Math 404 Report#2

Submit **Matlab** implementations (or equivalent) 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.
   a. Apply your implementations on at least **three** case studies (you can pick your own or use some of the solved examples in lectures.)
   b. Provide neat figures for each case study of the following:
      i. Objective function reduction versus iteration.
      ii. Center path.
      iii. Complementary condition.

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

Deadline: Sun Dec 6, 2020