Visual Studio Code

Tips and Tricks

Foreword

📝 Contribute on GitHub

🔗 View Online neave.dev/vscode

⬇️ Download PowerPoint and PDF

What is VS Code?

> Visual Studio Code is a free code editor that is optimized for building and debugging modern web and cloud applications.

You can run it on Windows, Linux, Mac or Online

https://vscode.dev

Key Features:

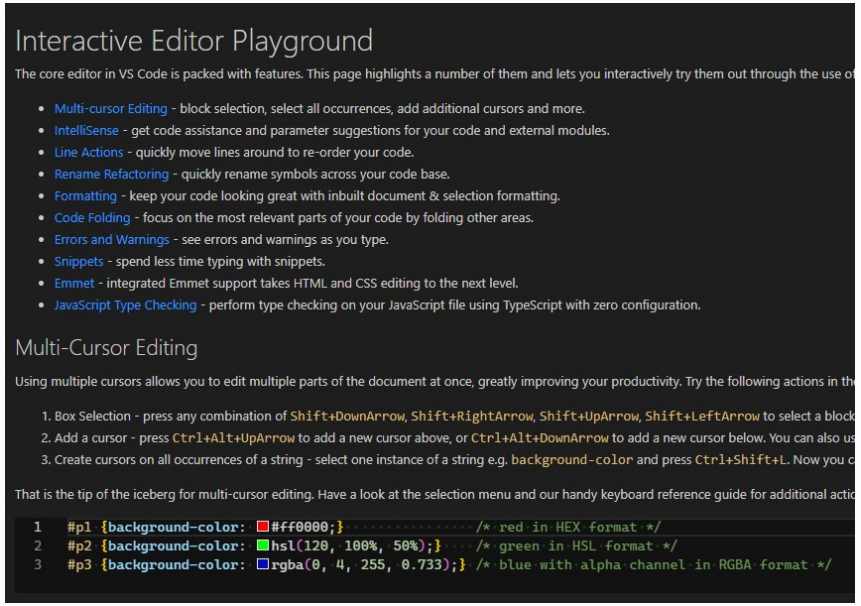
- It supports a range of languages,
- Productivity shortcut circuits
  - Keyboard shortcuts
  - Tasks
  - Snippets
- Customizable with
  - Themes
  - Extensions
- Integrated terminal.

Documentation and Updates

- Official Documentation
  - Intro Videos
  - Tips and Tricks
  - Updates
- VSCode YouTube Channel

Inbuilt Features

Help Menu

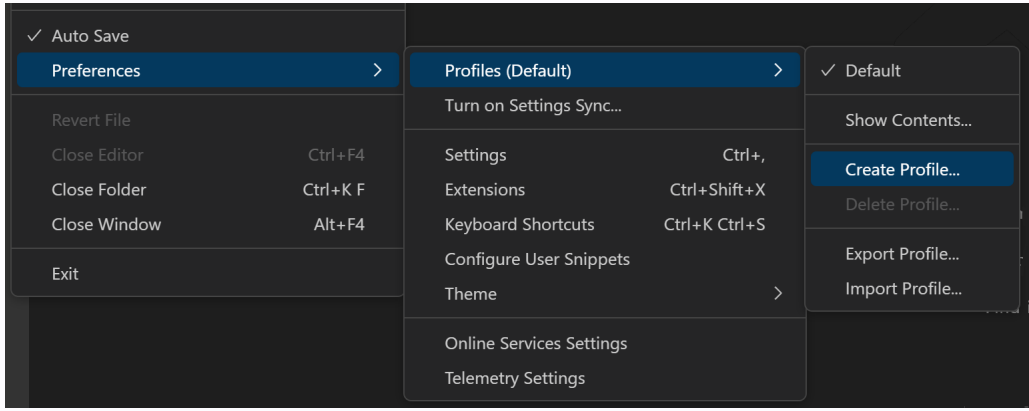
- Keyboard shortcut reference
- Walkthroughs
- Interactive Editor Playground
  - 

Settings

Profiles

VS Code has a Default Profile. You can have additional profiles.

Customize Settings, Keyboard Shortcuts, User Snippets, User Tasks or Extensions



- Have a profile for Frontend, Backend, AWS and Azure or even for a project.
- Customize the profile for a stack ie (Jira, AWS and Python).
- You could install the tools and extensions as part of that project.

