

Object Oriented Programming using Visual C++

Classes

- Creating a Data Structure
- Methods
- Object Scope
- VISUAL C++ Input and Output
- Namespaces
- Data Abstraction
- Enforcing Data Encapsulation
- File Organization
- Classes in VISUAL C++
- Objects
- this Pointer

Constructors and Destructors

- Debug Output
- The Default Constructor
- When are Constructors Called?
- The Destructor
- The Copy Constructor
- Other Constructors
- Why Did It Work Before?
- Composition
- The Report Class
- Code Reuse
- Initialization Lists

Inheritance

- Inheritance
- Bugreport
- Protected Access Modifier
- Access and Inheritance
- Constructors and Inheritance
- Initialization Lists Revisited
- Multiple Inheritance

Virtual Functions

- Inheritance and Assignment
- Inside Report's Assignment Operator
- Using Pointers - a Quick Look at Basics
- Class Assignment and Pointers
- Static Binding
- Dynamic Binding
- Polymorphism
- The show_rep() Function
- Using the show_rep() Function
- Designing Member Function Inheritance

Pure Virtual Functions

- Bugfix and Its Relationship with Bugreport
- Bugfix: Association with Bugreport
- Using Bugfix with show_rep()
- Adding Bugfix to the Hierarchy
- Coding for the Document Class
- Reexamining the Document Class
- Pure Virtual Functions
- Updated: Designing Member Function Inheritance

References and Constants

- References
- Displaying References
- Changing References
- Pass by Reference
- Returning by Reference
- Constant Variables
- Constant References
- Constant Methods

New and delete

- new and delete
- Array Allocation
- The Report Class
- Compiler Version of the Copy Constructor
- Guidelines for Copy Constructors
- The Report Constructors and new
- The Report Destructor and delete
- Virtual Destructors

Casting in VISUAL C++

- Casting: A Review
- New Casting Syntax
- Creating a String Class
- The String Class
- The Conversion Constructor
- Expanding Our Casting Options
- Casting Operator
- Using the Casting Operator

Class Methods and Data

- Class Data
- Class Methods
- Using the New Data
- More on Class Methods

Overloaded Functions

- Function Overloading
- Using Overloaded Functions
- Rules for Overloading
- Overloading Based on Constness
- Default Arguments
- Invoking Functions with Default Arguments

Overloaded Operators

- The Basics of Overloading
- Overloading operator+
- Coping with Commutativity
- Non-Commutative Operators
- friends and Their Problems
- The Assignment Operator
- Overloading the >> Operator
- Using Date with cout

Exception Handling

- Why Exception Handling?
- try / catch / throw
- Exception Classes
- Standard Exception Hierarchy
- Multiple catch Blocks
- Catching Everything
- Unhandled Exceptions
- Exception in Constructors and Destructors
- Designing for Exceptions