

# Rose Domain

## Introduction

The Rose domain lets you incorporate objects from Rational Rose models in your reporting.

Among the objects that you can extract are packages, classes, uses cases, and diagrams.

In addition, you can extract external documents that are associated with a specific object. That procedure is provided in the Help.

## Aliases

The following names in the Rose domain are aliased in the reporting interface:

| Name in Domain  | Name in Interface  | Item Type / Location           |
|---|--|--------------------------------|
| Packages<br>RootUseCasePackage<br>Subsystems<br>AllModules<br>RootLogicalPackage<br>AllScenarios<br>RootSubsystem                   | AllPackages<br>UseCaseView<br>AllSubsystems<br>AllComponents<br>LogicalView<br>AllInteractionDiagrams<br>ComponentView   | Relationship / Model Class     |
| HasStateDiagram   | HasStateActivityDiagram  | Property / Package Class       |
| StateDiagram<br>StateDiagrams<br>StateMachine<br>StateMachines<br>UseCases<br>Scenarios<br>Associations                             | FirstStateActivityDiagram<br>StateActivityDiagrams<br>FirstStateActivityModel<br>StateActivityModels<br>MyUseCases<br>InteractionDiagrams<br>MyAssociations                      | Relationship / Package Class   |
| Abstract<br>HasStateDiagram   | IsAbstract<br>HasStateActivityDiagram  | Property / Class Class         |
| StateDiagram<br>StateMachine<br>StateDiagrams<br>Relationships<br>SubClasses<br>SuperClasses<br>Modules<br>Operations<br>Attributes | FirstStateActivityDiagram<br>FirstStateActivityModel<br>StateActivityDiagrams<br>MyRelationships<br>MySubClasses<br>MySuperClasses<br>Components<br>MyOperations<br>MyAttributes | Relationship / Class Class     |
| ReturnType<br>CplusplusImage<br>HasStateDiagram   | ReturnClass<br>CplusplusImage<br>HasStateActivityDiagram   | Property / Operation Class     |
| StateDiagram<br>StateMachine<br>StateDiagrams<br>StateMachines<br>Parameters  | FirstStateActivityDiagram<br>StateActivityModel<br>StateActivityDiagrams<br>StateActivityModels<br>Arguments   | Relationship / Operation Class |
| InitValue<br>Derived<br>Static  | InitialValue<br>IsDerived<br>IsStatic  | Property / Attribute Class     |

| <b>Name in Domain</b>   | <b>Name in Interface</b>  | <b>Item Type / Location</b>       |
|---|---|-----------------------------------|
| HasLinkClass<br>Derived   | HasLinkElement<br>IsDerived   | Property / Association Class      |
| Role1<br>LinkClass<br>Role2   | RoleA<br>LinkElement<br>RoleB   | Relationship / Association Class  |
|   |   |                                   |
| StateMachine  | StateActivityModel  | Class                             |
| HasDiagram  | HasStateActivityDiagram   | Property / StateMachine Class     |
| Diagram<br>Diagrams<br>AllDiagrams<br>StateMachines                         | FirstStateActivityDiagram<br>StateActivityDiagrams<br>AllStateActivityDiagrams<br>StateActivityModels                       | Relationship / StateMachine Class |
|   |   |                                   |
| Scenario  | InteractionDiagram  | Class                             |
|   |   |                                   |
| Navigable<br>Static<br>Aggregate  | IsNavigable<br>IsStatic<br>IsAggregate  | Property / Role Class             |
|   |   |                                   |
| Module  | Component   | Class                             |
|   |   |                                   |
| ModuleDiagrams<br>AllModules<br>MainDiagram<br>Modules                      | ComponentDiagrams<br>AllComponents<br>Diagram<br>Components   | Relationship / Subsystem Class    |
|   |   |                                   |
| ObjectInstance  | Object  | Class                             |
| MyClassName   | ClassName   | Property / ObjectInstance Class   |
|   |   |                                   |
| SupplierRole<br>ClientRole  | Supplier<br>Client  | Relationship / Link Class         |
|   |   |                                   |
| Abstract<br>HasStateDiagram   | IsAbstract<br>HasStateActivityDiagram   | Property / UseCase Class          |
| StateDiagram<br>StateMachine<br>StateDiagrams<br>StateMachines<br>Scenarios | FirstStateActivityDiagram<br>FirstStateActivityModel<br>StateActivityDiagrams<br>StateActivityModels<br>InteractionDiagrams | Relationship / UseCase Class      |
|   |   |                                   |
| StateMachines<br>StateDiagrams<br>ParentStateMachine                        | StateActivityModels<br>StateActivityDiagrams<br>ParentStateActivityModel  | Relationship / Activity Class     |
|   |   |                                   |
| SyncItem  | Synchronization   | Class                             |
|   |   |                                   |
| StateDiagram  | StateActivityDiagram  | Class                             |
| HasStateMachine   | HasStateActivityModel   | Property / StateDiagram Class     |
| StateMachine  | StateActivityModel  | Relationship / StateDiagram Class |
|   |   |                                   |
| ModuleDiagram   | ComponentDiagram  | Class                             |
|   |   |                                   |

| <b>Name in Domain</b>                                | <b>Name in Interface</b>   | <b>Item Type / Location</b>          |
|--|--|--------------------------------------|
| StateMachines<br>StateDiagrams<br>ParentStateMachine | StateActivityModels<br>StateActivityDiagrams<br>ParentStateActivityModel | Relationship / State Class           |
| ExternalDocument                                     | String   | Class                                |
| Type   | Kind   | Property / Note Class                |
| InheritRelationship                                  | InheritsRelationship   | Class                                |
| Virtual  | IsVirtual  | Property / InheritRelationship Class |
| MappedPoints   | ItemsPositionInfo  | Property / Diagram Class             |
| MappedArtifacts                                      | Items  | Relationship / Diagram Class         |

# Action

## Rose Domain

An action is an operation that is associated with a state transition.

**Class Hierarchy:** Item>Action

### SubClasses of Action

This class has no subclasses.

### Properties Specific to Action

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>  |
|-------------------|-----------------------|---|
| Arguments         |                       | The arguments that accompany the trigger event.                     |
| Documentation     | Item                  | Documentation for the item.   |
| Name              | Item                  | Name of the item.   |
| OnEvent_Arguments |                       | For a Rose action that is an event, the name of the event.          |
| OnEvent_Condition |                       | For a Rose action that is an event, the associated guard condition. |
| OnEvent_Event     |                       | For a Rose action that is an event, the arguments for that event.   |
| QualifiedName     | Item                  | Qualified name of the item.   |
| Stereotype        | Item                  | Stereotype of the item.   |
| Target            |                       | The name of the event object.                                       |
| UniqueID          | Item                  | The unique ID of the item.  |

### Relationships Specific to Action

This class has no relationships.

## Activity

### Rose Domain

The Activity class is an abstract class that exposes activity functionality in the Rose extensibility interface. With the Rose Activity class, you can:

Retrieve information about activities, such as name, documentation, stereotype.

Retrieve objects associated with activities such as parent activities, parent states, parent state machines, child activities, child decisions, child states, child synchronizations, outgoing transitions, and swimlanes.

Create and retrieve tool and property settings for activities.

Open specification sheets for activities.

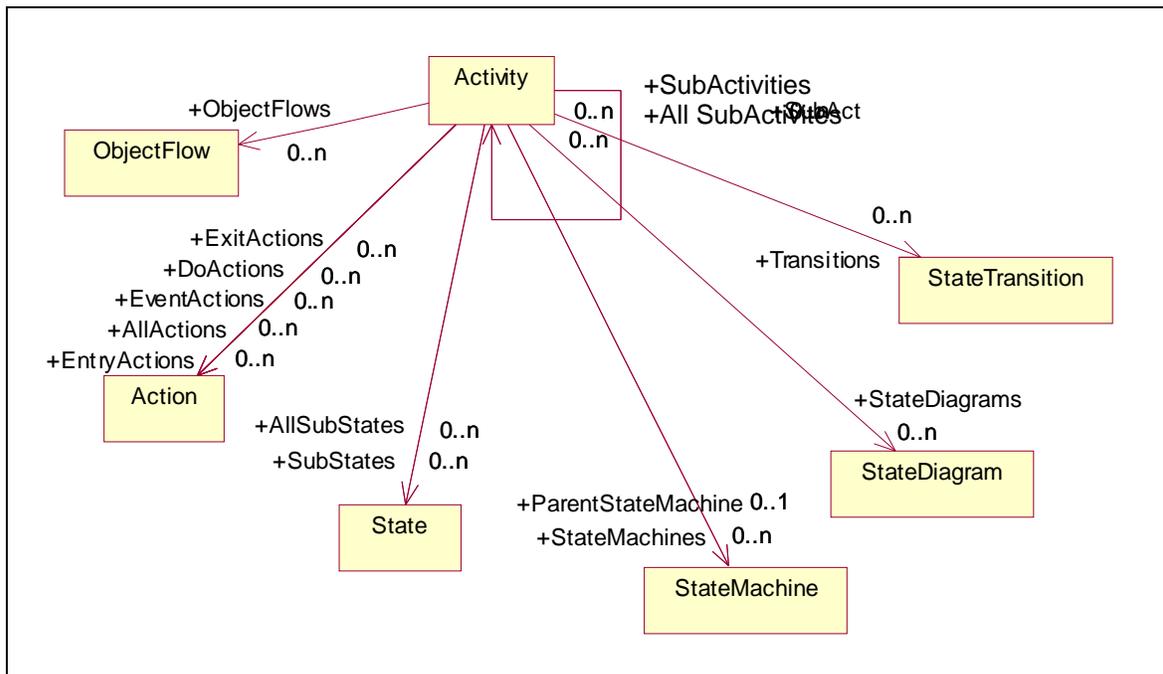
Add, delete, and retrieve an activity's actions, state machines, and events.

Add and delete transitions.

**Class Hierarchy:** Item>Activity

### SubClasses of Activity

This class has no subclasses.



### Properties Specific to Activity

| Properties    | Inherited From | Description                 |
|---------------|----------------|-----------------------------|
| Documentation | Item           | Documentation for the item. |
| Name          | Item           | Name of the item.           |
| QualifiedName | Item           | Qualified name of the item. |
| Stereotype    | Item           | Stereotype of the item.     |
| UniqueID      | Item           | The unique ID of the item.  |

**Relationships Specific to Activity**

| <b>Name</b>        | <b>Kind</b> | <b>Class</b>    | <b>Description</b>   |
|--------------------|-------------|-----------------|--|
| AllActions         | 0..n        | Action          | All actions associated with this Activity -- EntryActions, ExitActions, DoActions, and EventActions. |
| AllSubActivities   |             | Activity        | All activities associated with this Activity.  |
| AllSubStates       | 0..n        | State           | States associated with this Activity.  |
| DoActions          | 0..n        | Action          | The Do actions for this Activity.  |
| EntryActions       | 0..n        | Action          | The Entry actions for this Activity.   |
| EventActions       | 0..n        | Action          | The Event actions for this Activity.   |
| ExitActions        | 0..n        | Action          | The Exit actions for this Activity.  |
| ObjectFlows        | 0..n        | ObjectFlow      | The associated object flows for this Activity.   |
| ParentStateMachine | 0..1        | StateMachine    | Parent state machine associated with this Activity.  |
| StateDiagrams      | 0..n        | StateDiagram    | State or activity diagrams internal to this Activity.  |
| StateMachines      | 0..n        | StateMachine    | State machines internal to this Activity.  |
| SubActivities      |             | Activity        | Activities that are part of this Activity.   |
| SubStates          | 0..n        | State           | States that are part of this Activity.   |
| Transitions        | 0..n        | StateTransition | Transitions that exit from this Activity.  |

# Association

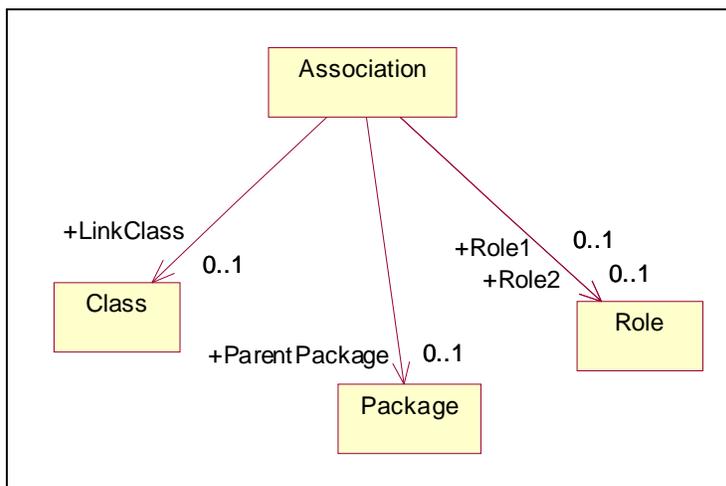
## Rose Domain

An association provides a pathway for communication. The communication can be between use cases, actors, classes, or interfaces. Associations are the most general of all relationships and consequentially the most semantically weak. If two objects are usually considered independently, the relationship is an association.

**Class Hierarchy:** Item>Association

### SubClasses of Association

This class has no subclasses.



### Properties Specific to Association

| Properties    | Inherited From | Description   |
|---------------|----------------|---|
| Constraints   |                | The text from the Constraints field in the association specification.       |
| Derived       |                | True if the association is derived; otherwise False.                        |
| Documentation | Item           | Documentation for the item.   |
| HasLinkClass  |                | True if the association has an attached Association class, otherwise False. |
| Name          | Item           | Name of the item.   |
| QualifiedName | Item           | Qualified name of the item.   |
| Stereotype    | Item           | Stereotype of the item.   |
| UniqueID      | Item           | The unique ID of the item.  |

**Relationships Specific to Association**

| <b>Name</b>   | <b>Kind</b> | <b>Class</b> | <b>Description</b>                            |
|---------------|-------------|--------------|---|
| LinkClass     | 0..1        | Class        | The linked class attached to the Association. |
| ParentPackage | 0..1        | Package      | Parent package attached to the Association.   |
| Role1         | 0..1        | Role         | The first role defined in the Association.    |
| Role2         | 0..1        | Role         | The second role defined in the Association.   |

## Attribute

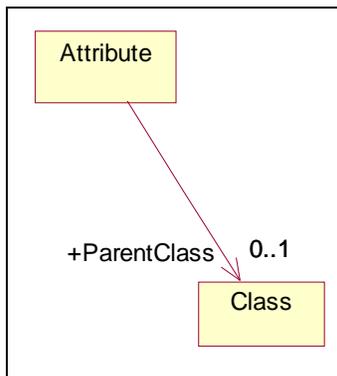
### Rose Domain

Attributes are data members of a class whose type is not another class. Attributes define the characteristics of a class. Each object in a class has the same attributes, but the values of the attributes may be different.

**Class Hierarchy:** Item>Attribute

#### SubClasses of Attribute

This class has no subclasses.



#### Properties Specific to Attribute

| Properties    | Inherited From | Description  |
|---------------|----------------|--|
| Containment   |                | Specifies the physical containment of the attribute. Returns Value, Reference, or Unspecified, depending on the state of the Containment radio control on the attribute specification. |
| Derived       |                | True if the Derived check box is selected in the attribute specification, otherwise False.   |
| Documentation | Item           | Documentation for the item.  |
| ExportControl |                | The export control of the attribute. Returns Public, Protected, Private, or implementation.  |
| InitValue     |                | The initial value of the Attribute.  |
| Name          | Item           | Name of the item.  |
| QualifiedName | Item           | Qualified name of the item.  |
| Static        |                | True if the Static check box is selected in the attribute specification, otherwise False.  |
| Stereotype    | Item           | Stereotype of the item.  |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>         |
|-------------------|-----------------------|----------------------------|
| Type              |                       | The type of the Attribute. |
| UniqueID          | Item                  | The unique ID of the item. |

**Relationships Specific to Attribute**

| <b>Name</b> | <b>Kind</b> | <b>Class</b> | <b>Description</b>                            |
|-------------|-------------|--------------|---|
| ParentClass | 0..1        | Class        | The class in which this attribute is defined. |

# Class

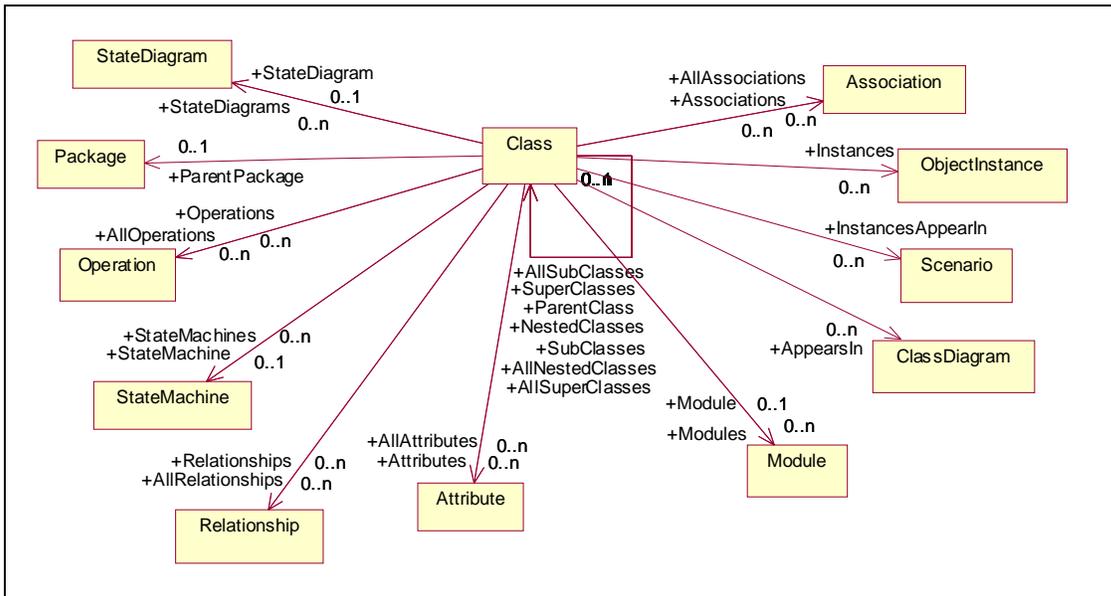
## Rose Domain

A class captures the common structure and common behavior of a set of objects. A class is an abstraction of real-world items. When these items exist in the real world, they are instances of the class, and referred to as objects. Rational Rose stores class information in a class specification.

