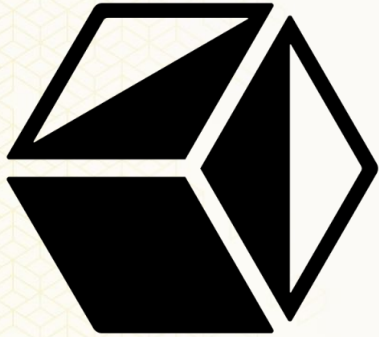


# Better Solidity Support in VSCode

By Hardhat



Hardhat



# NOMIC FOUNDATION

(AKA the **Hardhat** people)



Hardhat

# About me



John Kane

Team Lead *Solidity by Nomic*

[github.com/kanej](https://github.com/kanej)

<https://hardhat.org/discord>

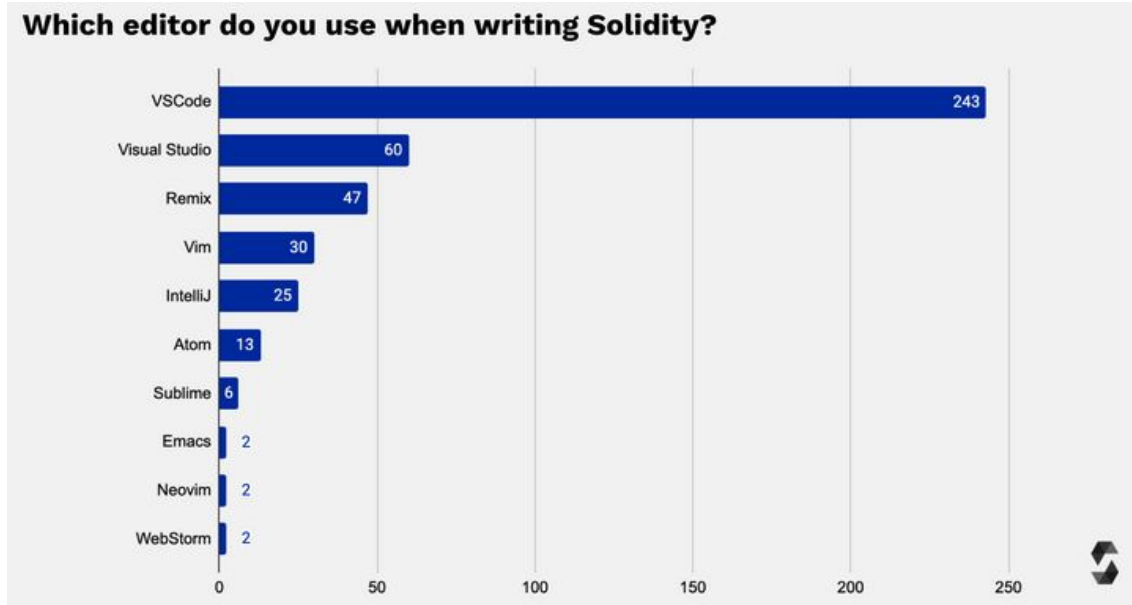
## UK Accent Bingo

-  Hobbit
-  Dwarf
-  Elf



# 01 | **VsCode/Extensions**

# VSCode is **winning**



Visual Studio

Visual Studio Code

Azure DevOps

Subscriptions

Build your own

Publish extensions

solidity



72 Results

Showing: All categories

Sort By: Relevance



**solidity**

Juan Blanco 👤 834K

Ethereum Solidity Language  
for Visual Studio Code



FREE



**Solidity**

Nomic Foundation 👤 45.2K  
nomic.foundation

Solidity and Hardhat support  
by the Hardhat team



FREE

ELEVEN01

**Solidity**

Eleven01 👤 17.5K

Eleven01 Solidity Language  
plugin for Visual Studio Code



FREE



**Solidity Debugger**

Meadow 👤 58.5K

Debugger for Solidity smart  
contracts - powered by the  
Meadow testing and...



