Name_____ Lastname_____ Student number [ ][ ][ ][ ][ ][ ]

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 transparency and heterogeneity requirement of a distributed file system. How well does NSF address these requirements? Use the NSF client/server architecture to explain your answer.

3. How would you implement an RPC (remote procedure calls) with load balancing using message queues? What are the benefits/drawbacks of such solution?

4. Explain what is asynchronous web request handling. When should it be used? Support your answer with typical usage scenarios.

5. Write Java code with line by line comments to perform the following operation:[1] connect to the Web page of the W3C, download the main HTML home page and echo it on standard output.

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[1] Syntax errors will not be considered in the evaluation of this exercise. Java objects that might be useful for the solution are: `Inet4Address, Socket, DataOutputStream, DataInputStream.`