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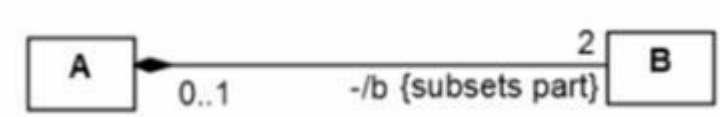
NEW QUESTION: 1
Choose the correct answer:
Consider the following diagram fragment:



Which statement is correct?
A. The set named "b" is contained in a set named "part".
B. The set named "b" has one subset, that contains the parts of B.
C. The property "subsets part" specifies that b only partially defines A
D. The constraint limits the elements of b to be from a predefined set of parts
Answer: (SHOW ANSWER)
In UML, the{subsets}keyword is used to indicate that one property is a subset of another property. In the provided diagram fragment, the association end-b {subsets part}indicates that the propertybon classAis a subset of the propertyparton classB. This means that the elements associated withAthroughbare contained within the larger set associated withBthroughpart. This kind of relationship is typically used in more complex class models where a part-whole hierarchy is represented, and it allows the model to show that certain associations are more specific subsets of a more general association. This usage is explained in the UML 2.x Superstructure Specification, where the semantics of association subsets are defined.

NEW QUESTION: 2
Choose the correct answer: What is the value of EMOF?
A. It provides the ability to define instance models without defining Slots.

B. It is the metamodel used to specify other metamodels including UML 2.
C. It allows implementations, but these are not considered MOF-compliant.
D. It enables mapping of MOF models to implementations such as XMI for simple metamodels.
Answer: (SHOW ANSWER)
The value of Essential MOF (EMOF) lies in its ability to provide a straightforward framework for mapping MOF models to implementations such as XML Metadata Interchange (XMI) for simple metamodels2. This allows for easier integration and manipulation of MOF models in various platforms and tools.

NEW QUESTION: 3
Choose the correct answer:
What does a lower multiplicity of one for an end of an n-ary Association imply?
A. Links combining the values of the other ends may exist or may not exist
B. Exactly one link exists combining the values of the other ends.
C. A link for every possible combination of values for the other ends must exist.
D. Links combining the values of one or many other ends may exist.
Answer: A (LEAVE A REPLY)
In UML, the multiplicity of an association end specifies how many instances of the class at that end can participate in a single association. A lower multiplicity of one (1) at one end of an n-ary (where n > 2) association implies that there must be at least one link that combines the values of the other ends, but it doesn't require that a link exists for every possible combination. Therefore, it's possible for some combinations to exist as links, while others do not, which is indicated by the option that links combining the values of the other ends may exist or may not exist. This interpretation is consistent with the definition of multiplicity in associations as outlined in the UML 2.x Superstructure Specification.

NEW QUESTION: 4
Choose the correct answer:
What does the MDA approach support?
A. The MDA approach presents Meta Data Aspects of modeling.
B. The MDA approach focuses on Design and Architectural Models as its name suggests
C. The MDA approach covers everything from requirements to technology implementations.
D. The MDA approach Is primarily about Deriving Models from Artificial Intelligence Systems.
Answer: (SHOW ANSWER)
The Model-Driven Architecture (MDA) approach is a design methodology that covers the entire software development lifecycle, from requirements to technology implementation. It emphasizes the use of models as the primary artifacts in the development process, allowing for a more abstract and high-level approach to software design. MDA supports the

transformation of models from platform-independent models (PIMs) to platform-specific models (PSMs) and ultimately to code, ensuring that the initial requirements are accurately reflected in the final technology implementation.
MDA is not limited to Meta Data Aspects (A) or Design and Architectural Models (B) alone, nor is it primarily about deriving models from Artificial Intelligence Systems (D). Instead, it provides a comprehensive framework that facilitates the creation of software systems by bridging the gap between business requirements and technology solutions.
References:
* An MDA Approach Based on UML and ODM Standards to Support Big Data Analytics1
* Improving Automatic UML2 Profile Generation for MDA Industrial Development2
* Applying 4+1 View Architecture with UML 2

NEW QUESTION: 5
Choose the correct answer:
Which interpretation is valid when NamedElement A is the Supplier in a specialized Dependency having NamedElement B as the Client, and a Comment indicates that A and B participate in a transformation?
A. B is the transformation Realization of A.
B. A is the transformation Realization of B.
C. A depends on B.
D. A and B are part of an economic system where A consumes what B transforms.
Answer: C (LEAVE A REPLY)
In UML, a Dependency is a relationship that signifies that one NamedElement, the client, depends on another NamedElement, the supplier, meaning that a change in the supplier could affect the client. If NamedElement A is the supplier and NamedElement B is the client in a Dependency relationship, and there is a Comment indicating that both participate in a transformation, the interpretation is that B (the client) depends on A (the supplier) for that transformation. The comment does not necessarily change the nature of the Dependency relationship; it simply adds additional information about the nature of their interaction. A transformation could mean that B transforms A's supplied element in some way, but in terms of UML Dependency relationships,it would still be interpreted as "A depends on B" or "B requires A for its transformation". This interpretation aligns with the UML 2.x Infrastructure and Superstructure specifications, which explain Dependencies and their meanings within the UML metamodel.

NEW QUESTION: 6
Choose the correct answer:
Consider the following diagram fragment:

Which statement is correct about the diagram fragment?