FREE



solidity

**Solidity Contract Flatten**

tintinweb 👤 60.3K  
oststrom.com

Flatten Solidity Contracts  
using truffle-flattener



FREE



**Truffle for VS Code**

ConsensSys Software 👤 21.7K  
trufflesuite.com

Build, debug and deploy  
smart contracts on Ethereum  
and EVM-compatible...



FREE



**Solidity Extended**

beaugunderson 👤 77.5K

Solidity support that aims to  
enable all of Visual Studio  
Code's features



FREE



**solidity-solhint**

ilya.drabenia 👤 41.7K

Ethereum Solidity Language  
for Visual Studio Code



FREE



**Solidity Visual Development**

tintinweb 👤 52.9K  
oststrom.com

Ethereum Solidity Language  
customized for developers  
and auditors using Visual...



FREE



**Solidity Language & Theme**

tintinweb 👤 43.8K  
oststrom.com

Solidity Language Support,  
Syntax Highlighting, and  
Themes



FREE

blockchain  
**TRUFFLE**  
HELPER

**Blockchain Truffle Suite**

oliveoverflow 👤 80

add suggestions to truffle  
suite javascript testing files by  
reading solidity contracts



FREE



**Solidity Metrics**

tintinweb 👤 7.8K  
oststrom.com

Solidity Metrics



FREE



Visual Studio

Visual Studio Code

Azure DevOps

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solidity



72 Results

Showing: All categories

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 <b>solidity</b> Juan Blanco <span>👤 834K</span> Ethereum Solidity Language for Visual Studio Code ★★★★★ <span>FREE</span>	 <b>Solidity</b> Nomic Foundation <span>👤 45.2K</span> Solidity and Hardhat support by the Hardhat team ★★★★★ <span>FREE</span>	 <b>Solidity</b> Eleven01 <span>👤 17.5K</span> Eleven01 Solidity Language plugin for Visual Studio Code ★★★★★ <span>FREE</span>	 <b>Solidity Debugger</b> Meadow <span>👤 58.5K</span> Debugger for Solidity smart contracts - powered by the Meadow testing and... ★★★★★ <span>FREE</span>	 <b>Solidity Contract Flatten</b> tintinweb <span>👤 60.3K</span> Flatten Solidity Contracts using truffle-flattener ★★★★★ <span>FREE</span>	 <b>Truffle for VS Code</b> ConsenSys Software <span>👤 21.7K</span> Build, debug and deploy smart contracts on Ethereum and EVM-compatible... ★★★★★ <span>FREE</span>
 <b>Solidity extended</b> beaugunderso <span>👤 77.5K</span> Solidity support that aims to enable all of Visual Studio Code's features ★★★★★ <span>FREE</span>	 <b>solidity-solhint</b> ilya.drabenia <span>👤 41.7K</span> Ethereum Solidity Language for Visual Studio Code ★★★★★ <span>FREE</span>	 <b>Solidity Visual Developer</b> tintinweb <span>👤 52.9K</span> Ethereum Solidity Language customized for developers and auditors using Visual... ★★★★★ <span>FREE</span>	 <b>Solidity Language &amp; Theme</b> tintinweb <span>👤 43.8K</span> Solidity Language Support, Syntax Highlighting, and Themes ★★★★★ <span>FREE</span>	 <b>Blockchain Truffle Suite</b> oliveoverflow <span>👤 80</span> add suggestions to truffle suite javascript testing files by reading solidity contracts ★★★★★ <span>FREE</span>	 <b>Solidity Metrics</b> tintinweb <span>👤 7.8K</span> Solidity Metrics ★★★★★ <span>FREE</span>





