

Open Source is Life

2025

What really is open-source?

Open-source is my life

You depend on open-source

Open standards and open access

What is open-source?

The term open source refers to something people can modify and share because its design is publicly accessible.

**Source code that is shared
online does not make it
open-source.**

Introduction

Open source doesn't just mean access to the source code. The distribution terms of open source software must comply with the following criteria:

1. Open Source Licence 

2. Public source code repository 

3. No hidden dependencies or components 

4. Right to fork or redistribute 

Great examples

Community projects

Explore some of the communities and projects that Apple participates in below.



Kubernetes

Go

Kubernetes is an open-source system for automating deployment, scaling, and management of containerized applications.

[Details](#)[Website](#)

Apache Cassandra

Java

Apache Cassandra® is a non-relational distributed database with a fault-tolerant leaderless architecture.

[Details](#)[Website](#)

LLVM / Clang

C, C++, LLVM-IR, Objective-C, Swift

The LLVM compiler infrastructure supports a wide range of projects, from industrial strength compilers to specialized JIT applications to small research projects.

[Details](#)[LLVM Website](#)

Apache Spark

Scala, Python

Apache Spark™ is a multi-language engine for executing data engineering, data science, and machine learning on single-node machines or clusters.

[Details](#)[Website](#)

Netty

Java

Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers & clients.

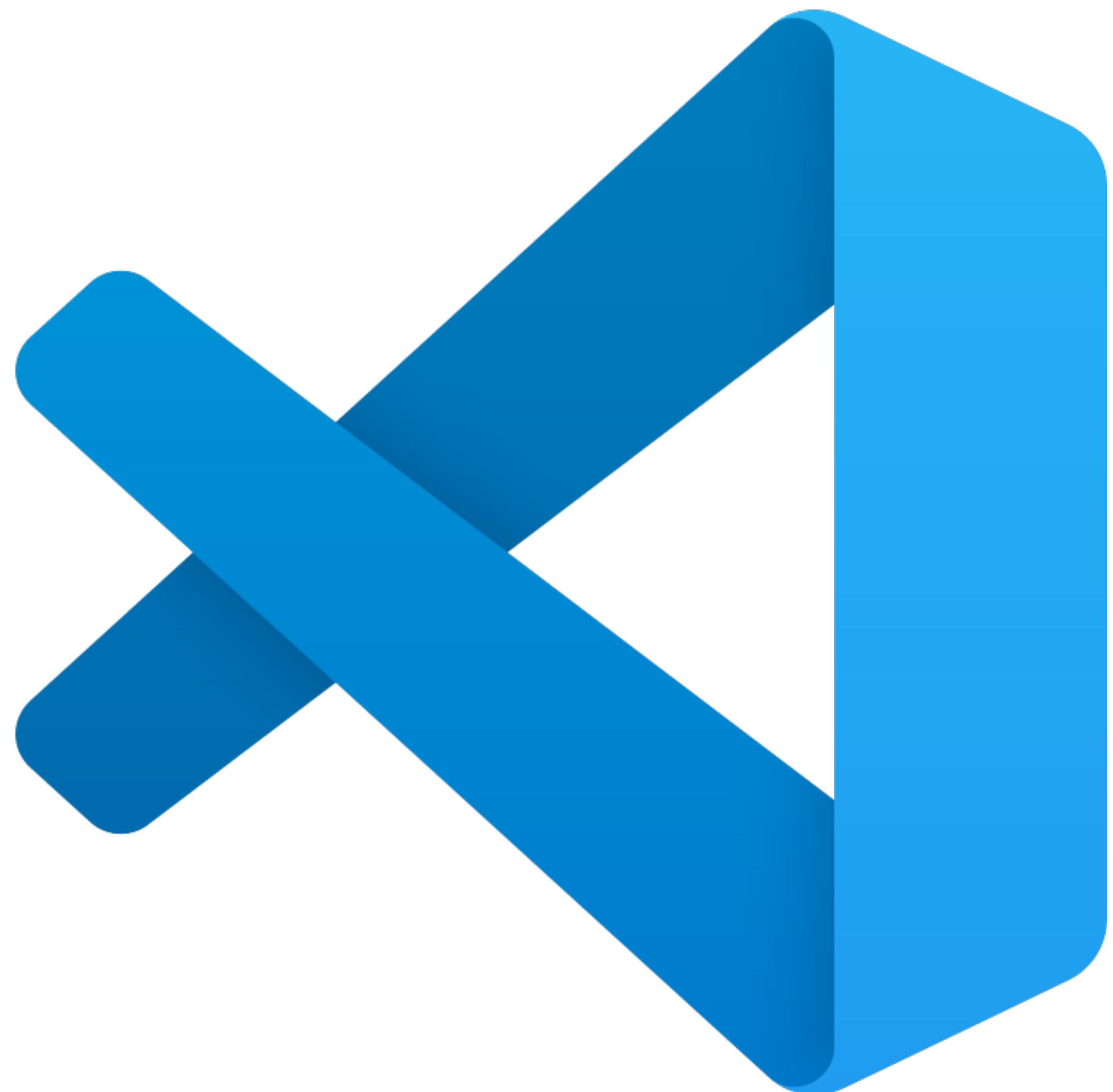
[Details](#)[Website](#)

