UML Model Critique

Modeler's Name: **Problem:**   **Evaluator's Name:**

1. Class, Inheritance, Polymorphism Definition   Yes

Notes: (example: 1.b ---, 2.a ---, etc.)

a. Are there any abstract classes indicated in the model? (class name in italics?)   {Should there be?} ☐

b. Are there any abstract services / methods indicated? (defined in an abstract class?) ☐

c. Is there any class inheritance indicated in the model? ("gen/ spec?") ☐

d. Is each child class distinctive from its parent? (additional attributes / additional or modified services?) ☐

e. Do the class definitions indicate polymorphism? (same service name in another class, or modified inherited service from a parent class?) Should there be? ☐

f. Does the name of each attribute indicate a single value for an "atomic" concept? ☐

g. Does the name of each method / service indicate "present, imperative action?" ☐

2. Object Relationship, Cardinality, Ownership Responsibility

a. Are there "whole/part" relationships of type "composition?" (Is cardinality 1-1 or 1-n?) ☐

b. Are there aggregations where the cardinality of the whole is 1 and not optional? ☐

c. Does the existence of a "whole/owner" depend on the child? ☐

d. Does the existence of a "part" depend on the "whole/owner?" ☐

e. Is the "whole/owner" responsible for "creating/destroying" the "part?" ☐

f. Does the "whole/owner" indicate a service for "visiting" or iterating to each of the "parts?" ☐

UML Model Critique

3. Attribute and Service Descriptions

Notes: (example: 1.b ---, 2.a ---, etc.)

a. Does each attribute description indicate the type of value remembered? ☐

b. Do the services of the class indicate how each attribute value is set / updated? ☐

c. Does each service description avoid referring to other services that invoke this
   service (in this class or others)? ☐

d. Does each service description indicate which other services are needed to
   accomplish this service's responsibilities (in this class or others)? ☐

e. If another service will be needed to accomplish this service's function, does the class
   have a relationship (whole/part or instance connection) that will allow the message
   to find it's way to the receiver object? ☐

f. Does each service description indicate which attributes of this class are used?
   (recall that some attributes may be inherited from a parent class) ☐

4. Prose Use Case Descriptions

a. Are both pre- and post- conditions of the use case actions clearly indicated? ☐

b. Are both success and failure possibilities clearly indicated? ☐

c. Are all actors or primary business objects also found in the class diagram? ☐

5. Sequence Diagrams

a. Is each message arrow labeled with a service name found in the receiving object? ☐

b. Is every message line supported by a relationship of some kind between the objects? ☐
   (Indicated in the class diagram)

c. Do nested messages (self-delegation) indicate services of the calling object? ☐

d. Do message labels indicate the attributes for parameter / return values if required? ☐

e. Are synchronous and asynchronous messages indicated by the proper arrows? ☐