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TypeScript static code analysis

Unique rules to find Bugs, Vulnerabilities, Security Hotspots, and Code Smells in your TYPESCRIPT code

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Equality operators should not be used in "for" loop termination conditions

Analyze your code

Code Smell

Critical

cwe suspicious

Testing `for` loop termination using an equality operator (`==` and `!=`) is dangerous, because it could set up an infinite loop. Using a broader relational operator instead casts a wider net, and makes it harder (but not impossible) to accidentally write an infinite loop.

Noncompliant Code Example

```
for (var i = 1; i != 10; i += 2) // Noncompliant. Infinite;
{
    //...
}
```

Compliant Solution

```
for (var i = 1; i <= 10; i += 2) // Compliant
{
    //...
}
```

Exceptions

Equality operators are ignored if the loop counter is not modified within the body of the loop and either:

- starts below the ending value and is incremented by 1 on each iteration.
- starts above the ending value and is decremented by 1 on each iteration.

Equality operators are also ignored when the test is against `null`.

```
for (var i = 0; arr[i] != null; i++) {
    // ...
}





for (var i = 0; (item = arr[i]) != null; i++) {
    // ...
}
```

See

- [MITRE, CWE-835](#) - Loop with Unreachable Exit Condition ('Infinite Loop')

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