✓ **Congratulations! You passed!**
TO PASS 75% or higher

[Keep Learning]

GRADE
75%

Module 3 Review

LATEST SUBMISSION GRADE

75%

---

1. Identify the attribute refinements of a system's performance. Select the 2 correct answers.

`1 / 1 point`

☑ latency

> ✓ **Correct**
> Correct! Latency is the time it takes to produce an output after receiving an input.

☐ boot time

☐ simplicity

☑ throughput

> ✓ **Correct**
> Correct! Throughput is the amount of output produced over a period of time.

☐ maintenance downtime

---

2. Guidelines such as "the system should be easy and intuitive to learn", "the system should minimize user errors," and "the system should make it easy for users to complete tasks" fall under which category of quality attribute?

`1 / 1 point`

○ astonishment

○ intuitiveness

◉ usability

○ complexity

> ✓ **Correct**
> Correct! The usability is how easy it is for an end user to interact with the system.

---

3. Calum is leading a team of developers and would like to promote conceptual integrity. Which of these is **NOT** a way he could promote conceptual integrity:

`1 / 1 point`

◉ Split the development team into subteams for each component of the architecture

○ Adopt good documentation practices

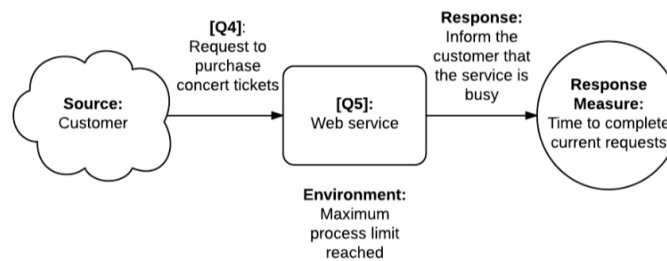○ Establish conventions, such as structural rules or naming conventions

○ Do regular code reviews with the development team

> ✓ **Correct**
> Correct! Although any large project will have subteams, this is a factor that tends to work against conceptual integrity.

---

4. Have a look at this diagram of a quality attribute scenario:

`1 / 1 point`

[Q4] is a condition that will cause the system to respond. What is this called?
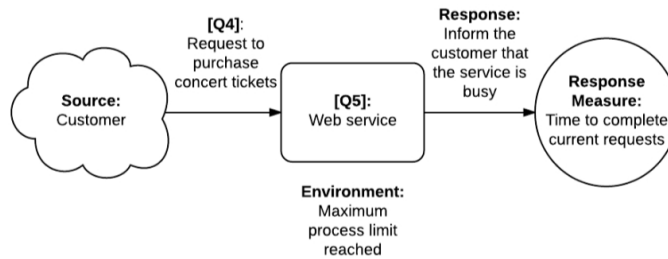
◉ stimulus

○ request

○ error

○ perturbation

> ✓ **Correct**
> Correct! This is a stimulus.

5. Let's look at the same diagram of a quality attribute scenario:

1 / 1 point

[Q5] is the part of the system affected by the stimulus. What is this called?

- ○ process
- ○ context
- ◉ artifact
- ○ component

✓ **Correct**
Correct! Don't confuse this artifact with the artifacts we talked about in deployment diagrams.

6. Which of these could be considered under the **environment** in a quality attribute scenario?

0 / 1 point

- ◉ internal subsystems
- ○ unrecognized system request
- ○ recovering from error
- ○ send error to external system

❗ **Incorrect**
Incorrect. Internal subsystems are a possible stimulus source.

7. Who are the three main groups of people involved in the architecture tradeoff analysis method?

1 / 1 point

- ○ evaluation team, outsiders, project team
- ○ clients, designers, stakeholders
- ◉ evaluation team, project decision makers, architecture stakeholders
- ○ peers, outsiders, designers

✓ **Correct**
Correct! Remember that each of these groups also has subgroups. For example, the evaluation team could include those responsible for architecture design, as well as completely independent evaluators.

8. Leon is analyzing the architecture and notices that under conditions of high numbers of users signing on at the same time, there is a potential that one of the architecturally significant requirements (ASRs) will not be met. What is this called?

1 / 1 point

- ○ non-risk scenario
- ◉ risk scenario
- ○ utility shortfall
- ○ tradeoff

✓ **Correct**
Correct! This is a risk scenario and should be evaluated.

9. Maddie's software team is split into two subteams working on two different components that work together. These teams share one large room and are in constant contact. According to Conway's Law, what could happen if Maddie does not physically separate the two subteams?
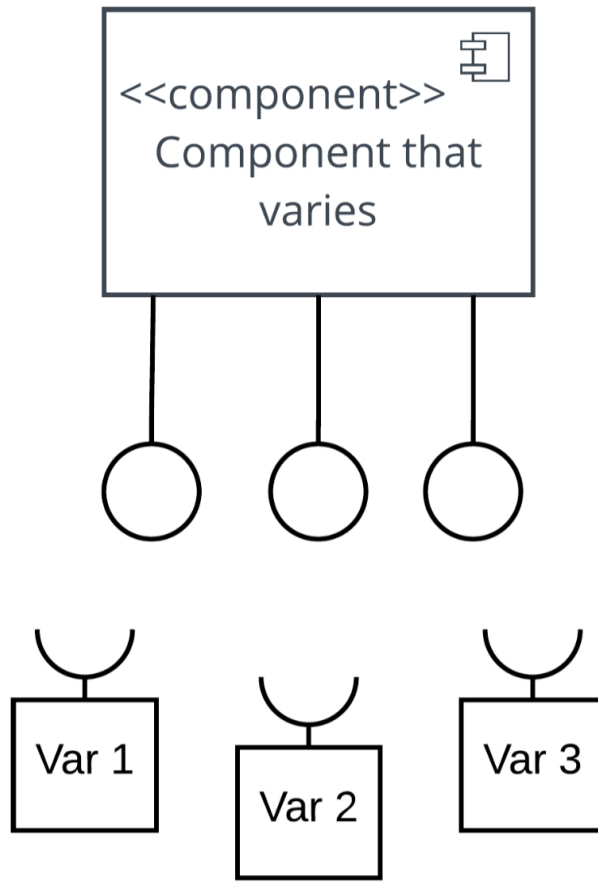
0 / 1 point

- ○ The component interfaces will not be reusable
- ◉ Their components will repeat code unnecessarily
- ○ The components they produce will be very tightly coupled
- ○ They will not leave sufficient comments, thinking that the other team already knows the relevant details

❗ **Incorrect**
Incorrect. This may or may not be true, but Conway's Law doesn't tell us either way!

10. This is one of the styles of implementing variations. What is it called? `1 / 1 point`

- ◉ adaptation
- ○ replacement
- ○ extension
- ○ composition

✓ **Correct**
Correct! Adaptations change certain parts of the component.

11. Which of these is **NOT** a typical advantage of developing a product line? `0 / 1 point`

- ○ reducing time-to-market of later products
- ◉ consistency over the product line
- ○ overall cost reduction
- ○ greatly reduced up-front development

❗ **Incorrect**
Incorrect. This is often an advantage of a product line, which can be a boon for developers that use your platform as well as end-users.

12. Andy is planning the development of a product line of eBook readers and he has to categorize the components that will be handled by each team. There is one product in the line which has a backlight for reading during the night. In the development process, where would you categorize this feature? `1 / 1 point`

- ○ One-Off
- ○ Variation
- ○ Commonality
- ◉ Product-Specific

✓ **Correct**
Correct! Product-specific components are developed by the application engineering team, because they only apply to one product.