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CSCI 3731 A

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2. Describe “ownership” as it pertains to C++ memory management.

Ownership is when a piece of data is “owned” by an object, when ownership of a piece of data is passed to an object, that object is now responsible for deleting it.

6. What is the “rule of five”?

The rule of five is derived from the rule of three which is something that existed before C++ 11. The rule of three was if the class you are creating owns heap data, then you must write three methods. These methods would sort of act as a “package”. If you implemented one of the three methods, then you must implement the other two. These methods were a custom implementation of the = operator, the copy constructor, and the destructor. The rule of five is the same thing but with two additional methods, move constructor and move assignment operator.

7. What is copy elision?

Copy elision is when a returned variable is about to go out of scope and the compiler skips the copy.

8. What is the difference between “copying” and “moving” an object?

Copying will not affect the original but moving will delete the original.

12. When would you need to use a forward declaration?

When you are referring to a class in another class.