**Class Hierarchy:** Item>Class

### SubClasses of Class

- ClassUtility
- InstantiatedClass
- InstantiatedClassUtility
- MetaClass
- ParameterizedClass
- ParameterizedClassUtility



### Properties Specific to Class

| Properties  | Inherited From | Description   |
|-------------|----------------|---|
| Abstract    |                | True if the Abstract check box is selected in the class specification, otherwise False.   |
| Cardinality |                | The string in the Cardinality field of the class specification.   |
| Concurrency |                | Returns Sequential, Guarded, Active, or Synchronous, depending on the value of the Concurrency radio control in the More dialog of the class specification. |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>   |
|-------------------|-----------------------|--|
| Documentation     | Item                  | Documentation for the item.  |
| ExportControl     |                       | Returns Public or Implementation, depending on the value of the Export Control radio control in the class specification.                         |
| FundamentalType   |                       | Returns TRUE if this class is a fundamental type.  |
| HasStateDiagram   |                       | Returns TRUE if the class has an associated state diagram, otherwise FALSE.  |
| IsNested          |                       | Returns TRUE if the Class is nested, otherwise FALSE.  |
| Kind              |                       | The kind of Class.   |
| Name              | Item                  | Name of the item.  |
| Persistence       |                       | This property is Persistent or Transient, depending on the value of the Persistence radio control in the More dialog of the class specification. |
| QualifiedName     | Item                  | Qualified name of the item.  |
| Space             |                       | The string in the Space field of the More dialog of the class specification.   |
| Stereotype        | Item                  | Stereotype of the item.  |
| UniqueID          | Item                  | The unique ID of the item.   |

### Relationships Specific to Class

| <b>Name</b>      | <b>Kind</b> | <b>Class</b> | <b>Description</b>  |
|------------------|-------------|--------------|---|
| AllAssociations  | 0..n        | Association  | All associations where this Class plays a role, including those inherited from other classes. |
| AllAttributes    | 0..n        | Attribute    | All attributes of this Class, including those inherited from other classes.                   |
| AllNestedClasses |             | Class        | All nested classes of this Class.   |
| AllOperations    | 0..n        | Operation    | All operations of this Class, including those inherited from other classes.                   |
| AllRelationships | 0..n        | Relationship | All relationships of this Class, including those inherited from other classes.                |

| <b>Name</b>       | <b>Kind</b> | <b>Class</b>   | <b>Description</b>   |
|-------------------|-------------|----------------|--|
| AllSubClasses     |             | Class          | All classes in the lineage of this Class. For example, if A inherits from B and B inherits from C, then AllSubClasses of C would include B and A.    |
| AllSuperClasses   |             | Class          | All classes in the ancestry of this Class. For example, if A inherits from B and B inherits from C, then AllSuperClasses of A would include B and C. |
| AppearsIn         | 0..n        | ClassDiagram   | The class diagrams where this Class appears.   |
| Associations      | 0..n        | Association    | The associations where this Class plays a role.  |
| Attributes        | 0..n        | Attribute      | Attributes that are defined by this Class. Does not include inherited attributes.  |
| Instances         | 0..n        | ObjectInstance | Object instances associated with this Class.   |
| InstancesAppearIn | 0..n        | Scenario       | Interaction diagrams that include instances of this Class.   |
| Module            | 0..1        | Module         | The first module associated with this Class.   |
| Modules           | 0..n        | Module         | All modules associated with this Class.  |
| NestedClasses     |             | Class          | Classes that are nested within this Class.   |
| Operations        | 0..n        | Operation      | Operations that are defined by this Class. Does not include inherited operations.  |
| ParentClass       |             | Class          | Parent class of this Class, if it is nested.   |
| ParentPackage     | 0..1        | Package        | The enclosing package.   |
| Relationships     | 0..n        | Relationship   | Relationships that are defined by this Class. Does not include inherited relationships.  |
| StateDiagram      | 0..1        | StateDiagram   | The (first) state/activity diagram associated with this Class.   |
| StateDiagrams     | 0..n        | StateDiagram   | All state/activity diagrams associated with this Class.  |
| StateMachine      | 0..1        | StateMachine   | The (first) state machine associated with this Class.  |
| StateMachines     | 0..n        | StateMachine   | All state machine associated with this Class.  |

| <b>Name</b>  | <b>Kind</b> | <b>Class</b> | <b>Description</b>   |
|--------------|-------------|--------------|--|
| SubClasses   |             | Class        | The classes that directly inherit from this Class. Only includes immediate subclasses. For example, if A inherits from B and B inherits from C, then MySubClasses of C would include B but not A.      |
| SuperClasses |             | Class        | The classes that this Class directly inherits from. Only includes immediate superclasses. For example, if A inherits from B and B inherits from C, then MySuperClasses of A would include B but not C. |

# ClassDiagram

## Rose Domain

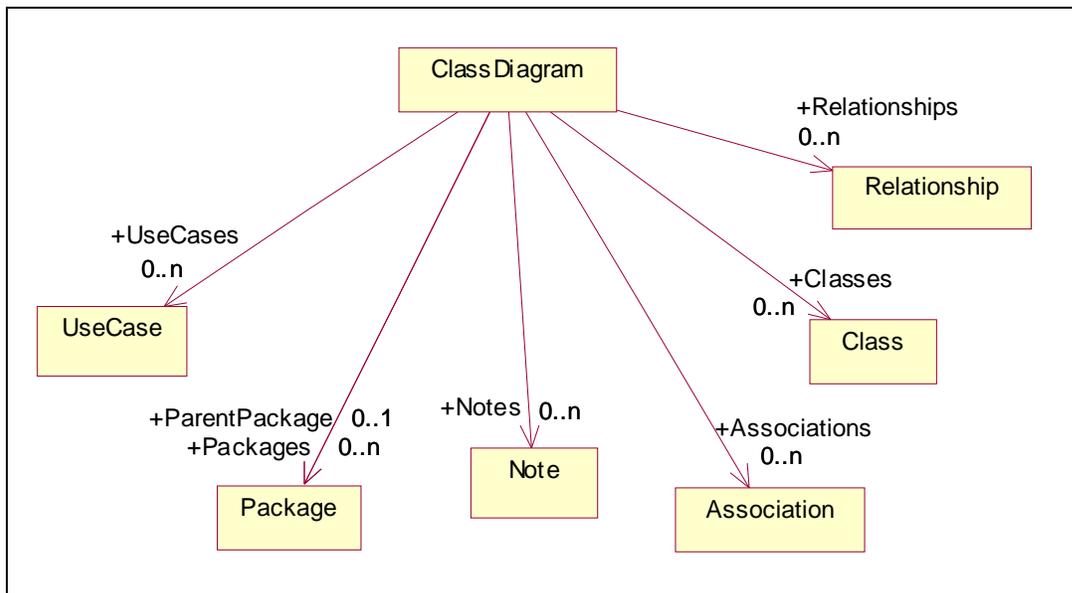
A class diagram shows the relationships between packages and classes; the essential relationships include association, inherits, has, and uses. Each class diagram provides a logical view of the current model.

Class diagrams contain icons representing packages and classes. Class diagrams can be considered as filtered views into the model. They do not necessarily depict all the classes or relationships in the model. For example, iterating over all the classes in the main diagram of a package will not necessarily return all the classes defined in that category.

**Class Hierarchy:** Diagram>ClassDiagram

### SubClasses of ClassDiagram

This class has no subclasses.



### Properties Specific to ClassDiagram

| Properties    | Inherited From | Description   |
|---------------|----------------|---|
| Documentation | Diagram        | The documentation text associated with the Diagram.   |
| MappedPoints  | Diagram        | A list of coordinates of the items in the Diagram. Each item is specified by a set of x/y coordinates designating the location of the corners of the item. The ordering of the items is the same as in the MappedArtifacts artifact collection. |
| Name          | Diagram        | Name of the Diagram.  |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>             |
|-------------------|-----------------------|--------------------------------|
| QualifiedName     | Diagram               | Qualified name of the Diagram. |
| UniqueID          | Diagram               | The unique ID for the Diagram. |

### Relationships Specific to ClassDiagram

| <b>Name</b>   | <b>Kind</b> | <b>Class</b> | <b>Description</b>  |
|---------------|-------------|--------------|---|
| Associations  | 0..n        | Association  | The associations where this class diagram plays a role.       |
| Classes       | 0..n        | Class        | All of the classes that appear on the diagram.                |
| Notes         | 0..n        | Note         | Notes that appear in the diagram.                             |
| Packages      | 0..n        | Package      | All packages associated with this class diagram.              |
| ParentPackage | 0..1        | Package      | The package that this diagram is contained in, if applicable. |
| Relationships | 0..n        | Relationship | All of the relationships that appear on the diagram.          |
| UseCases      | 0..n        | UseCase      | All of the use cases that appear on the diagram.              |

# ClassUtility

## Rose Domain

A class utility is a set of operations that provide additional functions for classes. Class utilities are used to:

- Denote one or more free subprograms.
- Name a class that only provides static members and/or static member functions.

**Class Hierarchy:** Item>Class>ClassUtility

### SubClasses of ClassUtility

This class has no subclasses.

### Properties Specific to ClassUtility

| Properties      | Inherited From | Description   |
|-----------------|----------------|---|
| Abstract        | Class          | True if the Abstract check box is selected in the class specification, otherwise False.   |
| Cardinality     | Class          | The string in the Cardinality field of the class specification.   |
| Concurrency     | Class          | Returns Sequential, Guarded, Active, or Synchronous, depending on the value of the Concurrency radio control in the More dialog of the class specification. |
| Documentation   | Item           | Documentation for the item.   |
| ExportControl   | Class          | Returns Public or Implementation, depending on the value of the Export Control radio control in the class specification.                                    |
| FundamentalType | Class          | Returns TRUE if this class is a fundamental type.   |
| HasStateDiagram | Class          | Returns TRUE if the class has an associated state diagram, otherwise FALSE.   |
| IsNested        | Class          | Returns TRUE if the Class is nested, otherwise FALSE.   |
| Kind            | Class          | The kind of Class.  |
| Name            | Item           | Name of the item.   |
| Persistence     | Class          | This property is Persistent or Transient, depending on the value of the Persistence radio control in the More dialog of the class specification.            |
| QualifiedName   | Item           | Qualified name of the item.   |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>   |
|-------------------|-----------------------|--|
| Space             | Class                 | The string in the Space field of the More dialog of the class specification. |
| Stereotype        | Item                  | Stereotype of the item.  |
| UniqueID          | Item                  | The unique ID of the item.   |

**Relationships Specific to ClassUtility**

This class has no relationships.

## Decision

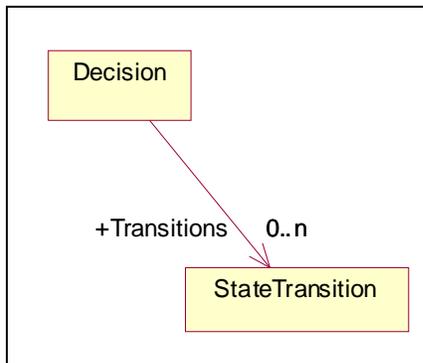
### Rose Domain

The Decision class is an abstract class that exposes decision functionality in the Rose extensibility interface.

**Class Hierarchy:** Item>Decision

#### SubClasses of Decision

This class has no subclasses.



#### Properties Specific to Decision

| Properties    | Inherited From | Description                 |
|---------------|----------------|-----------------------------|
| Documentation | Item           | Documentation for the item. |
| Name          | Item           | Name of the item.           |
| QualifiedName | Item           | Qualified name of the item. |
| Stereotype    | Item           | Stereotype of the item.     |
| UniqueID      | Item           | The unique ID of the item.  |

#### Relationships Specific to Decision

| Name        | Kind | Class           | Description                         |
|-------------|------|-----------------|-------------------------------------|
| Transitions | 0..n | StateTransition | State transition for this Decision. |

# DeploymentDiagram

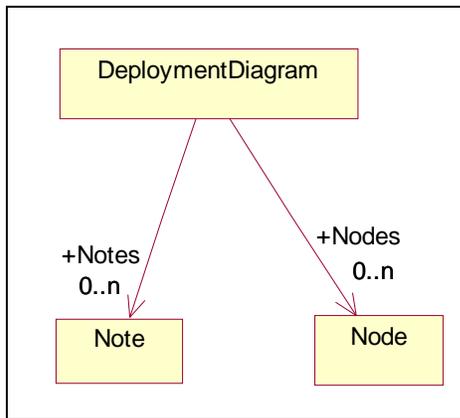
## Rose Domain

A deployment diagram shows the allocation of processes to processors in the physical design of a system. A deployment diagram may represent all or part of the process architecture of a system.

**Class Hierarchy:** Diagram>DeploymentDiagram

### SubClasses of DeploymentDiagram

This class has no subclasses.



### Properties Specific to DeploymentDiagram

| Properties    | Inherited From | Description   |
|---------------|----------------|---|
| Documentation | Diagram        | The documentation text associated with the Diagram.   |
| MappedPoints  | Diagram        | A list of coordinates of the items in the Diagram. Each item is specified by a set of x/y coordinates designating the location of the corners of the item. The ordering of the items is the same as in the MappedArtifacts artifact collection. |
| Name          | Diagram        | Name of the Diagram.  |
| QualifiedName | Diagram        | Qualified name of the Diagram.  |
| UniqueID      | Diagram        | The unique ID for the Diagram.  |

### Relationships Specific to DeploymentDiagram

| Name  | Kind | Class | Description                                      |
|-------|------|-------|--|
| Nodes | 0..n | Node  | Processors and devices contained in the diagram. |
| Notes | 0..n | Note  | Notes that appear in the diagram.                |

## Device

### Rose Domain

A device is a hardware component with no computing power. The Rose device class exposes properties and methods that allow you to define and manipulate the characteristics of devices.

**Class Hierarchy:** Item>Node>Device

#### SubClasses of Device

This class has no subclasses.

#### Properties Specific to Device

| Properties      | Inherited From | Description                                 |
|-----------------|----------------|---|
| Characteristics | Node           | Characteristics of the processor or device. |
| Documentation   | Item           | Documentation for the item.                 |
| Name            | Item           | Name of the item.                           |
| QualifiedName   | Item           | Qualified name of the item.                 |
| Stereotype      | Item           | Stereotype of the item.                     |
| UniqueID        | Item           | The unique ID of the item.                  |

#### Relationships Specific to Device

This class has no relationships.

## Diagram

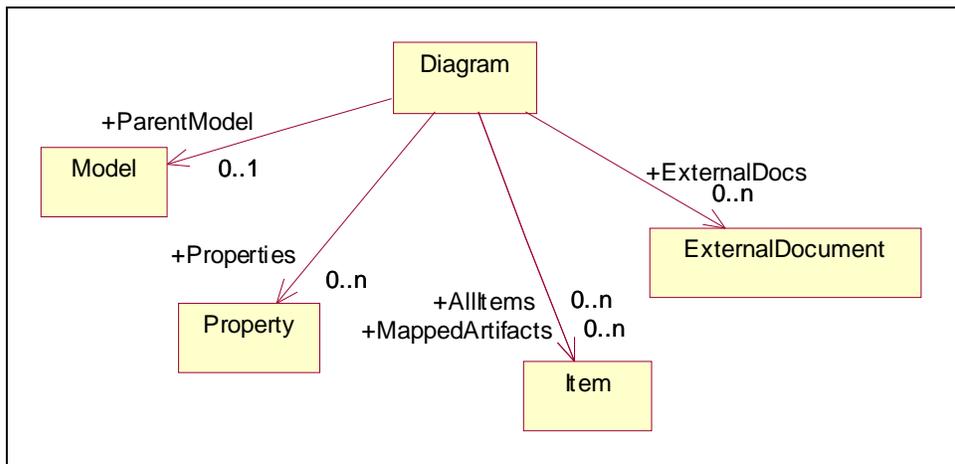
### Rose Domain

Exposes a set of properties and methods, which all other diagram classes (for example, class diagrams, and scenario diagrams) inherit. These properties and methods determine the size and placement of a diagram on the Rose user's computer screen.

**Class Hierarchy:** Diagram

#### SubClasses of Diagram

- ClassDiagram
- DeploymentDiagram
- ModuleDiagram
- Scenario
- StateDiagram
- UseCaseDiagram



#### Properties Specific to Diagram

| Properties    | Inherited From | Description   |
|---------------|----------------|---|
| Documentation |                | The documentation text associated with the Diagram.   |
| MappedPoints  |                | A list of coordinates of the items in the Diagram. Each item is specified by a set of x/y coordinates designating the location of the corners of the item. The ordering of the items is the same as in the MappedArtifacts artifact collection. |
| Name          |                | Name of the Diagram.  |
| QualifiedName |                | Qualified name of the Diagram.  |
| UniqueID      |                | The unique ID for the Diagram.  |

**Relationships Specific to Diagram**

| <b>Name</b>     | <b>Kind</b> | <b>Class</b>     | <b>Description</b>                                    |
|-----------------|-------------|------------------|---|
| AllItems        | 0..n        | Item             | All model objects placed on this Diagram.             |
| ExternalDocs    | 0..n        | ExternalDocument | External documents attached to this Diagram.          |
| MappedArtifacts | 0..n        | Item             | Items that are associated with this Diagram.          |
| ParentModel     | 0..1        | Model            | Model that this Diagram is contained in.              |
| Properties      | 0..n        | Property         | Property artifact types associated with this Diagram. |

## ExternalDocument

### Rose Domain

Exposes properties and methods that allow you to create external documents (reports) from within the Rose environment. For example, you can start Word for Windows and output information from a Rose model into a Word document.

**Class Hierarchy:** ExternalDocument

#### SubClasses of ExternalDocument

This class has no subclasses.

