

COP 2535: Data Structures

Quiz 06, Chapter 07 – Classes and Objects

Instructions

Answer the following questions in writing. These are short answer questions. Upload your answers in Canvas as plain text. Please include your name in the text.

1. Define an ADT.
2. When creating a class, what would you use access specifiers for? Give an example of two access specifiers.
3. Why would define member functions inside a class definition? Why would you define member functions outside of a class definition?
4. What is the *scope resolution operator*? What is it used for?
5. What does it mean for data to become *stale*? How do you prevent stale data?
6. What is the default constructor? When you define your own custom constructor, does the C++ compiler create a default constructor?
7. Give an example of using constructor delegation. By this, I mean for you to write some (simple) pseudo-code illustrating the concept of constructor delegation.
8. Assume that you are defining a function that takes an object as an argument. Describe how you could make changes in the attributes of that object inside the function. Describe how you could prevent the caller of the function from making changes to the object's attributes.
9. Explain the difference between *uses-a*, *is-a*, and *has-a*.
10. In your implementation of a program using a linked list, you have the following three files:
 - `list.h`
 - `list.cpp`
 - `myProgram.cpp`

Explain the difference between the three files, and what each one of them contains.