Apache Solr

Java

Apache Solr™ is the popular, blazing-fast, open source search platform built on Apache Lucene.

[Details](#)[Website](#)



Visual Studio Code forks

1. Visual Studio Code is open-source 

2. People can contribute to it 

3. Fork-able and buildable from source 

4. Version of VS Code downloaded is different

than the open-source version 

Is Forking VS Code a Good Idea?

- **Why Do People Fork VS Code?**
 - **AI-powered tools: Custom UX and Deep AI Integration**
- **Hidden Shortcomings of VS Code Forks**
 - **Loss of access to the VS Code Marketplace**
 - **Proprietary Extensions Become Unusable**
- **Technical shortcomings of forking VS Code: The Maintenance Burden**
 - **A False Sense of Security**
 - **Unpredictable Effort**
 - **Community Isolation**
- **An Alternative Path: Building on Open Frameworks**
- ...

Licences

Copyleft

Copyright

Choose an open source license

An open source license protects contributors and users. Businesses and savvy developers won't touch a project without this protection.

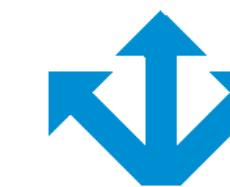
{ Which of the following best describes your situation? }



I need to work in a community.

Use the [license preferred by the community](#) you're contributing to or depending on. Your project will fit right in.

If you have a dependency that doesn't have a license, ask its maintainers to [add a license](#).



I want it simple and permissive.

The [MIT License](#) is short and to the point. It lets people do almost anything they want with your project, like making and distributing closed source versions.

[Babel](#), [.NET](#), and [Rails](#) use the MIT License.



I care about sharing improvements.

The [GNU GPLv3](#) also lets people do almost anything they want with your project, except distributing closed source versions.

[Ansible](#), [Bash](#), and [GIMP](#) use the GNU GPLv3.

{ What if none of these work for me? }

My project isn't software.

[There are licenses for that.](#)

I want more choices.

[More licenses are available.](#)

I don't want to choose a license.

[Here's what happens if you don't.](#)

BDFL

Benevolent Dictator For Life

Open-source is my life



worksofliam / RPG2

< > Code

Pull requests

Actions

Projects

Security

Commits

master ▾

-o Commits on Mar 7, 2013

Stamina Recharges/Consumed Slower ⚙

 Aibakins committed on Mar 8, 2013

-o Commits on Mar 3, 2013

Fixes ⚙

 worksofliam committed on Mar 3, 2013

Little change ⚙

 worksofliam committed on Mar 3, 2013

Book with stats + Players not taking damage fix ⚙

 worksofliam committed on Mar 3, 2013

New feature: Bank Cheques ⚙

 worksofliam committed on Mar 3, 2013

Open-source is bigger than me

Is it a religion?

codefori / **vscode-ibmi**

Code Issues 75 Pull requests 8 Discussions Actions Security 4 ⋮

vscode-ibmi Public Edit Pins Unwatch 26 Fork 105 Starred 316 ⋮

master Go to file + <> Code About

 **sebjulliand** Merge pull request #2674 fr... 44b745f · 4 days ago

 .github Update pull_request_templ... 4 days ago

 .vscode The ability to preconfigure a... 6 months ago

 l10n Show system name in notifi... 6 months ago

 schemas Added a CompletionItemPr... last year

 src Show target path in notificat... 4 days ago

About

IBM i development extension for VS Code

codefori.github.io/docs/#/

vscode cobol vscode-extension
rpgle ibmi as400 iseries

Readme MIT license Activity



Core

About

Core developers. Used for PRs and discussion

Find a member...