#### Properties Specific to ExternalDocument

| Properties | Inherited From | Description  |
|------------|----------------|--|
| CollIndex  |                | The index of the ExternalDocument within the collection of documents that contains it. It is used internally to identify the document. |
| ParentUID  |                | The unique id of the external document's parent class  |
| Value      |                | The actual path of the document.   |

#### Relationships Specific to ExternalDocument

This class has no relationships.

# HasRelationship

## Rose Domain

The Has Relationship indicates a containment or aggregation relationship between classes. The has relationship, available only with the Booch notation, denotes a whole and part relationship between two classes. This relationship is used to show how instances of the supplier, or aggregate, class are physically constructed from instances of the client class. The FromClass relationship returns the aggregate class. The ToClass relationship returns the client class, whose instances are part of aggregate class instances.

**Class Hierarchy:** Item>Relationship>HasRelationship

### SubClasses of HasRelationship

This class has no subclasses.

### Properties Specific to HasRelationship

| Properties        | Inherited From | Description   |
|-------------------|----------------|---|
| ClientCardinality | Relationship   | Indicates the number of possible links from an instance of the client class to an instance of the supplier class. Can be the same values as those listed in SupplierCardinality.  |
| Containment       |                | Specifies the physical containment of the relationship. Returns Value, Reference, or Unspecified, depending on the state of the Containment radio control on the relationship specification. Containment is also shown by adornments on relationships in diagrams.  |
| Documentation     | Item           | Documentation for the item.   |
| ExportControl     | Relationship   | Specifies the type of access allowed between classes. Returns Public, Protected, Private, or Implementation, depending on the state of the Access radio control on the relationship specification. Access is also shown by adornments on relationships in diagrams. |
| Kind              | Relationship   | Kind of the relationship, which will be one of: AggregateRole, AssociationRole, HasRelationship, InheritsRelationship, or UsesRelationship.   |

| <b>Properties</b>   | <b>Inherited From</b> | <b>Description</b>  |
|---------------------|-----------------------|---|
| Name                | Item                  | Name of the item.   |
| QualifiedName       | Item                  | Qualified name of the item.   |
| Static              |                       | Specifies whether the instance of the part class is owned by the class itself and not by its individual instances. Returns True, if the Static check box is checked on the relationship specification. Otherwise, returns False. Static relationships are also designated by special adornments on relationships in diagrams. |
| Stereotype          | Item                  | Stereotype of the item.   |
| SupplierCardinality | Relationship          | Indicates the number of possible links from an instance of the supplier class to an instance of the client class. Can be one the following values: n, 1, 0..n, 1..n, 0..1, <literal>, <literal>..n, or <literal>..<literal>.  |
| SupplierName        | Relationship          | Name of the supplier class or use case.   |
| UniqueID            | Item                  | The unique ID of the item.  |

### Relationships Specific to HasRelationship

This class has no relationships.

# InheritRelationship

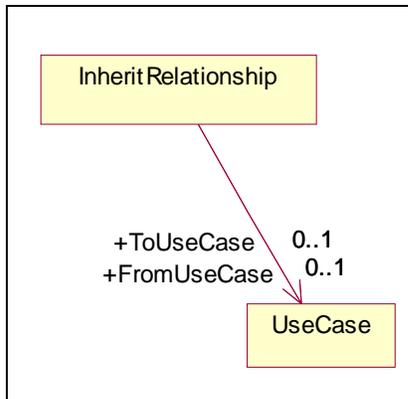
## Rose Domain

Indicates an inheritance relationship between classes.

**Class Hierarchy:** Item>Relationship>InheritRelationship

### SubClasses of InheritRelationship

This class has no subclasses.



### Properties Specific to InheritRelationship

| Properties         | Inherited From | Description   |
|--------------------|----------------|---|
| ClientCardinality  | Relationship   | Indicates the number of possible links from an instance of the client class to an instance of the supplier class. Can be the same values as those listed in SupplierCardinality.  |
| Documentation      | Item           | Documentation for the item.   |
| ExportControl      | Relationship   | Specifies the type of access allowed between classes. Returns Public, Protected, Private, or Implementation, depending on the state of the Access radio control on the relationship specification. Access is also shown by adornments on relationships in diagrams. |
| FriendshipRequired |                | Indicates whether the supplier class grants rights to the client class to access its nonpublic parts. Returns TRUE if the Friendship required check box is checked on the relationship specification. Otherwise, returns FALSE.                                     |

| <b>Properties</b>   | <b>Inherited From</b> | <b>Description</b>   |
|---------------------|-----------------------|--|
| Kind                | Relationship          | Kind of the relationship, which will be one of: AggregateRole, AssociationRole, HasRelationship, InheritsRelationship, or UsesRelationship.  |
| Name                | Item                  | Name of the item.  |
| QualifiedName       | Item                  | Qualified name of the item.  |
| Stereotype          | Item                  | Stereotype of the item.  |
| SupplierCardinality | Relationship          | Indicates the number of possible links from an instance of the supplier class to an instance of the client class. Can be one the following values: n, 1, 0..n, 1..n, 0..1, <literal>, <literal>..n, or <literal>..<literal>. |
| SupplierName        | Relationship          | Name of the supplier class or use case.  |
| UniqueID            | Item                  | The unique ID of the item.   |
| Virtual             |                       | Boolean value indicating whether the relation is virtual.  |

#### **Relationships Specific to InheritRelationship**

| <b>Name</b> | <b>Kind</b> | <b>Class</b> | <b>Description</b>   |
|-------------|-------------|--------------|--|
| FromUseCase | 0..1        | UseCase      | The supplier use case of the inherits relationship, if it is a use case. |
| ToUseCase   | 0..1        | UseCase      | The client use case of the inherits relationship, if it is a use case.   |

# InstantiatedClass

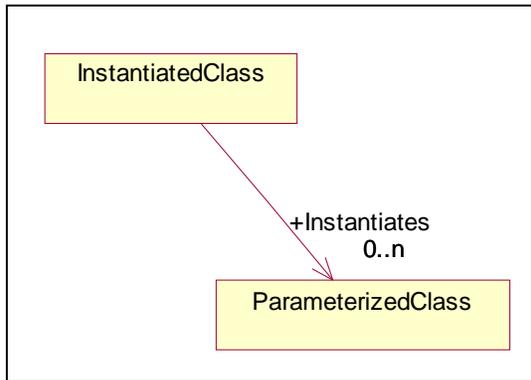
## Rose Domain

A class which instantiates a parameterized class. Instantiated classes are created by supplying the actual values for the formal parameters of the parameterized class. An instantiated class is concrete, meaning that its implementation is complete, and it may have object instances.

**Class Hierarchy:** Item>Class>InstantiatedClass

### SubClasses of InstantiatedClass

This class has no subclasses.



### Properties Specific to InstantiatedClass

| Properties      | Inherited From | Description   |
|-----------------|----------------|---|
| Abstract        | Class          | True if the Abstract check box is selected in the class specification, otherwise False.   |
| Cardinality     | Class          | The string in the Cardinality field of the class specification.   |
| Concurrency     | Class          | Returns Sequential, Guarded, Active, or Synchronous, depending on the value of the Concurrency radio control in the More dialog of the class specification. |
| Documentation   | Item           | Documentation for the item.   |
| ExportControl   | Class          | Returns Public or Implementation, depending on the value of the Export Control radio control in the class specification.                                    |
| FundamentalType | Class          | Returns TRUE if this class is a fundamental type.   |
| HasStateDiagram | Class          | Returns TRUE if the class has an associated state diagram, otherwise FALSE.   |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>   |
|-------------------|-----------------------|--|
| IsNested          | Class                 | Returns TRUE if the Class is nested, otherwise FALSE.  |
| Kind              | Class                 | The kind of Class.   |
| Name              | Item                  | Name of the item.  |
| Persistence       | Class                 | This property is Persistent or Transient, depending on the value of the Persistence radio control in the More dialog of the class specification. |
| QualifiedName     | Item                  | Qualified name of the item.  |
| Space             | Class                 | The string in the Space field of the More dialog of the class specification.   |
| Stereotype        | Item                  | Stereotype of the item.  |
| UniqueID          | Item                  | The unique ID of the item.   |

#### Relationships Specific to InstantiatedClass

| <b>Name</b>  | <b>Kind</b> | <b>Class</b>       | <b>Description</b>   |
|--------------|-------------|--------------------|--|
| Instantiates | 0..n        | ParameterizedClass | The parameterized class that this instantiated class instantiates. |

# InstantiatedClassUtility

## Rose Domain

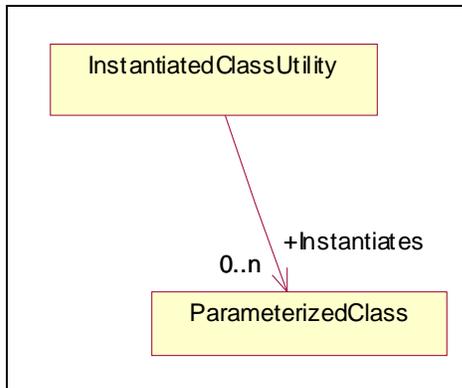
A class utility which instantiates a parameterized class utility. Instantiated class utilities are created by supplying the actual values for the formal parameters of the parameterized class utility.

An instantiated class utility is displayed as a 3-part box, with the class name in the top part, a list of attributes (with optional types and values) in the middle part, and a list of operations (with optional argument lists and return types) in the bottom part.

**Class Hierarchy:** Item>Class>InstantiatedClassUtility

### SubClasses of InstantiatedClassUtility

This class has no subclasses.



### Properties Specific to InstantiatedClassUtility

| Properties      | Inherited From | Description   |
|-----------------|----------------|---|
| Abstract        | Class          | True if the Abstract check box is selected in the class specification, otherwise False.   |
| Cardinality     | Class          | The string in the Cardinality field of the class specification.   |
| Concurrency     | Class          | Returns Sequential, Guarded, Active, or Synchronous, depending on the value of the Concurrency radio control in the More dialog of the class specification. |
| Documentation   | Item           | Documentation for the item.   |
| ExportControl   | Class          | Returns Public or Implementation, depending on the value of the Export Control radio control in the class specification.                                    |
| FundamentalType | Class          | Returns TRUE if this class is a fundamental type.   |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>   |
|-------------------|-----------------------|--|
| HasStateDiagram   | Class                 | Returns TRUE if the class has an associated state diagram, otherwise FALSE.  |
| IsNested          | Class                 | Returns TRUE if the Class is nested, otherwise FALSE.  |
| Kind              | Class                 | The kind of Class.   |
| Name              | Item                  | Name of the item.  |
| Persistence       | Class                 | This property is Persistent or Transient, depending on the value of the Persistence radio control in the More dialog of the class specification. |
| QualifiedName     | Item                  | Qualified name of the item.  |
| Space             | Class                 | The string in the Space field of the More dialog of the class specification.   |
| Stereotype        | Item                  | Stereotype of the item.  |
| UniqueID          | Item                  | The unique ID of the item.   |

#### Relationships Specific to InstantiatedClassUtility

| <b>Name</b>  | <b>Kind</b> | <b>Class</b>       | <b>Description</b>   |
|--------------|-------------|--------------------|--|
| Instantiates | 0..n        | ParameterizedClass | The parameterized class utility that this instantiated class utility instantiates. |

# Item

## Rose Domain

Item maps to Roseltem objects. Every Roseltem is a model element and therefore inherits all Element properties and methods. Item specifies the type of model element that the stereotype settings apply to. Valid items include:

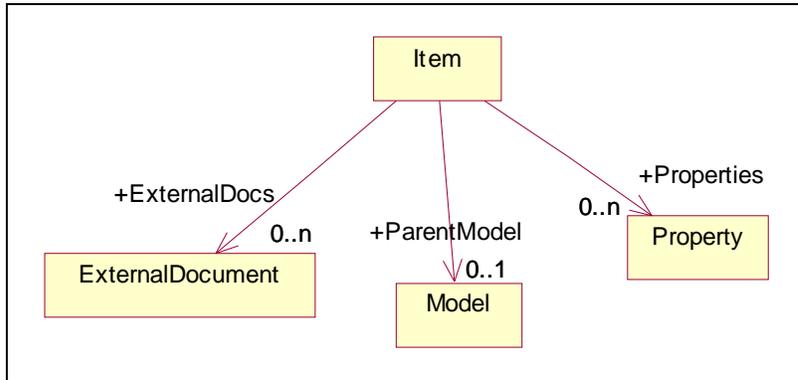
- Class
- Component
- Package (includes logical package, use case package, and component package)
- Logical Package
- Component Package
- Use Case Package
- Processor
- Device
- Use Case
- Association
- Generalization
- Dependency
- Connection
- Class Attribute
- Operation

The default setting is Class.

**Class Hierarchy:** Item

### SubClasses of Item

- Action
- Activity
- Association
- Attribute
- Class
- Decision
- Link
- Message
- Model
- Module
- ModuleVisibilityRelationship
- Node
- ObjectInstance
- Operation
- Package
- Parameter
- Process
- Relationship
- State
- StateTransition
- Subsystem
- SyncItem
- UseCase



### Properties Specific to Item

| Properties    | Inherited From | Description                 |
|---------------|----------------|-----------------------------|
| Documentation |                | Documentation for the item. |
| Name          |                | Name of the item.           |
| QualifiedName |                | Qualified name of the item. |
| Stereotype    |                | Stereotype of the item.     |
| UniqueID      |                | The unique ID of the item.  |

### Relationships Specific to Item

| Name         | Kind | Class            | Description  |
|--------------|------|------------------|--|
| ExternalDocs | 0..n | ExternalDocument | ExternalDocuments associated with this Item.           |
| ParentModel  | 0..1 | Model            | Parent Model associated with this Item.                |
| Properties   | 0..n | Property         | The Property artifact types associated with this Item. |

# Link

## Rose Domain

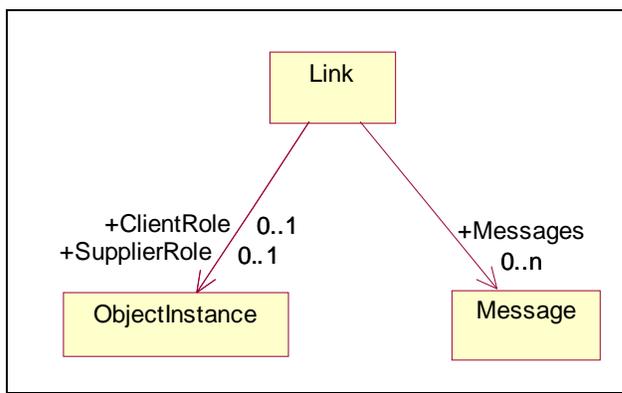
Objects interact through their links to other objects. A Link is an instance of an association, in the same way that an object is an instance of a class.

Rose Link properties and methods allow you to define links between objects and determine the nature of the objects' associations.

**Class Hierarchy:** Item>Link

### SubClasses of Link

This class has no subclasses.



### Properties Specific to Link

| Properties         | Inherited From | Description  |
|--------------------|----------------|--|
| ClientIsShared     |                | True if the Shared box is checked on the client side; otherwise False.   |
| ClientVisibility   |                | One of Unspecified, Field, Parameters, Local, or Global.                 |
| Documentation      | Item           | Documentation for the item.  |
| IsLinkToSelf       |                | True if the link goes from an object to itself.                          |
| Name               | Item           | Name of the item.  |
| QualifiedName      | Item           | Qualified name of the item.  |
| Stereotype         | Item           | Stereotype of the item.  |
| SupplierIsShared   |                | True if the Shared box is checked on the supplier side; otherwise False. |
| SupplierVisibility |                | One of Unspecified, Field, Parameters, Local, or Global.                 |
| UniqueID           | Item           | The unique ID of the item.   |

### Relationships Specific to Link

| <b>Name</b>  | <b>Kind</b> | <b>Class</b>   | <b>Description</b>                               |
|--------------|-------------|----------------|--|
| ClientRole   | 0..1        | ObjectInstance | The client object instance (role) of the Link.   |
| Messages     | 0..n        | Message        | Messages associated with the Link.               |
| SupplierRole | 0..1        | ObjectInstance | The supplier object instance (role) of the Link. |

# Message

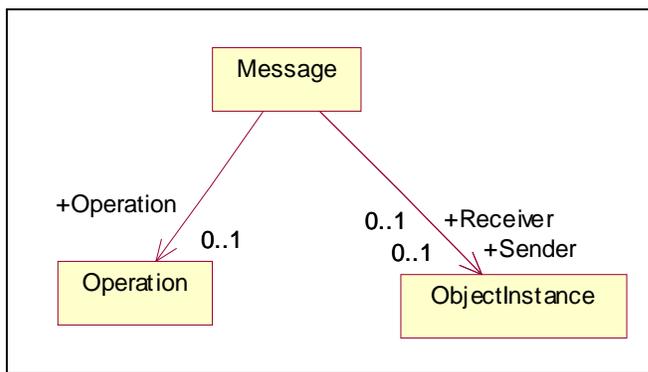
## Rose Domain

Any message associated with an object. Messages define the interaction between objects. The Rose message class inherits all of the Item (RoseItem) properties and methods. In addition message class methods allow you to retrieve message sender and receiver, along with other message-specific information.

**Class Hierarchy:** Item>Message

### SubClasses of Message

This class has no subclasses.



