

Linear Optimization - Assignment 1

Assumption

1. Polytope is non-degenerate.
2. Polytope is bounded
3. Rank of A is n

Implement the simplex algorithm to maximize the objective function, You need to implement the method discussed in class.

Input: CSV file with $m+2$ rows and $n+1$ column.

The first row excluding the last element is the initial feasible point z of length n

The second row excluding the last element is the cost vector c of length n

The last column excluding the top two elements is the constraint vector b of length m

Rows third to $m+2$ and column one to n is the matrix A of size $m \times n$

Output: You need to print the sequence of vertices visited and the value of the objective function at that vertex