Assignment 12 — 04.12.2019 – v1.0a
Architectural Styles for Concurrency

Deadline for exam questions (E02): Saturday, 07.12.2019, 11:59 pm

Otherwise we cannot guarantee that we’ll be able to discuss them in the upcoming practical session.

Exercise 1 (7 Points)

Answer the following questions:

a) What is a Software Architecture? What is its benefit?

b) What are the potential disadvantages when using layered architectures?

c) Provide an example in which the pattern Specialist Parallelism could be a legitimate architectural choice. Justify your answer!

d) The concepts Result Parallelism, Specialist Parallelism and Agenda Parallelism represent three ways of thinking about the problem. Can you tell on what they focus? Provide one sentence for each one of them.

e) What is a Flow Architecture? What are Blackboard Architectures?

f) Which blackboard style should be preferred when we have multiple processors? Why?

g) What are Unix pipes and how do you use them?

Exercise 2 (3 Points)

Now we change roles: It is your turn to send me questions of topics you are still not familiar with for the next practical session. The best questions will be presented in front of you. I will try my best to answer all the questions you submit. For each question you ask you will retrieve a point (maximum of 3 points, no bonus this time :).