### Properties Specific to Message

| Properties             | Inherited From | Description  |
|------------------------|----------------|--|
| Documentation          | Item           | Documentation for the item.  |
| Frequency              |                | Frequency of the message.  |
| HierarchicalSeqNumber  |                | Hierarchical sequence number of the message.   |
| IsOperation            |                | Boolean value indicating whether the message is associated with an operation.  |
| Name                   | Item           | Name of the item.  |
| NameWithoutParentheses |                | Name of a message without the parameters enclosed in parentheses from Rose that are added when a message is associated with a class operation. |
| QualifiedName          | Item           | Qualified name of the item.  |
| SeqNumber              |                | Sequence number of the message.  |
| Stereotype             | Item           | Stereotype of the item.  |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>   |
|-------------------|-----------------------|--|
| Synchronization   |                       | Concurrency semantics for the operation named in the Operations Field; one of Simple, Synchronous, Balking, Timeout or Asynchronous. |
| UniqueID          | Item                  | The unique ID of the item.   |

#### Relationships Specific to Message

| <b>Name</b> | <b>Kind</b> | <b>Class</b>   | <b>Description</b>                          |
|-------------|-------------|----------------|---|
| Operation   | 0..1        | Operation      | The associated Operation with this Message. |
| Receiver    | 0..1        | ObjectInstance | Object that receives the Message.           |
| Sender      | 0..1        | ObjectInstance | Object that sends the Message.              |

# MetaClass

## Rose Domain

A metaclass is a class whose instances are classes rather than objects. Metaclasses provide operations for initializing class variables and serve as repositories to hold class variables where a single value is required by all objects of a class. Smalltalk and CLOS support the use of metaclasses. C++ does not directly support metaclasses.

A metaclass is displayed as a 3-part box, with the class name in the top part, a list of attributes (with optional types and values) in the middle part, and a list of operations (with optional argument lists and return types) in the bottom part.

Not all languages directly support metaclasses.

**Class Hierarchy:** Item>Class>MetaClass

### SubClasses of MetaClass

This class has no subclasses.

### Properties Specific to MetaClass

| Properties      | Inherited From | Description   |
|-----------------|----------------|---|
| Abstract        | Class          | True if the Abstract check box is selected in the class specification, otherwise False.   |
| Cardinality     | Class          | The string in the Cardinality field of the class specification.   |
| Concurrency     | Class          | Returns Sequential, Guarded, Active, or Synchronous, depending on the value of the Concurrency radio control in the More dialog of the class specification. |
| Documentation   | Item           | Documentation for the item.   |
| ExportControl   | Class          | Returns Public or Implementation, depending on the value of the Export Control radio control in the class specification.                                    |
| FundamentalType | Class          | Returns TRUE if this class is a fundamental type.   |
| HasStateDiagram | Class          | Returns TRUE if the class has an associated state diagram, otherwise FALSE.   |
| IsNested        | Class          | Returns TRUE if the Class is nested, otherwise FALSE.   |
| Kind            | Class          | The kind of Class.  |
| Name            | Item           | Name of the item.   |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>   |
|-------------------|-----------------------|--|
| Persistence       | Class                 | This property is Persistent or Transient, depending on the value of the Persistence radio control in the More dialog of the class specification. |
| QualifiedName     | Item                  | Qualified name of the item.  |
| Space             | Class                 | The string in the Space field of the More dialog of the class specification.   |
| Stereotype        | Item                  | Stereotype of the item.  |
| UniqueID          | Item                  | The unique ID of the item.   |

#### **Relationships Specific to MetaClass**

This class has no relationships.

# Model

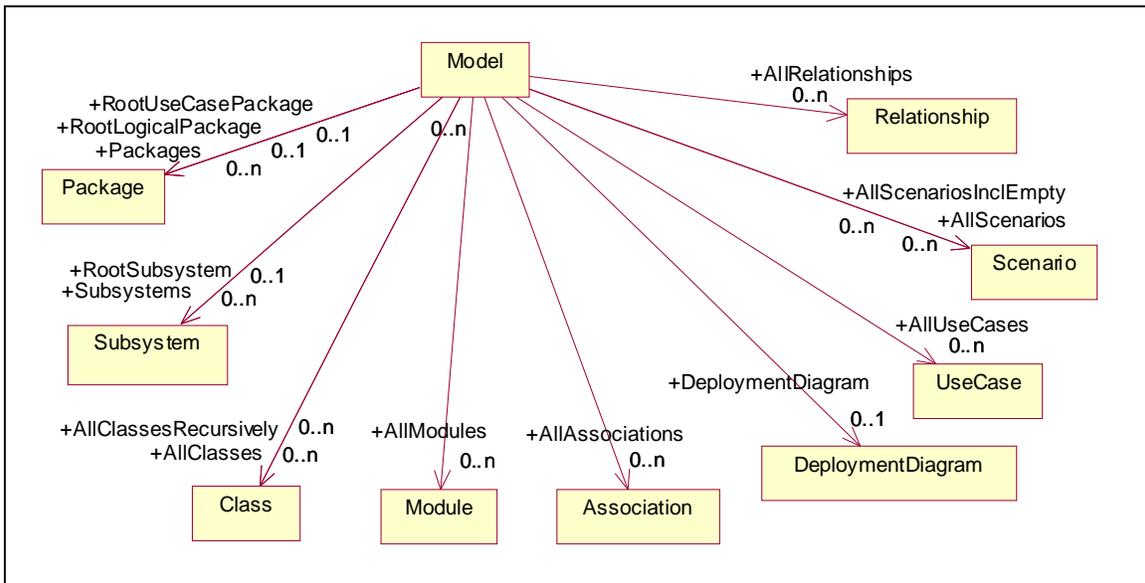
## Rose Domain

A Rose model file. A model file contains a Rose model, which describes your problem domain and system software. Model files use the default extension .mdl. Models are the highest hierarchical elements of the Rose source domain. Most templates start with connections to a Model.

**Class Hierarchy:** Item>Model

### SubClasses of Model

This class has no subclasses.



### Properties Specific to Model

| Properties    | Inherited From | Description   |
|---------------|----------------|---|
| Documentation | Item           | Documentation for the item.   |
| DriveLetter   |                | Drive letter in the path of the Model.  |
| Extension     |                | The segment of a SimpleName following the last period. For example, the Extension of c:\bill\file.txt is txt. If the SimpleName contains no period, then Extension returns a null string. |
| FullName      |                | The full name, including the path, of the Model.  |
| Name          | Item           | Name of the item.   |

| <b>Properties</b>   | <b>Inherited From</b> | <b>Description</b>  |
|---------------------|-----------------------|---|
| NameMinusExtension  |                       | Segment of a SimpleName preceding the last period. For example, the NameMinusExtension of c:\bill\file.txt is file. If the SimpleName contains no period, then NameMinusExtension returns the SimpleName. |
| NamePrefix          |                       | The simple name of the model file with the .<extension> removed (such as rose for rose.mdl).  |
| ParentDirectoryPath |                       | Directory containing the object.  |
| Path                |                       | The complete pathname of an object. For example, c:\bill\file.txt   |
| QualifiedName       | Item                  | Qualified name of the item.   |
| SimpleName          |                       | The simple name of the Model. The context-independent portion of an object's name. For example, the SimpleName of c:\bill\file.txt is file.txt.   |
| Stereotype          | Item                  | Stereotype of the item.   |
| UniqueID            | Item                  | The unique ID of the item.  |

### Relationships Specific to Model

| <b>Name</b>           | <b>Kind</b> | <b>Class</b>      | <b>Description</b>   |
|-----------------------|-------------|-------------------|--|
| AllAssociations       | 0..n        | Association       | All associations in the Model.   |
| AllClasses            | 0..n        | Class             | All classes in the Model, including actors.  |
| AllClassesRecursively | 0..n        | Class             | All classes in the model, including their nested classes recursively. Note that AllClasses does not return nested classes. |
| AllModules            | 0..n        | Module            | All modules in the Model (including subsystems).   |
| AllRelationships      | 0..n        | Relationship      | All relationships in the Model.  |
| AllScenarios          | 0..n        | Scenario          | All scenario diagrams in the Model that are not empty.   |
| AllScenariosInclEmpty | 0..n        | Scenario          | All scenario diagrams in the Model, with and without content.  |
| AllUseCases           | 0..n        | UseCase           | All use cases in the Model.  |
| DeploymentDiagram     | 0..1        | DeploymentDiagram | The deployment diagram (process diagram) for the Model.  |

| <b>Name</b>        | <b>Kind</b> | <b>Class</b> | <b>Description</b>   |
|--------------------|-------------|--------------|--|
| Packages           | 0..n        | Package      | All packages in the Model, including use case packages (but not including subsystems in the Component View).         |
| RootLogicalPackage | 0..1        | Package      | The highest-level package in the Model; its name is Logical View. All other packages are nested beneath it.          |
| RootSubsystem      | 0..1        | Subsystem    | The highest-level subsystem in the Model; its name is Component View. All other subsystems are nested beneath it.    |
| RootUseCasePackage | 0..1        | Package      | The root use case package in the Model; its name is UseCase View. All other use-case packages are nested beneath it. |
| Subsystems         | 0..n        | Subsystem    | All subsystem components in the Model.   |

# Module

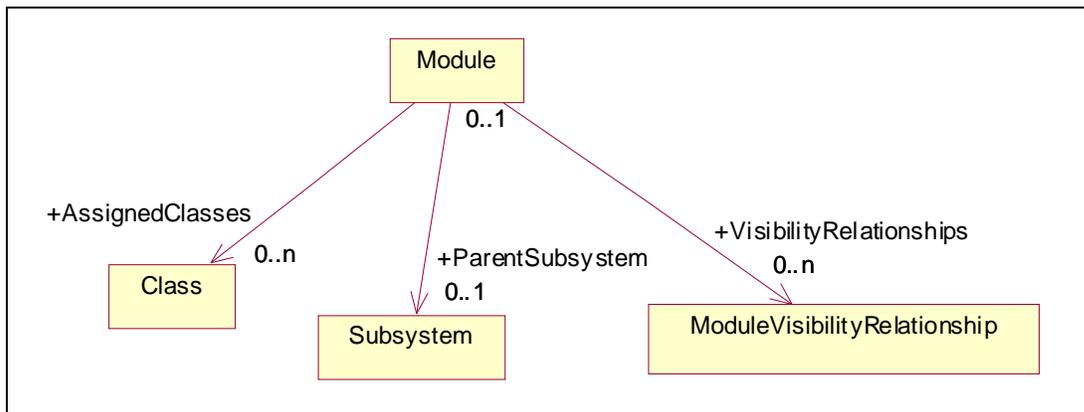
## Rose Domain

A module is a unit of code that serves as a building block for the physical structure of a system. The module class exposes properties and methods that allow you to define and manipulate the characteristics of modules.

**Class Hierarchy:** Item>Module

### SubClasses of Module

This class has no subclasses.



### Properties Specific to Module

| Properties       | Inherited From | Description   |
|------------------|----------------|---|
| AssignedLanguage |                | Specifies the programming language assigned to the Module.                            |
| Declarations     |                | Text of the declarations belonging to the Module.                                     |
| Documentation    | Item           | Documentation for the item.   |
| Name             | Item           | Name of the item.   |
| Part             |                | Defines the Module as a part of a subsystem: a Specification, Body, Generic, or Main. |
| Path             |                | The path of the Module.   |
| QualifiedName    | Item           | Qualified name of the item.   |
| Stereotype       | Item           | Stereotype of the item.   |
| Type             |                | The type of Module.   |
| UniqueID         | Item           | The unique ID of the item.  |

**Relationships Specific to Module**

| <b>Name</b>             | <b>Kind</b> | <b>Class</b>                     | <b>Description</b>                                   |
|-------------------------|-------------|----------------------------------|--|
| AssignedClasses         | 0..n        | Class                            | Associated classes to this Module.                   |
| ParentSubsystem         | 0..1        | Subsystem                        | Parent subsystem of this Module.                     |
| VisibilityRelationships | 0..n        | ModuleVisibilityRelation<br>ship | The module visibility relationships for this Module. |

# ModuleDiagram

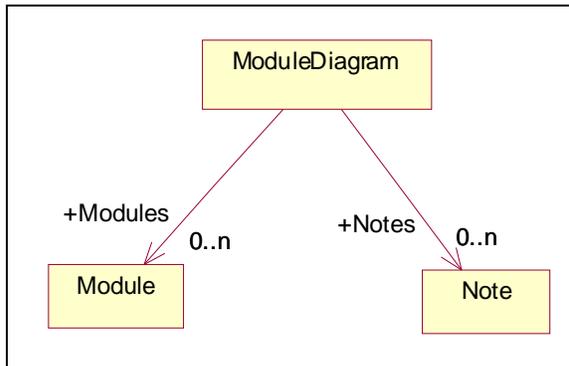
## Rose Domain

A module diagram maps the allocation classes and objects to modules. The module diagram class exposes properties and methods that allow you to add, retrieve, and delete classes and objects in a module diagram.

**Class Hierarchy:** Diagram>ModuleDiagram

### SubClasses of ModuleDiagram

This class has no subclasses.



### Properties Specific to ModuleDiagram

| Properties    | Inherited From | Description   |
|---------------|----------------|---|
| Documentation | Diagram        | The documentation text associated with the Diagram.   |
| MappedPoints  | Diagram        | A list of coordinates of the items in the Diagram. Each item is specified by a set of x/y coordinates designating the location of the corners of the item. The ordering of the items is the same as in the MappedArtifacts artifact collection. |
| Name          | Diagram        | Name of the Diagram.  |
| QualifiedName | Diagram        | Qualified name of the Diagram.  |
| UniqueID      | Diagram        | The unique ID for the Diagram.  |

### Relationships Specific to ModuleDiagram

| Name    | Kind | Class  | Description                              |
|---------|------|--------|--|
| Modules | 0..n | Module | Modules in the module diagram.           |
| Notes   | 0..n | Note   | Notes that appear in the module diagram. |

# ModuleVisibilityRelationship

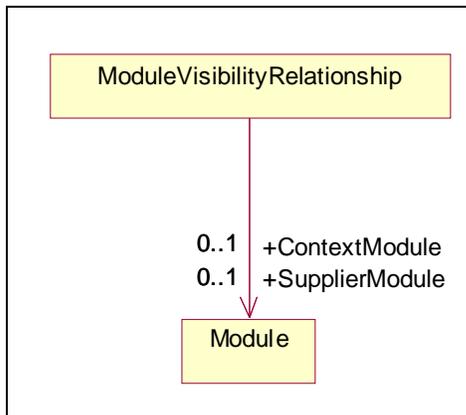
## Rose Domain

The ModuleVisibilityRelationship class describes the context and supplier relationship between modules.

**Class Hierarchy:** Item>ModuleVisibilityRelationship

### SubClasses of ModuleVisibilityRelationship

This class has no subclasses.



### Properties Specific to ModuleVisibilityRelationship

| Properties    | Inherited From | Description                 |
|---------------|----------------|-----------------------------|
| Documentation | Item           | Documentation for the item. |
| Name          | Item           | Name of the item.           |
| QualifiedName | Item           | Qualified name of the item. |
| Stereotype    | Item           | Stereotype of the item.     |
| UniqueID      | Item           | The unique ID of the item.  |

### Relationships Specific to ModuleVisibilityRelationship

| Name           | Kind | Class  | Description          |
|----------------|------|--------|----------------------|
| ContextModule  | 0..1 | Module | The consumer module. |
| SupplierModule | 0..1 | Module | The supplier module. |

# Node

## Rose Domain

Node is an abstract class for processors and devices.

**Class Hierarchy:** Item>Node

### SubClasses of Node

Device  
Processor

### Properties Specific to Node

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>                          |
|-------------------|-----------------------|---|
| Characteristics   |                       | Characteristics of the processor or device. |
| Documentation     | Item                  | Documentation for the item.                 |
| Name              | Item                  | Name of the item.                           |
| QualifiedName     | Item                  | Qualified name of the item.                 |
| Stereotype        | Item                  | Stereotype of the item.                     |
| UniqueID          | Item                  | The unique ID of the item.                  |

### Relationships Specific to Node

This class has no relationships.

## Note

### Rose Domain

A note captures the assumptions and decisions applied during analysis and design. Notes may contain any information, including plain text, fragments of code, or references to other documents. Notes are also used as a means of linking diagrams. A note holds an unlimited amount of text and can be sized accordingly.

**Class Hierarchy:** Note

#### SubClasses of Note

This class has no subclasses.

#### Properties Specific to Note

| Properties | Inherited From | Description   |
|------------|----------------|---|
| CollIndex  |                | The ordinal position of the note in the collection from which it comes. |
| Text       |                | Text of the Note.   |
| Type       |                | The type of Note.   |

#### Relationships Specific to Note

This class has no relationships.

# ObjectFlow

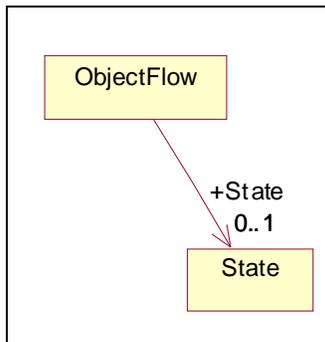
## Rose Domain

The ObjectFlow class is an abstract class that exposes Rose's object flow functionality in the extensibility interface. An object flow on an activity diagram represents the relationship between an activity and the object that creates it (as an output) or uses it (as an input).

**Class Hierarchy:** Item>Relationship>ObjectFlow

### SubClasses of ObjectFlow

This class has no subclasses.



