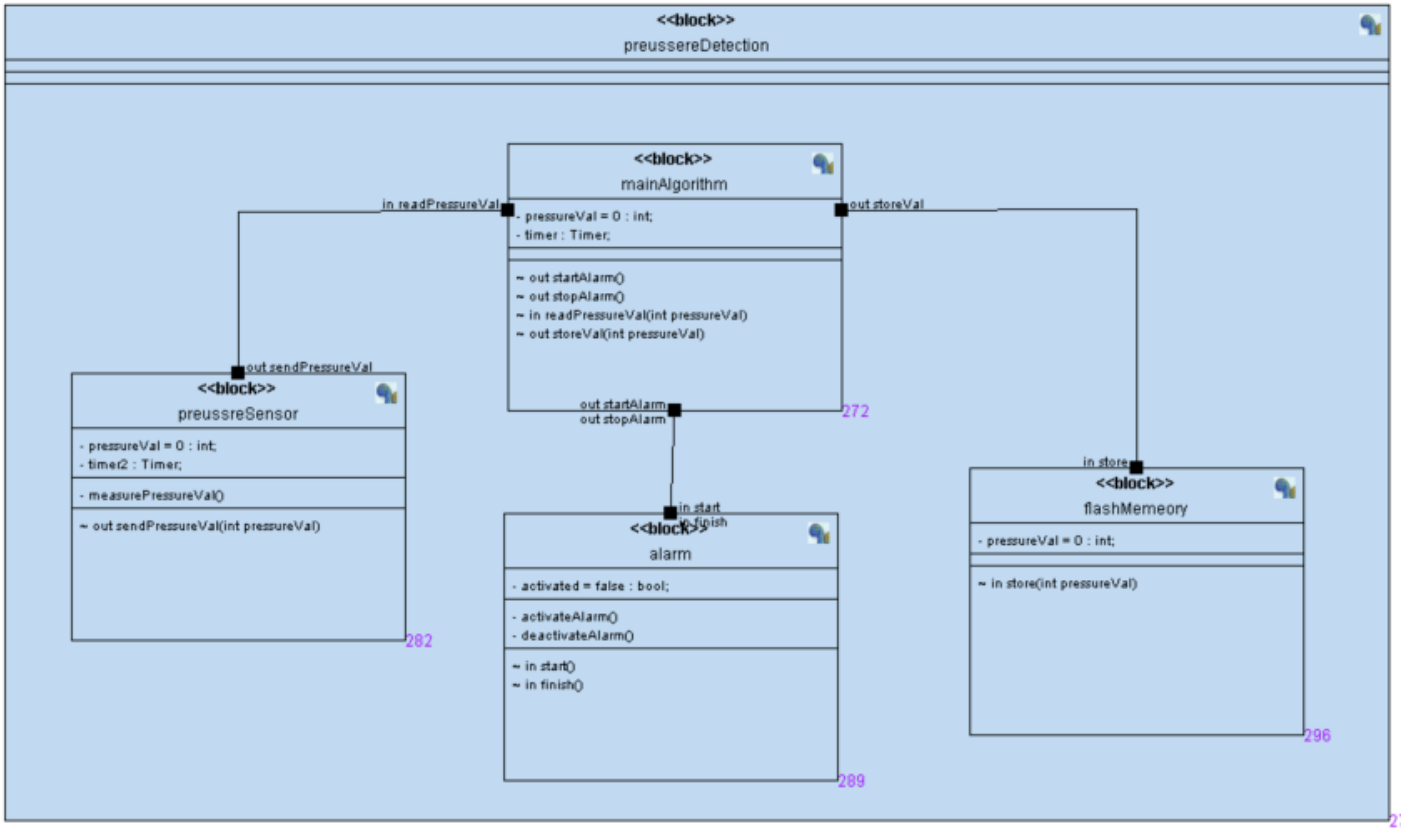
2)Activity Diagram



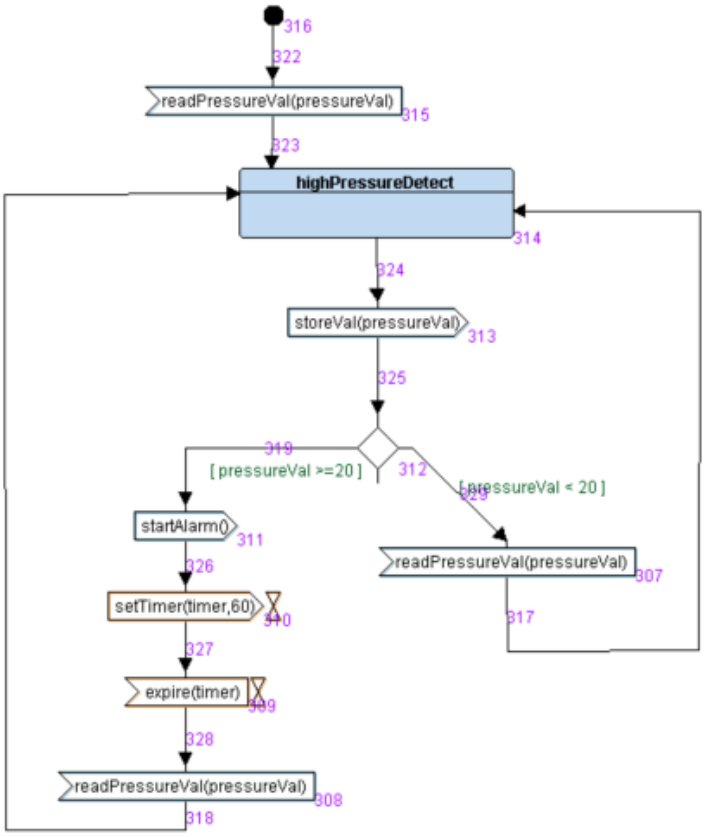
3)Sequence Diagram



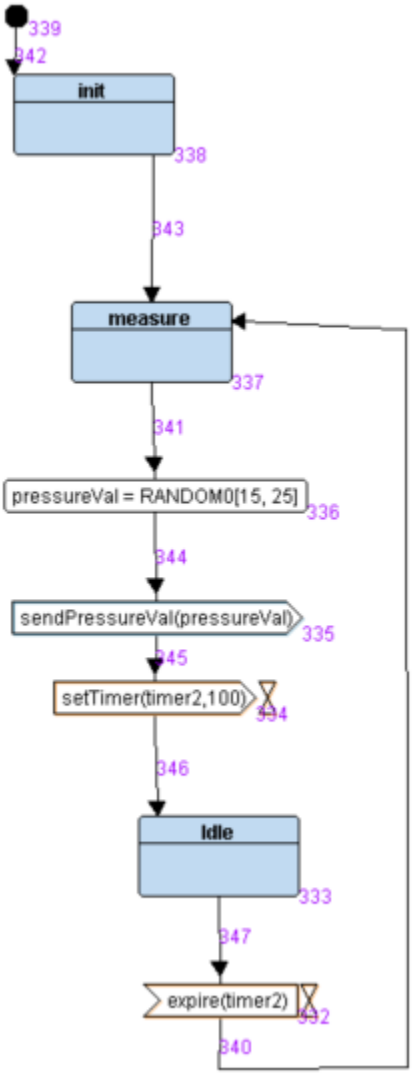
System Design



