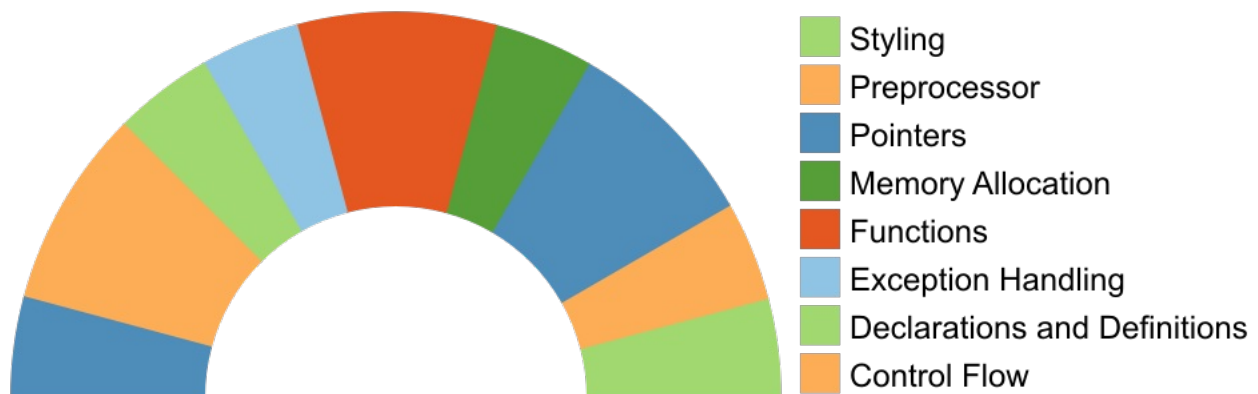# Understand™
by SciTools

"The Power of 10: Rules for Developing Safety-Critical Code" standard by Gerald Holzmann

This standard was presented by Gerald Holzmann at NASA's Jet Propulsion Laboratory. The rules are few in number so that developers are likely to remember them all. They are strict to improve the quality of the code, analysis results, and ultimately the program.

Checks by Tags

- Styling
- Preprocessor
- Pointers
- Memory Allocation
- Functions
- Exception Handling
- Declarations and Definitions
- Control Flow

Checks

Check ID	Check Name	Supported
POWER_OF_TEN_01	1 Simple Control Flow	Yes
POWER_OF_TEN_02	2 Loops with Fixed Limits	Yes
POWER_OF_TEN_03	3 No Dynamic Memory Allocation	Yes
POWER_OF_TEN_04	4 Short Functions	Yes
POWER_OF_TEN_05	5 Use Assertion Statements	Yes
POWER_OF_TEN_06	6 Declarations at Lowest Scope	Yes
POWER_OF_TEN_07_A	7A Check Parameters and Return Values - Ignored Return Values	Yes
POWER_OF_TEN_07_B	7B Check Parameters and Return Values - Unchecked Parameters and Return Values	Yes
POWER_OF_TEN_08	8 Limit Preprocessor Usage	Yes
POWER_OF_TEN_09_A	9A Restrict Pointer Usage - Multiple Dereferences	Yes
POWER_OF_TEN_09_B	9B Restrict Pointer Usage - Other	Yes
POWER_OF_TEN_10	10 All Compiler Warnings	Yes