

MS-3832 Advanced C++ Topic Outline

- Class Authoring – Canonical Form (for dynamic data members in objects)
 - Constructors, Destructor, Copy Constructor, Overloaded Assign. Op.
- Separating interface (.h) from implementation (.cpp)
 - exceptions being “inlining” and templates
- Pointers
- References (and const references)
- Linked Data Structures (Linked lists, etc.)
- Composition
 - sub-object syntax has a name
- Inheritance
 - sub-object syntax does not have a name
- Polymorphism (virtual member functions)
 - Abstract classes (pure virtual functions)
- Containers
- Iterators
- Templates
 - Classes and Global Functions
- STL Containers
 - vectors, lists, deque, sets, maps
 - Matrix as vector of vectors
- STL Algorithms
 - find, search, sort