COMP2021 A2 Q2

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1 Task 2

This code can compile, and the output is:

Thor is now a level 2 warrior.

2 Task 3

This code does not compile, for *Hero* is declared as *abstract*. There can not be any instance whose type is abstract.

3 Task 4

This code can compile, and the output is:

Thor attacks Althea. Does 5 damage.

4 Task 5

This code does not compile, since there exists no inheritance relationship between the classes *Warrior* and *Healer*. Hence, *Diana's* dynamic type *Healer* is not the subtype of its static type *Warrior*, and the case is not allowed.

5 Task 6

This code can compile, and the output is:

Thor attacks Thor. Does 5 damage.
Althea heals Althea by 0 points.

6 Task 7

This code does not compile, as the class *Warrior* is the subclass of the class *Hero*, and assigning an instance of the subclass, *warrior*, to another instance of the superclass, *hero*, is not allowed.