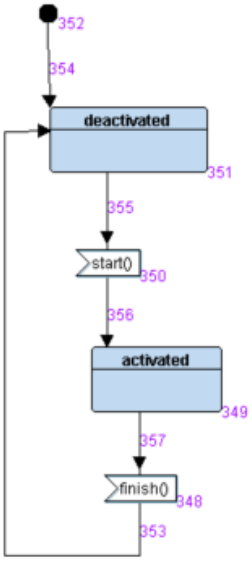
Main algorithm



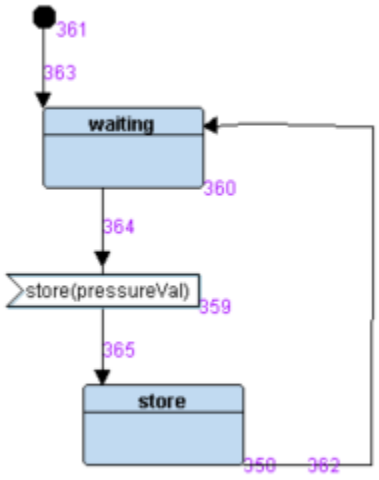
Pressure sensor



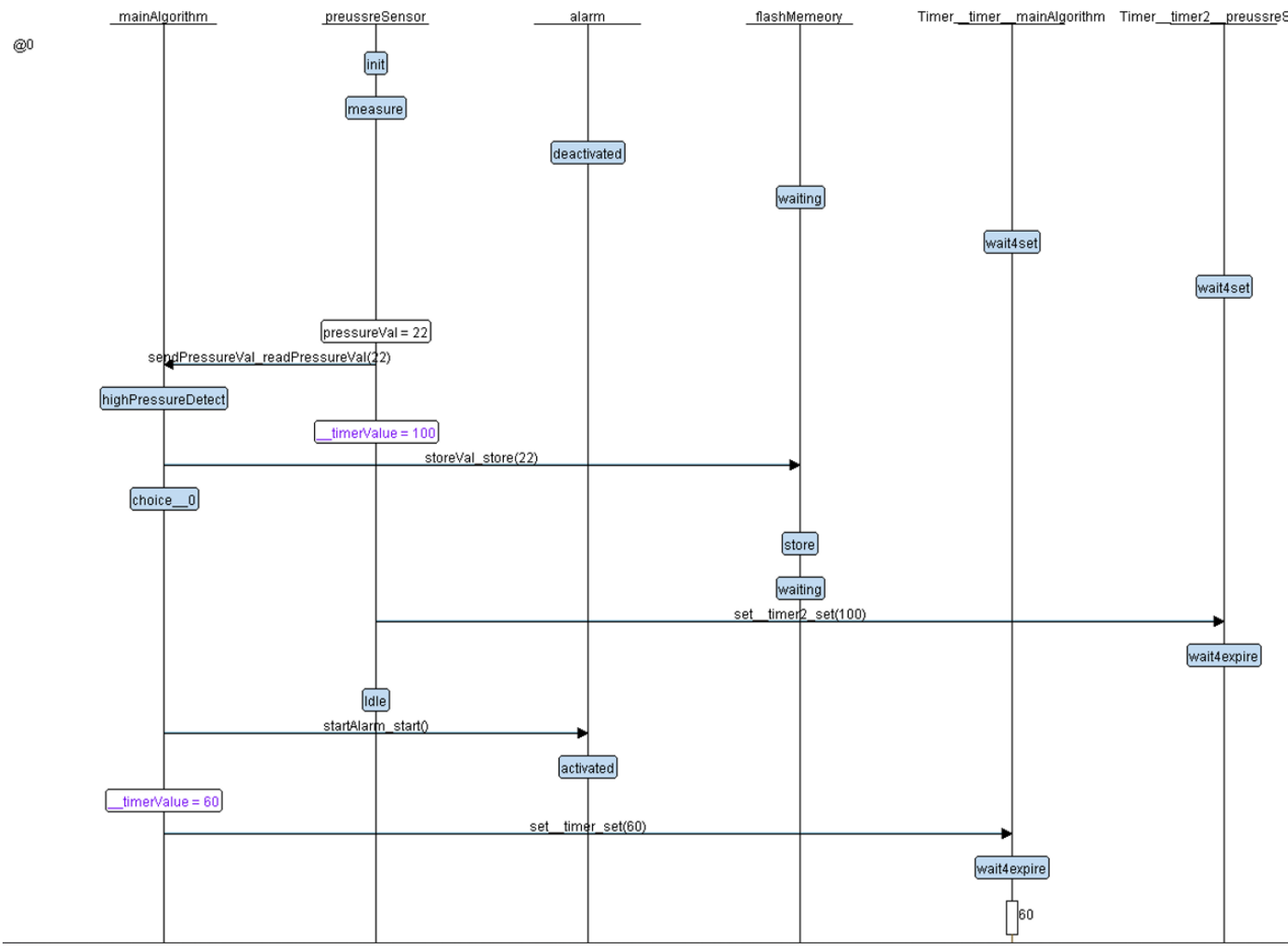
Alarm system

