FIT3142 Tutorial #4
Performance of Distributed Systems Part 1

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1 Tutorial Format

Preparation is required for this tutorial. Do not plan to complete the tutorial preparation during the tutorial.

Students should produce written answers to the tutorial questions prior to starting the tutorial.

The answers will be reviewed in a question and answer format during the tutorial. Each student will explain their answer.

Students will need to submit their answers before each tutorial via Moodle [Turnitin].

All questions are based on lecture slides, and lecture slides are in effect the "answer sheets" for these tutorials.

Worked answers **will not be posted after tutorials as the answers are already in the lecture slides**.

2 Tutorial Questions

2.1 Question 1 (25%)

Explain the data dependency problem at instruction, routine and program level. What impact does it have on control flow in a program?

2.2 Question 2 (25%)

Explain *Amdahl's Law*. What is the dimension of S? Explain what happens when $p = 0$, and when $s = 0$.

2.3 Question 3 (25%)

In a distributed system, the term s can be represented as $s_{compute} + s_{network}$. Explain why.

2.4 Question 4 (25%)

In a distributed system, $s_{network}$ comprises several components. Explain each component, and why some are time variant and some are not.