quiz solution w1

Question 1

Read the following statements. Which of them are **true**?

1. Project managers are stakeholders in the architecture
2. End users are stakeholders in the architecture

0 / 1 point

☐ **Neither statement is true**

Incorrect

Incorrect. At least one of these groups is considered a stakeholder in the architecture. Remember, a stakeholder is anyone who has an interest in the software architecture, directly or indirectly.

☑ ~~**Both statements are true**~~

Correct

Correct! Project managers are stakeholders because the architecture affects how they will manage the development. End users do not see the architecture, but it still affects how well the software works!

☐ **Only the second statement is true.**

Incorrect

Incorrect. End users are stakeholders in the architecture, but so are project managers!

☐ **Only the first statement is true.**

Incorrect

Incorrect. Project managers are stakeholders in the architecture, but so are end users! Although they do not see the architecture, they are still affected by it.

Question 2

Which of these UML diagrams might be useful for the logical view of a system? Select the **2 correct** answers.

0 / 1 point

□ **Deployment diagram**

This should not be selected

Incorrect. Deployment diagrams are typically used to communicate the physical layout of the system. They fit better with physical view.

□ **Sequence diagram**

This should not be selected

Incorrect. Sequence diagrams focus on the logical flow of one process. They are not focused on the structure of the system.

☑ ~~**Class diagram**~~

Correct

Correct! Class diagrams are the most basic logical view, Their entire purpose is to show the relationship between classes and objects.

☑ ~~**State diagram**~~

Correct

Correct! State diagrams focus on the behaviour of objects and classes, making them a good fit for a logical view.

Question 3

You need to show how your software elements are mapped to hardware nodes and execution environments. Which view do you need?

1 / 1 point

☑ ~~**physical view**~~

Correct

Correct! The physical view is concerned with the physical deployment - either to hardware nodes or execution environments - of the software.

□ **process view**

Incorrect

Incorrect. The process view is mostly concerned with how tasks are executed by the objects in the logical view.

□ **scenario**

Incorrect

Incorrect. The scenario details use cases or tasks required by the end user.

□ **development view**

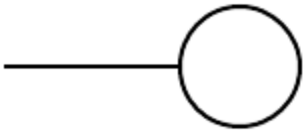
Incorrect

Incorrect. The development view is concerned with the hierarchical structure of the software, languages, etc., details that affect the development process.

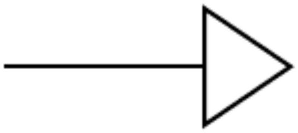
Question 4

William is drawing out a component diagram. One of his classes needs an interface from another component. Which of these connectors should he use on the component that needs an interface from another component?

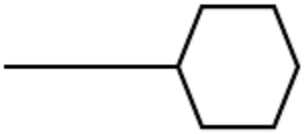
a)



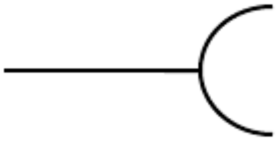
b)



c)



d)



0 / 1 point

□ **a)**

Incorrect

Incorrect. This is a provided interface.

□ **b)**

Incorrect

Incorrect. This is not a connector in component diagrams.

□ **c)**

Incorrect

Incorrect. This is not a connector in component diagrams.

☑ ~~d)~~

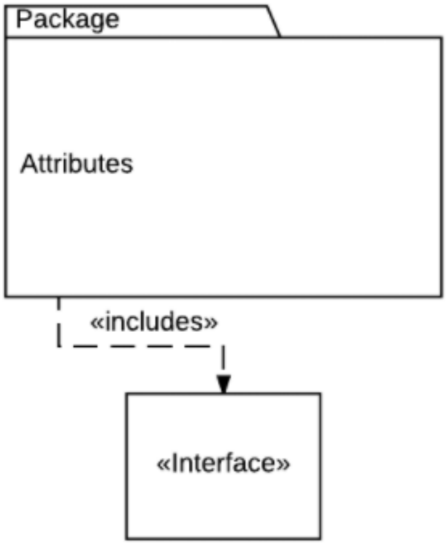
Correct

Correct! This is a required interface, meaning it needs another component to provide the expected functionality.