### Properties Specific to ObjectFlow

| Properties        | Inherited From | Description   |
|-------------------|----------------|---|
| ClientCardinality | Relationship   | Indicates the number of possible links from an instance of the client class to an instance of the supplier class. Can be the same values as those listed in SupplierCardinality.  |
| Documentation     | Item           | Documentation for the item.   |
| ExportControl     | Relationship   | Specifies the type of access allowed between classes. Returns Public, Protected, Private, or Implementation, depending on the state of the Access radio control on the relationship specification. Access is also shown by adornments on relationships in diagrams. |
| Kind              | Relationship   | Kind of the relationship, which will be one of: AggregateRole, AssociationRole, HasRelationship, InheritsRelationship, or UsesRelationship.   |
| Name              | Item           | Name of the item.   |

| <b>Properties</b>   | <b>Inherited From</b> | <b>Description</b>   |
|---------------------|-----------------------|--|
| QualifiedName       | Item                  | Qualified name of the item.  |
| Stereotype          | Item                  | Stereotype of the item.  |
| SupplierCardinality | Relationship          | Indicates the number of possible links from an instance of the supplier class to an instance of the client class. Can be one the following values: n, 1, 0..n, 1..n, 0..1, <literal>, <literal>..n, or <literal>..<literal>. |
| SupplierName        | Relationship          | Name of the supplier class or use case.  |
| UniqueID            | Item                  | The unique ID of the item.   |

#### Relationships Specific to ObjectFlow

| <b>Name</b> | <b>Kind</b> | <b>Class</b> | <b>Description</b>                  |
|-------------|-------------|--------------|-------------------------------------|
| State       | 0..1        | State        | Associated State of the ObjectFlow. |

# ObjectInstance

## Rose Domain

The ObjectInstance class exposes a set of properties and methods that:

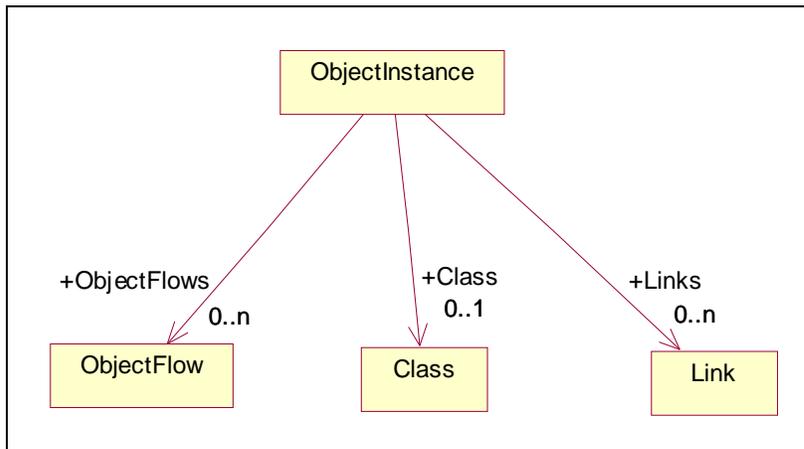
Determine the characteristics of objects in a model (for example, the class associated with the object and whether multiple instances of the object exist)

Allow you to retrieve objects from a model

**Class Hierarchy:** Item>ObjectInstance

### SubClasses of ObjectInstance

This class has no subclasses.



### Properties Specific to ObjectInstance

| Properties        | Inherited From | Description   |
|-------------------|----------------|---|
| Documentation     | Item           | Documentation for the item.   |
| IsClass           |                | True if the ObjectInstance is a class.  |
| MultipleInstances |                | True if the Multiple Instances box is checked; otherwise False.   |
| MyClassName       |                | The ObjectInstance class name.  |
| Name              | Item           | Name of the item.   |
| Persistence       |                | Persistent, Static, or Transient depending on the value of the Persistence radio control in the object specification. |
| QualifiedName     | Item           | Qualified name of the item.   |
| Stereotype        | Item           | Stereotype of the item.   |
| UniqueID          | Item           | The unique ID of the item.  |

### Relationships Specific to ObjectInstance

| <b>Name</b> | <b>Kind</b> | <b>Class</b> | <b>Description</b>                                   |
|-------------|-------------|--------------|--|
| Class       | 0..1        | Class        | The class of the object.                             |
| Links       | 0..n        | Link         | The links associated with the object.                |
| ObjectFlows | 0..n        | ObjectFlow   | The associated ObjectFlows with this ObjectInstance. |

# Operation

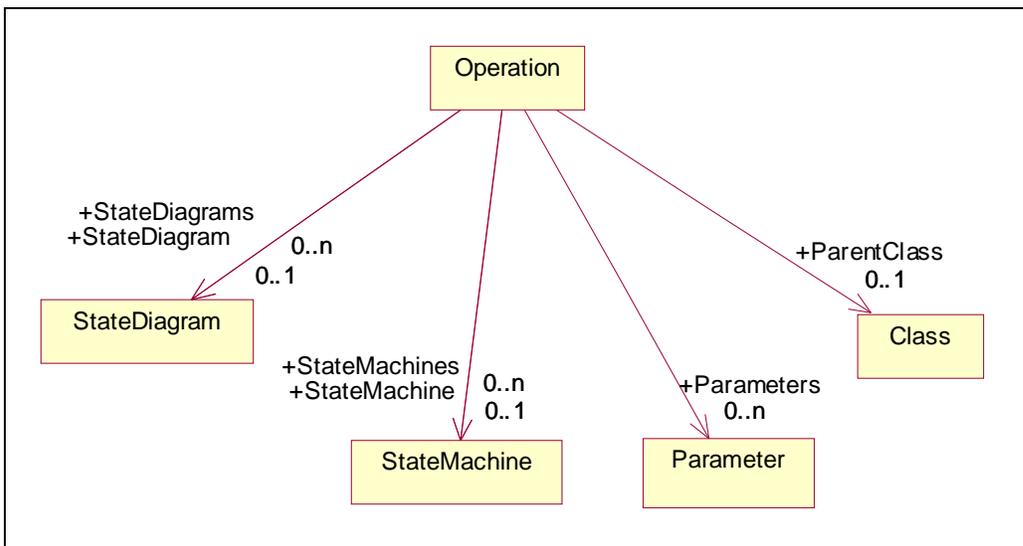
## Rose Domain

Operations denote services provided by the class. Operations can be methods for accessing and modifying class fields or methods that implement characteristic behaviors of a class. The operations of a class are listed in the Operations list box in the class specification. Rational Rose stores operation information in an operation specification. You can access operation specifications only through the class specification.

**Class Hierarchy:** Item>Operation

### SubClasses of Operation

This class has no subclasses.



### Properties Specific to Operation

| Properties | Inherited From | Description  |
|------------|----------------|--|
| AdalImage  |                | An Ada code segment that represents the declaration of the operation. This image is derived from the operation name and the operation parameters. Although the AdalImage is semantically consistent with your actual code, it may differ in terms of format, depending on the rules and styles you use for code generation and/or reverse engineering. |
| COMImage   |                | A COM code segment that represents the declaration of the operation.   |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>   |
|-------------------|-----------------------|--|
| Concurrency       |                       | Denotes the semantics of the operation in the presence of multiple threads of control. Returns Sequential, Guarded, or Synchronous, depending on the state of the Concurrency radio control in the More dialog of the operation specification.   |
| CplusplusImage    |                       | A C++ code segment that represents the prototype of the operation. This image is derived from the operation name and the operation parameters. Although the CplusplusImage is semantically consistent with your actual code, it may differ in terms of format, depending on the rules and styles you use for code generation and/or reverse engineering. |
| Documentation     | Item                  | Documentation for the item.  |
| Exceptions        |                       | Textual list of the exceptions that can be raised by the operation. The Exceptions text field appears in the More dialog of the operation specification.   |
| ExportControl     |                       | Specifies the type of access allowed by the class for this operation. Will return Public, Protected, Private, or Implementation, depending on the state of the Export Control radio control in the operation specification.  |
| HasStateDiagram   |                       | True if the operation has an associated StateDiagram   |
| JavaImage         |                       | A Java code segment that represents the declaration of the operation.  |
| Name              | Item                  | Name of the item.  |
| Postconditions    |                       | Text describing the post-conditions of the operation. The PostText is that text which appears in the Dynamic Semantics field of the operation specification when the Post radio button is selected.  |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>  |
|-------------------|-----------------------|---|
| Preconditions     |                       | Text describing the preconditions of the operation. The PreText is that text which appears in the Dynamic Semantics field of the operation specification when the Pre radio button is selected.   |
| Protocol          |                       | The Protocol field lists a set of operations that a client may perform on an object and the legal orderings in which they may be invoked. The protocol of an operation has no semantic impact. The Protocol text field appears in the More dialog of the operation specification. |
| Qualification     |                       | Identifies language-specific features that allow you to qualify the method. The Qualification text field appears in the More dialog of the operation specification.   |
| QualifiedName     | Item                  | Qualified name of the item.   |
| ReturnType        |                       | For operations that are functions, refers to the class that is returned by the function. The ReturnClass text field appears in the Return Class field on the operation specification.   |
| Semantics         |                       | Text describing the action of the main operation. The SemanticsText is that text which appears in the Dynamic Semantics field of the operation specification when the Semantics radio button is selected.   |
| Size              |                       | Text describing the size of the class.  |
| Stereotype        | Item                  | Stereotype of the item.   |
| Time              |                       | A statement about the relative or absolute time required to complete an operation. The Time text field appears in the More dialog of the operation specification.   |
| UMLImage          |                       | The image of the operation and parameters using UML standard notation.  |
| UniqueID          | Item                  | The unique ID of the item.  |

**Relationships Specific to Operation**

| <b>Name</b>   | <b>Kind</b> | <b>Class</b> | <b>Description</b>   |
|---------------|-------------|--------------|--|
| Parameters    | 0..n        | Parameter    | The formal parameters of the Operation. These appear in the Arguments list box in the operation specification. |
| ParentClass   | 0..1        | Class        | Class to which this Operation belongs.   |
| StateDiagram  | 0..1        | StateDiagram | The top-level state diagram associated with this Operation.  |
| StateDiagrams | 0..n        | StateDiagram | All state diagrams associated with this Operation.   |
| StateMachine  | 0..1        | StateMachine | The top-level state machine associated with this Operation.  |
| StateMachines | 0..n        | StateMachine | All state machines associated with this Operation.   |

# Package

## Rose Domain

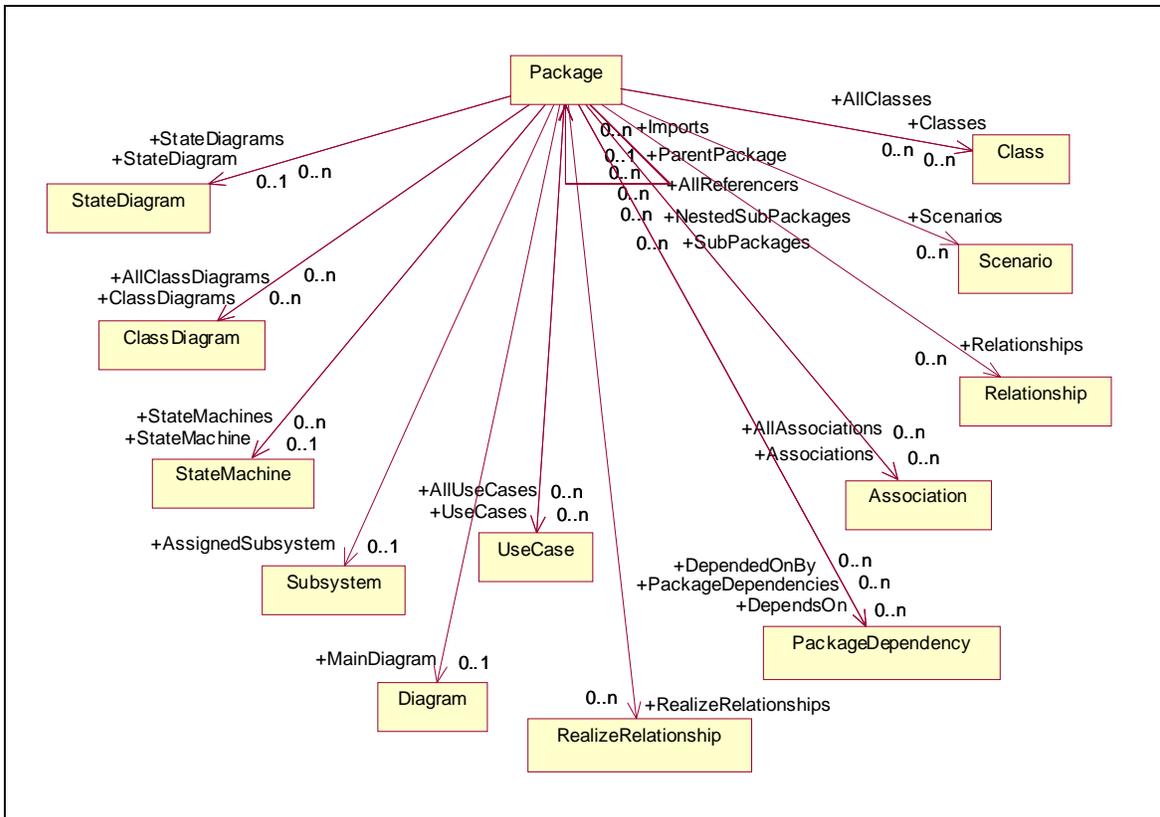
Packages serve to partition the logical model of a system. They are clusters of highly related classes that are themselves cohesive, but are loosely coupled relative to other such clusters. You can use packages to group classes and other packages. Rational Rose stores data describing the package in a package specification.

Note: When you create an OPEN command directly to a package, be sure to specify the name of the .mdl file and the name of the package, even if the package is contained in a separate .cat file.

**Class Hierarchy:** Item>Package

### SubClasses of Package

This class has no subclasses.



### Properties Specific to Package

| Properties    | Inherited From | Description                                     |
|---------------|----------------|---|
| Documentation | Item           | Documentation for the item.                     |
| Global        |                | True if the Package is global, otherwise False. |

| <b>Properties</b>    | <b>Inherited From</b> | <b>Description</b>  |
|----------------------|-----------------------|---|
| HasAssignedSubsystem |                       | True if the Package has a subsystem associated with it, otherwise False.          |
| HasStateDiagram      |                       | True if the Package has a state/activity diagram.                                 |
| IsUseCasePackage     |                       | True if the Package is a descendent of the UseCase View package, otherwise False. |
| Name                 | Item                  | Name of the item.   |
| QualifiedName        | Item                  | Qualified name of the item.   |
| Stereotype           | Item                  | Stereotype of the item.   |
| UniqueID             | Item                  | The unique ID of the item.  |

### Relationships Specific to Package

| <b>Name</b>       | <b>Kind</b> | <b>Class</b>      | <b>Description</b>  |
|-------------------|-------------|-------------------|---|
| AllAssociations   | 0..n        | Association       | All associations that are defined in this Package, or in any nested packages.   |
| AllClassDiagrams  | 0..n        | ClassDiagram      | All class diagrams that are defined in this Package, or in any nested packages.   |
| AllClasses        | 0..n        | Class             | All classes that are defined in this Package, or in any nested packages.  |
| AllReferencers    |             | Package           | All packages that import this Package. Does not include indirect referencers.   |
| AllUseCases       | 0..n        | UseCase           | All use cases that are defined in this Package, or in any nested packages.  |
| AssignedSubsystem | 0..1        | Subsystem         | The subsystem associated with this Package, as specified in the package specification.  |
| Associations      | 0..n        | Association       | All associations that are immediate members of this Package.  |
| ClassDiagrams     | 0..n        | ClassDiagram      | All class diagrams that are immediate members of this Package.  |
| Classes           | 0..n        | Class             | All classes that are immediate members of this Package. All member classes are returned, regardless of whether they appear on any diagrams. |
| DependedOnBy      | 0..n        | PackageDependency | Associates this Package as the supplier package in a package dependency   |

| <b>Name</b>          | <b>Kind</b> | <b>Class</b>        | <b>Description</b>  |
|----------------------|-------------|---------------------|---|
| Dependencies         | 0..n        | Relationship        | The relationships of type DependencyRelation.   |
| DependsOn            | 0..n        | PackageDependency   | Associates this Package as the receiver package in a package dependency   |
| Imports              |             | Package             | All packages that are imported by this Package. Does not include indirect dependencies. For example if A imports B and B imports C, A does not directly import C. |
| MainDiagram          | 0..1        | Diagram             | The first class or use case diagram called "Main," or the first class or use case diagram, in that order. An empty diagram will not be included.                  |
| NestedSubPackages    |             | Package             | All packages that are descendents of this Package.  |
| PackageDependencies  | 0..n        | PackageDependency   | The relationships of type PackageDependency.  |
| PackageRelationships | 0..n        | Relationship        | The relationships of types Relationships, CategoryDependency, RealizeRelation, and DependencyRelation.  |
| ParentPackage        |             | Package             | The enclosing Package. This relationship will result in an error if applied to the TopLevelCategory.  |
| RealizeRelationships | 0..n        | RealizeRelationship | The relationships of type RealizeRelationship.  |
| Relationships        | 0..n        | Relationship        | All the relationships defined within this Package.  |
| Scenarios            | 0..n        | Scenario            | The scenario diagrams in the package.   |
| StateDiagram         | 0..1        | StateDiagram        | The top-level state/activity diagram associated with this Package.  |
| StateDiagrams        | 0..n        | StateDiagram        | All state diagrams associated with this Package.  |
| StateMachine         | 0..1        | StateMachine        | The top-level state machine associated with this Package.   |
| StateMachines        | 0..n        | StateMachine        | All state machines associated with this Package.  |
| SubPackages          |             | Package             | All packages that are immediate children of this Package.   |
| UseCases             | 0..n        | UseCase             | All use cases that are immediate members of this Package.   |

# PackageDependency

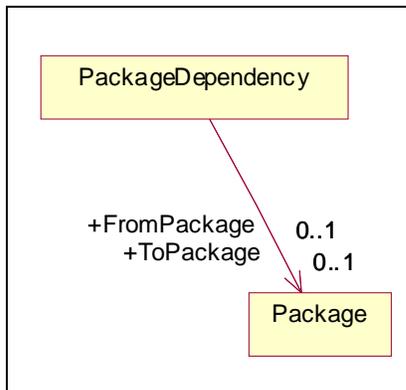
## Rose Domain

The package dependency indicates that one package in a model uses the services or facilities of another.

**Class Hierarchy:** Item>PackageDependency

### SubClasses of PackageDependency

This class has no subclasses.