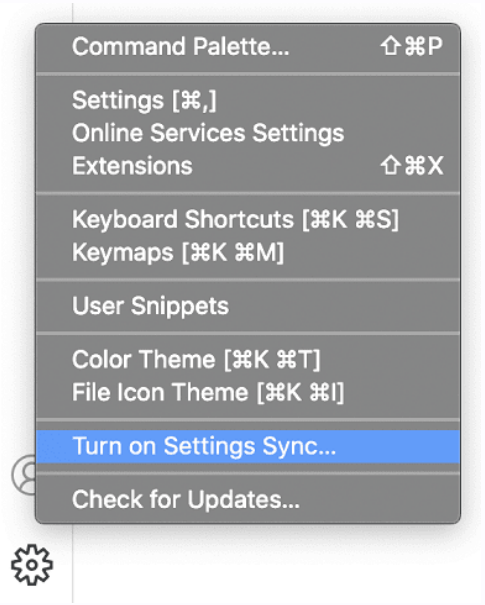
Customisation

- Default settings or open `Preferences: Open Default Settings (JSON)`
- Customize it with User settings - `Ctrl+P` and go to `Open User Settings (JSON)`

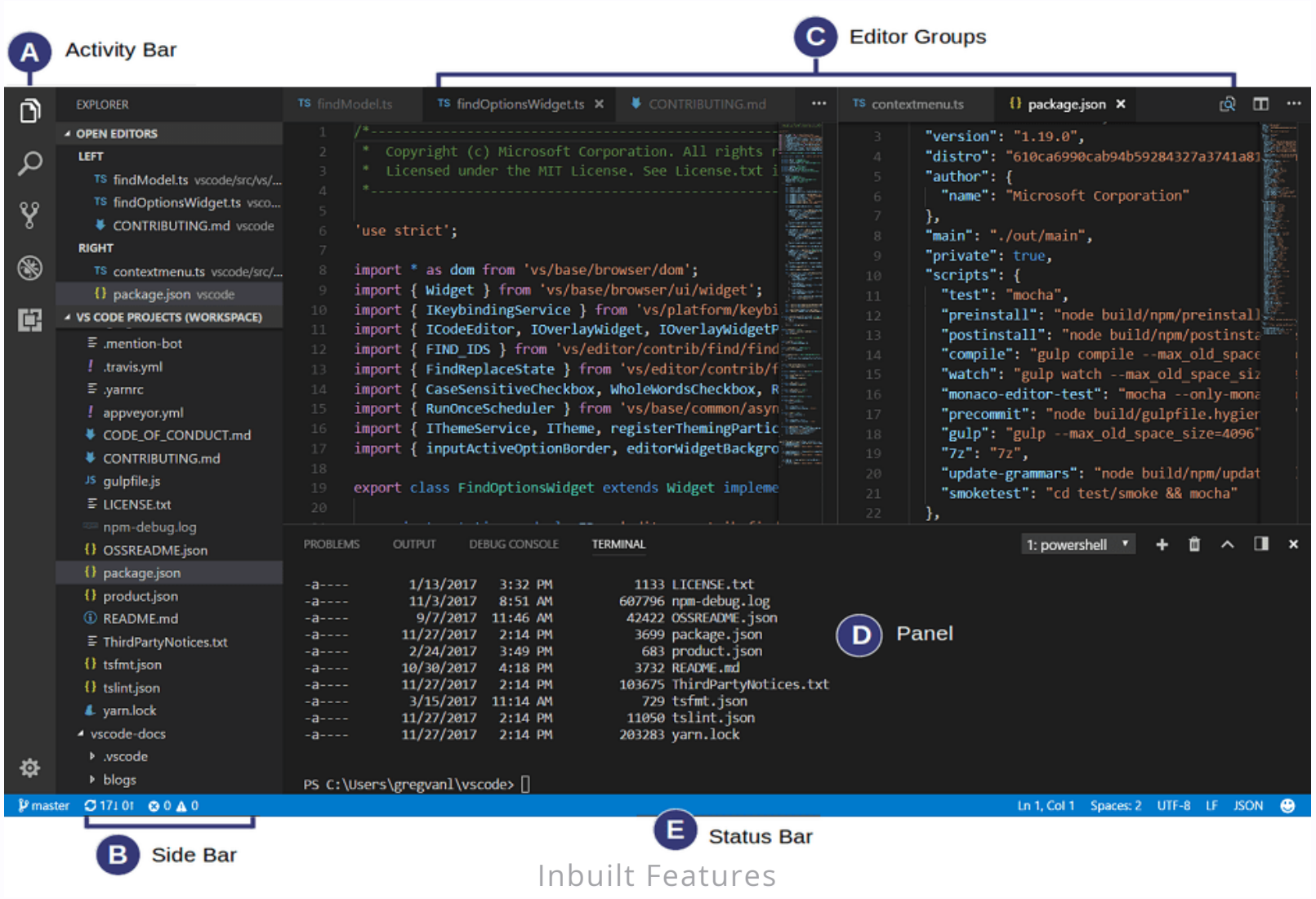
```
{
  "editor.fontFamily": "'Cascadia Code'",
  "editor.formatOnSave": true,
  "editor.rulers": [ 120 ],
  "editor.stickyScroll.enabled": true,
  "editor.trimAutoWhitespace": true,
  "explorer.fileNesting.enabled": true,
  "files.trimTrailingWhitespace": true,
  "git.branchPrefix": "yourusername/",
  "terminal.integrated.fontFamily": "'CaskaydiaCove Nerd Font Mono','Cascadia Code',Consolas,'Courier New',monospace",
  "workbench.sideBar.location": "right"
}
```

