

*Master Program in Computer Science and Networking*  
**High Performance Computing**

2012-13

**Homework 1**

Submit the written answer. Deadline: September 24 at the lecture, or send an e-mail: [vannesch@di.unipi.it](mailto:vannesch@di.unipi.it). The solution has to be discussed at Question Time.

**Question 1**

Explain Section 1.3.3 (Part 0 Course Notes) in more detail, in general and also using different examples about paragraph 3 (“In other terms ...”). Explain paragraph 4 (“It is important ...”).

Explain the last paragraph (“Moreover, ...”): in particular explain the differences between the level structuring of Section 1 and the protocol stack structuring.

**Question 2**

Consider a service, e.g. of the operating system, available to applications and linkable to them. Two or more applications cannot use the service simultaneously. Explain how this condition is respected in two different scenarios:

- a)* the service is a process
- b)* the service is a procedure.