ID1212 Network Programming 7.5 credits

Nätverksprogrammering

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for ID1212 valid from Autumn 2017

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

ID1018 Programming I 7.5 credits or DD1332 Object-Oriented Programming 7.5 credits, or equivalent course.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The aim of the course is to introduce advanced tools and technologies for network programming at such a level that the participants on completion of the course can

- use application programmer's interfaces (API:s) mainly in Java, to develop distributed applications
- design clients for distributed applications
- develop multi-threaded programs, especially multi-threaded servers
- develop multi-layered server applications
- develop distributed applications with sockets and other network API:s, such as Java RMI, CORBA, Java Servlet, JSF, EJB, JDBC, JPA and Android SDK.

Course contents

- Basic concepts in network and web technologies.
- Graphical user interface for clients.
- Multi-threaded programs.
- Java I/O.
- Network programming with sockets.
- Client/server solutions.
- Distributed applications with RMI.
- Distributed applications with message passing.
- Distributed, multi-layered, server applications, mainly with Java EE technologies such as JavaMail, Java Naming and Directory Interface (JNDI), Java DataBase Connectivity (JDBC), Java Persistence API (JPA), Java Servlet, Enterprise Java Beans (EJB), Java Server Faces (JSF).
- API:s and tools for mobile applications, such as Android SDK.

Course literature

The course is not based on reading from any particular book. Some recommended books are shown below.

- Elliotte Rusty Harold. Java Network Programming, 4th Edition. O'Reilly & Ass., Inc. October 2013.
- Jan Graba. An Introduction to Network Programming with Java, 3rd Edition. Springer, 2013.

Examination

- INL1 - Assignments, 4.5 credits, grading scale: P, F

- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.