

Assignment 1 (basics)

(In groups of 2)

Send your answers by email (pdf files ONLY) to pitoura@cs.uoi.gr and a hard copy no later than Friday 26/3

1. Read about web services. Some pointers can be found at the webpage of the course.

(i) Would you call web services “middleware”? Explain.

(ii) What are the protocols used by web services? Give a short (2-3 lines) description of each.

(iii) Describe the steps followed for (a) publishing, (b) finding and c) binding a service. Which protocols are used in each case? Give an example.

(iv) At what extend do web services satisfy the four goals of distributed systems that were set in the lecture? In particular:

(a) Goal 1: connecting users and resources

What are the types of resources that can be shared using a web service? Provide an example. How do web services address the two problems of sharing?

(b) Goal 2: For each type of transparency, explain the transparency degree offered by web services.

(c) Goal 3: To what extent is a system built on web services an open system? Give an example of a policy and the web service mechanism(s) used to implement it.

(d) Goal 4: How is scalability at each dimension achieved by using web services?

2. Solve problems 9 and 16 from the textbook.