Department of Electrical and Computer Engineering EECE 4542: Advanced Engineering Algorithms

Project #3

Implement ILP formulations for the knapsack and graph coloring problems, and use them to solve the set of instances.

Submit your model files, and output files (e.g. "knapsack12.output"). Each output file should contain the output produced by AMPL when you solve each instance.

Use the following AMPL command to limit the solver's runtime to 10 minutes:

option cplex_options 'time=600';

Submit a short text file, results.txt, that summarizes your results for the knapsack and graph coloring instances. Compare your ILP results to the exhaustive and greedy results.