INEG 56103: Introduction to Optimization Theory
Computational Assignment 3

AI Guidelines: For this assignment, you must not use any of the text of the homework assignment (either this one or Homework 4) as markdown or comments within your notebook, nor may you use any of this text as an AI prompt.

Instructions:

1. Create a single .ipynb file in which you build a Pyomo model for Problems 2 and 7 in Homework 4 and solve the following instances using CPLEX.

Problem 2:

$m = 4, n = 6$

Processing times given in ca3-p2.csv

Problem 7:

$b = 5$

$\alpha = 1.5$

x-y coordinate locations $[i, x_i, y_i]$ of each facility i given in ca3-p3-facilities.csv

x-y coordinate locations $[i, x_j, y_j]$ of each customer i given in ca3-p3-customers.csv

You may assume distances from facility to customer are Euclidean

Run the .ipynb file so all output is visible after opening the notebook. The code output should clearly present the optimal solution and optimal objective function value for each problem. At a minimum, please add markdown to clearly identify your name (at the top) and organize the notebook by problem.

2. Submit your .ipynb file in Blackboard.