6 members 0 child team members



LJ worksofliam



Sébastien Julliand sebjulliand



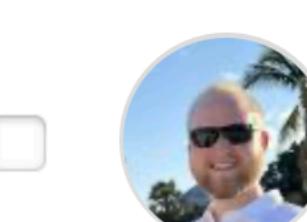
Christian Jorgensen chrjorgensen



Julia Yan julesyan



Sanjula Ganepola SanjulaGanepola



Joseph Wright Wright4i

Everyone can have a say

Open-standards

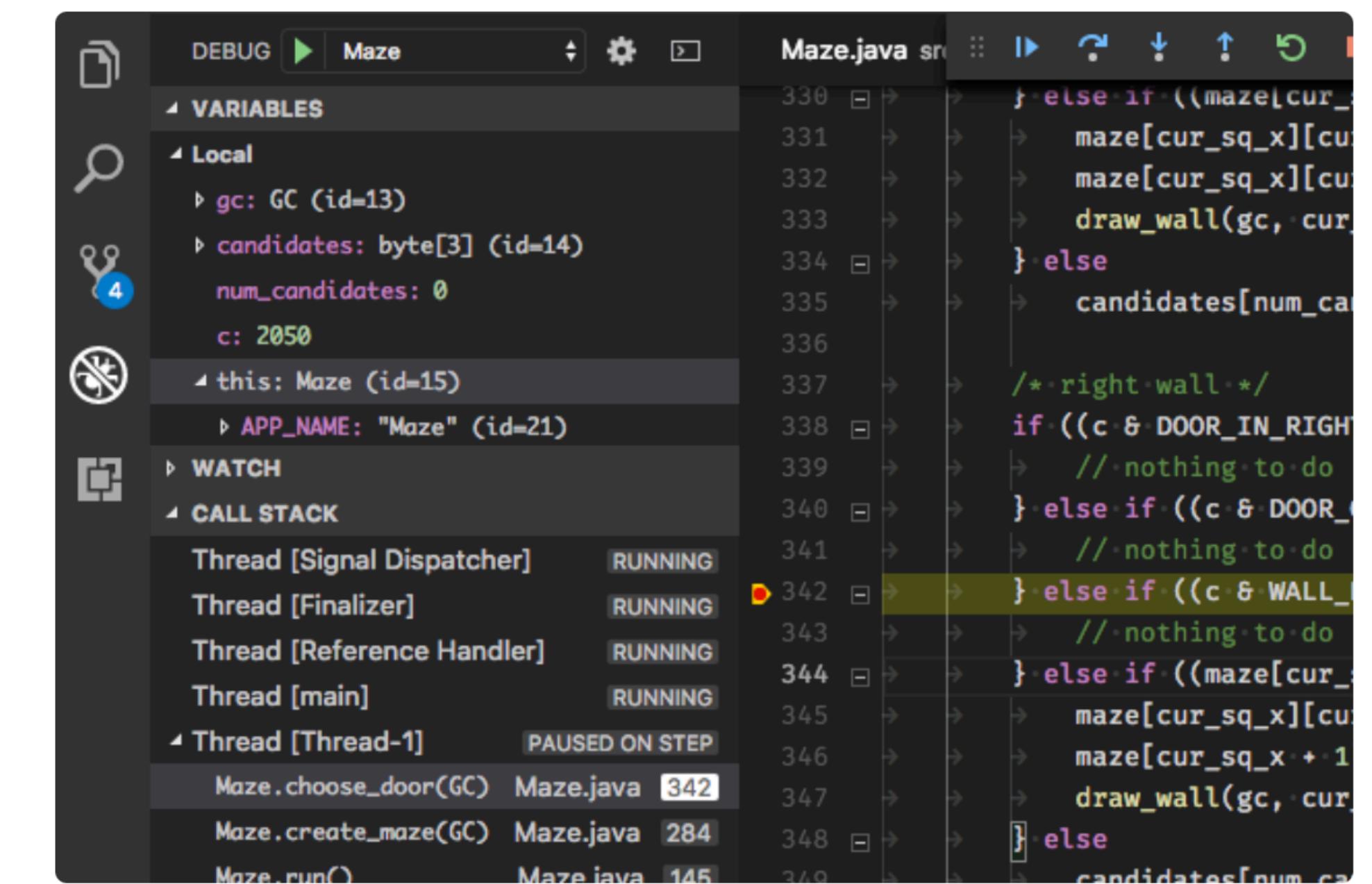
What is the Debug Adapter Protocol?

Adding a debugger for a new language to an IDE or editor is not only a significant effort, but it is also frustrating that this effort can not be easily amortized over multiple development tools, as each tool uses different APIs for implementing the same feature.

