Problem Set 8.md 12/4/2022

Q1: step by step descent (with respect to the objective function) along edges of the convex polyhedral set from one vertex to an adjacent one.

Q2: First, the basis is usually very sparse. Second, one can usually rearrange the rows and columns of the various bases encountered in the course of solution so that they are nearly triangular.

Q3: Figure out optimal use of raw material in bread production in order to maximize the profit.

Q4: Linear Programming

Q5: Application of the current software implementations of the Simplex algorithm to real-life optimization problems are time consuming when used as the bounding engine within an integer linear programming framework. This paper aims to accelerate the Simplex algorithm by proposing a novel parameterizable hard- ware implementation of the algorithm on an FPGA.

Q6: FIFO: First In, First Out, known as FIFO, meaning data that first comes into a container would be popped out first.