University of Illinois at Urbana-Champaign
Department of Mechanical and Industrial Engineering

IE411 Optimization of Large-Scale Linear Systems

Fall 2021

In the case the simplex_step input is not consistent with the test code which does not have BInv, you can choose one of the two options:
1. Remove BInv from the input of simplex_step. This of course means you cannot pass the information to the next pivot unless you define BInv as a global variable.
2. Keep BInv as an input of simplex_step. You will then change the test code to accommodate that.
Another thing I would like to mention is the failure of the initialization procedure, which means that the first phase ends up with an artificial variable still in the basis but taking value zero when we stop the first phase at an optimal solution.

Team members:

Ismet Gradjan and Archie Gertsman

1. Did your code pass all the test cases?

   Yes, our code passed all test cases

2. Does your code pass the inverse of the basis to the next pivot in your implementation or not?

   Our code does the inverse of the basis to the next pivot

3. Did your implement the alternative approach of storing the inverse of the basis as the product of elementary matrices?

   We did not implement the alternative approach of storing the inverse basis as the product of the elementary matrices

4. Did you implement the LU factorization approach?

   No we did not implement LU Factorization