ID2212 Network Programming with Java 7.5 credits

Nätverksprogrammering med Java

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

Establishment

Course syllabus for ID2212 valid from Autumn 2010

Grading scale

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

Education cycle

Second cycle

Main field of study

Specific prerequisites

ID1018 Programming I 7,5 credits or DD1332 Object Oriented Programming 7,5 credits, or equivalent courses.

Language of instruction

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

Intended learning outcomes

The aim of this course is to introduce advanced network programming tools and techniques on the level which enables one

- to use Java Application Programming Interface and windowing toolkits (AWT, Swing)
- to design GUI clients for network servers
- to develop concurrent programs with threads, in particular, multithreaded servers
- to program Java applets and servlets
- to use sockets, URL connections and content handlers in network programming
- to develop distributed applications with sockets, Java RMI, CORBA, servlets, JSP, JSF, EJB, JDBC, JXTA and J2ME (Java 2 platform, Micro Edition).

Course contents

- Review of Java programming basics and paradigms.
- Overview of the core Java API. Java I/O. GUI programming and multithreading.
- Basic network and Web concepts.
- Networking with sockets, secure sockets, URL connections. Applets and servlets.
- Client-server applications. Distributed computing with Java RMI and CORBA.
- The JavaMail API.
- An overview of Enterprise Java technologies such as Java Naming and Directory Interface (JNDI), Java DataBase Connectivity (JDBC), Java servlets, Java Server Pages (JSP), Enterprise Java Beans (EJB), Java Server Faces (JSF).
- An overview of the JXTA technology for development of P2P distributed applications.
- An overview of the Java 2 Platform, Micro Edition (J2ME).

Course literature

Kursen baseras inte på någon speciell kursbok. Några rekommenderade böcker visas nedan. Andra titlar presenteras under kursens gång.

- Elliotte Rusty Harold, Java Network Programming, 3rd Edition, O'Reilly & Ass., Inc., 3nd Edition October 2004 (ISBN: 0-596-00721-3)
- Jan Graba, An Introduction to Network Programming with Java, Addison-Wesley, 2003 (ISBN: 0-321-11614-3)
- Merlin Hughes, Michael Shoffner, Derek Hamner, Java Network Programming: A Complete Guide to Networking, Streams, and Distributed Computing, 2nd ed., Manning Publications, July 1999 (ISBN 188477749X)
- Franzén, Torkel, Java från grunden. Studentlitteratur, 2003 (ISBN 9144029144) (på svenska)
- Java hemsida på Internet: http://www.javasoft.com/

Examination

- ANN1 - 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.