The idea behind the *Debug Adapter Protocol* (DAP) is to abstract the way how the debugging support of development tools communicates with debuggers or runtimes into a protocol. Since it is unrealistic to assume that existing debuggers or runtimes adopt this protocol any time soon, we rather assume that an intermediary component - a so called *Debug Adapter* - adapts an existing debugger or runtime to the Debug Adapter Protocol.

The Debug Adapter Protocol makes it possible to implement a generic debugger for a development tool that can communicate with different debuggers via Debug Adapters. And Debug Adapters can be re-used across multiple development tools which significantly reduces the effort to support a new debugger in different tools.

The *Debug Adapter Protocol* is a win for both debugger providers and tooling vendors!



A screenshot of the VS Code interface during multi-thread debugging. The top bar shows 'DEBUG' and the current file 'Maze'. The left sidebar has icons for file, search, and four threads. The main area has three sections: 'VARIABLES' (Local variables like gc, candidates, num_candidates, c, this), 'WATCH' (empty), and 'CALL STACK' (listing several threads: Signal Dispatcher, Finalizer, Reference Handler, main, and Thread [Thread-1] which is highlighted and labeled 'PAUSED ON STEP'). To the right is the code editor with Java code for 'Maze.java'.

```
else if ((maze[cur_sq_x][cur_sq_y] & DOOR_IN_UP) != 0) {  
    maze[cur_sq_x][cur_sq_y] |= WALL_UP;  
    draw_wall(gc, cur_sq_x, cur_sq_y);  
}  
else if ((c & DOOR_IN_RIGHT) != 0) {  
    // nothing to do  
}  
else if ((c & DOOR_IN_LEFT) != 0) {  
    // nothing to do  
}  
else if ((c & WALL_UP) != 0) {  
    // nothing to do  
}  
else if ((maze[cur_sq_x][cur_sq_y] & WALL_UP) != 0) {  
    maze[cur_sq_x][cur_sq_y] |= DOOR_IN_UP;  
    draw_wall(gc, cur_sq_x, cur_sq_y);  
}  
else if ((maze[cur_sq_x][cur_sq_y] & WALL_DOWN) != 0) {  
    maze[cur_sq_x][cur_sq_y] |= DOOR_IN_DOWN;  
    draw_wall(gc, cur_sq_x, cur_sq_y);  
}  
else if ((maze[cur_sq_x][cur_sq_y] & WALL_LEFT) != 0) {  
    maze[cur_sq_x][cur_sq_y] |= DOOR_IN_LEFT;  
    draw_wall(gc, cur_sq_x, cur_sq_y);  
}  
else if ((maze[cur_sq_x][cur_sq_y] & WALL_RIGHT) != 0) {  
    maze[cur_sq_x][cur_sq_y] |= DOOR_IN_RIGHT;  
    draw_wall(gc, cur_sq_x, cur_sq_y);  
}  
}  
}
```