Visual Studio

Visual Studio Code

Azure DevOps

Subscriptions

Build your own

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solidity



72 Results

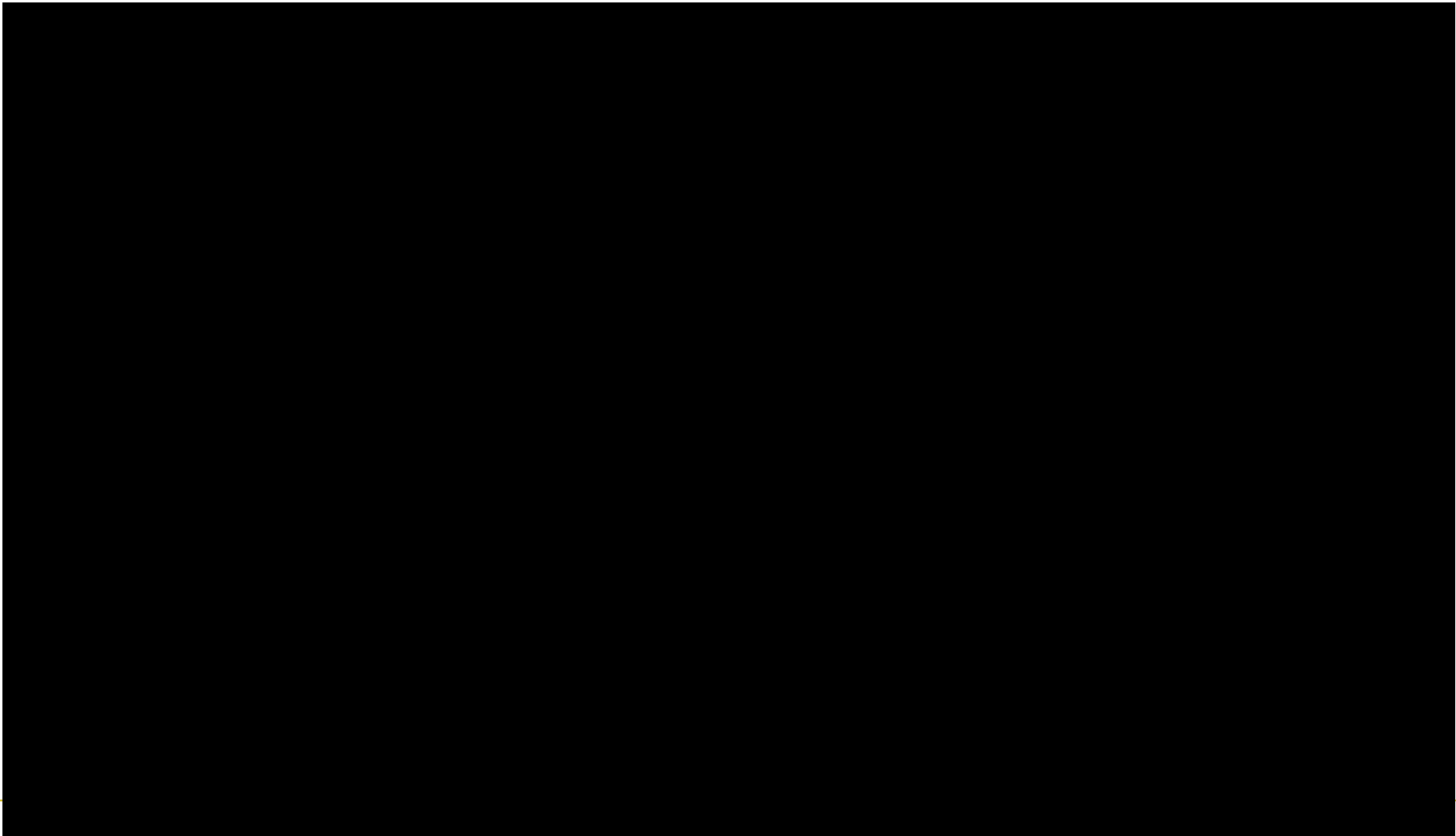
Showing: All categories

Sort By: Relevance

 <p><b>solidity</b> Juan Blanco <span>👤 834K</span></p> <p>Ethereum Solidity Language for Visual Studio Code</p> <p>★★★★★ FREE</p>	 <p><b>Solidity</b> Nomic Foundation <span>👤 45.2K</span> nomic.foundation</p> <p>Solidity and Hardhat support by the Hardhat team</p> <p>★★★★★ FREE</p>	 <p><b>Solidity</b> Eleven01 <span>👤 17.5K</span></p> <p>Eleven01 Solidity Language plugin for Visual Studio Code</p> <p>★★★★★ FREE</p>	 <p><b>Solidity Debugger</b> Meadow <span>👤 58.5K</span></p> <p>Debugger for Solidity smart contracts - powered by the Meadow testing and...</p> <p>★★★★★ FREE</p>	 <p><b>Solidity Contract Flatten</b> tintinweb <span>👤 60.3K</span> oststrom.com</p> <p>Flatten Solidity Contracts using truffle-flattener</p> <p>★★★★★ FREE</p>	 <p><b>Truffle for VS Code</b> ConsenSys Software <span>👤 21.7K</span> trufflesuite.com</p> <p>Build, debug and deploy smart contracts on Ethereum and EVM-compatible...</p> <p>★★★★★ FREE</p>
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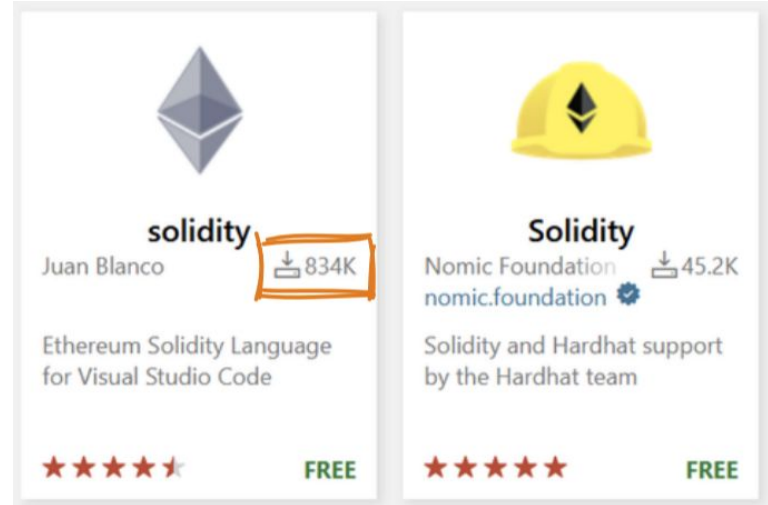






