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CSE210

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Section A8

Encapsulation coming from the roots of the word is basically to surround something with a “shell” of protection. The key use of encapsulation is to protect what is inside. What does this mean in the Information Technology field? In the case of Object-Oriented Programming, this means to set protection to the internal data of your object and grant the minimum required access to the internals of the object.

The greatest benefit for everyone who uses the object is that if an internal change to the object is required, and if the API portion is strong enough from earlier design, then a consumer of the object will not have to change how they use the object. The only changes required would be internal, reducing the work required to maintain the lifecycle of the product and the products that derive from it.

As I have learned in this course, I did not learn this my previous times very well. In the past I would grant accessors to each descriptor element of an object, providing too much exposure. In this assignment, my Word class have several descriptors that are private to the outside and the outside does not need to know how they are tracked. For example, I use three strings to form a word as follows: pre-fix punctuation, post-fix punctuation, and the rest of the word in between. This is used by my version of a word, to only hide the middle words, not the external punctuation. Now if in a later version, the design changes to be an array of eligible characters to be hidden instead, the API to the consumer does not need to change and the new feature will work without changing any external code.

In short, I like the note I saw in one of the study points, encapsulation protects your code not only misuse of other developers but also from yourself writing more error prone code that is hard to maintain.