

Name: SOLUTION

Answer the questions below. Be clear and concise in your answers, writing in complete sentences and providing examples for support as appropriate. No answer should take more than three sentences. *You will lose points if you do not follow these instructions.*

1. (5 pts.) Is architectural design focused more on the fulfillment of functional requirements or non-functional requirements? Justify your answer.

Architectural design is more focused on non-functional requirements. See page 2 of slide set 5, where we discussed the advantages of an explicit architecture: stakeholder communication, analysis of non-functional requirements, and large-scale reuse. One can argue that the fulfillment of functional requirements is possible through nearly any architecture, thus the primary tradeoffs being considered in architectural design are related to modularity, performance, security, and a number of other non-functional requirements.

Partial credit was possible if you justified your answer. Full credit required justification of why NFRs receive more consideration than FRs.

Points:

- 3 Points: Choice and Justification
- 2 Points: Correctness of assumptions

2. (5 pts.) Many authors hold that design patterns are applied within single modules while architectural views are applied to a higher level (e.g. module interaction, subsystems, etc.). What is the difference between a subsystem and a module? Give an example.

See again page 2 of slide set 5, where the difference between modules and subsystems is given. Subsystems are independent and capable of standing alone while modules depend on other modules, although they can be switched out.

Points:

- 5 Points: Correctly identify independence as the difference between a module and subsystem.