SOFTENG325-Part II — Assignment

The University of Auckland would like to develop a light-weight teaching platform named "UOA-Connect" to improve remote education. In this platform, students can enroll in a course, participate in lectures, and ask their questions at anytime. Lecturers can hold live sessions, post teaching materials, respond to questions both during a lecture or later, give exam, and collect feedback from students. It is important that the platform will be fair to everyone. For instance, questions from students should be served in order, and an exam should be held secure.

Tasks:

1. Write down concrete quality scenarios for five system quality attributes that you assume to be essential for this system.
2. Explain your architecture that meets the five quality attributes.

Deliverables:

You must hand in a document that describes an architecture that meets the Quality Attribute Concrete Scenarios, and also describes how you developed that architecture, that is, what tactics you used in its development, why, and how you used them.

Note: Identifying what situations you need to make assumptions for, and your ability to make reasonable assumptions (backed by some evidence to support them) is part of the assignment.

Assessment: your submission will be assessed according to the following criteria.

- Is your architecture adequately described, that is, have you provided enough information that it can be evaluated by someone who is technically competent but not knowledgeable about your architecture?

- Is your explanation that your architecture meets the quality requirements consistent with the architecture description, and is it convincing?

- Are the tactics you claim to use actually used in your architecture, and is your explanation of their correct use in the development of your architecture convincing?

- Have you put sufficient effort into the development of the architecture?

- Is your document concise, that is, has no unnecessary repetition or irrelevant detail?

- There is no specific presentation criteria. It is expected that your writing and presentation will be to professional engineering standard. However, poor presentation will reduce your mark. It is not up to us to try to figure out what you might be trying to say; you have to explain it clearly. If there is insufficient detail in the system description for you to make the arguments you want, check before making any assumptions.

Caveats: common reasons for lost marks for this assignment.

- Functionality — it is not clear where some of the functionality of the system is provided in the architecture.
- Architecture Description — does not contain enough detail. Examples include: lack of explanation as to what the diagrams mean (such as no legend given), missing details regarding how communications work (such as what protocol, speed, direction), not describing all necessary structures, or poor organisation or layout makes it difficult to understand.
- Tactics Detail — insufficient explanation of how tactics were used.
- Tactics Consistency — use of tactics doesn't seem to match what is in architecture description, it is not clear how the tactic was used, tactics were mentioned that were not relevant to requirements, or tactics were used incorrectly.
- Missing Assumptions — assumptions appear to have been made but not stated.
- Unreasonable Assumptions — assumptions are given but are unreasonable in that it makes the solution trivial.
- Justification Detail — justification for meeting one or more QAS lacks detail. For example: "I used a performance tactic therefore the performance QAS has been met" (or equivalent).
- Inconsistent Justification — justification for one QAS contradicts justification for another QAS.