A. The diagram fragment is a valid UML diagram.

B. To use the template List. Company must be a bound element to List.

C. List cannot be used by Company unless Company is also a template.

D. List cannot be used as a data type, only a bound element to List can.

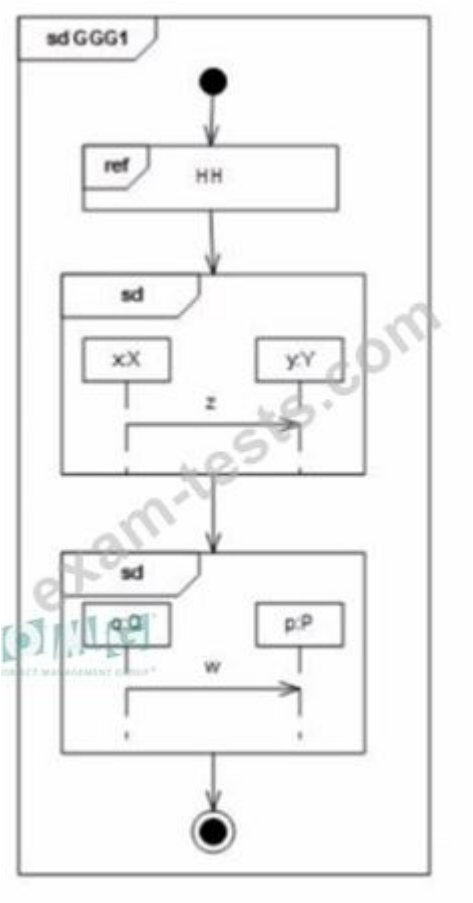
Answer: D (LEAVE A REPLY)

The provided diagram fragment seems to indicate a situation involving a template. In UML, a template is a parameterizable element, and a bound element is a specific manifestation of that template wherein the parameters have been replaced with actual values or types. If 'List' is a template class, it cannot be directly used as a type. Instead, one must use a bound element of the List, meaning the template parameters of List must be bound to actual types before it can beused. For instance, if List is a template expecting a type T, then a concrete class might be List<Customer> or List<Order>, where Customer or Order are actual types replacing the template parameter T. This use of templates and bound elements is according to the UML specification, which details how templates are defined and instantiated within UML models.

NEW QUESTION: 7

Choose the correct answer:

Consider the following diagram:



When this behavior is executed, which event will occur last?

A. finalizing HH

B. reception of z

C. reception of w

D. We cannot determine the last event from this diagram alone.

Answer: C (LEAVE A REPLY)

The sequence diagram depicts interactions over time between different entities. To determine the order of events, one must follow the flow of messages from top to bottom, as this represents the chronological order in which these interactions occur.

In the given diagram, 'HH' is a lifeline that is eventually destroyed, indicated by the finalization (cross) symbol at the bottom of its lifeline. The reception of 'z' is an event that happens between the lifelines labeled 'xX' and

'yY', and the reception of 'w' is an event that happens between 'q:Q' and 'p:P'. Since sequence diagrams are read from top to bottom, the message 'w' is the last one before the destruction of 'q:Q', which isindicated by the destruction occurrence specification (cross) at the bottom of 'q:Q'. Therefore, the last event that occurs according to the diagram is the reception of 'w'.

References to UML 2 specifications include:

* UML 2.5 Specification (formal/2017-12-05), by Object Management Group, which describes the semantics of sequence diagrams, interactions, and the interpretation of message flows and lifeline termination.

* Sequence Diagrams in UML, which explain the order of interaction and message passing between lifelines.

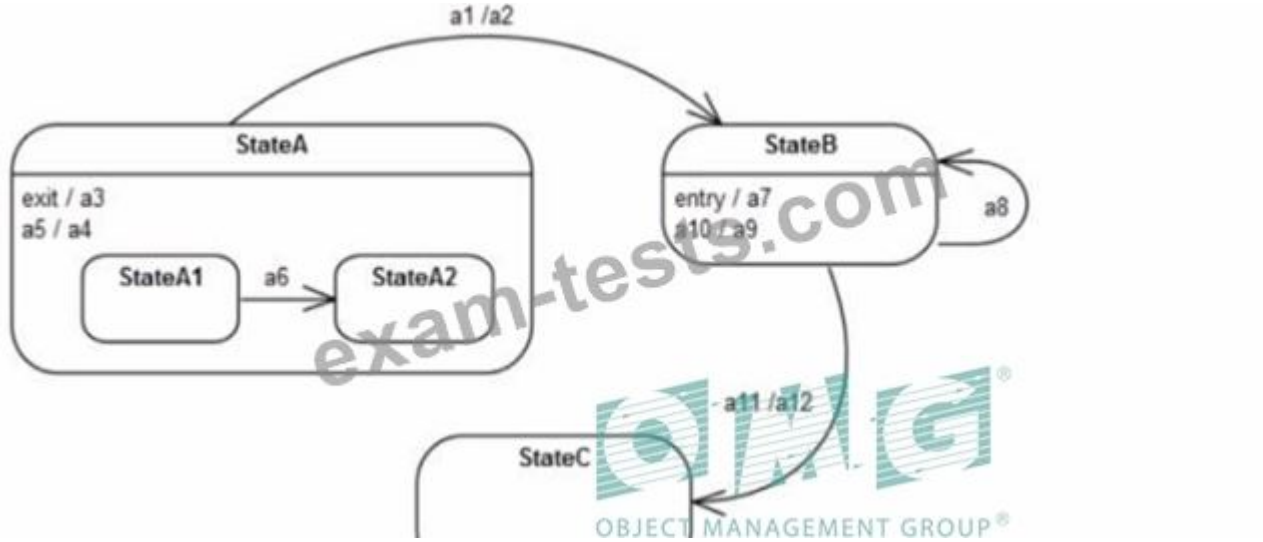
NEW QUESTION: 8
Choose the correct answer:
A group of programming language designers want to create classes that model typical data collections such as arrays, lists, maps. etc.
Their design must satisfy three conditions:
1. The collections must be parameterizable to support any data type.
2. Some collections must inherit from other collections to leverage reuse of functionality.
3. The implementation of the collection functions cannot be overridden.
Which UML concept should these designers use?
A. Classes
B. Interfaces
C. Power Types
D. Class Templates
Answer: (SHOW ANSWER)
In UML, class templates are the concept used to create classes that can be parameterized with different data types. This feature satisfies the first condition, allowing collections to support any data type. Class templates can be specialized, fulfilling the second condition, where some collections can inherit from others, thus enabling the reuse of functionality. Additionally, UML allows for operations to be defined in such a way that they cannot be overridden, by specifying them as non-virtual or final, which meets the third condition. Therefore, the use of class templates would be the most suitable approach for the design criteria specified by the programming language designers. This approach is consistent with the capabilities of class templates as described in the UML 2.x Superstructure Specification.

