Estimated workload: 1.5 days full time

Background

In Laboration 2 you designed and documented a software architecture for an automotive control system. Now it is time to think about how your architecture might be evaluated with respect to different quality attributes. A good idea is to read Chapter 21 in [BCK12] about the architecture trade-off analysis method (ATAM) and even to review Chapters 4, 7 and 8 about quality attributes.

Your task

Construct a utility tree for the automotive control system. The tree must include at least three quality attributes:

Modifiability

Performance

A third quality attribute you think is important for this type of system

For each quality attribute, you are required to have:

At least one attribute refinement

At lest two quality attribute scenarios.

You are not required to prioritize the scenarios.

Recall that quality attribute scenarios when used as part of the ATAM are expressed in a three-part form - stimulus, environment, and response - where the response should be expressed quantitatively. When formulating your scenarios in this assignment, try to pick quantitative measures that you think are sensible, but do not spend time researching what quality requirements are actually used in the car industry (the purpose of the assignment is to demonstrate that you understand what utility trees and quality attribute scenarios are).

State approximately how much time you have spent on this assignment.

Reporting the assignment

Create a subfolder called "Lab 3" in your Subversion repository containing the following:

A document (Word or PDF) with your solution to the assignment (do not forget the estimates of how much time you have spent).

After you have uploaded your assignment in your Subversion repository, you should notify us in Blackboard that you are done. To notify us use submit option under Assignment 3. As a message you have to write your group number. Each group member has to submit the assignment via Blackboard individually.