Task 1 UML Design

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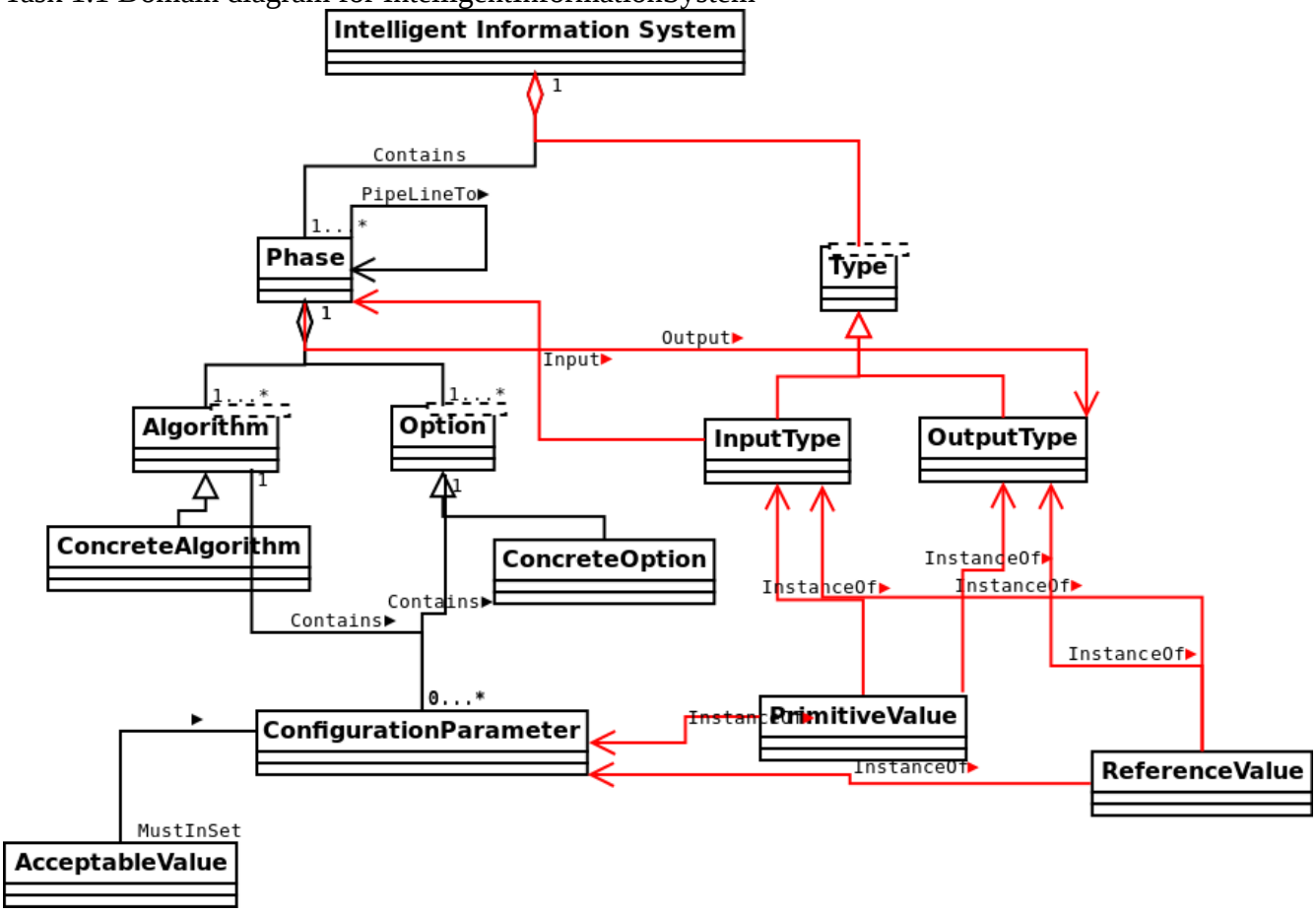
