Please see the attached report.

Comments
COMP61511 Exam Feedback

The exam consisted of 31 MCQs (1 mark each) and 2 essays (5 marks each) for a total of 41 marks.

The average time to take the exam was 1 hour 46 min, which is shorter than in previous years which probably reflects the fact that we moved to 2 essays from 3.

Overall Exam Performance

Here are the basic stats for the exam:

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>MCQs</th>
<th>Essays</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>67.4</td>
<td>67.27</td>
<td>67.81</td>
</tr>
<tr>
<td>Median</td>
<td>67.07</td>
<td>67.74</td>
<td>65.0</td>
</tr>
<tr>
<td>Stdev</td>
<td>8.96</td>
<td>10.31</td>
<td>10.96</td>
</tr>
<tr>
<td>Min</td>
<td>50.0</td>
<td>45.16</td>
<td>45.0</td>
</tr>
<tr>
<td>Max</td>
<td>85.37</td>
<td>87.1</td>
<td>100.0</td>
</tr>
</tbody>
</table>

This graph gives shows the distribution of marks in a more granular form.

![Exam Distribution](image)

Question Breakdown

There are two sorts of question in this exam: automarked questions (e.g., multiple choice questions (MCQs), true/false, multiple response, etc.) and manually marked questions (e.g., essay questions).

Automarked Questions
Most questions fell into the “medium” difficulty range with perhaps an unusually high level of “easy” questions (i.e., >90% passing). This itself isn’t necessarily an issue but may reflect better preparation.

Q23 was very hard for this cohort and a bit tricky. The definition of refactoring is producing a *sufficiently functionally equivalent* version with an improved internal quality. This doesn’t mean that all functionality is untouched “Irrelevant” behavior might be touched and even somewhat relevant functionality might be. *We saw* this with the argparse refactoring.

It's not enough to sort of memorise a definition. This cropped up again in the essays

### Manually Marked Questions

![Manually Marked Question Average Scores](image)

### General Question Feedback

The students performed well in both essay questions and exhibited a high level of understanding with respect to refactoring and McConnell’s paradox.

- **Q32** mean = 65% (3.27 out of 5; min = 2.0; max=5.0):

In the majority of the cases students failed to expand on mitigation strategies for technical debt or lower code quality
Q33 mean = 70% (3.51 out of 5; min = 2.5; max=5.0):
A significant amount of students defined refactoring as the transformation of a program to improve its internal qualities while being functionally equivalent.

The correct answer is the transition to a sufficiently functionally equivalent program.