NEW QUESTION: 9
Choose the correct answer:
Which capability Is provided by the Profile mechanism?
A. storing user-specific configurations of model settings
B. creating new metamodel elements for specific purposes
C. adapting existing metamodel elements for specific purposes
D. configuring model libraries and a set of keywords to be used for a model
Answer: C (LEAVE A REPLY)
The Profile mechanism in UML provides the capability to adapt existing metamodel elements for specific purposes. Profiles allow modelers to extend the standard UML metamodel with additional semantics by defining stereotypes, tagged values, and constraints that are specific to a particular domain, platform, or methodology. This means that profiles tailor the existing UML metamodel elements to create domain-specific models

without changing the underlying metamodel itself. This adaptation mechanism is described in the UML 2.x Superstructure and Infrastructure Specifications, which detail how profiles can be used to customize the UML for particular domains or purposes.

NEW QUESTION: 10

Choose the correct answer: Consider the following diagram fragment:



Assume that the system is in StateAl Which sequence of triggers will move the system to StateC?

A. a6., a3, a1, a7, an

B. a5, a5, a5. a1. a8, a8, a11

C. a5, a6, a5, a3, a2, a10, a11, a12

D a1, a7, a8, a7, an

Answer: (SHOW ANSWER)

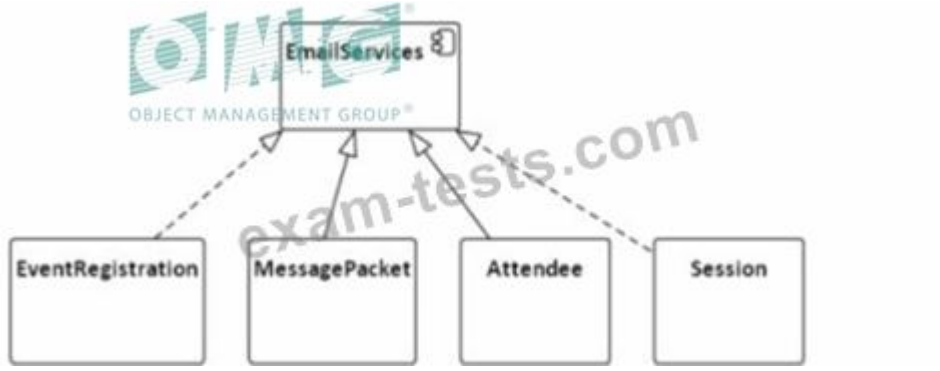
Given that the system is inStateA1, the sequence of triggers that will move the system toStateCmust take into account the transitions and their associated triggers as defined in the UML state diagram. Starting from StateA1, the triggera5will cause a transition withinStateA, followed bya6, which moves toStateA2. The triggera5is not relevant as it is an internal transition inStateA1. Then,a3(the exit action forStateA) anda2 would be followed to leaveStateAaltogether. Once out ofStateA,a1is used to transition toStateB, wherea10is an entry action, not a trigger. Finally, to get fromStateBtoStateC, the triggersa11followed bya12are needed.

This sequence of triggers reflects the correct usage of exit, entry, and transition triggers as defined by UML state machine semantics.

NEW QUESTION: 11

Choose the correct answer:

Given the following diagram fragment:



Which review comment is valid and applicable?

A. The Realization relationships should be reversed

B. The Generalization relationships should be replaced by Realization relationships.

C. The Realization relationships should be replaced by Generalization relationships.

D. The UML syntax rules do not allow the use of Realization relationships between Components and Classes without the application of the stereotypes in a profile.

Answer: C (LEAVE A REPLY)