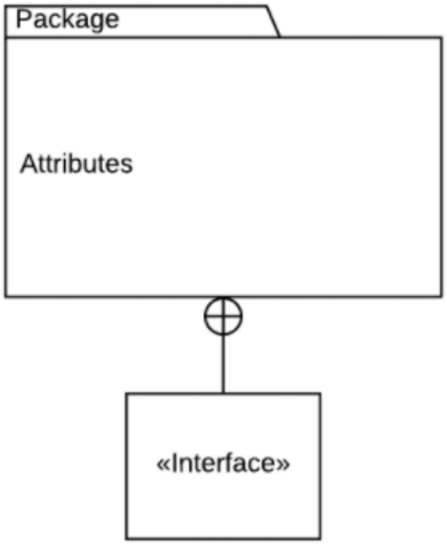
Question 5

Cécile is putting together a Package diagram. How can she show that a package has an interface? Select the **2 correct answers**.

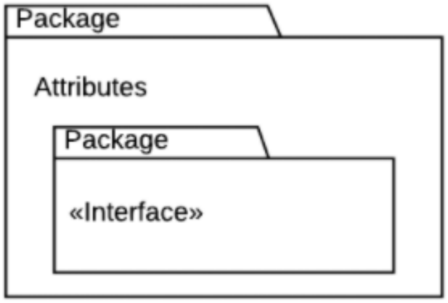
a)



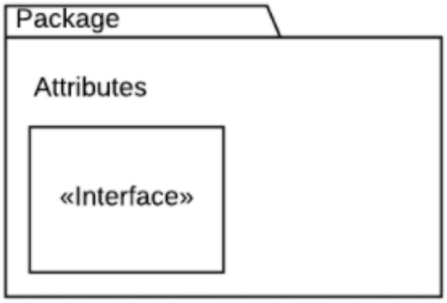
b)



c)



d)



0 / 1 point

□ **a)**

This should not be selected

Incorrect. This line and arrow style is used for other relationships in a package diagram!

☑ ~~**b)**~~

Correct

Correct! The line which has a crossed circle shows that the interface is part of the package.

□ **c)**

This should not be selected

Incorrect. The interface is not in another package, so it does not need another package symbol.

☑ ~~d)~~

Correct

Correct! The interface can be put right into the package.

Question 6

What is the name for a physical result of the development process, such as an executable file?

0 / 1 point

□ **package**

Incorrect

Incorrect. Package may correspond to physical elements, but they are not synonymous.

☑ ~~artifact~~

Correct

Correct. These are called artifacts!

□ **leaf**

Incorrect

Incorrect. Leaf is not the right term.

□ **node**

Incorrect

Incorrect. Node usually refers to a hardware piece.

Question 7

Which of these sets of keywords might be used on the lines in package diagrams?

1 / 1 point

☑ ~~**merge, access, import**~~

Correct

Correct! Merge is used to merge packages together. Access allows one package to get information from another. Import allows a package to import part or all of another package.

□ **request, import, merge**

Incorrect

Incorrect. There is a different keyword for a "request" interaction.

□ **deploy, merge, include**

Incorrect

Incorrect. Deployment is for deployment diagrams. Include is shown with a symbol.

□ **interface, export, load**

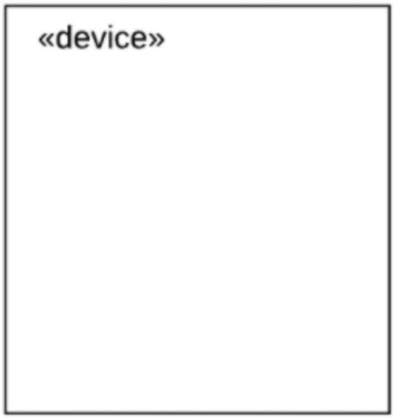
Incorrect

Incorrect. Interface can be used but not on the connectors. Import is used rather than export. Load should be a different word.

