



C++ Coding Standard

SEI CERT C++ CODING STANDARD

Member Names* | Date

Abstract

This section gives the reader an overview of the report. It should state what the report discusses, why is it important, what is that trying to achieve, and how does it help the reader. The reader can be your classmate, friends, or professionals.

Abstract Max Words: 200

Remove the highlighted text in the final copy.

Cover page Image: Change the cover page image to something interesting or related to the topic for additional 5 points.

Source: [SEI CERT C++ Coding Standard - SEI CERT C++ Coding Standard - Confluence \(cmu.edu\)](#)

Priority: [Rule: Priority and Levels - SEI CERT Oracle Coding Standard for Java - Confluence \(cmu.edu\)](#). Focus on rules with Priority **P12-P27**. If you cannot find enough rules, then consider **P6-P9** and then **P1-P4**

* Each member is responsible for 9 rules. If possible, the members must explain and demo the rule using an example. As much as possible, write example programs that will demonstrate 2 or more rules together. For examples, if you select rules from “Characters and Strings” (Rule 05) and “Input and Output” (Rule 07), try an examples that will combine the two or more rules from Rule 05 and Rule 07.

Note: If you cannot find enough rules or rules that you can understand, you can explain common vulnerabilities and strategies to handle Strings in C++.

*If you cannot find enough rules for the team, you can also include rules from L3 level.

* when writing sample code, ensure you can use DOxygen (<https://en.wikipedia.org/wiki/Doxygen>). This is similar to Javadoc style comments. <https://www.oracle.com/technical-resources/articles/java/javadoc-tool.html>

* when writing the content for the report, please **USE YOUR OWN WORDS. DO NOT COPY the CONTENT** directly from the provided documentation. If you copy the content, its “plagiarism” and you will not get points for the rule or recommendation.

Rules

Rule Code: Rule Name (The code and name come from the documentation)

- Description
- Why is this rule important?
- Example of a clean working code

- Write your own code, explaining the rule.

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* Each member is responsible for 4 recommendations. Use the recommendation list from C language standard ([SEI CERT C Coding Standard - SEI CERT C Coding Standard - Confluence \(cmu.edu\)](#)). The explanation, examples, and description MUST be adapted towards C++. **NOTE:** Please ignore Recommendation 50 and 51.

Recommendations

Recommendation Code: Recommendation Name (The code and name come from the documentation)

- Description
- Why is this recommendation important?
- Example of a clean working code explaining the recommendation.

Conclusion

What is the conclusion of the report? What has the team learned and summarize it.

* The team must provide larger examples (as many as possible) that will combine as many rules as possible into one larger example. Please provide detailed comments in the sample code.

Rubric:

Report: 150 points

- **40:** Coding examples that combine multiple rules and recommendations
- **10 each rule:** Each rule must be complete.
- **5 each recommendation:** Each recommendation must be complete.

Presentation: 50

- Check the presentation guideline document for the rubric.

Expectation

- The document must be well-formatted (consistent font and format) and proof-read before submission.