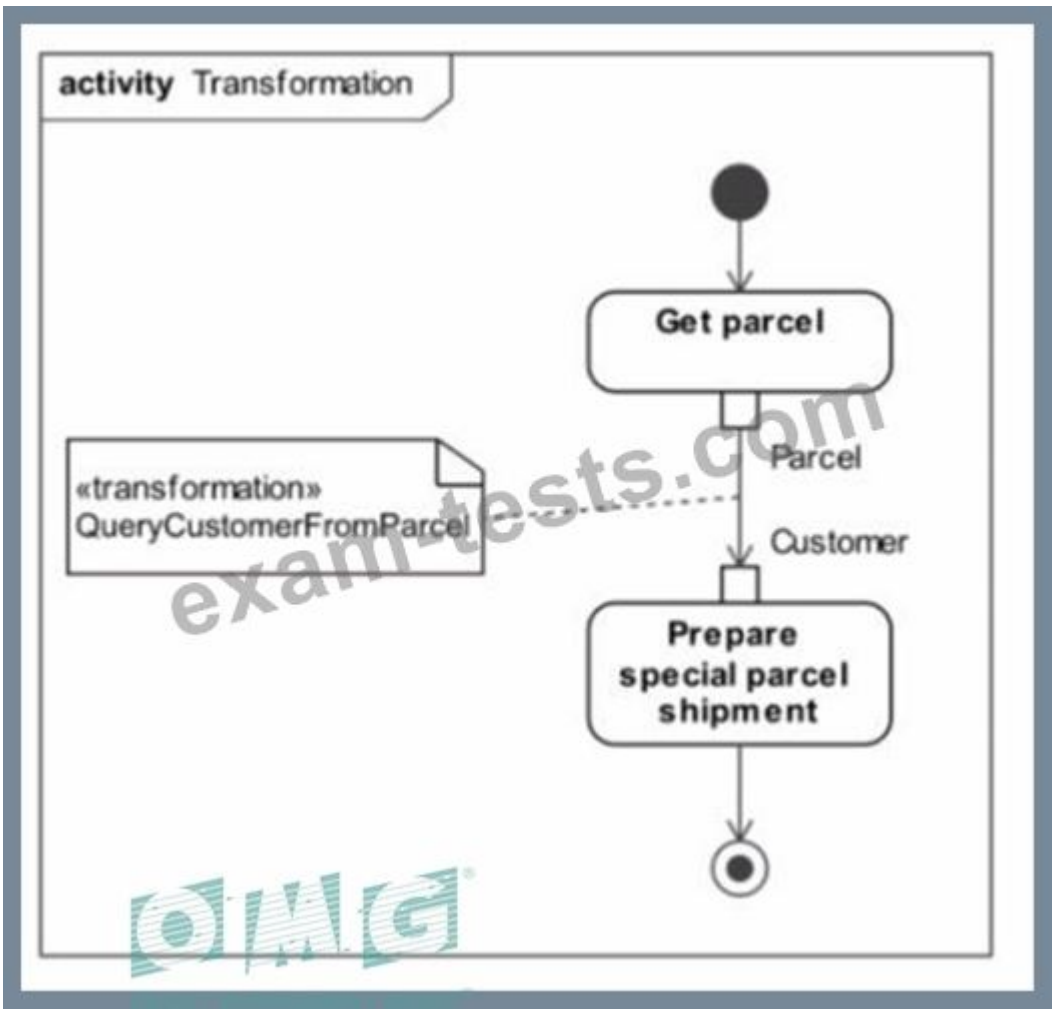
The provided diagram fragment shows what appears to be Components or Classes with dashed arrows pointing towards them. Typically in UML, a dashed arrow with an unfilled arrowhead represents a Realization relationship, which is used to show that an element (such as an interface) is realized by another element (such as a class or component). However, when we are talking about Classes like "EventRegistration," "MessagePacket," "Attendee," and "Session" which seem to share a common nature or purpose with

"EmailServices," these relationships are more appropriately modeled as Generalizations, indicating that they inherit from a common superclass or implement a common interface. Realizations are typically not used in this context.Hence, the dashed arrows in the diagram should be solid lines representing Generalization, not Realization. This answer aligns with the UML 2.x Superstructure Specification, which provides guidance on the usage of Realization and Generalization relationships in class diagrams.

NEW QUESTION: 12

Choose the correct answer:

Consider the following diagram fragment:



What is "QueryCustomerFromParcel"?

A. A SQL query

B. An OCL expression.

C. An Action with a reference to a transformation behavior.

D. A Behavior element, for example, an Activity. State Machine, or OpaqueBehavior.

Answer: D (LEAVE A REPLY)

"QueryCustomerFromParcel" is annotated with the «transformation» stereotype, which indicates that it is a behavior element that specifies how to convert input objects into output objects. Therefore, the answer is D, a Behavior element, for example, an Activity, State Machine, or OpaqueBehavior. In UML, the
«transformation» stereotype is applied to specify that an action or activity is responsible for transforming an input (in this case, "Parcel") into an output ("Customer"), typically by employing a specific behavior element.

References:

* UML 2.5 Specification: Section on Object Flows describes how transformations can be used within activity diagrams to turn inputs into outputs using behavior elements.

NEW QUESTION: 13

Choose the correct answer:

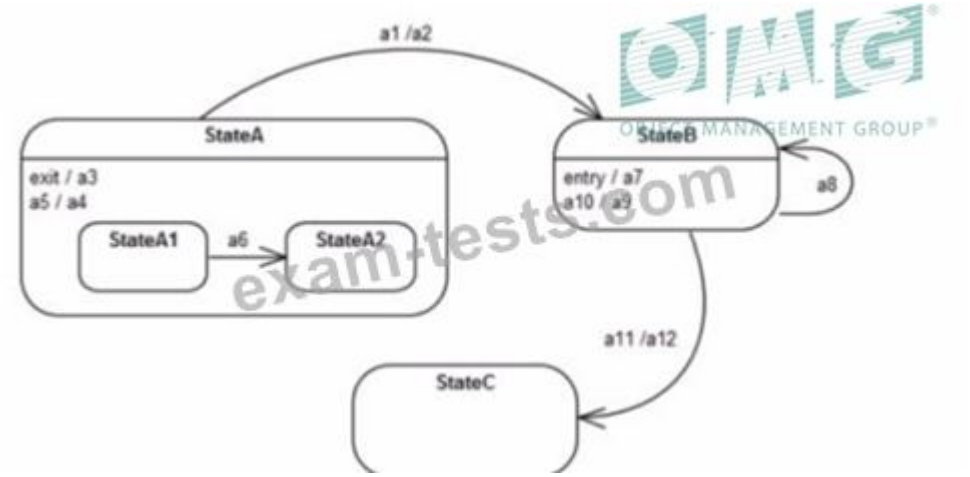
What is true about a MOF 2.x Model?

