Series 12 — 06.12.2017 – v1.0
Architectural Styles for Concurrency

Deadline for submission: 10-Dec-2017, 1159 pm

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 :).