ADVANCED ALGORITHMS

ASSIGNMENT – 2 (Due: 12 March 2016)

Appreciation of Greedy algorithms for Vertex Cover:

Implement two greedy algorithms: (i) with Max-degree heuristic and (ii) based on Matching edges to find approximate minimum vertex cover of a given graph.

Run the algorithms on the benchmark instances available at DIMACS website: https://turing.cs.hbg.psu.edu/txn131/vertex_cover.html Choose the graphs given in frb30-15-mis (5 instances).

Submit a document having: a table giving the size of vertex cover obtained by the two algorithms on each graph instance; and Analysis of the result obtained by you with respect to the approximation factor that you know of the respective algorithms.