

Coursework

Deadline: Friday 17th November, 2017 at 11:59pm

The coursework for F29DC is composed of four questions, which focus on reflecting on the work you have done as part of the lab-sessions and extends it, demonstrating your understanding of various common networks and their features, and taking that knowledge to construct and analyse a network.

Marking The coursework is worth 25% of the overall course mark — each question is worth a specific number of marks which added together are used to determine your mark.

Submission The work is to be submitted online through **VISION** and will be checked for plagiarism.

Other notes The submission should not be longer than 2000 words, which is approximately 5 pages. Each question has more specific word count requirements.

Question 1 [5 marks]

For this question you are expected to write a report on what you have learned during the lab-sessions. In particular concentrate on the various networks you have explored, their topologies, the protocols used, and any noteworthy features, such as routing protocols. Furthermore you should provide some analysis on the effect(s) of some of these features on the network, their benefits and disadvantages, etc. The report should be between 500 and 800 words in length, you are encouraged to use screenshots to aid in your descriptions.

Question 2 [7.5 marks]

For this question, you are expected to create two networks and provide screenshots of them. Please ensure that the screenshots of the network are clear and well formed. The two networks you should create are:

1. A star topology that has *10 nodes*.
2. A tree topology that has *21 nodes*.

Comment on the advantages and disadvantages of each topology, writing 500-800 words in total

Question 3 [7.5 marks]

For this question you need to create a network which contains at least 20 nodes (you can have more if you like). You may use any topology shown to you during the lectures and lab-sessions. Configure the topology to use one dynamic routing protocol.

Report on your findings on the routing protocol (e.g. effect of a lost link) using your tool. The report should be 500-800 words long.

Question 4 [5 marks]

5 marks will be allocated for insightful extra work for Question 3. This can for example be an implementation of a second routing protocol (in addition to the one you already use in your network) and comparing it to the first, a deeper study on the effect of the topology on the routing algorithm, etc. Provide some analysis on your observations, similar to what you did in the previous question.