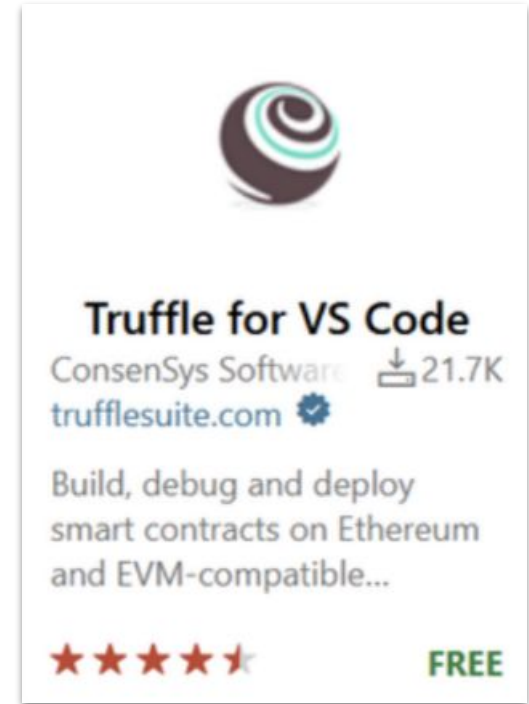
# Solidity by Juan Blanco

- ❑ Syntax highlighting
- ❑ Formatting
- ❑ Navigation
- ❑ Diagnostics

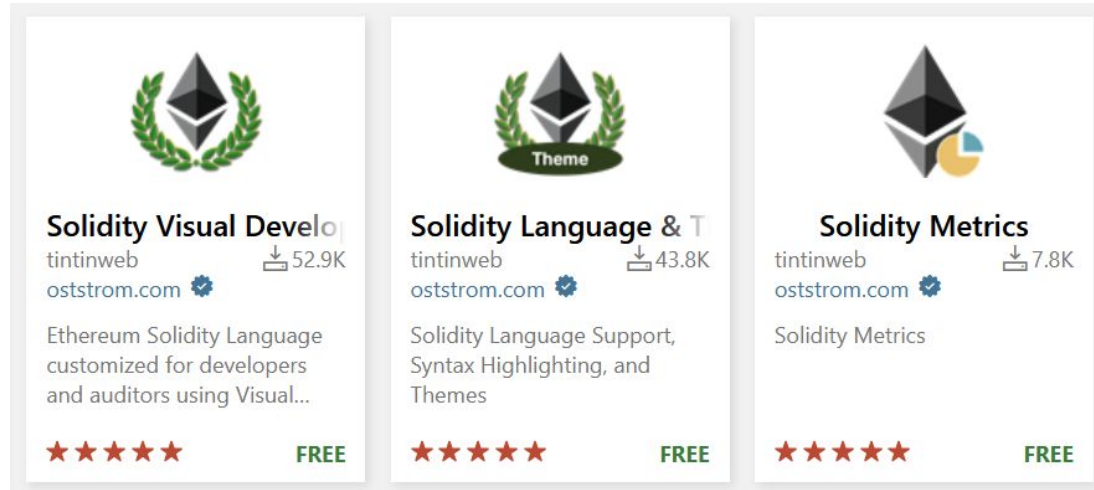


# Truffle for VSCode

- ❑ **Leverages Solidity by Juan Blanco for syntax highlighting, diagnostics, formatting**
- ❑ **UI Integrations with truffle tools**
- ❑ **VSCode integration with Truffle debugger**



# Consensys Diligence



- ❑ **Security centric language features**
- ❑ **Analysis and visualizations to support audits**



The background features a repeating pattern of geometric shapes, specifically cubes and rectangular prisms, arranged in a staggered grid. The pattern is color-coded: the left side is yellow, the right side is purple, and the center is a light gray gradient.

