Math 404 Linear and Non-Linear programming

Assignment #3

Q1. Submit Matlab implementations of the following **Primal-Dual Interior Point** Methods:

1. Central Path with **fixed** step size (α) and centering parameter (σ).
2. Central Path with **Adaptive** step size (α) and centering parameter (σ).
3. **Mehrotra** Predictor-Corrector.

Q2. Apply your implementations on at least **three** case studies (you can pick your own or use some of the solved examples in lectures.)

Q3.Provide neat figures for each case study of the following:

1. Objective function reduction versus iteration.
2. Center path
3. Complementary condition.

Q4. Compare your results with **Matlab built-in** function that uses **Mehrotra** algorithm.

Due date : Wed Apr 18, 2018