**Assignment 1**

1. Write a program in C or C++ for Gauss Seidel algorithm.
2. Use this algorithm as a function and solve simultaneous equations with unknowns () to obtain basic solutions.
3. Check your program for the following examples and find the basic solutions. Consider the non-negativity constraint for all.
4. **Lab on BFS**

STEP 1: Use the program written in Q 2 and find all Basic feasible solutions for the following linear programming problems.

STEP 2: Find optimal value from these BFSs. But list the objective function values at all BFSs.

1. Maximize Subject to , ≥
2. Maximize Subject to , ≥
3. Maximize Subject to , ≥
4. Minimize Subject to , ≥
5. Maximize Subject to , ≥