

From the script to the problem

Difficulty level: intermediate

Keywords

- Integer Linear Programming
- Python+PuLP

Problem description

We have found the `problem.py` file which contains the Python+Pulp implementation of a mathematical model. Unfortunately, the code is not even commented, and therefore we have no clue about the mathematical formulation of the problem. Could you help us, starting from the code, to write both the mathematical formulation and a plausible text that fits the problem described by the script?

Tasks

1. Read the `problem.py` script thoroughly and understand each line of the code.
2. Write the formulation of the mathematical model described by the code.
3. Create a plausible text of the corresponding problem, consistent with the model.