### Properties Specific to PackageDependency

| Properties        | Inherited From | Description   |
|-------------------|----------------|---|
| ClientCardinality | Relationship   | Indicates the number of possible links from an instance of the client class to an instance of the supplier class. Can be the same values as those listed in SupplierCardinality.  |
| Documentation     | Item           | Documentation for the item.   |
| ExportControl     | Relationship   | Specifies the type of access allowed between classes. Returns Public, Protected, Private, or Implementation, depending on the state of the Access radio control on the relationship specification. Access is also shown by adornments on relationships in diagrams. |
| Kind              | Relationship   | Kind of the relationship, which will be one of: AggregateRole, AssociationRole, HasRelationship, InheritsRelationship, or UsesRelationship.   |
| Name              | Item           | Name of the item.   |

| <b>Properties</b>   | <b>Inherited From</b> | <b>Description</b>   |
|---------------------|-----------------------|--|
| QualifiedName       | Item                  | Qualified name of the item.  |
| Stereotype          | Item                  | Stereotype of the item.  |
| SupplierCardinality | Relationship          | Indicates the number of possible links from an instance of the supplier class to an instance of the client class. Can be one the following values: n, 1, 0..n, 1..n, 0..1, <literal>, <literal>..n, or <literal>..<literal>. |
| SupplierName        |                       | Name of the package that is the supplier in the package dependency.  |
| SupplierName        | Relationship          | Name of the supplier class or use case.  |
| UniqueID            | Item                  | The unique ID of the item.   |

#### Relationships Specific to PackageDependency

| <b>Name</b> | <b>Kind</b> | <b>Class</b> | <b>Description</b>    |
|-------------|-------------|--------------|-----------------------|
| FromPackage | 0..1        | Package      | The supplier package. |
| ToPackage   | 0..1        | Package      | The receiver package. |

# Parameter

## Rose Domain

Formal parameter of an operation, instantiated class, or instantiated class utility.

**Class Hierarchy:** Item>Parameter

### SubClasses of Parameter

This class has no subclasses.

### Properties Specific to Parameter

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>  |
|-------------------|-----------------------|---|
| Const             |                       | Returns TRUE if the parameter is constant; otherwise False. |
| Documentation     | Item                  | Documentation for the item.                                 |
| InitValue         |                       | Initial value of the parameter.                             |
| Name              | Item                  | Name of the item.   |
| QualifiedName     | Item                  | Qualified name of the item.                                 |
| Stereotype        | Item                  | Stereotype of the item.                                     |
| Type              |                       | The type of the parameter.                                  |
| UniqueID          | Item                  | The unique ID of the item.                                  |

### Relationships Specific to Parameter

This class has no relationships.

# ParameterizedClass

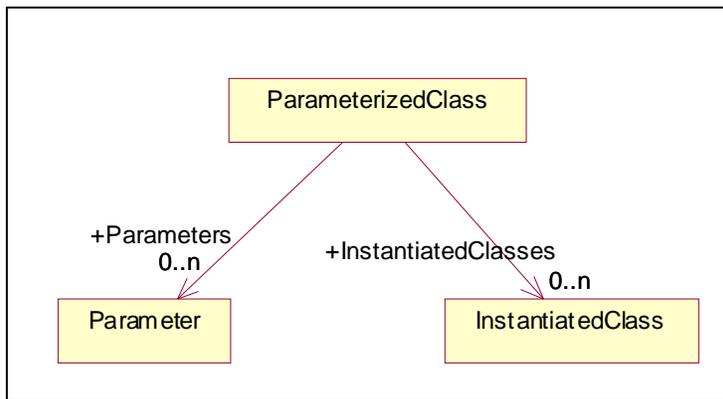
## Rose Domain

A parameterized class is a template for creating any number of instantiated classes that follow its format. A parameterized class declares formal parameters, which can be classes, objects, or operations.

**Class Hierarchy:** Item>Class>ParameterizedClass

### SubClasses of ParameterizedClass

This class has no subclasses.



### Properties Specific to ParameterizedClass

| Properties      | Inherited From | Description   |
|-----------------|----------------|---|
| Abstract        | Class          | True if the Abstract check box is selected in the class specification, otherwise False.   |
| Cardinality     | Class          | The string in the Cardinality field of the class specification.   |
| Concurrency     | Class          | Returns Sequential, Guarded, Active, or Synchronous, depending on the value of the Concurrency radio control in the More dialog of the class specification. |
| Documentation   | Item           | Documentation for the item.   |
| ExportControl   | Class          | Returns Public or Implementation, depending on the value of the Export Control radio control in the class specification.                                    |
| FundamentalType | Class          | Returns TRUE if this class is a fundamental type.   |
| HasStateDiagram | Class          | Returns TRUE if the class has an associated state diagram, otherwise FALSE.   |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>   |
|-------------------|-----------------------|--|
| IsNested          | Class                 | Returns TRUE if the Class is nested, otherwise FALSE.  |
| Kind              | Class                 | The kind of Class.   |
| Name              | Item                  | Name of the item.  |
| Persistence       | Class                 | This property is Persistent or Transient, depending on the value of the Persistence radio control in the More dialog of the class specification. |
| QualifiedName     | Item                  | Qualified name of the item.  |
| Space             | Class                 | The string in the Space field of the More dialog of the class specification.   |
| Stereotype        | Item                  | Stereotype of the item.  |
| UniqueID          | Item                  | The unique ID of the item.   |

#### Relationships Specific to ParameterizedClass

| <b>Name</b>         | <b>Kind</b> | <b>Class</b>      | <b>Description</b>  |
|---------------------|-------------|-------------------|---|
| InstantiatedClasses | 0..n        | InstantiatedClass | All instantiated classes of this parameterized class.   |
| Parameters          | 0..n        | Parameter         | Formal, generic parameters declared by the parameterized class. The parameters appear in the Parameters list box in the More dialog of the class specification. |

# ParameterizedClassUtility

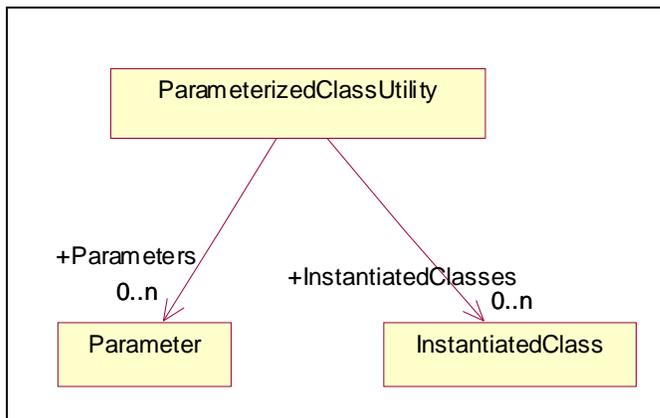
## Rose Domain

A parameterized class utility is a set of operations or functions that are not associated with a higher level class (free subprograms) and are defined in terms of formal parameters. Parameterized class utilities are used as templates for creating instantiated class utilities.

**Class Hierarchy:** Item>Class>ParameterizedClassUtility

### SubClasses of ParameterizedClassUtility

This class has no subclasses.



### Properties Specific to ParameterizedClassUtility

| Properties      | Inherited From | Description   |
|-----------------|----------------|---|
| Abstract        | Class          | True if the Abstract check box is selected in the class specification, otherwise False.   |
| Cardinality     | Class          | The string in the Cardinality field of the class specification.   |
| Concurrency     | Class          | Returns Sequential, Guarded, Active, or Synchronous, depending on the value of the Concurrency radio control in the More dialog of the class specification. |
| Documentation   | Item           | Documentation for the item.   |
| ExportControl   | Class          | Returns Public or Implementation, depending on the value of the Export Control radio control in the class specification.                                    |
| FundamentalType | Class          | Returns TRUE if this class is a fundamental type.   |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>   |
|-------------------|-----------------------|--|
| HasStateDiagram   | Class                 | Returns TRUE if the class has an associated state diagram, otherwise FALSE.  |
| IsNested          | Class                 | Returns TRUE if the Class is nested, otherwise FALSE.  |
| Kind              | Class                 | The kind of Class.   |
| Name              | Item                  | Name of the item.  |
| Persistence       | Class                 | This property is Persistent or Transient, depending on the value of the Persistence radio control in the More dialog of the class specification. |
| QualifiedName     | Item                  | Qualified name of the item.  |
| Space             | Class                 | The string in the Space field of the More dialog of the class specification.   |
| Stereotype        | Item                  | Stereotype of the item.  |
| UniqueID          | Item                  | The unique ID of the item.   |

#### Relationships Specific to ParameterizedClassUtility

| <b>Name</b>         | <b>Kind</b> | <b>Class</b>      | <b>Description</b>  |
|---------------------|-------------|-------------------|---|
| InstantiatedClasses | 0..n        | InstantiatedClass | All instantiated class utilities of this parameterized class utility.   |
| Parameters          | 0..n        | Parameter         | Formal, generic parameters declared by the parameterized class utility. The parameters appear in the Parameters list box in the More dialog of the class specification. |

## Process

### Rose Domain

A process transforms data values. Lowest-level processes are pure functions without side effects.

**Class Hierarchy:** Item>Process

#### SubClasses of Process

This class has no subclasses.

#### Properties Specific to Process

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>           |
|-------------------|-----------------------|------------------------------|
| Documentation     | Item                  | Documentation for the item.  |
| Name              | Item                  | Name of the item.            |
| Priority          |                       | The priority of the Process. |
| QualifiedName     | Item                  | Qualified name of the item.  |
| Stereotype        | Item                  | Stereotype of the item.      |
| UniqueID          | Item                  | The unique ID of the item.   |

#### Relationships Specific to Process

This class has no relationships.

# Processor

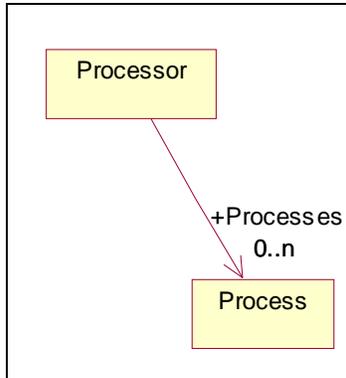
## Rose Domain

A processor is a hardware component capable of executing programs.

**Class Hierarchy:** Item>Node>Processor

### SubClasses of Processor

This class has no subclasses.



### Properties Specific to Processor

| Properties      | Inherited From | Description  |
|-----------------|----------------|--|
| Characteristics | Node           | Characteristics of the processor or device.                      |
| Documentation   | Item           | Documentation for the item.                                      |
| Name            | Item           | Name of the item.  |
| QualifiedName   | Item           | Qualified name of the item.                                      |
| Scheduling      |                | The text in the Scheduling field of the processor specification. |
| Stereotype      | Item           | Stereotype of the item.  |
| UniqueID        | Item           | The unique ID of the item.                                       |

### Relationships Specific to Processor

| Name      | Kind | Class   | Description                          |
|-----------|------|---------|--------------------------------------|
| Processes | 0..n | Process | Processes defined by this Processor. |

## Property

### Rose Domain

A code-generation property associated with the model, a package, a subsystem, a class, an association, a has relationship, an attribute, a module, or an operation.

**Class Hierarchy:** Property

#### SubClasses of Property

This class has no subclasses.

#### Properties Specific to Property

| Properties | Inherited From | Description  |
|------------|----------------|--|
| Name       |                | Name of the property.  |
| ParentUID  |                | The unique id of this property's parent artifact type.                 |
| ToolName   |                | The name of the tool, or tab, for the property, such as "cg" or "DDL." |
| Value      |                | String equivalent of the value associated with the property.           |

#### Relationships Specific to Property

This class has no relationships.

# RealizeRelationship

## Rose Domain

A realize relationship between a logical class and a component class shows that the component class realizes the operations defined by the logical class.

**Class Hierarchy:** Item>Relationship>RealizeRelationship

### SubClasses of RealizeRelationship

This class has no subclasses.

### Properties Specific to RealizeRelationship

| Properties          | Inherited From | Description   |
|---------------------|----------------|---|
| ClientCardinality   | Relationship   | Indicates the number of possible links from an instance of the client class to an instance of the supplier class. Can be the same values as those listed in SupplierCardinality.  |
| Documentation       | Item           | Documentation for the item.   |
| ExportControl       | Relationship   | Specifies the type of access allowed between classes. Returns Public, Protected, Private, or Implementation, depending on the state of the Access radio control on the relationship specification. Access is also shown by adornments on relationships in diagrams. |
| Kind                | Relationship   | Kind of the relationship, which will be one of: AggregateRole, AssociationRole, HasRelationship, InheritsRelationship, or UsesRelationship.   |
| Name                | Item           | Name of the item.   |
| QualifiedName       | Item           | Qualified name of the item.   |
| Stereotype          | Item           | Stereotype of the item.   |
| SupplierCardinality | Relationship   | Indicates the number of possible links from an instance of the supplier class to an instance of the client class. Can be one the following values: n, 1, 0..n, 1..n, 0..1, <literal>, <literal>..n, or <literal>..<literal>.  |
| SupplierName        | Relationship   | Name of the supplier class or use case.   |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>         |
|-------------------|-----------------------|----------------------------|
| UniqueID          | Item                  | The unique ID of the item. |

**Relationships Specific to RealizeRelationship**

This class has no relationships.

# Relationship

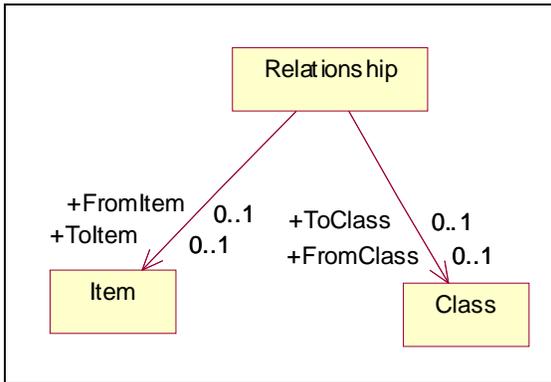
## Rose Domain

A semantic connection between two classes. Rational Rose stores relationship information in a relationship specification.

**Class Hierarchy:** Item>Relationship

### SubClasses of Relationship

- HasRelationship
- InheritRelationship
- ObjectFlow
- PackageDependency
- RealizeRelationship
- Role
- UsesRelationship



### Properties Specific to Relationship

| Properties        | Inherited From | Description   |
|-------------------|----------------|---|
| ClientCardinality |                | Indicates the number of possible links from an instance of the client class to an instance of the supplier class. Can be the same values as those listed in SupplierCardinality.  |
| Documentation     | Item           | Documentation for the item.   |
| ExportControl     |                | Specifies the type of access allowed between classes. Returns Public, Protected, Private, or Implementation, depending on the state of the Access radio control on the relationship specification. Access is also shown by adornments on relationships in diagrams. |

| <b>Properties</b>   | <b>Inherited From</b> | <b>Description</b>   |
|---------------------|-----------------------|--|
| Kind                |                       | Kind of the relationship, which will be one of: AggregateRole, AssociationRole, HasRelationship, InheritsRelationship, or UsesRelationship.  |
| Name                | Item                  | Name of the item.  |
| QualifiedName       | Item                  | Qualified name of the item.  |
| Stereotype          | Item                  | Stereotype of the item.  |
| SupplierCardinality |                       | Indicates the number of possible links from an instance of the supplier class to an instance of the client class. Can be one the following values: n, 1, 0..n, 1..n, 0..1, <literal>, <literal>..n, or <literal>..<literal>. |
| SupplierName        |                       | Name of the supplier class or use case.  |
| UniqueID            | Item                  | The unique ID of the item.   |

#### Relationships Specific to Relationship

| <b>Name</b> | <b>Kind</b> | <b>Class</b> | <b>Description</b>   |
|-------------|-------------|--------------|--|
| FromClass   | 0..1        | Class        | The client class. For example, if A Has a B, A is the client, or From class.   |
| FromItem    | 0..1        | Item         | The client that owns the relationship.   |
| ToClass     | 0..1        | Class        | The supplier class. For example, if A Has a B, B is the supplier, or To class. |
| ToItem      | 0..1        | Item         | The supplier of the relationship to the client.                                |

# Role

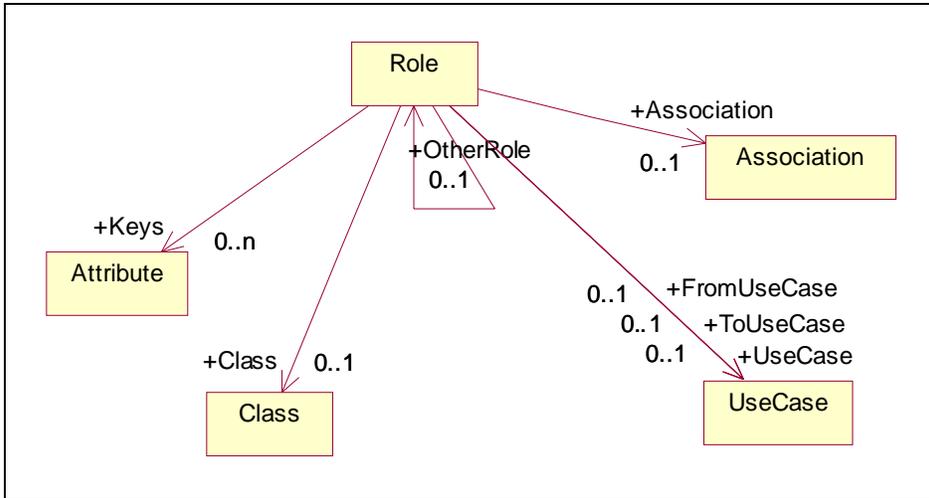
## Rose Domain

The purpose or capacity where one class associates with another.

**Class Hierarchy:** Item>Relationship>Role

### SubClasses of Role

This class has no subclasses.