Synchronized Settings

Settings sync cross multiple instances of VS Code



Layout


A Activity Bar
C Editor Groups
EXPLORER
OPEN EDITORS
LEFT
findModel.ts vscode/src/vs/...
findOptionsWidget.ts vsco...
CONTRIBUTING.md vscode
RIGHT
contextmenu.ts vscode/src/...
package.json vscode
VS CODE PROJECTS (WORKSPACE)
.mention-bot
.travis.yml
.yarnrc
appveyor.yml
CODE_OF_CONDUCT.md
CONTRIBUTING.md
gulpfile.js
LICENSE.txt
npm-debug.log
OSSREADME.json
package.json
product.json
README.md
ThirdPartyNotices.txt
tsfmt.json
tslint.json
yarn.lock
vscode-docs
.vscode
blogs
findModel.ts
findOptionsWidget.ts
CONTRIBUTING.md
contextmenu.ts
package.json
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
1: powershell
D Panel
PS C:\Users\gregvanl\vscode>
master
Ln 1, Col 1
Spaces: 2
UTF-8
LF
JSON
B Side Bar
E Status Bar

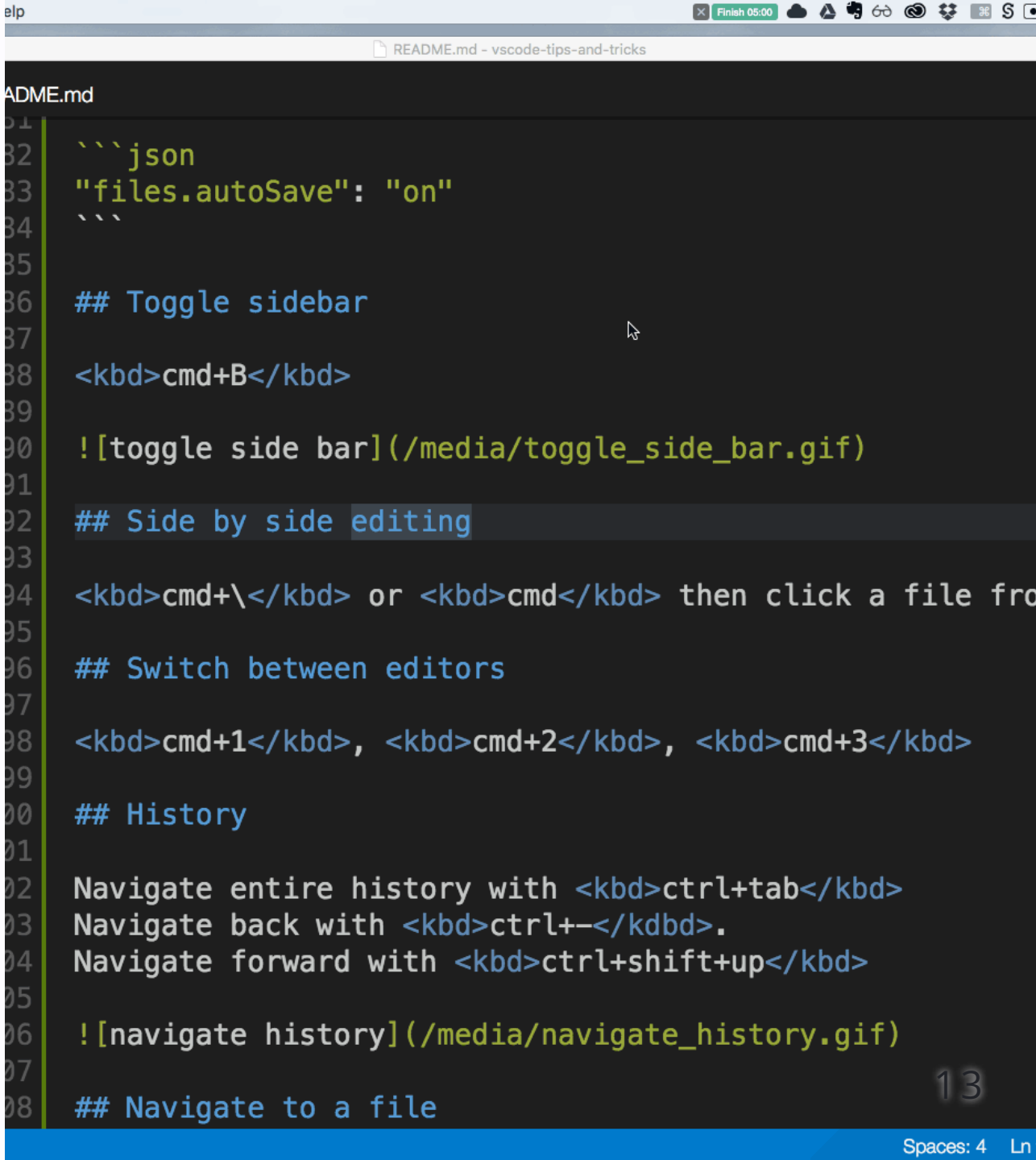
Customize the layout

- You could move the sidebar to the right then when you `Toggle Sidebar/Ctrl+B` it doesn't make the code jump around.
- Add a secondary sidebar with Outline view for better navigation.

