✓ **Congratulations! You passed!**

| Grade received 100% | Latest Submission Grade 100% | To pass 75% or higher |

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

☐ maintenance downtime

☑ throughput

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

☑ latency

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

☐ simplicity

☐ boot time

1 / 1 point

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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?

○ complexity

○ astonishment

⦿ usability

○ intuitiveness

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

1 / 1 point

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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:

○ Establish conventions, such as structural rules or naming conventions

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

○ Do regular code reviews with the development team
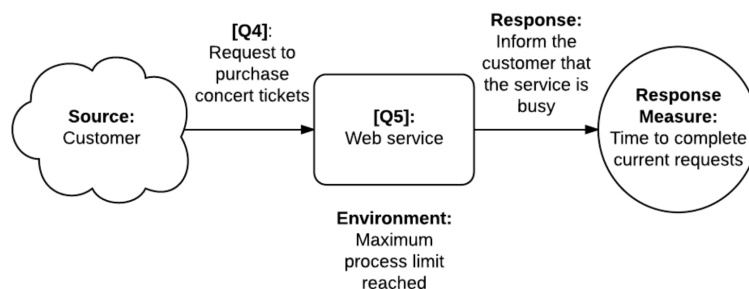
○ Adopt good documentation practices

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

1 / 1 point

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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?
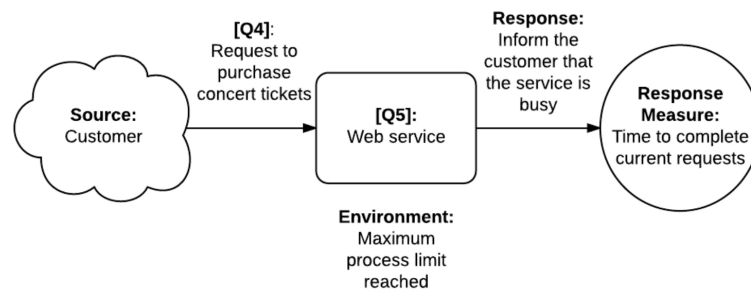
○ error

○ perturbation

○ stimulus
○ request

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?

○ context
○ process
○ component
◉ artifact

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

1 / 1 point

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

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

1 / 1 point

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

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
○ tradeoff
◉ risk scenario
○ utility shortfall

9. Maddie's software team is split into two subteams working on two different components that work together.

1 / 1 point

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?
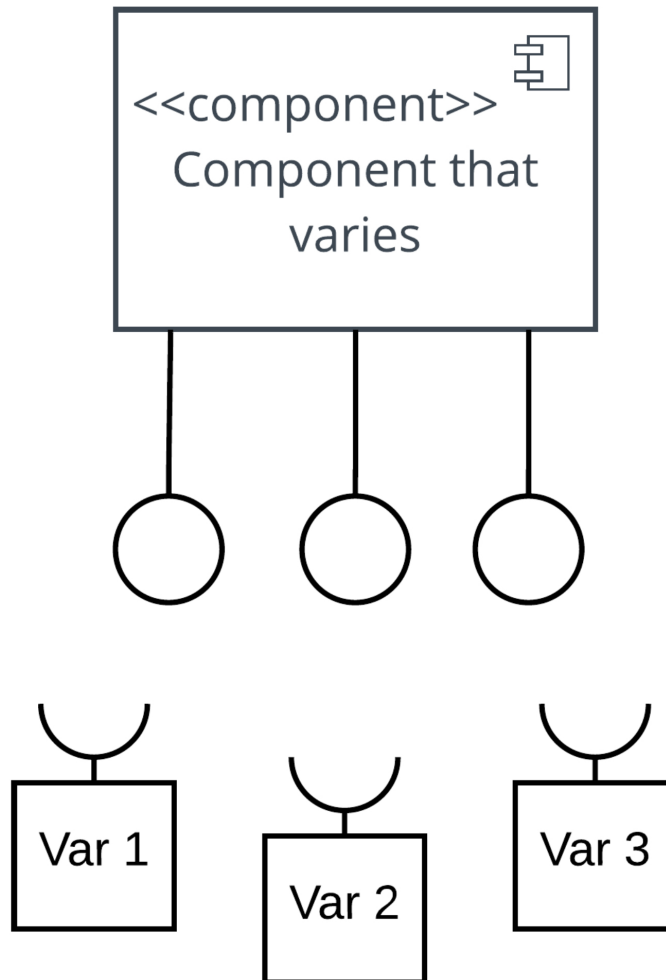
○ The component interfaces will not be reusable

○ They will not leave sufficient comments, thinking that the other team already knows the relevant details

◉ The components they produce will be very tightly coupled

○ Their components will repeat code unnecessarily

✓ **Correct**
Correct! Conway's Law says that software tends to mirror real world organization, so a team in constant contact will produce more tightly coupled software.

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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.

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11. Which of these is **NOT** a typical advantage of developing a product line?

1 / 1 point

○ overall cost reduction

◉ greatly reduced up-front development

○ reducing time-to-market of later products

○ consistency over the product line

✓ **Correct**
Correct! This is NOT an advantage of a product line, which typically needs more up-front development.

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

◉ Product-Specific

○ One-Off

○ Commonality

○ Variation

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