

Name _____

Lastname _____

Student number

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Net Computing academic year 2012-13

Rules

- This is a closed books exam.
- The operation of any electronic device is prohibited (e.g., no calculator or phone).
- Answer the questions being *precise, complete, and formal*.
- Write as *clearly* as possible, both in terms of handwriting and wording.
- You can answer the questions in English or in Dutch, whatever you prefer.

Questions

1. Illustrate the general structure of a Remote Method Invocation architecture and the process of an invocation of a remote method.
2. Illustrate the replication and concurrency requirement of a distributed file system. How well does NSF address these requirements?
3. Describe the notion of 'future' as it comes to asynchronous communication. How would one implement it? Provide a sketch of the implementation in a language of your choice.
4. Compare Protocol Buffers and traditional web services. What are the differences and commonalities between the two? What would you prefer to use if you were asked to develop an API for, let say, NS.NL? Motivate your choice.
5. Illustrate the phases of a process joining a Jini network and looking for a color printing service in the student domain. In addition, illustrate the requirements for a host to be part of a Jini network.