PGT Exam Performance Feedback
2016/2017 Semester 2

COMP61232   Mobile and Energy Efficient Systems   Dirk Koch

Comments   Please see the attached report.

UNIVERSITY OF MANCHESTER
SCHOOL OF COMPUTER SCIENCE

COMP 61232 (Mobile and Energy Efficient Systems)
Exam Performance

Question 1 (Questions concerning energy efficient computing)
The average performance for this question was 10 out of 20 marks (with a span from 3 to 19 marks).
The warm-up question on how parallelism can help reducing power was answered well (65.5% average) but the question about ARM big.LITTLE only got 27.7 % or the possible marks. This is despite the fact that the concept was part of two lectures and the question was only asking for knowledge provided on the lecture slides. However, this was new material added this year and there are no similar questions from previous years that cover ARM big.LITTLE, so students may have not considered the topic relevant. But it was clearly stated in the introduction to this course unit (including the slides) that material from the slides is relevant for the exam.

Question 2 (Questions concerning programming the ARM architecture)
The average performance for this question was 10 out of 20 marks (with a span from 3 to 20 marks).
The major part of this question was about writing a matrix multiplication in ARM assembly. The algorithm was provided in an abstract manner and the task is complex in the sense that it needs about one page and three nested loops to master. However, the same task was asked for in Project A and the intention of this task was to assess if students did that Project on their own. The results were that one third received only 10% of the possible marks for this question while another third got 80+% of the marks. In particular the low marks are surprising as there were other ARM assembly programming tasks introduced in the course work. Moreover, ARM assembly was regularly assessed in previous exams of this modules such that students can predict that the probability for an ARM assembly related task is rather high.

Question 3 (Questions about memory)
The average performance for this question was 12.5 out of 20 marks (with a span from 8 to 17.5 marks).
The task 3ai) on memory management and 3d) on cache organization got on average 80% of the possible marks. However, task 3bii) "how to allocate address signals for row select and for column select?" was not tried by most students and only one student got full marks for this task. This is a bit surprising as this question is not very tough, was asked slightly similar in earlier exams and because this topic was covered in one of the lectures.