VS Code's multi-thread debugging powered by the Java Debug Adapter

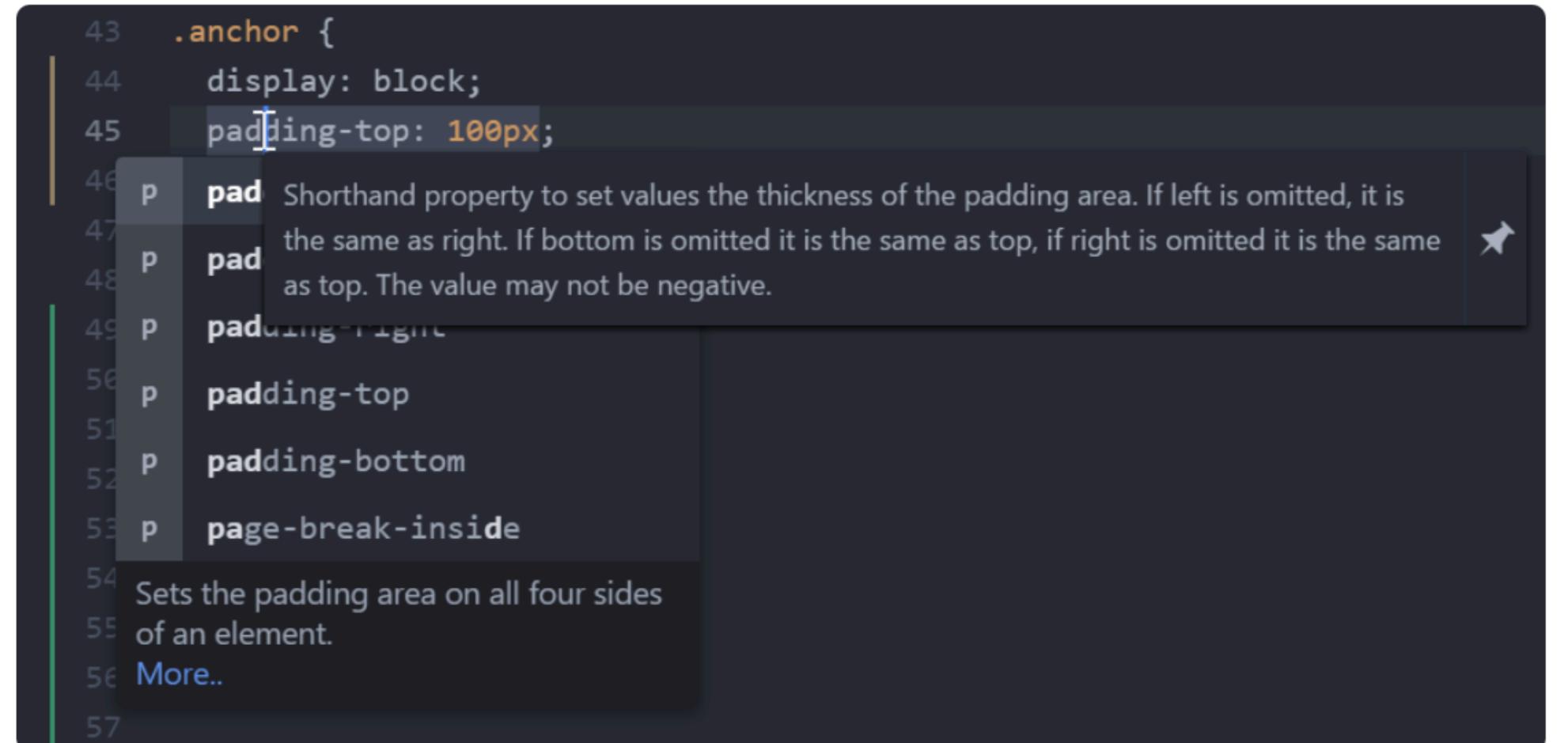
What is the Language Server Protocol?

Adding features like auto complete, go to definition, or documentation on hover for a programming language takes significant effort. Traditionally this work had to be repeated for each development tool, as each tool provides different APIs for implementing the same feature.

A *Language Server* is meant to provide the language-specific smarts and communicate with development tools over a protocol that enables inter-process communication.

The idea behind the *Language Server Protocol (LSP)* is to standardize the protocol for how such servers and development tools communicate. This way, a single *Language Server* can be re-used in multiple development tools, which in turn can support multiple languages with minimal effort.

LSP is a win for both language providers and tooling vendors!



A screenshot of the Atom code editor interface. A tooltip is open over the word 'padding-top' in a line of CSS code. The tooltip contains the following information:

```
43 .anchor {  
44   display: block;  
45   padding-top: 100px;  
46 P pad Shorthand property to set values the thickness of the padding area. If left is omitted, it is  
47 P pad the same as right. If bottom is omitted it is the same as top, if right is omitted it is the same  
48 P padding-right as top. The value may not be negative.  
49 P padding-top  
50 P padding-bottom  
51 P page-break-inside  
52  
53 Sets the padding area on all four sides  
54 of an element.  
55 More..  
56  
57
```

The code being edited is:

```
.anchor {  
  display: block;  
  padding-top: 100px;
```

CSS code complete in Atom powered by the CSS LSP Server



Model Context Protocol

modelcontextprotocol.io

OPEN BANKING

April API performance

99.48%

Average API Availability

351ms

Average API Response Time

99.37%

Successful API Calls (%)

99.55%

Average API availability – weighted

1990.1m

Successful API Calls Actual

0.63%

Failed API Calls

See all latest figures >

<https://www.openbanking.org.uk/>

<https://stripe.com/resources/more/open-banking-regulation-explained-a-guide>

A single standardisation approach (methodology, process, repository) to be used by all financial standards initiatives

ISO 20022



LEARNING MADE EASY

SWIFT 6th Limited Edition

ISO 20022

for
dummies[®]
A Wiley Brand



Benefit from
ISO 20022

Understand how
ISO 20022 can help you

Contribute to
ISO 20022

Compliments
of
 Swift

The SWIFT Standards Team