Coursework commentaries 2015–16

CO3325 Data compression

Coursework assignment 1

General remarks

Most students enjoyed working on the coursework assignment and explicitly reported a valuable learning experience. Students who closely followed the submission requirements and included both the report file (in .pdf) and the programming Java source codes (in .java) generally achieved very good grades and were well prepared for their examination. Some students only partially completed the programming. Some students noted this in the report; for example, that the enhanced coding was not done, which allowed them some scope for discussion/explanation. Some students submitted an incomplete report, or failed to submit it altogether, and lost marks accordingly.

Producing good coursework includes, but is not limited to, ensuring you have planned sufficient time for reading, for problem solving and design issues, for clear programming (and testing) and for structuring a well-written report. This should include strong explanatory arguments and insightful discussions on technical issues. There is also a requirement for honest reflection on the experience of undertaking the coursework. The best coursework often uncovers issues that would not have been recognised without implementation, such as the fast-approaching-to-zero problem.

Weak coursework showed little evident effort, poor design (or no design at all), over-reliance on material borrowed from the internet, incomplete work and superficial or no discussion.

Comments on specific questions

This coursework assignment requires the implementation of two given algorithms. The simple user interface and the expected output are provided in the assignment. The submission requirements include both a report document and the running of Java program codes.

A good approach to this coursework assignment is suggested in the Introduction; that is, do preparatory exercises for the relevant concepts before attempting the assignment.

An efficient way to complete the coursework assignment is to follow the basic Software Engineering approach (see CO2206 subject guide) to complete a software development journey professionally. The milestone stages include:

1. working on the given problem specifications →
   designing rough solutions in block diagrams →
2. designing fine solutions in class diagrams →
   finalising the design with general analysis →

class diagrams or pseudocodes→

3. testing →
4. evaluation of your software

If you follow the above procedure, the report document can present the partial results from the completion of each stage of your working process under the required sections in the report: Design, Algorithms, Demonstration. You then need to add a Discussion section to highlight any issues or experiences, and to provide insightful comment. Finally, review your journey of the software development.

If you take this approach for every software development project, you will find the programming tasks not only doable but also enjoyable.