A. It is always a valid UML 2 x Model
B. It can be a valid UML 2.x Model, when certain limitations are observed.
C. The visual representation resembles a UML 2.x Model, but the underlying Model is a MOF-Model.
D. There is a subtle difference between it and a UML 2.x Model, but only theoretical computer scientists care.
Answer: B (LEAVE A REPLY)
A MOF (Meta Object Facility) 2.x Model is not always a valid UML (Unified Modeling Language) 2.x Model. The MOF 2.x and UML 2.x serve different purposes and have different scopes of application. While UML is a general-purpose modeling language used to define software systems, MOF is a language for defining metamodels, which can include UML itself1.
The MOF 2.x specification provides the basis for metamodel definition in OMG's (Object Management Group's) family of modeling languages, which includes UML. However, it is based on a simplification of UML 2's class modeling capabilities1. MOF is designed to be simpler, directly implementable, and provides a set of CORBA interfaces for manipulating meta objects2. In contrast, UML is used as a general-purpose modeling language with potentially many implementation targets2.
Therefore, a MOF 2.x Model can be a valid UML 2.x Model when certain limitations are observed, such as adhering to the simplified class modeling capabilities that MOF is based on. This means that while a MOF model can resemble a UML model in terms of visual representation, it is fundamentally a MOF model, and its validity as a UML model depends on the extent to which it conforms to the UML specifications

NEW QUESTION: 14
Choose the correct answer:
Can State Machine Events have Features?
A. Yes. they can
B. Yes. they can. but only when the modeled Events also extend Classifier.
C. No. they can not. because State Machine Events are not Classifiers.
D. No. they can not. because UML State Machines do not have an Event concept.
Answer: (SHOW ANSWER)
State Machine Events in UML are triggers for transitions and do not classify as objects or classifiers; thus they do not inherently have features:
* A.Incorrect, because State Machine Events are not treated as classifiers with features.
* B.Incorrect, though it hints at an extended use case, State Machine Events do not extend classifiers in standard UML usage.
* C.Correct, State Machine Events are not Classifiers and therefore cannot have features such as properties or operations.
* D.Incorrect, because UML State Machines certainly have an Event concept, but these Events are not classified as having features.

References:
* UML Specification: State Machine chapter, specifically sections discussing the nature of events and triggers.
* Further insights can be found in the event and trigger management sections of the UML 2.5 Documentation.

NEW QUESTION: 15
Choose the correct answer:
Consider the following diagram fragment:

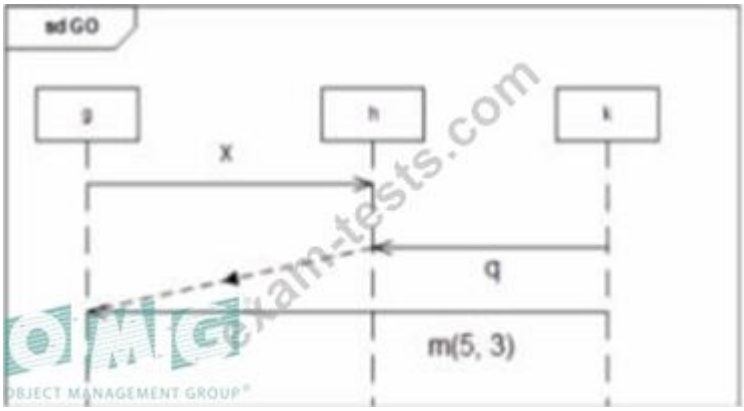


Assume that the system is in StateAl
Which sequence of behaviors could be executed in moving the system to StateC?
A. a6, a2, a7, al2
B. a4, a3, a1, a2, a7, a8, a12
C. a4, a6, a3, a1, a7, a8, a11
D. a4,a4, a3, a2, a7, a7, a9, a9,a12
Answer: C (LEAVE A REPLY)
Assuming the system is inStateA1, the behaviors (or actions) executed when moving toStateCwould begin with any behaviors associated with internal transitions or exit actions withinStateA1. Transitiona6would be the trigger to go fromStateA1toStateA2, executinga4(the exit action ofStateA1) before the transition. Upon exitingStateAaltogether (a3is the exit action forStateA), the system would follow the transition labeleda1to StateB, executinga7as the entry action ofStateB. Then, the transition fromStateBtoStateCwould occur, likely with an internal trigger withinStateBor by completion, followed bya11to complete the transition intoStateC.
The actions follow the flow of state transitions and the associated entry and exit actions as prescribed by UML state machine behavior specifications.

NEW QUESTION: 16
Choose the correct answer:
Which statement should be taken into consideration when extending a UML metaclass with a stereotype?

A. UML recommends to start extending the metaclass "Class" and then other metaclasses depending on the expected qualities of the profile.
B. The choice of the extended metaclass is not that important since tools can always apply a profile's filtering rules to hide unneeded metaclasses.
C. The metaclass and the stereotype that extends it should be semantically related to each other to avoid having to constrain the metamodel excessively.
D. UML specifies rules on how the mapping between stereotypes and UML metaclasses should be done; these rules must be followed to identify the best metaclasses.
Answer: C (LEAVE A REPLY)
When extending a UML metaclass with a stereotype, it is critical to ensure that the metaclass and the stereotype are semantically related. This is because a stereotype is a way to extend the UML metamodel to create new kinds of model elements that can include additional semantics and constraints, but still adhere to the base behavior defined by the metaclass. The stereotype should be a meaningful specialization of the metaclass and not contradict its fundamental semantics. By keeping them semantically related, there is less need for additional constraints on the metamodel, and the resulting profile is more intuitive for users. This is consistent with the principles described in the UML 2 Specification, particularly in the sections on profiles and stereotypes.

