Coursework commentary 2018–2019

CO2222 Data communications and enterprise networking

Coursework assignment 2

General remarks

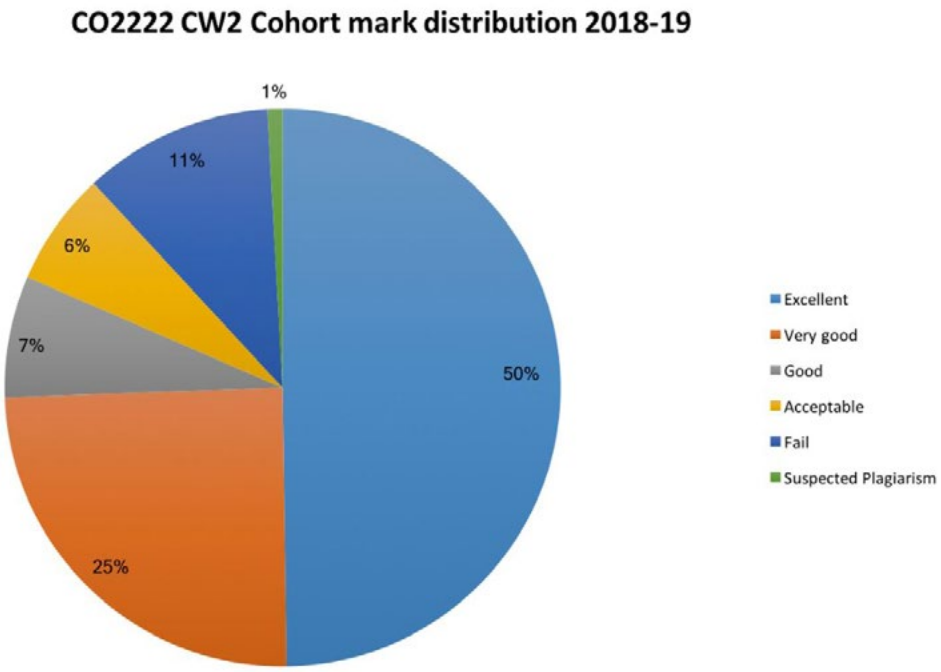
This was the second of two coursework assignments for CO2222. The aim of the coursework assignment was to provide the opportunity for students to develop their skills through the application of knowledge gained in the taught element of the course to the solution of a real-world problem. This assignment provided an opportunity to research and propose a design for a medium size computer network to meet a given specification. The scenario given involved a new university building that required a LAN to be designed for the building that could be integrated into the campus network. A reasonably detailed set of design considerations and marking scheme were provided to guide and advise students on the format and relative weightings of the various required elements of the report.

This coursework assignment required the application of much of the material covered in the module, and a good solution was one which provided a coherent design proposal based on this material. There was no single 'best' solution, but choices needed to be justified with some having clear advantages/disadvantages in comparison with other contenders.

In order to score top marks, it was important to provide a solution that addressed each task and contained all of the elements specified in the marking scheme. While this sounds obvious, a number of reports paid little attention to the requirements specified and instead presented fairly general, textbook type overviews with little or no attempt to put it into context.

That said, the overall standard was very good with 50 per cent of submissions achieving an *Excellent* grading and a further 25 per cent a *Very Good* grade. A proportion of the reports (11 per cent) unfortunately failed to meet the required standard but this was mainly due to incomplete submissions.

See cohort mark distribution for 2018–2019 below:



Comments on specific questions

The full design was to be developed in three distinct steps, assigned as Tasks 1-3.

Task 1

This task involved the design of individual LANs for each floor of the new building. A good solution took account of the loading data provided (number of users and minimum data rate) and ideally included an overall diagram of the chosen solution.

Task 2

This task asked for three technically different ways in which a backbone could be implemented to link all the floors together. A good solution here was looking for not just a description of three different architectures, but for an evaluation that took anticipated loading into account and perhaps such things as the type of data that might be expected to be found in a university application. Most reports presented good descriptions of alternative architectures, with the best providing comparison tables to support the final choice.

Task 3

This task was the most open-ended, and ideally included real-world material from local MAN/WAN providers, although it is recognised that this can be quite difficult for students to acquire and is subject to regional variations. There were four elements to this part of the assignment and most reports provided good coverage of this section.

The **Conclusions** section was intended for students to comment on their overall design and its main advantages over the other contenders that had been used for comparison. A good conclusion therefore provided a brief review of each of the tasks covered in the report and then highlighted the benefits/ advantages of the solutions chosen. Performance here was somewhat variable, with some being just a few lines while others were more comprehensive.

Finally, although the need for a **Reference section** was not mentioned explicitly, references should be included for any piece of work where use is made of other published material.