## 02 | **How do we get better?**

# Blockers

- ❏ Feature Fragmentation
- ❏ Feature Brittleness



# Fragmentation

- ❑ By editor - VSCode only
- ❑ By development framework - some features are supported in some development frameworks





# Import Loading

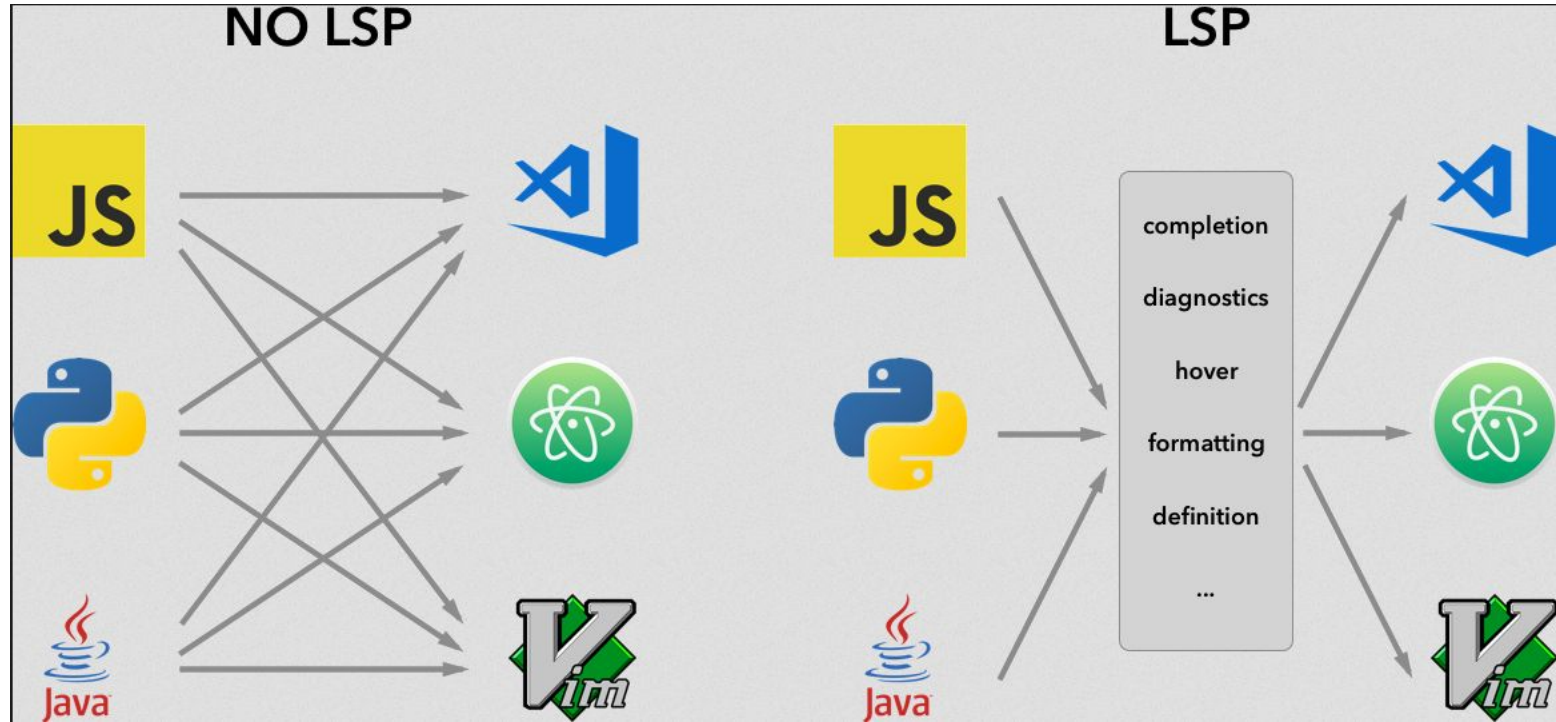
```
contracts > CodeCoin.sol
1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
3
4 import "./Box.sol";
5 import "@openzeppelin/contracts/interfaces/IERC20.sol";
6
7 contract CodeCoin is IERC20 {
8     function totalSupply() external view override returns (uint256) {}
9
10    function balanceOf(address account)
11        external
12        view
13        override
14        returns (uint256)
15    {}
}
```