NEW QUESTION: 17
Choose the correct answer:
Consider the following sequence diagram GO:



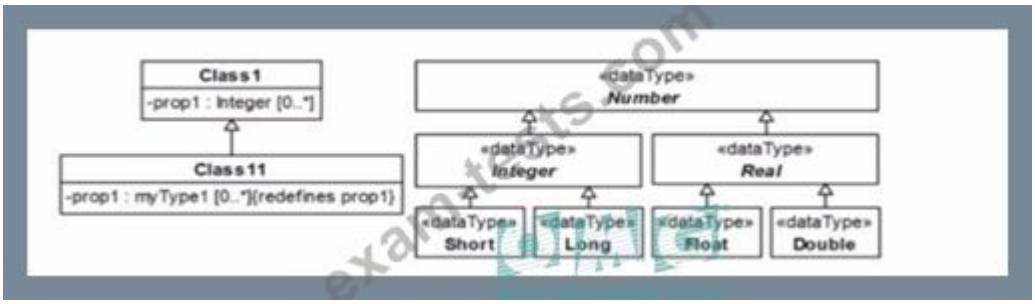
What is always true according to the diagram?
A. h receives x before k sends q
B. h receives q before k sends m
C. h receives q before g receives m
D. g sends x before k sends m
Answer: A (LEAVE A REPLY)
In the sequence diagram 'GO', the event 'h receives x' is depicted before 'k sends q', as indicated by the solid arrow from 'g' to 'h' labeled 'x' and the dashed arrow from 'k' labeled 'q'. Since messages are processed in the order they are depicted from top to bottom, 'h' must receive 'x' before 'k' can send 'q'.
The other options (B, C, and D) cannot be determined to be always true based on the information provided in the diagram alone. Especially with asynchronous messages, the send event may occur before the corresponding receive event, and the diagram does not contain sufficient information about timing constraints or message processing durations to ascertain the exact ordering of these events.
References include:
* UML 2.5 Specification (formal/2017-12-05), specifically the sections regarding message sends and receives, lifelines, and the semantics of sequence diagrams.
* Introduction to UML 2 Sequence Diagrams by Scott W. Ambler, which provides insights into the interpretation of sequence diagrams and the flow of messages.

NEW QUESTION: 18
Choose the correct answer:
Where does UML explicitly intend String Expression elements to be used?
A. as (he ValueSpecifications for the nameExpressions of ParameterableElements within Template specifications
B. as the model the author chooses for the specification of custom dynamically-generated names for any NamedElement
C. whenever an OpaqueExpression form of a ValueSpecification needs to specify an expression that operates on String instances
D. The specification has no metaclass StnngExpression and so no use of StringExpression is explicitly intended.
Answer: D (LEAVE A REPLY)
In UML, ValueSpecifications are used to specify the value of an element. The UML 2 Specification does not define a metaclass named StringExpression. Instead, it provides a metaclass named OpaqueExpression, which can be used when an expression is written in a language that is not directly interpretable by the model. Since there is no metaclass called StringExpression in the UML 2 Specification, there is no explicitly intended use for it within the UML metamodel. The absence of this metaclass suggests that any use of a concept called

"StringExpression" would not conform to standard UML 2 practices and would likely be part of an extension or profile, not the core UML metamodel.

NEW QUESTION: 19
Choose the correct answer:
Which statement is correct about a Decision Node?
A. A Decision Node shall have at most one incoming Activity Edge
B. A Decision Node shall have at most two incoming Control Flows
C. If a Decision Node has an incoming Control Flow and a decisionInput. then a decisionInput shall have a single in Parameter.
D. If a Decision Node has an incoming Object Flow, a decisionInput. and a decisionInputFlow. then a decisionInput shall have two in Parameters.
Answer: C (LEAVE A REPLY)
In the context of UML 2.0 and the specifications around Decision Nodes, option C is the correct choice.
According to the UML 2.5 specification, when a Decision Node has an incoming control flow and a decisionInput, thedecisionInputmust have a single input parameter (in Parameter). This ensures that the decision node can evaluate the decision input using the value passed through the incoming control flow. This mechanism is crucial for decision-making processes within activity diagrams where decisions are made based on dynamic data provided at runtime.
References:
* UML 2.5 Specification: The specification details the properties and behaviors of Decision Nodes within activity diagrams, particularly emphasizing how decision inputs and their parameters are handled.

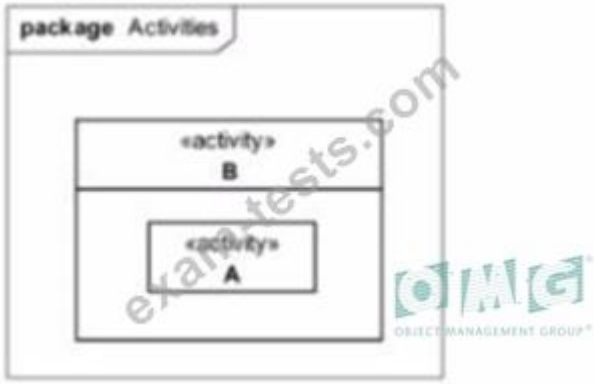
NEW QUESTION: 20
Choose the correct answer:
Consider the following diagram:



What could be substituted for myTypeI?
A. Number
B. Short or Long
C. any subtype of Number
D. any Type, there is no restriction
Answer: C (LEAVE A REPLY)

In the given diagram,myType1is shown redefiningprop1, which was originally of typeInteger. Given that Integeris a subtype ofNumber, andmyType1is used in a redefinition context, it implies thatmyType1must also be a subtype ofNumber. In UML, when a property is redefined, the redefining property must be type compatible with the property it redefines. Therefore,myType1could be substituted by any subtype ofNumber, which includesInteger,Real, and all their subtypes (Short,Long,Float,Double, etc.). This is based on the UML principle of type conformance in property redefinition, as specified in the UML 2.x Superstructure Specification.