### Properties Specific to Role

| Properties        | Inherited From | Description  |
|-------------------|----------------|--|
| Aggregate         |                | Returns TRUE if the role is an aggregate relationship.   |
| Cardinality       |                | Cardinality of this Role.  |
| ClientCardinality | Relationship   | Indicates the number of possible links from an instance of the client class to an instance of the supplier class. Can be the same values as those listed in SupplierCardinality. |
| Constraints       |                | Text of the Constraints field in the Role specification.   |
| Containment       |                | Specifies the physical containment of the role. Returns Value, Reference, or Unspecified, depending on the state of the Containment radio control on the Role specification.     |
| Documentation     | Item           | Documentation for the item.  |

| <b>Properties</b>   | <b>Inherited From</b> | <b>Description</b>  |
|---------------------|-----------------------|---|
| ExportControl       | Relationship          | Specifies the type of access allowed between classes. Returns Public, Protected, Private, or Implementation, depending on the state of the Access radio control on the relationship specification. Access is also shown by adornments on relationships in diagrams. |
| Friend              |                       | Returns TRUE if the Friend check box is selected in the Role specification, otherwise FALSE.  |
| Kind                | Relationship          | Kind of the relationship, which will be one of: AggregateRole, AssociationRole, HasRelationship, InheritsRelationship, or UsesRelationship.   |
| Name                | Item                  | Name of the item.   |
| Navigable           |                       | Returns TRUE if the Navigable check box is selected, otherwise FALSE.   |
| QualifiedName       | Item                  | Qualified name of the item.   |
| Static              |                       | Returns TRUE if the Static check box is selected in the Role specification, otherwise FALSE.  |
| Stereotype          | Item                  | Stereotype of the item.   |
| SupplierCardinality | Relationship          | Indicates the number of possible links from an instance of the supplier class to an instance of the client class. Can be one the following values: n, 1, 0..n, 1..n, 0..1, <literal>, <literal>..n, or <literal>..<literal>.  |
| SupplierName        | Relationship          | Name of the supplier class or use case.   |
| UniqueID            | Item                  | The unique ID of the item.  |

### Relationships Specific to Role

| <b>Name</b> | <b>Kind</b> | <b>Class</b> | <b>Description</b>                           |
|-------------|-------------|--------------|--|
| Association | 0..1        | Association  | The association that this Role is a part of. |
| Class       | 0..1        | Class        | The class associated with this Role          |

| <b>Name</b> | <b>Kind</b> | <b>Class</b> | <b>Description</b>   |
|-------------|-------------|--------------|--|
| FromUseCase | 0..1        | UseCase      | The supplier use case of the Role, if it is a use case.                |
| Keys        | 0..n        | Attribute    | Each key is an attribute that uniquely defines a single target object. |
| OtherRole   |             | Role         | The role at the other end of the association.                          |
| ToUseCase   | 0..1        | UseCase      | The client use case of the inherits relationship, if it is a use case. |
| UseCase     | 0..1        | UseCase      | The use case associated with this Role.                                |

# Scenario

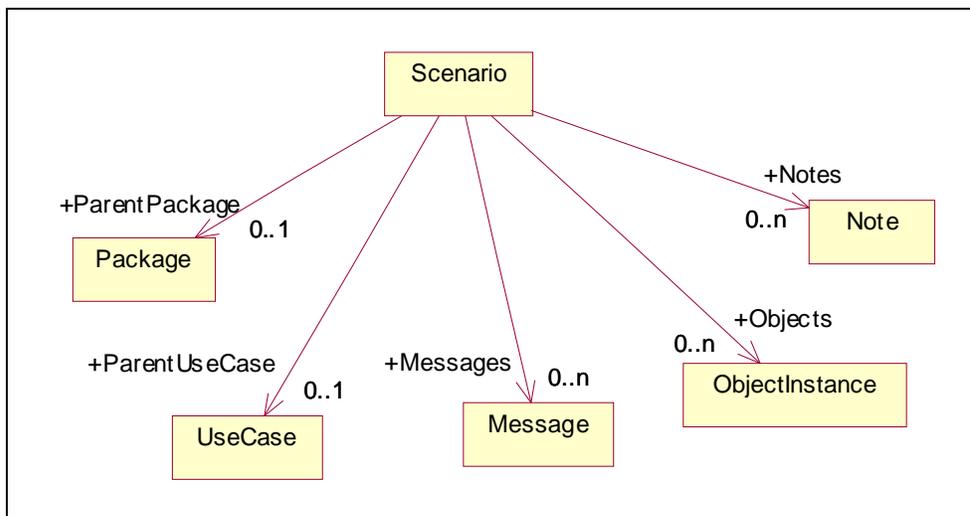
## Rose Domain

A scenario is an instance of a use case; it is an outline of events that occur during system execution.

**Class Hierarchy:** Diagram>Scenario

### SubClasses of Scenario

This class has no subclasses.



### Properties Specific to Scenario

| Properties    | Inherited From | Description   |
|---------------|----------------|---|
| DiagramType   |                | The diagram type of this scenario   |
| Documentation | Diagram        | The documentation text associated with the Diagram.   |
| MappedPoints  | Diagram        | A list of coordinates of the items in the Diagram. Each item is specified by a set of x/y coordinates designating the location of the corners of the item. The ordering of the items is the same as in the MappedArtifacts artifact collection. |
| Name          | Diagram        | Name of the Diagram.  |
| ParentKind    |                | The parent diagram of this scenario   |
| QualifiedName | Diagram        | Qualified name of the Diagram.  |
| UniqueID      | Diagram        | The unique ID for the Diagram.  |

**Relationships Specific to Scenario**

| <b>Name</b>   | <b>Kind</b> | <b>Class</b>   | <b>Description</b>                             |
|---------------|-------------|----------------|--|
| Messages      | 0..n        | Message        | Messages associated with this Scenario.        |
| Notes         | 0..n        | Note           | Notes associated with this Scenario.           |
| Objects       | 0..n        | ObjectInstance | Object instances associated with the Scenario. |
| ParentPackage | 0..1        | Package        | Parent package of this Scenario.               |
| ParentUseCase | 0..1        | UseCase        | Parent use case of this Scenario.              |

## State

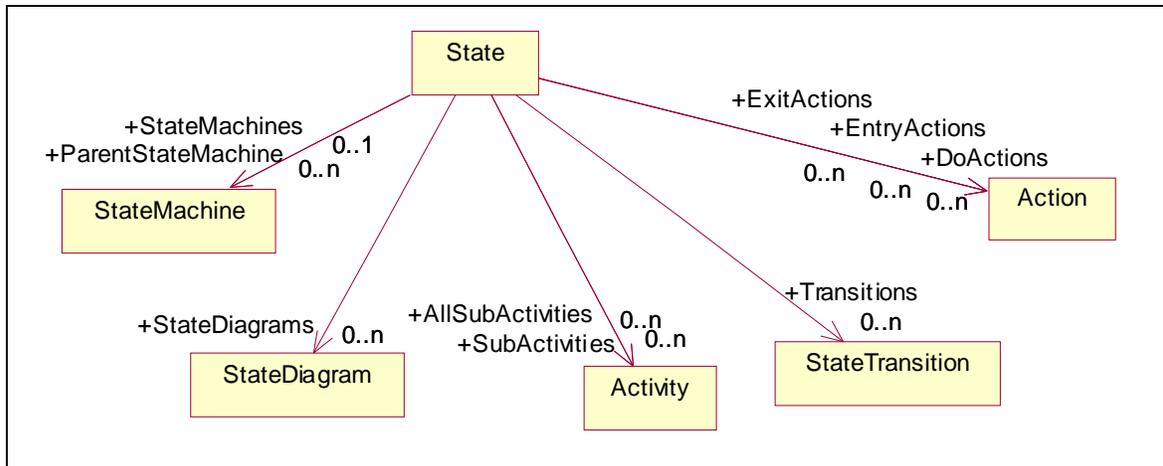
### Rose Domain

The state of an object represents the cumulative history of its behavior. State encompasses all of the object's static properties and the current values of each property.

**Class Hierarchy:** Item>State

#### SubClasses of State

This class has no subclasses.



#### Properties Specific to State

| Properties    | Inherited From | Description   |
|---------------|----------------|---|
| Documentation | Item           | Documentation for the item.                               |
| History       |                | The text in the History field of the state specification. |
| Name          | Item           | Name of the item.   |
| QualifiedName | Item           | Qualified name of the item.                               |
| StateKind     |                | The kind of State. One of Start, Normal, or Stop.         |
| Stereotype    | Item           | Stereotype of the item.                                   |
| UniqueID      | Item           | The unique ID of the item.                                |

#### Relationships Specific to State

| Name             | Kind | Class    | Description   |
|------------------|------|----------|---|
| AllSubActivities | 0..n | Activity | All activities that are associated with this State. |
| DoActions        | 0..n | Action   | The Do actions associated with this State.          |

| <b>Name</b>        | <b>Kind</b> | <b>Class</b>    | <b>Description</b>                                      |
|--------------------|-------------|-----------------|---|
| EntryActions       | 0..n        | Action          | The Entry actions associated with this State.           |
| ExitActions        | 0..n        | Action          | The Exit actions associated with this State.            |
| ParentStateMachine | 0..1        | StateMachine    | The top-level state machine associated with this State. |
| StateDiagrams      | 0..n        | StateDiagram    | All state diagrams associated with this State.          |
| StateMachines      | 0..n        | StateMachine    | All state machines associated with this State.          |
| SubActivities      | 0..n        | Activity        | The activities that are part of this State.             |
| Transitions        | 0..n        | StateTransition | The transitions that exit from this State.              |

# StateDiagram

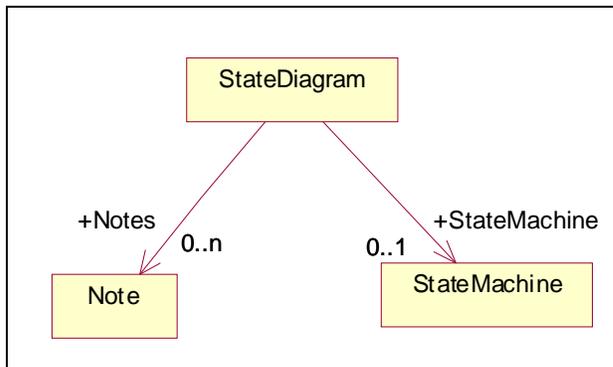
## Rose Domain

Depicts significant event-ordered behavior of a particular class. Each class may have one state diagram to describe its behavior.

**Class Hierarchy:** Diagram>StateDiagram

### SubClasses of StateDiagram

This class has no subclasses.



### Properties Specific to StateDiagram

| Properties        | Inherited From | Description   |
|-------------------|----------------|---|
| Documentation     | Diagram        | The documentation text associated with the Diagram.   |
| HasStateMachine   |                | Returns TRUE if the diagram includes a state activity model.  |
| IsActivityDiagram |                | Returns TRUE if the StateDiagram is an activity diagram   |
| MappedPoints      | Diagram        | A list of coordinates of the items in the Diagram. Each item is specified by a set of x/y coordinates designating the location of the corners of the item. The ordering of the items is the same as in the MappedArtifacts artifact collection. |
| Name              | Diagram        | Name of the Diagram.  |
| QualifiedName     | Diagram        | Qualified name of the Diagram.  |
| UniqueID          | Diagram        | The unique ID for the Diagram.  |

### Relationships Specific to StateDiagram

| <b>Name</b>  | <b>Kind</b> | <b>Class</b> | <b>Description</b>  |
|--------------|-------------|--------------|---|
| Notes        | 0..n        | Note         | Notes that appear in the diagram.                         |
| StateMachine | 0..1        | StateMachine | The top-level state machine associated with this diagram. |

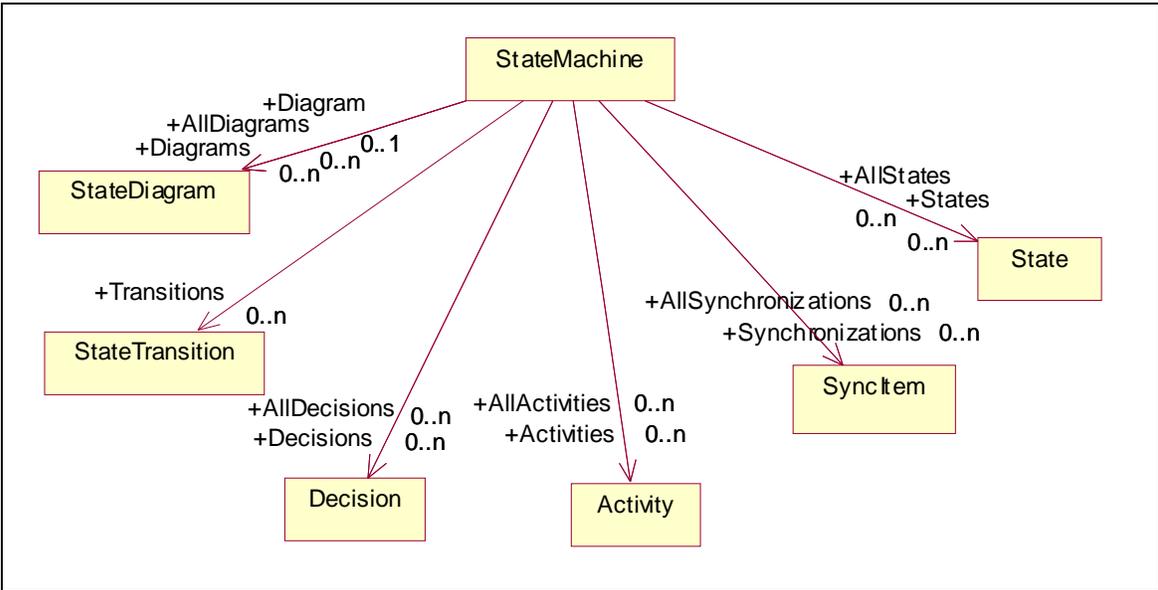
# StateMachine

## Rose Domain

A state machine can be defined as a behavior that specifies the valid sequences of activities that an object or interaction goes through during its life in response to events, together with its responses and actions.

**Class Hierarchy:** StateMachine

**SubClasses of StateMachine**  
This class has no subclasses.



### Properties Specific to StateMachine

| Properties    | Inherited From | Description  |
|---------------|----------------|--|
| Documentation |                | The documentation for the StateMachine.                                      |
| HasDiagram    |                | True if the state activity model has at least one state or activity diagram. |
| Name          |                | Name of the state activity model.  |
| Stereotype    |                | The stereotype of the StateMachine.  |
| UniqueID      |                | The internal unique identifier of the state activity model.                  |

**Relationships Specific to StateMachine**

| <b>Name</b>         | <b>Kind</b> | <b>Class</b>    | <b>Description</b>   |
|---------------------|-------------|-----------------|--|
| Activities          | 0..n        | Activity        | The activities defined in this state activity model.   |
| AllActivities       | 0..n        | Activity        | The activities defined in both this state activity model and all nested state activity models.   |
| AllDecisions        | 0..n        | Decision        | Decisions defined in both this state activity model and all nested state activity models.        |
| AllDiagrams         | 0..n        | StateDiagram    | Diagrams defined in both this state activity model and all nested state activity models.         |
| AllStates           | 0..n        | State           | All states that are associated with this state activity model.                                   |
| AllSynchronizations | 0..n        | Syncltem        | Synchronizations defined in both this state activity model and all nested state activity models. |
| Decisions           | 0..n        | Decision        | Decisions defined in this state activity model.  |
| Diagram             | 0..1        | StateDiagram    | The (first) state or activity diagram associated with this state activity model.                 |
| Diagrams            | 0..n        | StateDiagram    | The state or activity diagrams associated with this state activity model.                        |
| States              | 0..n        | State           | States that are part of this state activity model.   |
| Synchronizations    | 0..n        | Syncltem        | Synchronizations defined in this state activity model.   |
| Transitions         | 0..n        | StateTransition | Transitions that are part of this state activity model.  |

# StateTransition

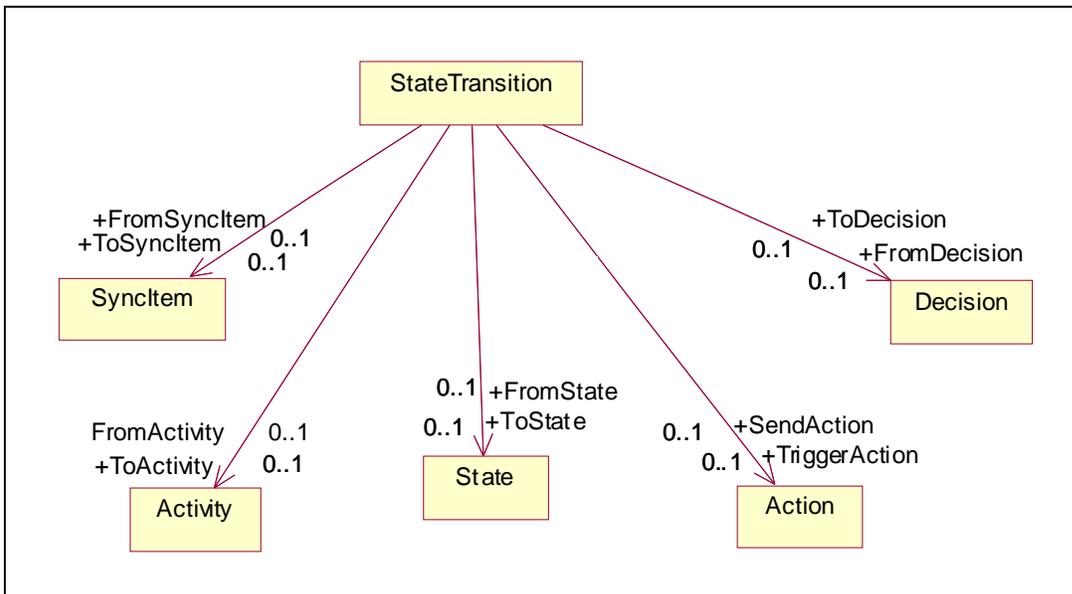
## Rose Domain

A state transition is a change of state caused by an event. Use state transitions to connect two states in a state diagram or show state transitions from a state to itself.

**Class Hierarchy:** Item>StateTransition

### SubClasses of StateTransition

This class has no subclasses.



