**Project #16 – C++ Code Checker**

**Purpose:**

The code checker project will provide facilities to check for common errors in C++ implementations. Using the C++ parser facility[[1]](#footnote-1) this project looks for common errors in C++ code such as:

1. Hiding
2. Failure to provide virtual destructor in classes with virtual functions
3. Redefining non-virtual base class functions in a derived class
4. Defining public data
5. Using new and delete outside the context of a class
6. Allocating variables with no corresponding delete
7. Classes that have more than 10 public functions (probably some should be private)
8. Classes that start with lowercase letters and functions that start with uppercase letters
9. Classes that hold pointers to data that do not provide copy constructors and assignment operators
10. You think of at least 5 more things to check

**Requirements:**

For the C++ Code Checker Project you will:

1. Write an analysis class that uses the C++ parser to identify at least the errors cited above.
2. Provide means for a user to register new checking functionality
3. Provide a pleasing GUI that provides for selecting files for analysis and displays the results.
4. Provide an option for saving the analysis results in some persistent form for use by other tools.
1. <http://www.lcs.syr.edu/faculty/fawcett/handouts/CoreTechnologies/Cpp/Code/Parser/> [↑](#footnote-ref-1)