NEW QUESTION: 21
Choose the correct answer:
A behavior A is specified by an Activity. A specialized version B of the behavior shall also be specified Which is a correct approach to model that scenario?



A.
B.
C.
D.
Answer: A (LEAVE A REPLY)
In UML, a specialized behavior that is an extension or modification of a more general behavior is typically shown using the generalization relationship. Option A correctly models this scenario by showing behavior B as a specialization of behavior A, which is indicated by the containment within the package and a nesting of B inside A without any stereotype on the relationship. This representation implies that B inherits the characteristics of A while potentially adding or overriding some aspects of it.
References:
* UML 2.5 Specification: Generalization is defined in the UML 2.5 Specification, where a more specific classifier may override the behaviors of a more general classifier.

NEW QUESTION: 22
Choose the correct answer:
Consider the following diagram:
What does the string {guarded} mean?

A. The execution of op1 is guarded by one or more exceptions which it will handle if they arise.
B. Multiple invocations of op1 that overlap in time may occur to one instance, but only the first one will get handled.
C. Multiple invocations of op1 that overlap in time may occur to one instance, but only one is allowed to commence.
D. The execution of op1 Is guarded by one or more exceptions. Behaviors invoking it are required to handle these exceptions
Answer: C (LEAVE A REPLY)
In UML, when an operation is marked with the term{guarded}, it means that the operation is subject to a concurrency constraint. It specifies that the operation cannot have overlapping executions; in other words, if the operation is already in execution, a new attempt to start it will have to wait until the current one completes.
This prevents race conditions and ensures thread safety for that operation when dealing with concurrent accesses in multi-threaded environments. This interpretation is based on the UML 2.x Superstructure Specification, which describes how operations can be marked with constraints to define their behavioral features in terms of concurrency.

NEW QUESTION: 23
Choose the correct answer:
Consider the following diagram:
Which statement is correct about the diagram?
A. Each subclass of Electronic Device Kind must have a set of required Certifications defined.
B. Each subclass of Electronic Device in the shown Generalization Set must have a set of required Certifications defined.
C. The "Electronic Device Kind" Class and the "Electronic Device Kind" Generalization Set have the same name, but no semantic connection is implied by this.
D. These are two alternative but incompatible ways to specify Electronic Device Kinds, either as Class
"Electronic Device Kind" or as Specialization of "Electronic Device".
Answer: A (LEAVE A REPLY)
The diagram depictsElectronic Device Kindas a class that requires a set of Certifications (required :
Certification[1..*]). This implies that any subclass ofElectronic Device Kindmust provide a set of required Certifications because the multiplicity[1..*]indicates that at least one Certification is mandatory for each instance ofElectronic Device Kindor its subclasses.
Therefore, when a subclass is created, it inherits the requirement to specify what Certifications are needed. This is a standard UML generalization, where the subclass inherits the attributes and constraints of its superclass. This interpretation is consistent with

the rules defined in the UML 2.x Superstructure Specification, which includes the semantics of class generalization and attribute inheritance.

NEW QUESTION: 24
Choose the correct answer:
What happens when an exception is raised by an Action within an Activity that has been invoked asynchronously?
A. The exception is propagated to the caller
B. That kind of exception cannot be handled.
C. The catching exception handler has exactly one output pin.
D. The exception is lost if there is no matching handler within the Activity.
Answer: D (LEAVE A REPLY)
For asynchronous invocations in UML, when an exception is thrown and there is no matching exception handler within the activity, the exception is effectively lost because there is no direct mechanism to propagate it back to the caller. This reflects the nature of asynchronous communication where the calling process does not wait for the completion of the called process and, thus, may not be designed to handle exceptions that occur during the called process.
References:
* UML 2.5 Specification: The UML specification describes the behavior of actions within activities and how exceptions are handled, or not handled, in the case of asynchronous calls. It specifically states that for asynchronous calls, the exception is not propagated back to the caller as there is no return flow defined for such invocations.

NEW QUESTION: 25
Choose the correct answer:
Which MOF capability supports the correlation of model elements across model transformations where both the source and target models may be subject to change?
A. Identifiers
B. Extension
C. Reflection
D. Federation
Answer: (SHOW ANSWER)
The MOF capability that supports the correlation of model elements across model transformations, where both the source and target models may be subject to change, is known as Federation1. Federation allows for the integration of different models, ensuring that changes in one model can be reflected in another, thus maintaining consistency across transformations.

NEW QUESTION: 26
Choose the correct answer:

In a model of a commercial transaction, actors might exchange euros, pesos, and dollars Which figure illustrates compliant use of UML information items for these currency exchanges?

A. Figure 1
B. Figure 2
C. Figure 3
D. Figure 4

Answer: (SHOW ANSWER)

In UML, an InformationItem represents an abstraction of all those elements in a UML model that have an information-bearing feature. It is depicted as a classifier with the keyword «informationItem». An InformationItem does not have direct instances and serves as a mechanism to handle unspecified, untyped information in a model. In the context of a commercial transaction model, currencies such as euros, pesos, and dollars can be abstractly represented as InformationItems to signify that they are used as a form of data exchange but without specifying the concrete structure or data type. Figure 2 correctly uses InformationItem notation, with the «informationItem» keyword and the directed association pointing from the Currency InformationItem to the Euro, Peso, and Dollar, which are likely representations or manifestations of the Currency. This complies with the UML specification for representing abstract entities in models that are involved in the exchange or flow of information.