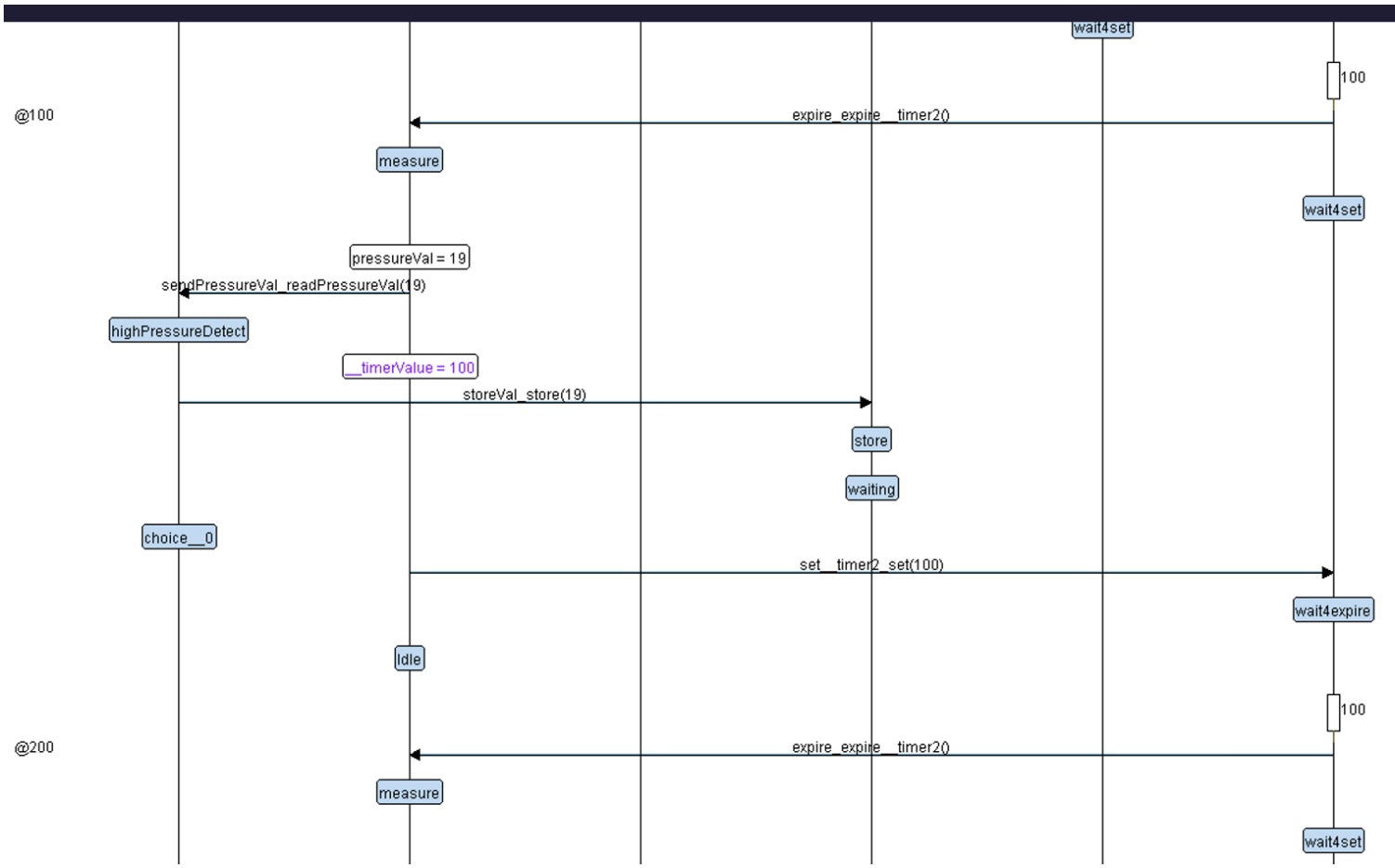


Flash memory



Interactive simulation




wait4set
100
@100
expire_expire__timer2()
measure
wait4set
pressureVal = 19
sendPressureVal_readPressureVal(19)
highPressureDetect
__timerValue = 100
storeVal_store(19)
store
waiting
choice__0
set__timer2_set(100)
wait4expire
Idle
100
@200
expire_expire__timer2()
measure
wait4set