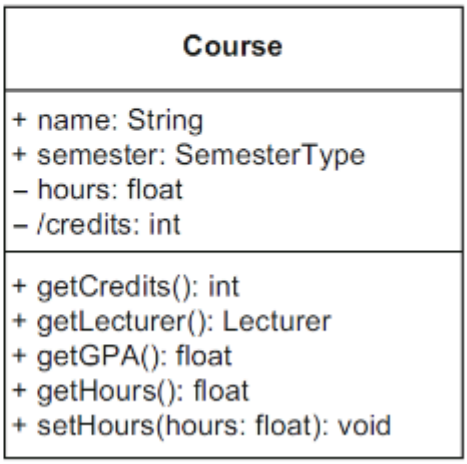
UML Class Diagram

In-Class Problem

1. Based on this Class Diagram model:
   a. What is the name of the class?
   b. What are the public properties and their types?
   c. What are the private properties and their types?
   d. List the methods, their parameters, and return value type.
2. Describe in your own words an Association.
3. Describe in your own words an Aggregation Association.
4. Describe in your own words a Composite Association.
5. In your own words, what is the difference between an Aggregation and a Composition.



1. .
    1. Course
    2. name → String, and semester → semesterType
    3. hours → float, and /credits → int
    4. getCredits → int, getLecturer → Lecturer, getGPA → float, getHours →float, setHours → void
2. Shows that the objects of one class are connected to the objects of another. Students and courses may be associated because both are used together, but one doesn't necessarily own another.
3. An aggregation association is a different association that shows the child class is owned by the parent but can also exist without it.
4. A composite association shows that the other object is a part of the paretn object. A body consists of a liver and a heart and needs it to function, where a car can exist without a wheel or engine and they can exist on their own.
5. In an aggregation the parts can exist by themselves, where in a composite the part can only exist as a part of the whole object. The whole creates and destroys the parts in composite.