NEW QUESTION: 27

Choose the correct answer:

Which can be added to a redefined operation?

A. scope
B. templates
C. parameters
D. preconditions

Answer: D (LEAVE A REPLY)

In UML, operations can have preconditions defined, which are constraints that must be true before the operation is invoked. When an operation is redefined in a subclass, it is possible to add new preconditions or alter existing ones. Redefining an operation does not typically allow for changes to its scope or the addition of templates, but the preconditions may be expanded to reflect the semantics of the subclass. This is in line with the behavioral specification of operations in UML, where preconditions are part of the behavioral contract of an operation, as described in the UML 2.x Superstructure Specification.

NEW QUESTION: 28

Choose the correct answer:

What is the main purpose of the concept of Extent in MOF?

A. To allow an Element to access its meta class in order to obtain a reflective description of that Element.
B. To define a set of Tags that represent information to be associated by any number of model Elements.
C. To provide a context in which an Element can be identified independently from any value in the Element.
D. To provide an extension mechanism to dynamically annotate model Elements with additional information.
Answer: B (LEAVE A REPLY)
The concept of Extent in MOF serves the purpose of defining a set of Tags that can be associated with any number of model elements. These tags provide additional information or metadata about the elements. Extent allows you to annotate model elements with relevant information beyond their intrinsic properties. It provides a context for identifying and managing these annotations independently from the element's actual values.

NEW QUESTION: 29
Choose the correct answer:
What does the UML specification say about choosing between a MOF-based metamodel and a UML profile?
A. It is not always clear when to use one approach over the other; this decision must be domain-specific
B. It is always good to opt for metamodeling when the metamodel is large and the domain is inherently complex such as the database domain.
C. Since UML extends MOF. it is always preferable to start by extending MOF and. if this turns out to be complex, then shift to extending UML.
D. Extending UML should be favored because of the fact that there are several tools that support UML profiling, which is not the case for MOF.
Answer: (SHOW ANSWER)
The UML (Unified Modeling Language) specification, which is a part of the MOF (Meta-Object Facility) framework, suggests that the choice between creating a MOF-based metamodel and a UML profile depends on the specific needs of the domain being modeled. A MOF-based metamodel might be more appropriate for domains that require defining a completely new set of modeling concepts, whereas a UML profile is suitable for domains where the extension ofexisting UML concepts is sufficient. Since the specification recognizes the variability in modeling requirements across different domains, it emphasizes the importance of understanding the domain to make an informed decision on the modeling approach. The UML specification, therefore, does not prescribe a one-size-fits-all solution but rather leaves the decision to the modeler, based on the domain-specific requirements.

NEW QUESTION: 30

Choose the correct answer:
You are asked to provide UML model content such that other modelers may use the Classes of your model as modular, partial specifications to be more fully specified by their models. You decide to provide a Vehicle Class that represents a partial specification of automobiles and allows tailoring of this class through the other modelers' choices of kinds of propulsion such as a gasoline motor, an electric engine, or a manual cyclesystem.
You want to limit whichClass kinds the other modelers can choose as their propulsion system.
Which tactic appropriately exploits UML's syntax and semantics for modular reification?
A. Model GasolineMotorVehicle. ElectricEngineVehicle. and ManualCyclingVehicle as specialized versions of your Abstract Class Automobile.
B. Model Vehicle as a Template Classifier with a Class Parameter named Thrustor that is constrained to be a derivative of an Abstract Class PropulsionSystem
C. Model Vehicle as a Class with a Property named thrustor of Type Enumeration Class Thrustor that has Enumeration Literals GasolmeMotor. ElectncEngme. and ManualCycler.
D. Model three separate Packages named GasolineMotor Vehicles. ElectricEngme Vehicles, and ManualCyclmg Vehicles and Package Import into each of these the Package with your Vehicle Class.
Answer: (SHOW ANSWER)
The approach described in option B aligns with the concept of template classifiers in UML, which allows for the creation of parameterized elements that can be instantiated with different arguments. By modelingVehicle as a template classifier with a parameter namedThrustor, other modelers can instantiate this template with their chosen propulsion system, as long as it is a type that specializes thePropulsionSystemabstract class. This method provides the flexibility needed for modelers to tailor theVehicleclass to different propulsion systems while enforcing that only derivatives ofPropulsionSystemcan be used as the actual parameter forThrustor.
This tactic of using template classifiers and class parameters is an application of UML's syntax and semantics for creating modular and customizable models. This practice is detailed in the UML 2.x Superstructure Specification, particularly in the sections describing template classifiers and their parameters.

NEW QUESTION: 31
Choose the correct answer: Consider the following definition:
Which statement is correct about elements referred to in the illustration?
A. mycar is a classifier.
B. rear is a property of Wheel.
C. frontleft must have a void type.
D. wheels is a property of Vehicle.
Answer: D (LEAVE A REPLY)

In the diagram, "mycarVehicle" represents a class that likely encapsulates the concept of a vehicle within the system being modeled. The elements within "mycarVehicle" are properties that represent different parts of the car. The term "wheels" is not explicitly shown in the diagram, but based on UML conventions and the context provided, it would be a property of the Vehicle class. This property would likely be associated with the "frontleft" and "frontrightwheels" parts of the car. In UML, properties represent structural features of a class that hold data values or references to other objects. The correctness of this answer is consistent with the principles found in the UML 2.x Superstructure Specification regarding the structural features of classes.

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