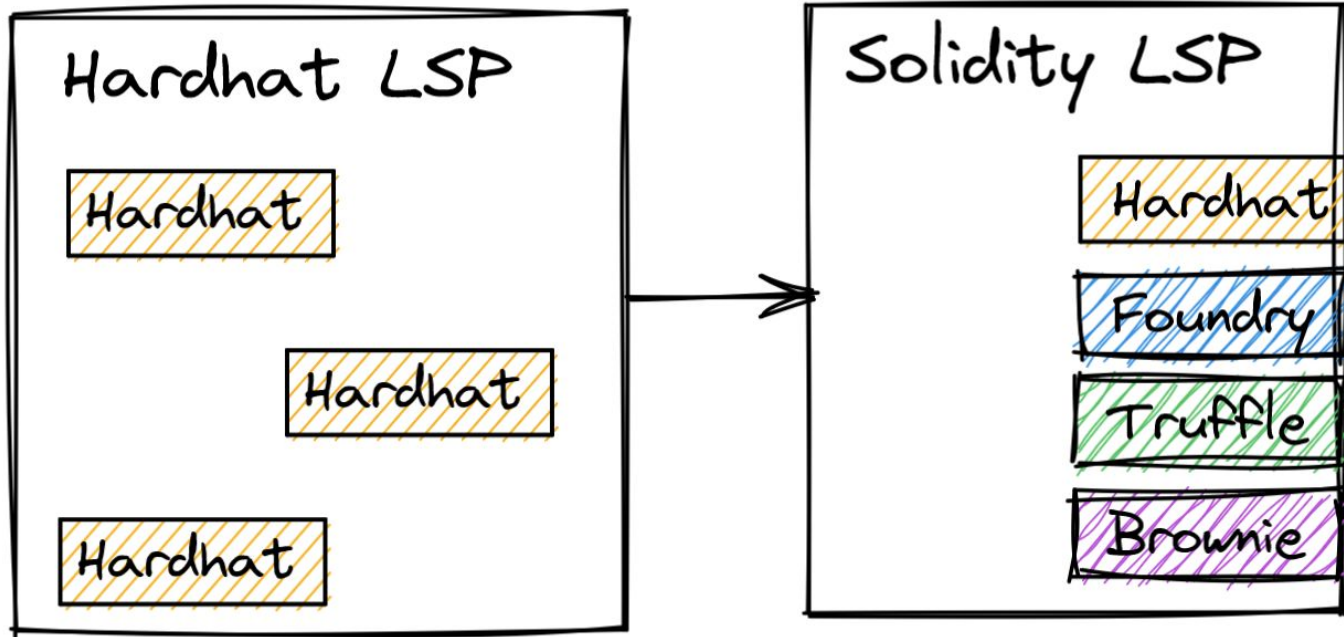
# Use a Language Server

Build a refactoring once, use it everywhere