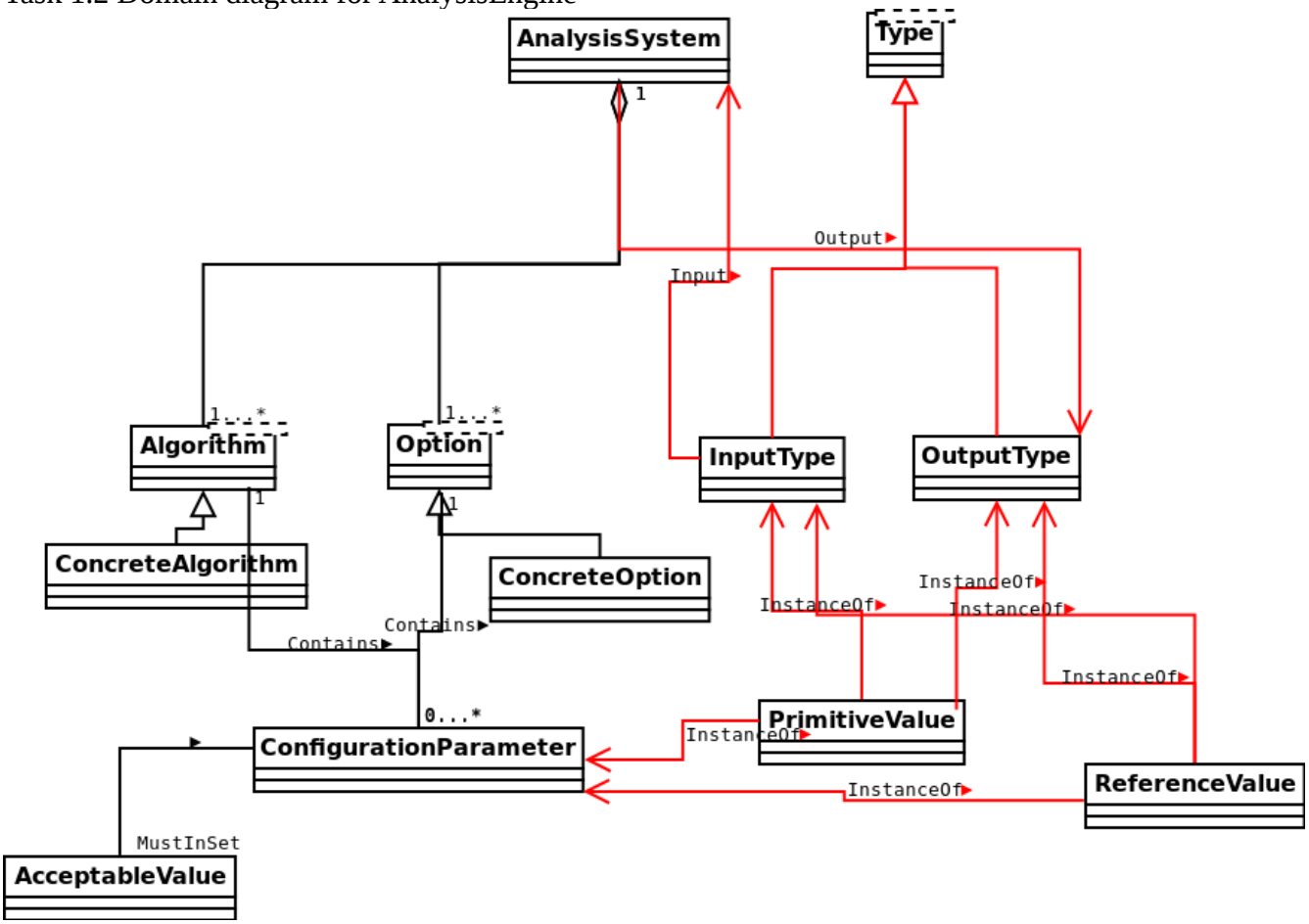
Task 1.1 Domain diagram for IntelligentInformationSystem



