

Empty statements should be removed

Code Smell
Minor

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Empty statements, i.e. `;`, are usually introduced by mistake, for example because:

- It was meant to be replaced by an actual statement, but this was forgotten.
- There was a typo which lead the semicolon to be doubled, i.e. `;;`.

Noncompliant Code Example

```
void doSomething() {  
    ; // Noncompliant -  
    was used as a kind of TODO marker  
}
```

Compliant Solution

```
void doSomething() {  
}
```

Exceptions

In the case of empty expanded macro and in the case of 2 consecutive semi-colons when one of the two is part of a macro-definition then the issue is not raised.

Example:

```
#define A(x) x;  
#define LOG(x)  
  
void fun() {  
    A(5);  
    LOG(X);  
}
```

See

- MISRA C:2004, 14.3 - Before preprocessing, a null statement shall only occur on a line by itself; it may be followed by a comment provided that the first character following the null statement is a white-space character.

- MISRA C++:2008, 6-2-3 - Before preprocessing, a null statement shall only occur on a line by itself; it may be followed by a comment, provided that the first character following the null statement is a white-space character.
- [CERT, MSC12-C.](#) - Detect and remove code that has no effect or is never executed
- [CERT, MSC51-J.](#) - Do not place a semicolon immediately following an if, for, or while condition
- [CERT, EXP15-C.](#) - Do not place a semicolon on the same line as an if, for, or while statement

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