

Assignment 2: Production Planning. Optimization modelling exercises¹

Objectives:

- Solving methods: use of mathematical programming to formulate the planning models
- OPL coding and solution of the proposed exercises

Background:

- T.3: Planning
- OPL Basics (lab session)

Hand-in solution

ILOG OPL modelling and solving exercises. Submit the OPL project, named A.2.Student_surname with the programmed models in a compressed file in accordance with the instructions and due date to be communicated in the Virtual Campus.

Exercise 1

Code in OPL the food manufacturing planning problem stated as exercise 1 in the P.3 list. This model should be named as foodmanufact1. The required input data is provided in the enclosed foodmanufact1.dat file.

Exercise 2

Based on the previous model, create a second version named foodmanufact2 in order to introduce the additional constraints stated as exercise 2 in the P.3 list. The required input data is provided in the enclosed foodmanufact1.dat file.

Exercise 3

Code in OPL the refinery planning problem stated as exercise 3 in the P.3 list. This model should be named as refinery. The required input data is provided in the enclosed refinery.dat file.

¹ These exercises have been extracted from H. Paul Williams. Model Building in Mathematical Programming. Wiley.