

Programming Challenge 15

1) Why does your textbook say that all destructors should be virtual? ?

A destructor that is not marked virtual will potentially cause issues whenever an instance of a derived class is assigned to a pointer of its base class. In such a case, if "delete" is invoked with a pointer that references a derived class then only the destructor for the base class will be executed, not the destructor for the derived class. Marking the destructor in the base class as virtual ensures that all destructors are always executed for instances of derived classes. Also, according to our textbook: "when a destructor is marked virtual, then all destructors of derived classes are automatically virtual (whether or not they are marked virtual)" (677).