

Programmering B

1st Weekly Note (E10, Week 45)

Format

The course is taught by Peter Schneider-Kamp. Lectures will usually be on Tuesday mornings 10:15–12 and on Thursday shortly before sunrise 8:15–10. There are two groups of students: matematik og matematik-økonomi (S1/M1) and datalogi (S7). These groups will be together for the exercises and the labs which will be taught by Alessandro Maddaloni and Philipp Peters, respectively.

For a precise schedule, please see the web site of the course. As we will sometimes mix or swap discussion sections and exercises, please always carefully read the weekly notes such that you will end up in the right room. Note in particular that labs will usually be held in IMADA's "Terminalrum".

The weekly notes and other information about the course are available from:

<http://www.imada.sdu.dk/~petersk/DM503/>

You can also access the course home page through the e-learning system:

<http://e-learn.sdu.dk/>

Textbook

John Lewis; William Loftus: *Java Software Solutions: Foundations of Program Design*. 6th edition, Pearson Education, 2009.

The textbook will be supplemented with notes available from the menu item "Course Documents" for DM502 or DM503 in Blackboard.

Evaluation

Your progress in the material of the course is evaluated by a practical project. This project will consist of two parts. The first part will be probably handed out in week 46. Both parts will require you to model a problem, implement a program that solves the problem, and test your implementation.

Personal Contact

Peter Schneider-Kamp has no fixed office hours, but his door is always open for you (if it should be closed, knock loudly and wait a few seconds before trying to enter). If you like, you can also schedule an appointment by email, jabber or phone (see the course home page for contact details).

Reading for Week 45

Sections 11.1 – 11.3 and 12.1 – 12.4 (except for the section on “Graphs”) in “Java Software Solutions”.

Quick refresh of material from DM502.

Section 3.19 in ”Noter og opgaver”.

Pages 25–26 in “Eksempler på datastrukturer og algoritmer”.

Lecture: Tuesday, November 9, 10-12 (U144)

After an introduction to the course we will repeat the introduction to recursion and extend our understanding of this important concept.

Lecture: Thursday, November 11, 8-10 (U140)

We will introduce the concept of an abstract data type and its relation to the concept of classes. Then we will look at some simple abstract data types and their design and implementation.

Discussion: see schedule for time and room

The teaching assistants will introduce themselves. Then the solution of the second part of DM502’s project will be discussed.

Afterwards, implement the Towers of Hanoi in a short Java program. Try to make the program as short and minimal as possible. It should just ask for the number of discs and then print all required moves in the right order.