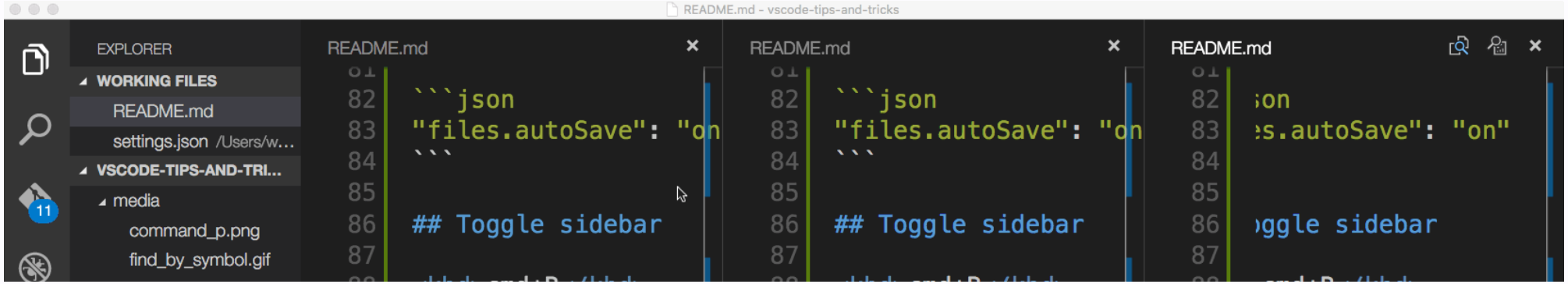
Grouping

`Ctrl+\`

Inbuilt Features



Switch to next group with `Ctrl+[1,2,3...]`



Alternatively: `Ctrl+P` and `View: Move Editor to Next Group`

Navigation

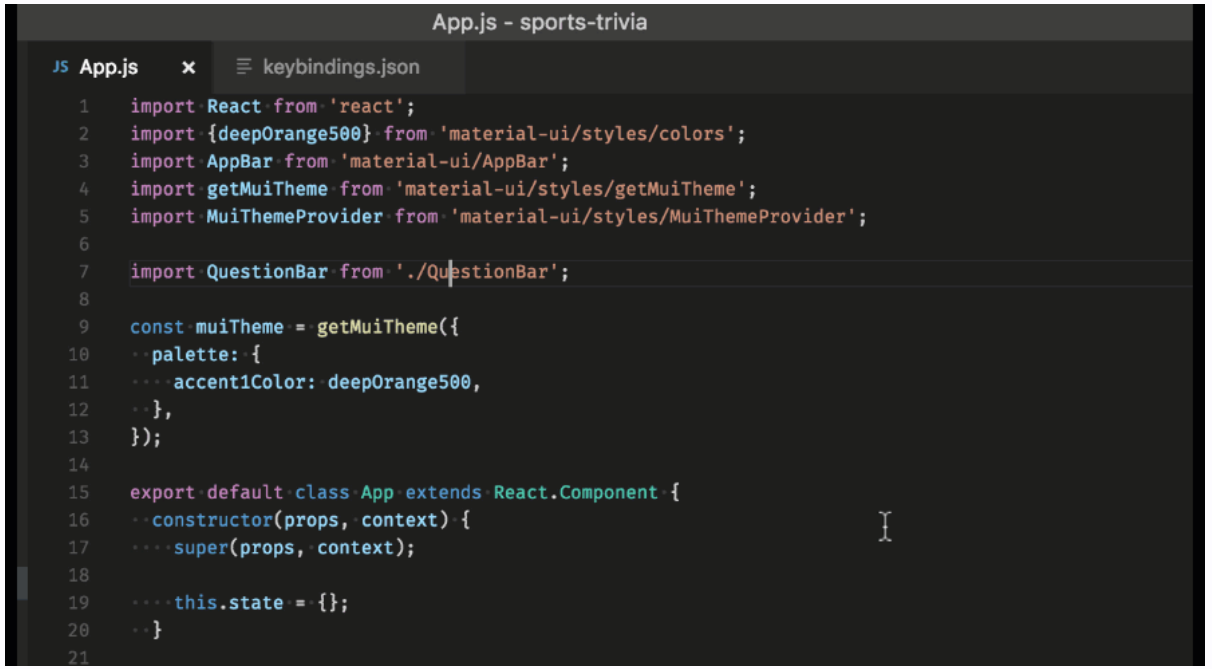
`Ctrl+R` Displays a Quick Pick dropdown with the list from `File > Open Recent` with recently opened folders and workspaces followed by files.

Multi-Root Workspaces

Normally your workspace has a single root/project folder but you can have a workspace with multiple project folders in Visual Studio Code with multi-root workspaces. Uses a `.code-workspace` file

```
{
  "folders": [
    {
      // Source code
      "name": "Product",
      "path": "vscode"
    },
    {
      // Docs and release notes
      "name": "Documentation",
      "path": "vscode-docs"
    },
    {
      // Yeoman extension generator
      "name": "Extension generator",
      "path": "vscode-generator-code"
    }
  ]
}
```

