CptS 122 – Data Structures

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# Take-Home: Quiz 7 (15 pts) – Inheritance in C++

1. **(5 pts)** What is inheritance? Explain.

Inheritance allows a class to have the same behavior as another class and extend or tailor that behavior to provide special action for specific needs.

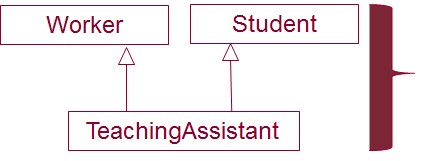
www.webopedia.com/TERM/I/**inheritance**.html

1. **(2 pts)** Inheritance enables \_\_software reusability\_\_\_\_\_, which saves time in development and encourages using previously proven high-quality software.

1. **(2 pts – 1 pt/each)** An object of a(n) \_\_\_derived\_\_\_\_\_ class can be treated as an object of its corresponding \_\_\_\_base\_\_\_\_\_ class.

1. **(2 pts)** Inheritance is representative of a(n) \_\_\_”is a”\_\_\_\_ relationship. A Manager object demonstrates this relationship because it can be treated as an Employee object.

1. **(2 pts)** The following class diagram is an example of \_\_\_\_Multiple\_\_\_\_\_ inheritance.



1. **(2 pts)** When an object of a derived class is instantiated, the base class’ \_\_constructor\_\_ is called implicitly or explicitly to initialize the data members of the base-class in the derived-class object.

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