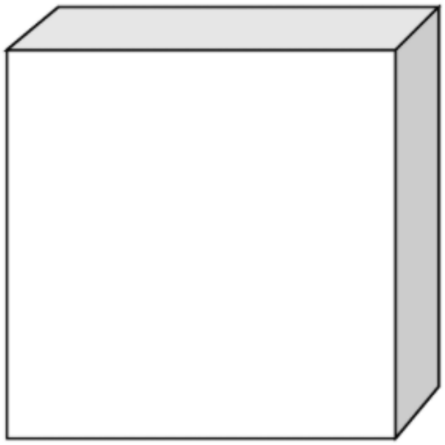
Question 8

How is a hardware device shown in a deployment diagram?

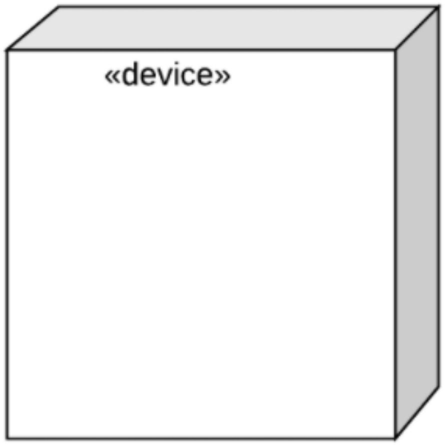
a)



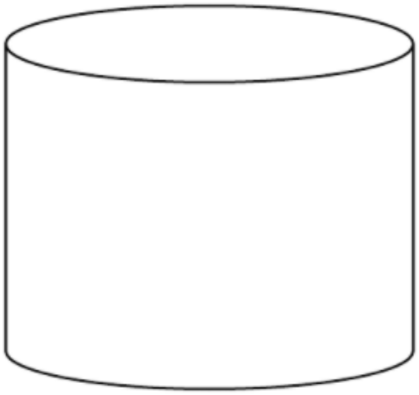
b)



c)



d)



0 / 1 point

□ **a)**

Incorrect

Incorrect. The shape is not quite right for this one!

□ **b)**

Incorrect

Incorrect. A 3D box like this can represent a hardware node or a software node.