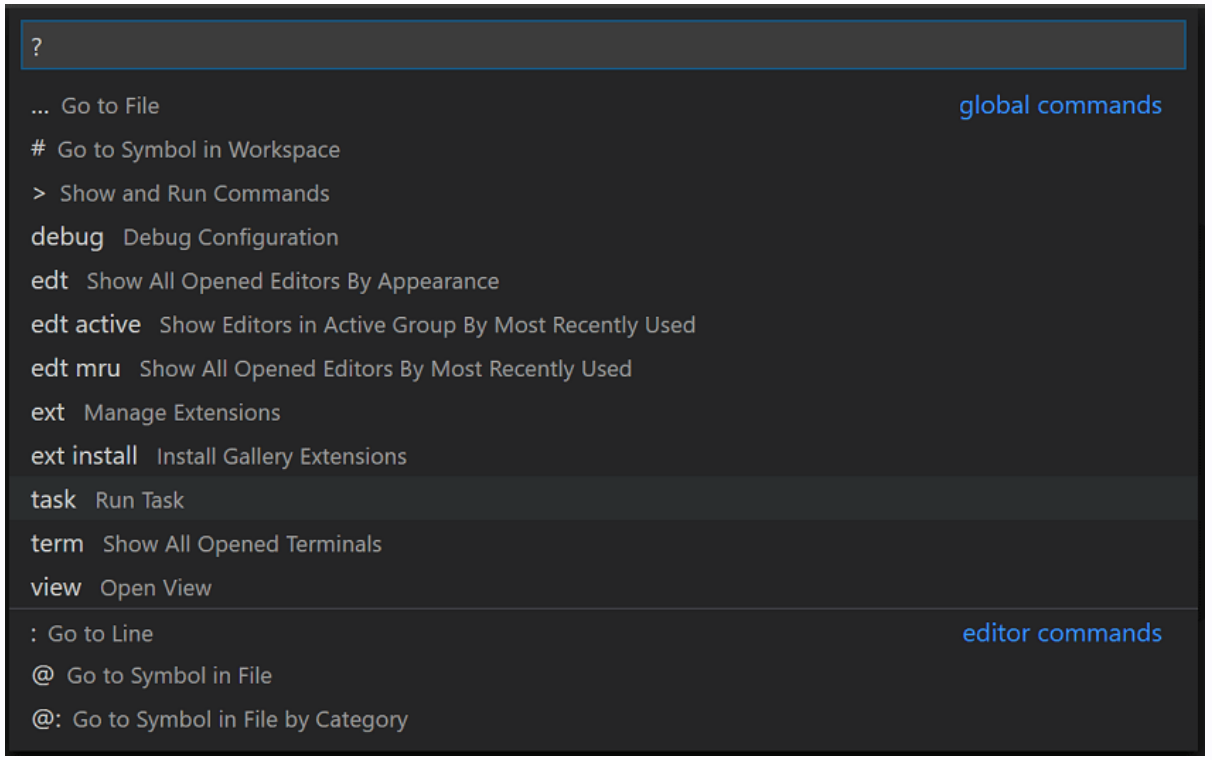
Command Palette



`Ctrl+Shift+P`

Quick Open File

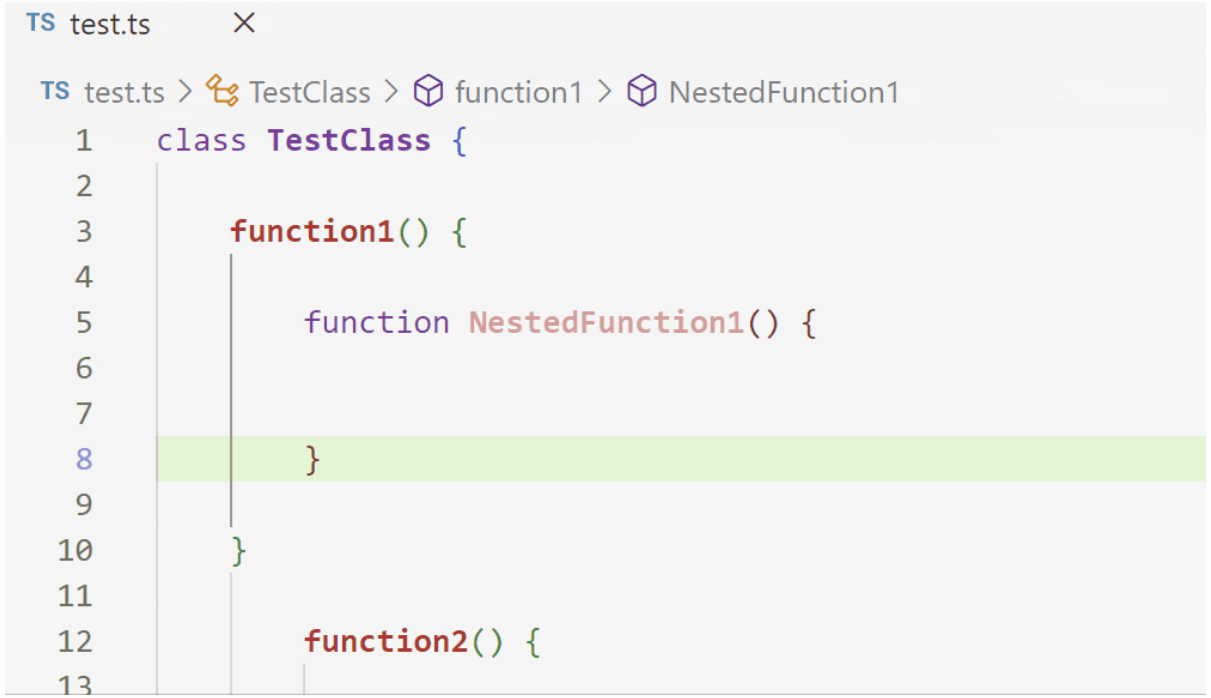
`Ctrl+P`