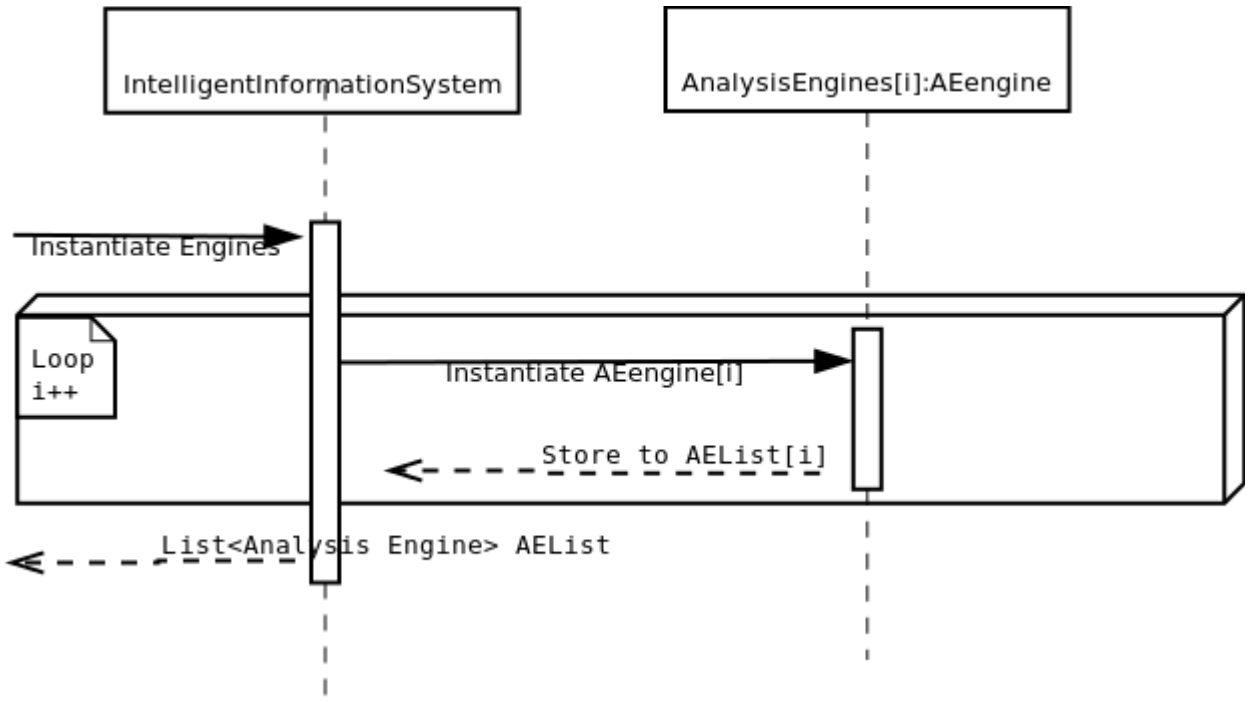
In this diagram, Intelligent Information System aggregates many phases and types.
For every phase, it have two abstract class algorithm and option to realize its function and it points to itself for pipelining each phases, take InputType as input and output as OutputType.
Algorithm and Option are abstract class, which specify the basic requirement in these templates. They are implemented by ConcreteAlgorithm and ConcreteOption.
For both algorithm and option, they have some specific configuration parameters; those parameters must in the pre-defined AcceptableValue set. Moreover, the parameters could use Primitive and Reference values.
On the other hand, type is a abstract class, which can be realized by InputType and OutputType class. And both of them can contain primitive and reference values.

Task 1.2 Domain diagram for AnalysisEngine



The AnalysisEngine domain diagram is just a subset of IntelligentInformationSystem.

Task 1.3 Sequence Diagram



After instantiate IntelligentInformationSystem, it instantiates many AnalysisEngines and store to its List of analysis engine.