EUROPEAN
SPALLATION
SOURCE

On coding conventions, standards and practices

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Naming and casing

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Problems with current coding convention

```
Stats Stats; // compile error

Stats S; // abbreviations not allowed

auto Stats = Stats(); // personally don’t like ‘auto’, undesirable as member definition?

Stats stats; // would prefer this
```

Indifferent to ‘Function’ or ‘function’, but variables should not clash with typenames.

Naming and casing

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- Alternative casing `k_myVar/c_myVar, m_myVar, g_myVar`
- Possibly enforceable via clang-tidy, if we want to do the work.
- Some codebases used SMyStruct (POD), ZMyClass, IMyInterface, not super important

Globals

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Undefined initialization order

Mitigate C++'s global variable undefined initialization order problem.

If you for some reason need complex globals/singletons then wrap in getter function…

Instead of

```
static MyClass g_MyClass;
```

Consider

```
MyClass& GetMyClass() {
  static MyClass g_MyClass;
  return g_MyClass;
}
```

Runtime lib remembers order of function static initialization

Worse when dealing with DynLib/DLL loading and unloading.

Spacing/indent

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Personal preference for speed reading

```
if (foo (bar))
{
      if (hoge())
      {
            /*Lorem ipsum dolor sit amet, consectetuer adipiscing elit*/
      }
      else if (fuga())
      {
            /*Lorem ipsum dolor sit amet, consectetuer adipiscing elit*/
      }
      else
      {
            /*Lorem ipsum dolor sit amet, consectetuer adipiscing elit*/
      }
}
```

```
MyObject (int a, int b, int c)
: m_a (a)
, m_b (b)
, m_c (c)
{}
```

Spacing/indent

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space

```
if (foo (bar))
{                 no space
    if (hoge())
    {
        /*Lorem ipsum dolor sit amet, consectetuer adipiscing elit*/
    }
    else if (fuga())
    {
        /*Lorem ipsum dolor sit amet, consectetuer adipiscing elit*/
    }
    else
    {
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```

4 “spaces”

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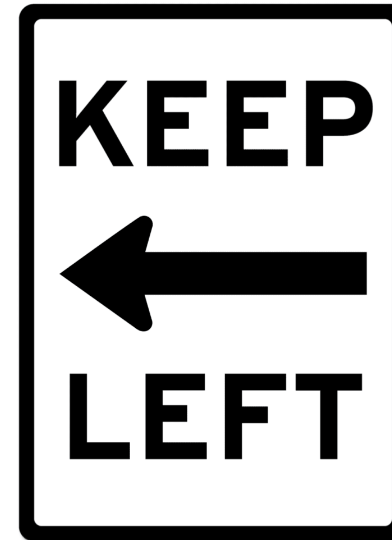

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```
if (foo (bar))
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        }
        else if (
        {
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        }
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                /*L
        } else {
                /*L
        }
}



MyObject(int a
```
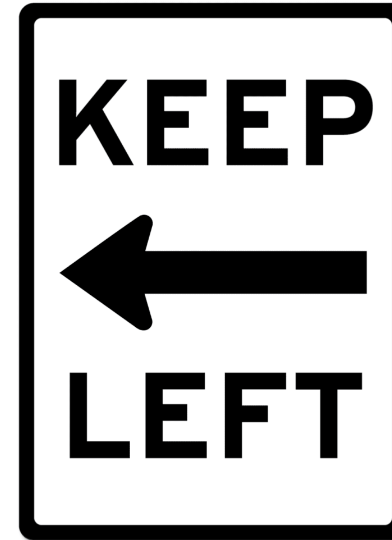

clang-format:
Structure is lost
Have to read RHS



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- Testing: "Negated tests"
  - A parameter telling your test that it must fail, so you can test that tests are fallible, which is required to be useful.

Finish presentation