`Ctrl+P` and type `?term` to open a new terminal

Sticky Scroll

See the code context with Sticky Scroll - useful for long methods



Others

`Ctrl+T` - Go To Symbol

`Ctrl+G` - Go to Line

`Alt+ ← / →` - Jump forward and back

Editing

Text Manipulation

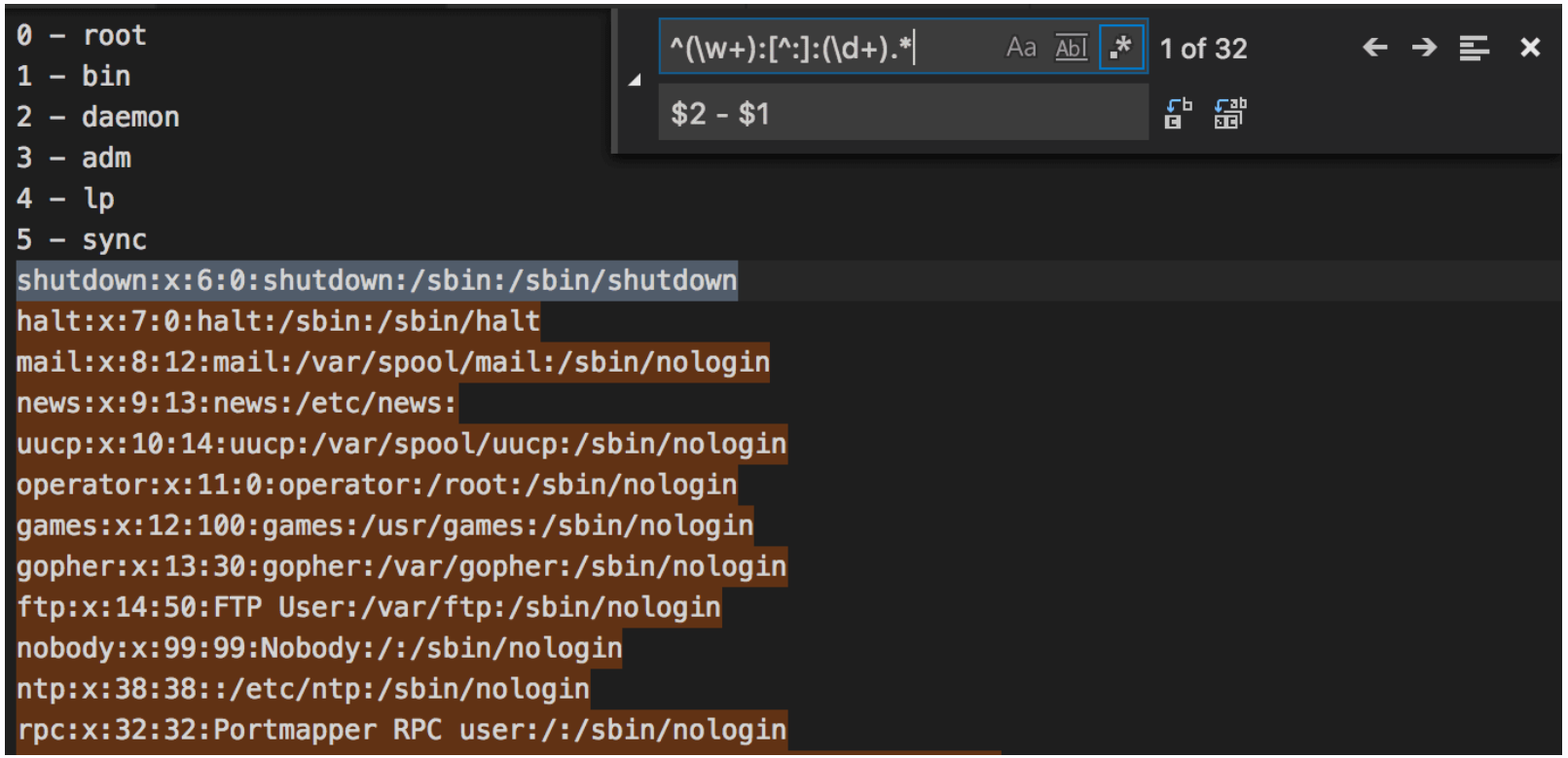
- Sort Lines Ascending/Descending
- Join Lines
- Transform Text