# Language Server



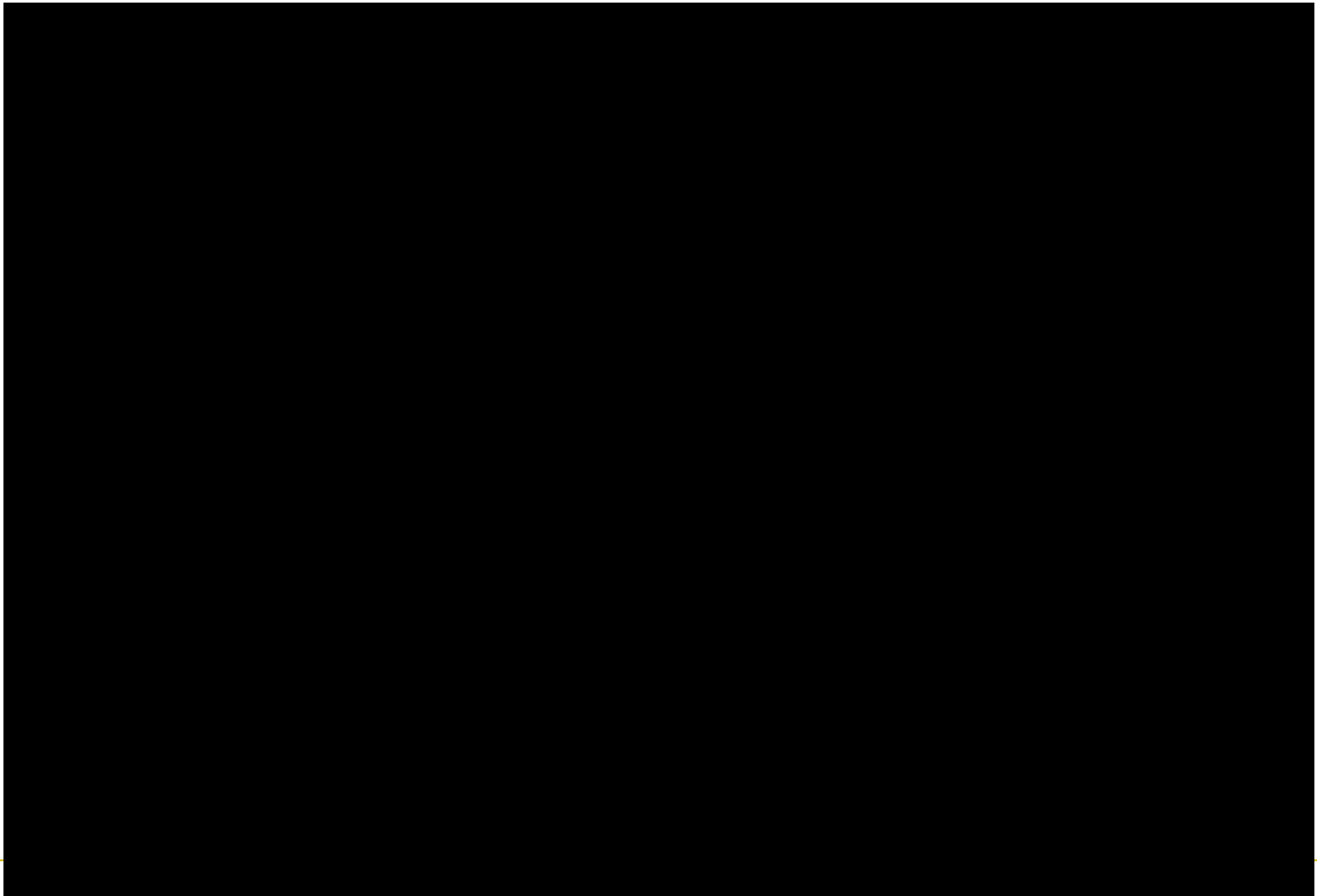
# Eh, what about that Foundry support?



