

## I402A Software Architecture and Quality Assessment

### Quizz 1: Software architecture and quality

This assessment evaluates the following competencies:

- SA201 – Define what is software quality and explain how it can be ensured
- SA202 – Understand and illustrate the links between a software architecture and its quality
- SA401 – Understand what is the conceptual integrity and take actions to ensure it a for project
- SA402 – Understand and discuss about the questions and dilemmas that a software architect could face

Five affirmations are given for each assessed competency. For each of them, you have to decide whether it is true or false. To get a star for the competency, you must have the correct answer for the five affirmations.

SA201	True	False
It is possible to ensure some quality criteria just by choosing a right software architecture.	<input type="checkbox"/>	<input type="checkbox"/>
Choosing a layer architecture for a given software will always result in an increased maintainability.	<input type="checkbox"/>	<input type="checkbox"/>
For a search engine, such as Google, availability is an important quality criterion.	<input type="checkbox"/>	<input type="checkbox"/>
Decreasing the number of components of a software system always increases its quality.	<input type="checkbox"/>	<input type="checkbox"/>
The fact that a software system works as intended is a quality criterion.	<input type="checkbox"/>	<input type="checkbox"/>

SA202	True	False
An architecture choice can favour or penalise the performances of a software.	<input type="checkbox"/>	<input type="checkbox"/>
Choosing a layer architecture for a given software will always result in an increased maintainability.	<input type="checkbox"/>	<input type="checkbox"/>
There is always at least one architecture choice that optimises all the quality criteria.	<input type="checkbox"/>	<input type="checkbox"/>
The performance of a software system decreases as the number of components increases.	<input type="checkbox"/>	<input type="checkbox"/>
Writing more unit tests and having them pass increases the performance of a software system.	<input type="checkbox"/>	<input type="checkbox"/>

SA401	True	False
A software architect must ensure that the conceptual integrity of a software is preserved.	<input type="checkbox"/>	<input type="checkbox"/>
Having a uniform user interface throughout a software system is part of the conceptual integrity.	<input type="checkbox"/>	<input type="checkbox"/>
The conceptual integrity of a software with a lot of small independent features is for sure preserved.	<input type="checkbox"/>	<input type="checkbox"/>
The conceptual integrity of a software is a kind of a line of conduct to follow.	<input type="checkbox"/>	<input type="checkbox"/>
Implementation details of a software system are defined by the conceptual integrity.	<input type="checkbox"/>	<input type="checkbox"/>

SA402	True	False
A good software architect always has to plan the future and design for change.	<input type="checkbox"/>	<input type="checkbox"/>
A good software architecture imposes its constraints on the execution environment.	<input type="checkbox"/>	<input type="checkbox"/>
Demands from the business can always be ignored by the software architect.	<input type="checkbox"/>	<input type="checkbox"/>
A software architect has to make choices for the fundamental structure of a software.	<input type="checkbox"/>	<input type="checkbox"/>
A software architect may have to produce several view for the software architecture of a system.	<input type="checkbox"/>	<input type="checkbox"/>