Queries

- Given a particular Execution, retrieve the pertaining ComputerModel

- Given some InstantiationAttributeOutput retrieve all related CodeFile

Mutually disjoint classes: Attribute, ComputationalModel, Algorithm, CodeCollection, CodeFile, ExecutableCollection, ExectuableFile, Execution, AttributeInstantiation.

$$\text{Attribute} \sqcap \text{AttributeInstantiation} \tag{1}$$

$$\text{InputAttribute} \sqsubseteq \text{Attribute} \tag{2}$$

$$\text{OutputAttribute} \sqsubseteq \text{Attribute} \tag{3}$$

$$\text{ComputationalObservation} \sqsubseteq \text{OutputAttributeInstantiation} \tag{4}$$

$$\text{OutputAttributeInstantiation} \sqsubseteq \text{AttributeInstantiation} \tag{5}$$

$$\text{InputAttributeInstantiation} \sqsubseteq \text{AttributeInstantiation} \tag{6}$$

$$\text{ComputationalModel} \sqsubseteq \exists \text{hasInputAttribute.InputAttribute} \tag{7}$$

$$\text{ComputationalModel} \sqsubseteq \exists \text{hasOutputAttribute.OutputAttribute} \tag{8}$$

$$\text{Execution} \sqsubseteq \exists \text{hasInputAttributeInstantiation.InputAttributeInstantiation} \tag{9}$$

$$\text{Execution} \sqsubseteq \exists \text{hasOutputAttributeInstantiation.OutputAttributeInstantiation} \tag{10}$$

$$\text{Execution} \sqsubseteq \geq 0\text{hasStartTime.StartTime} \tag{11}$$

$$\text{Execution} \sqsubseteq \geq 0\text{hasEndTime.EndTime} \tag{12}$$

$$\text{Execution} \sqsubseteq \geq 0\text{occurredAtMachine.Machine} \tag{13}$$

$$\text{Execution} \sqsubseteq \geq 0 \ldots \ldots \ldots \tag{14}$$

$$\text{Execution} \sqsubseteq \leq 1\text{isExecutionOf.ExecutableCollection} \tag{15}$$

$$\text{Execution} \sqsubseteq \leq 1\text{isRealizationOf.CodeCollection} \tag{16}$$

$$\text{ExecutableCollection} \sqsubseteq \leq 1\text{wasCompiledFrom.CodeCollection} \tag{17}$$

$$\text{wasCompiledFrom}^- \sqsubseteq \text{isCompiledInto} \tag{18}$$

$$\text{isExecutionOf} \circ \text{wasCompiledFromisRealizationOf} \tag{19}$$