**Why not use solc's?**

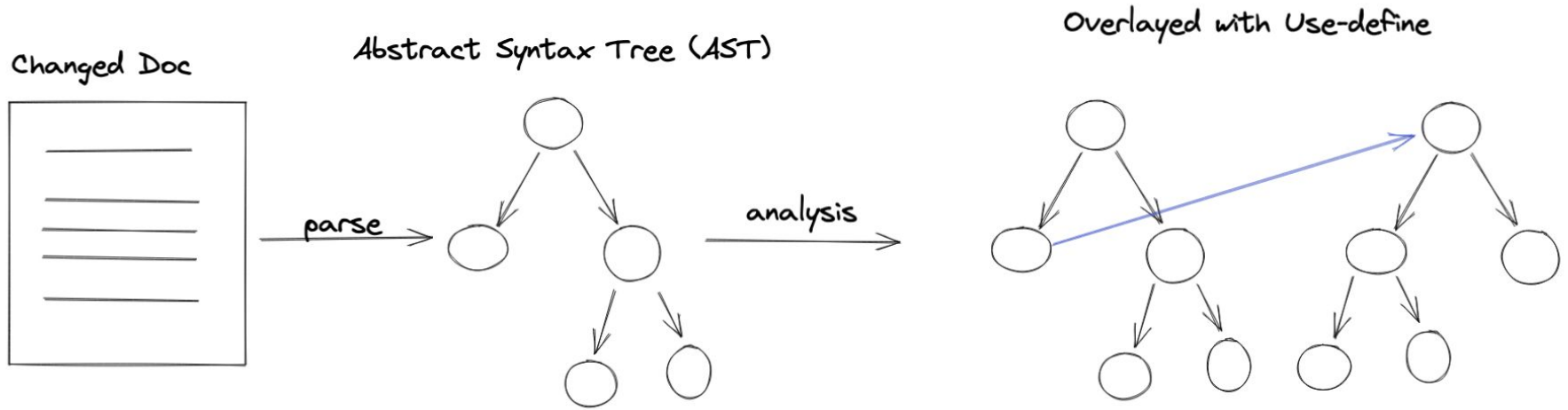


# Feature Brittleness



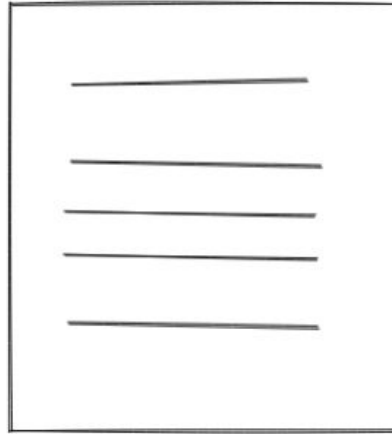


# When we are good we are really good

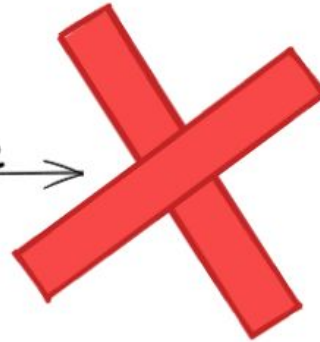


# But when we are bad ...

Changed Doc



parse →





Error List

- \* line 12
- \* line 44

+

Syntax Tree

```
graph TD; A(( )) --> B(( )); A --> C(( ))
```



# Slang's Parser

- ❑ Leverage best practice (roslyn, swift, rust)
- ❑ Produce output in the presence of errors
- ❑ Include incidentals (whitespace, comments)



## 03 | **Summary**



# Hardhat

# Credibly Neutral Language Server



TRUFFLE





# Wen Vim?



**:wq**



