

DM85 Networks and Integer Programming — Ugeseddel 2

OPL studio 3.7 You can start the program by typing “oplst &” and the full version can be started by typing “oplst37 &” There are many examples of projects with data so that you may experiment. They are in /usr/local/ilog/ilog/OPLSt37/examples/opl/

Please remember that we have only one license for the full version, so when you develop code you should use your own free version of OPL Studio.

Lecture on February 9, 2007: I will show you how to run OPL studio on some examples. We will cover most of Chapter 2. We will also discuss the solution of the exercise 1.9.5 from weekly note 1.

Lecture on February 12, 2007: I will recall basic concepts on linear programming and the simplex method and we discuss the exercises below.

Exercises for February 12, 2006: 1.9.7, 1.9.10 (the weighted sum of start times means $\sum_i w_i * s_i$, where s_i is the start time of job i .), 1.9.11, 1.9.13 and 1.9.14 make formulations of each problem in OPL studio and solve them using that program. Try also to formulate the well known puzzle Sudoku as an integer program (use variables of the kind x_{ijk} where $x_{ijk} = 1$ if the (i, j) 'th cell has value k). Implement your solution in OPL Studio and check it on various sudokus.

Putting a model and data together in OPL: When you have a model myfile.mod and a datafile xxx.dat you have to put these together before OPL can run the model on the data. This is done as follows

1. Select new project in the file menu. now you will have a project called noname.prj
2. right click on noname.prj and select “insert an existing model file”
3. choose the modelfile myfile.mod from the list of available model files.
4. right click on noname.prj and select “insert an existing data file”
5. choose the data file xxx.dat from the list of available data files.
6. right click on noname.prj and select “save the project as”

now you have an executable project and you can run the model on the data by clicking the green button in the right part of the top bar.