### Properties Specific to StateTransition

| Properties       | Inherited From | Description  |
|------------------|----------------|--|
| CausingArguments |                | Arguments that accompany the causing event.  |
| CausingEventName |                | Name of the event that causes this transition.   |
| Documentation    | Item           | Documentation for the item.  |
| GuardCondition   |                | The guard condition associated with the causing event.   |
| KindofFromItem   |                | Returns a string for the artifact type of the 'From', which is set to either State, or Activity or SyncItem. |
| KindofToItem     |                | Returns a string for the artifact type of the 'To', which is set to either State, or Activity or SyncItem.   |
| Name             | Item           | Name of the item.  |

| <b>Properties</b> | <b>Inherited From</b> | <b>Description</b>   |
|-------------------|-----------------------|--|
| QualifiedName     | Item                  | Qualified name of the item.                                |
| SendArguments     |                       | Arguments that accompany the trigger event.                |
| SendEventName     |                       | Name of the event triggered by the transition.             |
| SendTarget        |                       | Name of the object that will receive the transition event. |
| Stereotype        | Item                  | Stereotype of the item.                                    |
| SupplierName      |                       | Name of the object that supplies the transition event.     |
| UniqueID          | Item                  | The unique ID of the item.                                 |

### Relationships Specific to StateTransition

| <b>Name</b>   | <b>Kind</b> | <b>Class</b> | <b>Description</b>                               |
|---------------|-------------|--------------|--|
| FromActivity  | 0..1        | Activity     | The Activity that this transition emanates from. |
| FromDecision  | 0..1        | Decision     | The Decision that this transition emanates from. |
| FromState     | 0..1        | State        | The State that this transition emanates from.    |
| FromSyncltem  | 0..1        | Syncltem     | The Syncltem that this transition emanates from. |
| SendAction    | 0..1        | Action       | Send action of this transition.                  |
| ToActivity    | 0..1        | Activity     | The Activity that this transition leads to.      |
| ToDecision    | 0..1        | Decision     | The Decision that this transition leads to.      |
| ToState       | 0..1        | State        | The State that this transition leads to.         |
| ToSyncltem    | 0..1        | Syncltem     | The Syncltem that this transition leads to.      |
| TriggerAction | 0..1        | Action       | The Action that triggers this transition.        |

# Subsystem

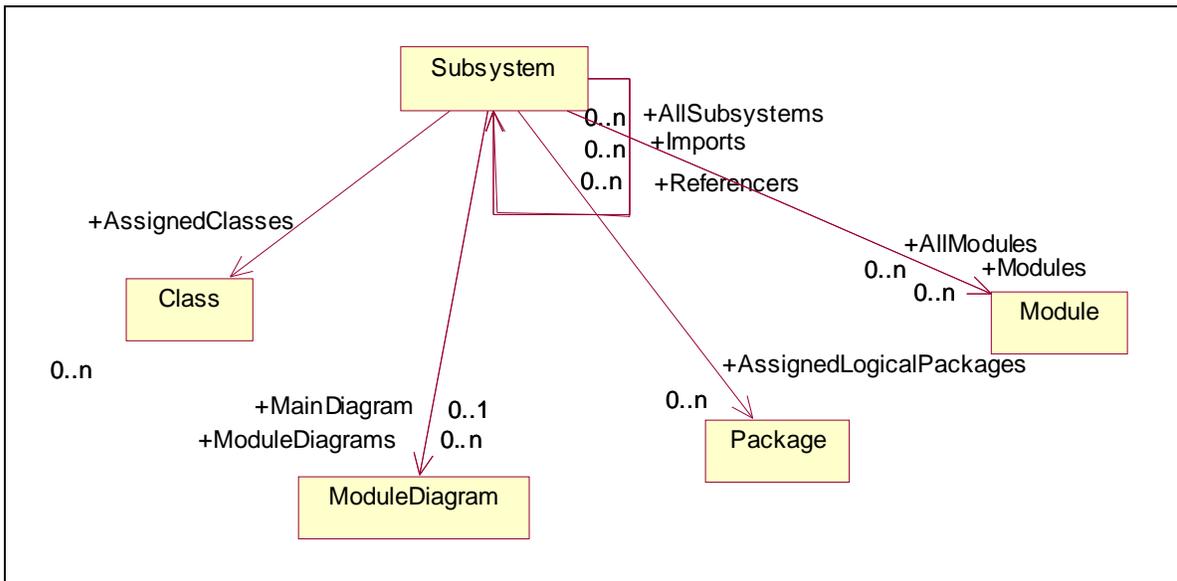
## Rose Domain

Subsystems represent clusters of logically related components. They parallel the role played by packages for class diagrams, allowing you to partition the physical model of the system. Each subsystem can contain components and other subsystems. Each module in your system must reside in a single subsystem or at the Component View of the model.

**Class Hierarchy:** Item>Subsystem

### SubClasses of Subsystem

This class has no subclasses.



### Properties Specific to Subsystem

| Properties    | Inherited From | Description                 |
|---------------|----------------|-----------------------------|
| Documentation | Item           | Documentation for the item. |
| Name          | Item           | Name of the item.           |
| QualifiedName | Item           | Qualified name of the item. |
| Stereotype    | Item           | Stereotype of the item.     |
| UniqueID      | Item           | The unique ID of the item.  |

### Relationships Specific to Subsystem

| Name          | Kind | Class     | Description                                    |
|---------------|------|-----------|--|
| AllModules    | 0..n | Module    | All modules associated with this Subsystem.    |
| AllSubsystems |      | Subsystem | All subsystems associated with this Subsystem. |

| <b>Name</b>             | <b>Kind</b> | <b>Class</b>  | <b>Description</b>   |
|-------------------------|-------------|---------------|--|
| AssignedClasses         | 0..n        | Class         | The classes assigned to this Subsystem.  |
| AssignedLogicalPackages | 0..n        | Package       | The logical packages assigned to this Subsystem.   |
| Imports                 |             | Subsystem     | All other Subsystems that this Subsystem directly depends on. Does not include indirect dependencies. For example if A imports B and B imports C, A does not directly import C.    |
| MainDiagram             | 0..1        | ModuleDiagram | All main module diagram contained in this Subsystem.   |
| ModuleDiagrams          | 0..n        | ModuleDiagram | All module diagrams contained in this Subsystem.   |
| Modules                 | 0..n        | Module        | The modules contained in this Subsystem.   |
| Referencers             |             | Subsystem     | All other Subsystems that directly depend on this Subsystem. Does not include indirect referencers. For example if A imports B and B imports C, A is not a direct referencer of C. |

# SyncItem

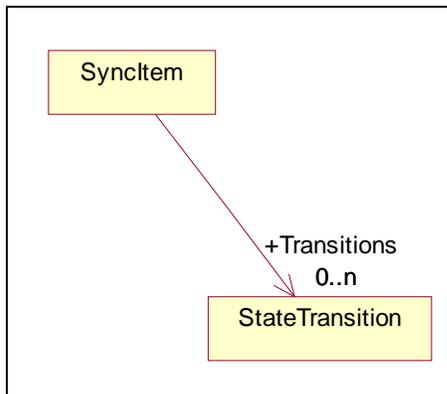
## Rose Domain

The SyncItem class is an abstract class that exposes the Rose synchronization functionality in the extensibility interface.

**Class Hierarchy:** Item>SyncItem

### SubClasses of SyncItem

This class has no subclasses.



### Properties Specific to SyncItem

| Properties    | Inherited From | Description                 |
|---------------|----------------|-----------------------------|
| Documentation | Item           | Documentation for the item. |
| Name          | Item           | Name of the item.           |
| QualifiedName | Item           | Qualified name of the item. |
| Stereotype    | Item           | Stereotype of the item.     |
| UniqueID      | Item           | The unique ID of the item.  |

### Relationships Specific to SyncItem

| Name        | Kind | Class           | Description  |
|-------------|------|-----------------|--|
| Transitions | 0..n | StateTransition | The state transitions associated with this SyncItem. |

## UseCase

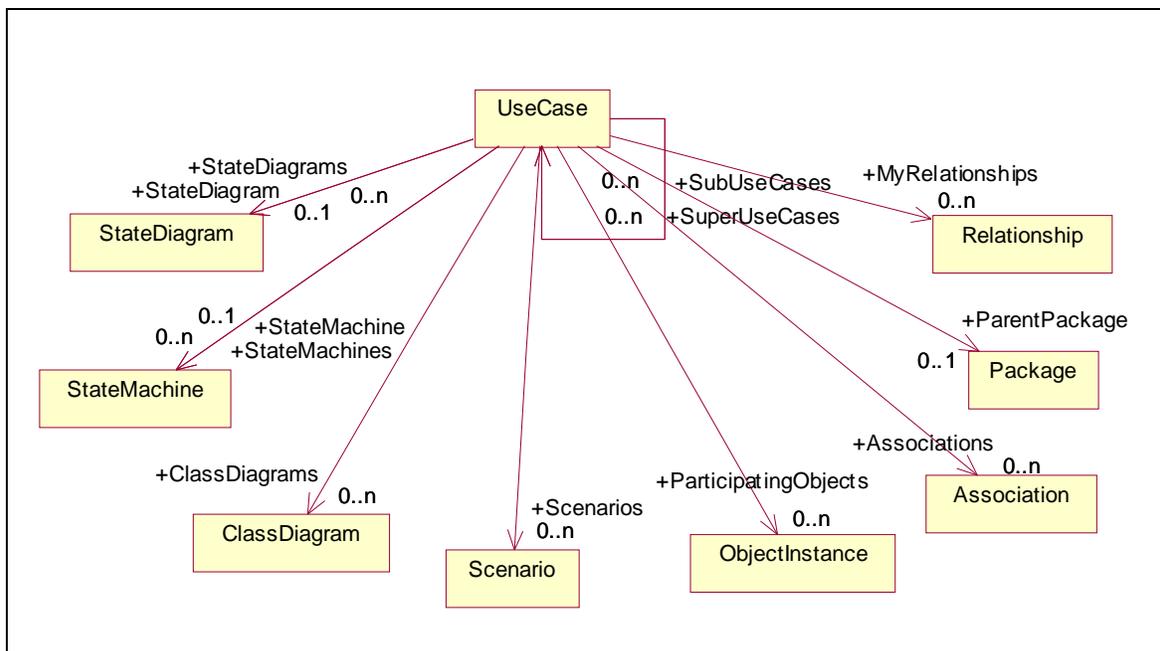
### Rose Domain

A sequence of transactions performed by a system in response to a triggering event initiated by an actor to the system. A full use case should provide a measurable value to an actor when the actor is performing a certain task. A use case contains all the events that can occur between an actor-use case pair, not necessarily the ones that will occur in any particular scenario. A use case contains a set of scenarios that explain various sequences of interaction within the transaction.

**Class Hierarchy:** Item>UseCase

### SubClasses of UseCase

This class has no subclasses.



### Properties Specific to UseCase

| Properties          | Inherited From | Description   |
|---------------------|----------------|---|
| Abstract            |                | True if the abstract check box is checked.            |
| Documentation       | Item           | Documentation for the item.                           |
| HasStateDiagram     |                | True if the use case has an associated state diagram. |
| Name                | Item           | Name of the item.                                     |
| QualifiedName       | Item           | Qualified name of the item.                           |
| Rank                |                | The rank of the UseCase.                              |
| RequisiteProDocName |                | The associated ReqPro ReqDocument name.               |

| <b>Properties</b>       | <b>Inherited From</b> | <b>Description</b>                      |
|-------------------------|-----------------------|---|
| RequisiteProProjectPath |                       | The associated ReqPro Project path.     |
| RequisiteProReqGUID     |                       | The associated ReqPro Requirement GUID. |
| Stereotype              | Item                  | Stereotype of the item.                 |
| UniqueID                | Item                  | The unique ID of the item.              |

### Relationships Specific to UseCase

| <b>Name</b>          | <b>Kind</b> | <b>Class</b>   | <b>Description</b>   |
|----------------------|-------------|----------------|--|
| Associations         | 0..n        | Association    | The associations where this UseCase plays a role.            |
| ClassDiagrams        | 0..n        | ClassDiagram   | The class diagrams included in this UseCase.                 |
| MyRelationships      | 0..n        | Relationship   | The inherits and role relationships defined by this UseCase. |
| ParentPackage        | 0..1        | Package        | The enclosing package.                                       |
| ParticipatingObjects | 0..n        | ObjectInstance | The objects included in scenarios defined by this UseCase.   |
| Scenarios            | 0..n        | Scenario       | The scenarios by this UseCase.                               |
| StateDiagram         | 0..1        | StateDiagram   | The top-level state diagram associated with this UseCase.    |
| StateDiagrams        | 0..n        | StateDiagram   | All state diagrams associated with this UseCase.             |
| StateMachine         | 0..1        | StateMachine   | The top-level state machine associated with this UseCase.    |
| StateMachines        | 0..n        | StateMachine   | All state machines associated with this UseCase.             |
| SubUseCases          |             | UseCase        | The UseCases that inherit from this UseCase.                 |
| SuperUseCases        |             | UseCase        | The UseCases that this UseCase inherits from directly.       |

# UseCaseDiagram

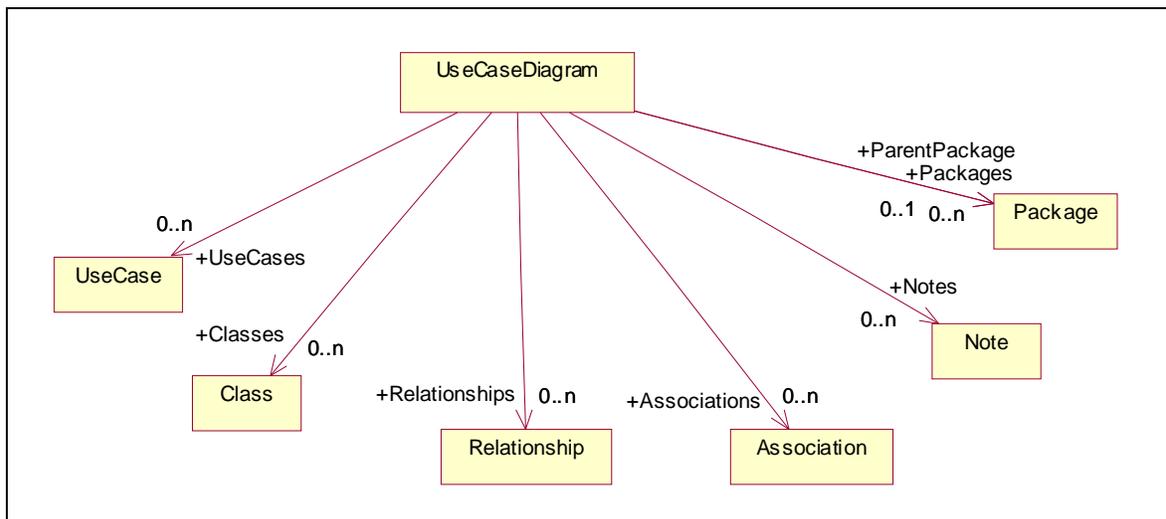
## Rose Domain

A use case diagram shows the relationships between use cases and actors. Use case diagrams can be considered as filtered views into the model. They do not necessarily depict all the use cases or relationships in the model. For example, iterating over all the use cases in the main diagram of a package will not necessarily return all the use cases defined in that package.

**Class Hierarchy:** Diagram>UseCaseDiagram

### SubClasses of UseCaseDiagram

Package



### Properties Specific to UseCaseDiagram

| Properties    | Inherited From | Description   |
|---------------|----------------|---|
| Documentation | Diagram        | The documentation text associated with the Diagram.   |
| MappedPoints  | Diagram        | A list of coordinates of the items in the Diagram. Each item is specified by a set of x/y coordinates designating the location of the corners of the item. The ordering of the items is the same as in the MappedArtifacts artifact collection. |
| Name          | Diagram        | Name of the Diagram.  |
| QualifiedName | Diagram        | Qualified name of the Diagram.  |
| UniqueID      | Diagram        | The unique ID for the Diagram.  |

**Relationships Specific to UseCaseDiagram**

| <b>Name</b>   | <b>Kind</b> | <b>Class</b> | <b>Description</b>   |
|---------------|-------------|--------------|--|
| Associations  | 0..n        | Association  | The associations where this use case diagram plays a role. |
| Classes       | 0..n        | Class        | All of the classes that appear on the diagram.             |
| Notes         | 0..n        | Note         | All of the notes associated with the diagram.              |
| Packages      | 0..n        | Package      | All of the packages that appear on the diagram.            |
| ParentPackage | 0..1        | Package      | The package that contains the diagram, if applicable.      |
| Relationships | 0..n        | Relationship | All of the relationships that appear on the diagram.       |
| UseCases      | 0..n        | UseCase      | All of the use cases that appear on the diagram.           |

# UsesRelationship

## Rose Domain

Indicates that the client class depends on the supplier class to provide certain services, such as:  
The client class accesses a value (constant or variable) defined in the supplier class.

Operations of the client class invoke operations of the supplier class.

Operations of the client class have signatures whose return class or arguments are instances of the supplier class.

**Class Hierarchy:** Item>Relationship>UsesRelationship

### SubClasses of UsesRelationship

This class has no subclasses.

### Properties Specific to UsesRelationship

| Properties         | Inherited From | Description   |
|--------------------|----------------|---|
| ClientCardinality  | Relationship   | Indicates the number of possible links from an instance of the client class to an instance of the supplier class. Can be the same values as those listed in SupplierCardinality.  |
| Documentation      | Item           | Documentation for the item.   |
| ExportControl      | Relationship   | Specifies the type of access allowed between classes. Returns Public, Protected, Private, or Implementation, depending on the state of the Access radio control on the relationship specification. Access is also shown by adornments on relationships in diagrams. |
| InvolvesFriendship |                | Indicates whether the supplier class grants rights to the client class to access its non-public parts. Returns TRUE, if the Friendship required check box is checked on the relationship specification. Otherwise, returns FALSE.                                   |
| Kind               | Relationship   | Kind of the relationship, which will be one of: AggregateRole, AssociationRole, HasRelationship, InheritsRelationship, or UsesRelationship.   |
| Name               | Item           | Name of the item.   |
| QualifiedName      | Item           | Qualified name of the item.   |

| <b>Properties</b>   | <b>Inherited From</b> | <b>Description</b>   |
|---------------------|-----------------------|--|
| Stereotype          | Item                  | Stereotype of the item.  |
| SupplierCardinality | Relationship          | Indicates the number of possible links from an instance of the supplier class to an instance of the client class. Can be one the following values: n, 1, 0..n, 1..n, 0..1, <literal>, <literal>..n, or <literal>..<literal>. |
| SupplierName        | Relationship          | Name of the supplier class or use case.  |
| UniqueID            | Item                  | The unique ID of the item.   |

**Relationships Specific to UsesRelationship**

This class has no relationships.