☑ ~~c)~~

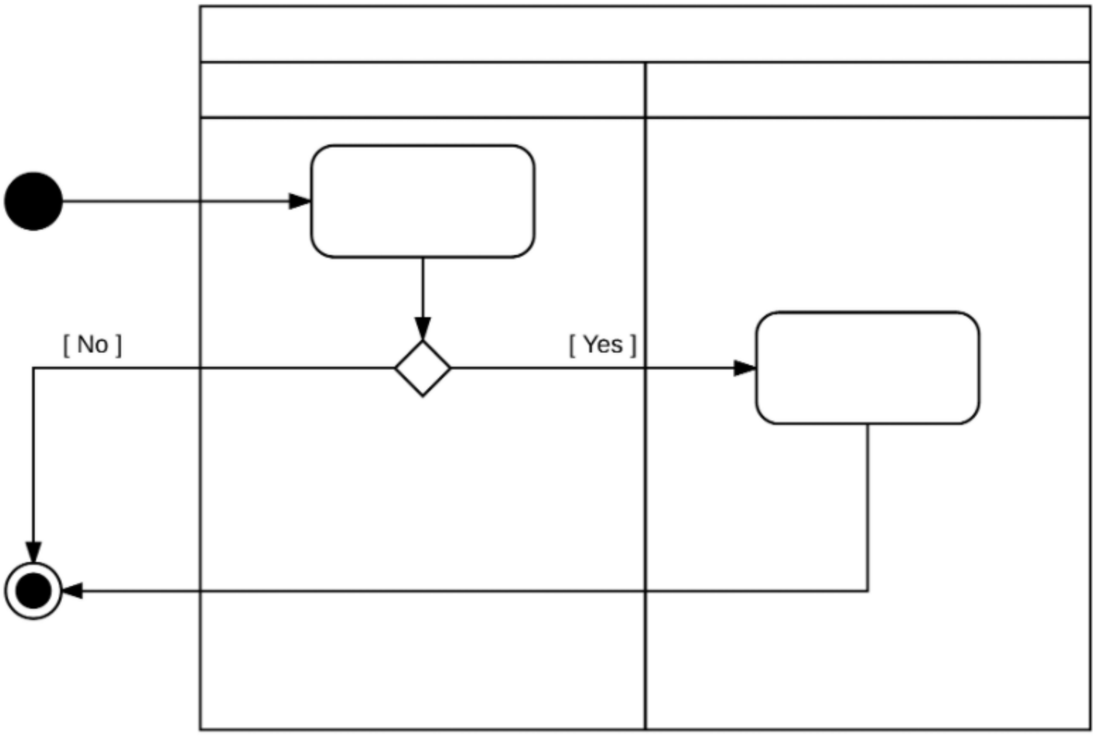
Correct

Correct! It is important to use a 3D box, but also specify in guillemets that it is a device.

□ **d)**

Question 9

What kind of UML diagram is shown here?



0 / 1 point

□ **Flow chart**

Incorrect

Incorrect. That is not a UML diagram, but the correct answer is very similar to a flow chart!

☑ ~~**Activity diagram**~~

Correct

Correct! An activity diagram is like a flowchart. This one also has swimlanes to provide additional information.

□ **State diagram**

Incorrect

Incorrect. Though you may show states in this diagram, it is something else.

□ **Sequence diagram**

Incorrect

Incorrect. A sequence diagram is used for similar information, but is based on messaging between objects.

Question 10

Which of these is **NOT** shown on an activity diagram?

0 / 1 point

□ **activities**

Incorrect

Incorrect. This was not a trick question; there are activities on activity diagrams!

☑ ~~**interfaces**~~

Correct

Correct! Activity diagrams do not show interfaces. This is better shown with logical diagrams, such as component diagrams.

□ **concurrency**

Incorrect

Incorrect. Processes running at the same time can be shown with black bars to show their beginning (split) and end (join).

□ **decisions**

Incorrect

Incorrect. Decisions are shown on activity diagrams with a diamond!

Question 11

What does the **component** of ‘component diagram’ refer to?

0 / 1 point

☐ **a general name for a "part" of the software system. It could be a method, variable, class, object, or grouping of any of these.**

Incorrect

Incorrect. Components are higher-level than a method, or even a class.

☑ ~~**an independent, encapsulated unit in the system.**~~

Correct

Correct! Components are higher-level than objects and classes, but they are units of the system.

☐ **the basic parts of the software, which it could not run without.**

Incorrect

Incorrect. Non-essential parts of the software could also be considered components.

☐ **an external part of the software system, like a library that must be imported.**

Incorrect

Incorrect. Libraries are just one of the many types of components in the system.

Question 12

The "+1" in Kruchten's 4+1 View Model refers to a scenario. What is a scenario?

0 / 1 point

☐ **an unexpected use case of the software.**

Incorrect

Incorrect. This is not what is considered a scenario in the 4+1 View Model.

□ **a representation of the system-wide state.**

Incorrect

Incorrect. Scenarios may include state, but there is more to it.

□ **one of the tools that is used to implement the software.**

Incorrect

Incorrect. This is represented in a development view.

☑ ~~a representation of a normal use case.~~

Correct

Correct! Scenarios are use cases that are analyzed by specifying scripts - sequences of actions and interactions.