MSFE

Preparatory Computer Programming (C++)
Course

Monday, August 10 – Friday, August 14, 2015

Cost: $950 (Prepay via QuikPAY)

Course Overview:
(Day 1) Introduction to C++, Getting started with Visual C++ for Windows or XCode for Macs, Standard C++ Data Types, Standard Libraries
(Day 1) Control Structures in C++, Basics, Global & Local variables, Typecasting, Scope
(Day 2) Pointers, References and Memory Allocation in C++, Declaring and using Pointers, Levels of indirection, this pointer, References, Structures and Enumerated Data Types, Allocating memory in C++, Dynamic allocation, Iterators, lists and vectors in C++
(Day 2) Functions, Calling functions – arguments vs. parameters, Passing parameters by value, passing parameters by reference, passing parameters by address, Overloading a function
(Day 3) Objects and Classes, Structures to Classes, new operator, Polymorphism, Constructor and Destructor Functions, Templates
(Day 3) Operators and Friends, Operator overloading in C++, Overloading Math operators
(Day 4) Inheritance, Single and Multiple inheritance, Public and private class access
(Day 4) Input/Output in C++, Examples/Illustrations of the many options.
(Day 4) Exception Handling in C++, Some typical errors, The try, catch throw blocks
(Day 5) Recursion in C++, Direct and Indirect Recursion, Benefits and Pitfalls to Recursion