**Project # 13 - C++ Serializer**

**Purpose:**

C++ provides the insertion and extraction operators and stringstreams that support serializing a C++ object into a string. It would be very useful for message-passing communication to develop this into a facility for serializing any C++ object into a tagged XML string and providing the reverse deserialization operation using XML parsing and the extraction operation. Note that if a C++ object composes one or more other instances the serialization and deserialization should work with this facility (by doing almost nothing).

**Requirements:**

For the Serializer project you will:

1. Develop a MessageEncode capability that might be declared like this:   
     
    template <typename T, typename I=T>   
    std::string Encode(T t) {…}   
     
    template <typename T, typename I=T>   
    I Decode(std::string& Message) {…}   
     
   Where I will be either an interface that T implements or T itself.
2. Implement a set of test cases to show how your processing functions.

**Here are some references:**

None needed.