

University of Helsinki
Department of Computer Science

CSM14101 Software Architectures
Course Exam 25.10.2018
Examiner: Antti-Pekka Tuovinen

No other materials or implements except for writing are allowed in the examination.

Write on each separate sheet of paper the name of the course and the date of the exam, your name (clearly), your student number and your signature. Students who are taking their whole degree in English must answer in English, but others can answer also in Finnish or Swedish.

The exam yields 32 points in total. Each question is worth 8 points.

The expected length of an answer is about one hand written page (75 - 100 words). The answers must consist of complete sentences (not just bullet points).

1. Explain how software architecture can be used in a *prescriptive role* and in a *descriptive role* in software development by explaining shortly two uses from both role categories.
2. What does *Information Hiding* mean as a software design principle? Give an example (no code needed, explain on a general level).
3. Explain the *solution characteristics* of the Microservice Architecture pattern. What kind of elements there are, what are their responsibilities, how do they communicate, and how does this affect organizing the development work?
4. Explain the basic idea of *scenario-based* architecture assessment. What is good about scenarios?