

IT252 Homework 5

Problem 1. [DPV] Chapter 3. Exercise 3.4

Problem 2. [DPV] Chapter 3. Exercise 3.12

Problem 3. Consider the following approach to compute a linearization of a DAG G : Perform a *complete* time-stamped DFS on G (i.e. if vertices remain unvisited after a DFS, restart DFS with an unvisited vertex as source). Order the vertices of G according to decreasing end time. This is the required linearisation. Is this algorithm correct? If yes, give a proof of correctness; if no, give a counter example for which this algorithm fails.

Problem 4. [DPV] Chapter 3. Exercise 3.3.

Problem 5. [KT] Chapter 5. Exercise 3.

Problem 6. [KT] Chapter 5. Exercise 5.

Additional Exercises: (agar dil mange more!) DPV 3.15, 3.16 3.22, 3.23, 3.24, 3.25.