Tranform	Example
Title	Hello World
Upper	HELLO WORLD
Lower	hello world
Camel	helloWorld
Snake	helloWorld → hello_world
Kebab	helloWorld → hello-world

Code Formatting

```
render() {
    return (
        <div className={s.app}>
            <AppBar
              title="Notes"
            iconClassNameRight="muidocs-icon-navigation-expan
              />
              <div style={{
                            marginTop: 20,
              marginLeft: 20
              }}>
                  <NewNote />
        <Notes items={this.state.notes}/>
            </div>
                    </div>
    );
}
```

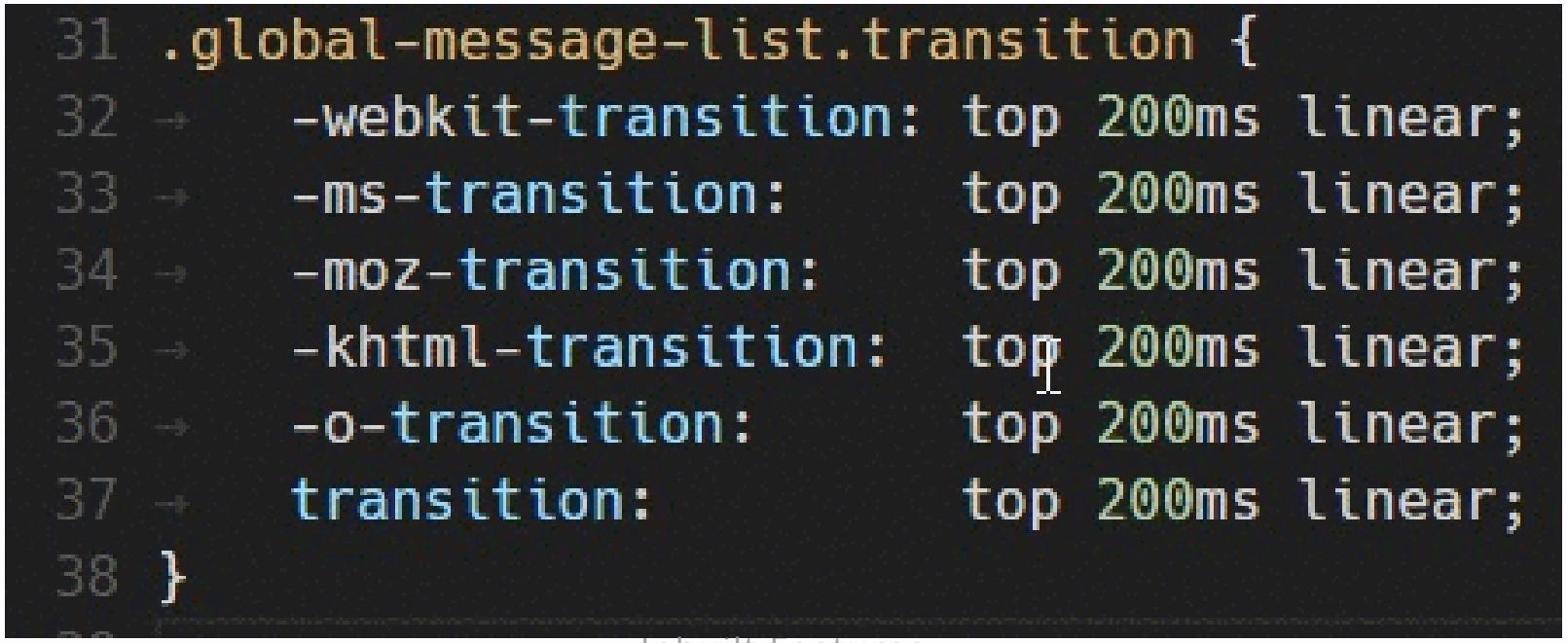
Regex Search and Replace



Multi Cursor

Edit Text Vertically with multi-cursor

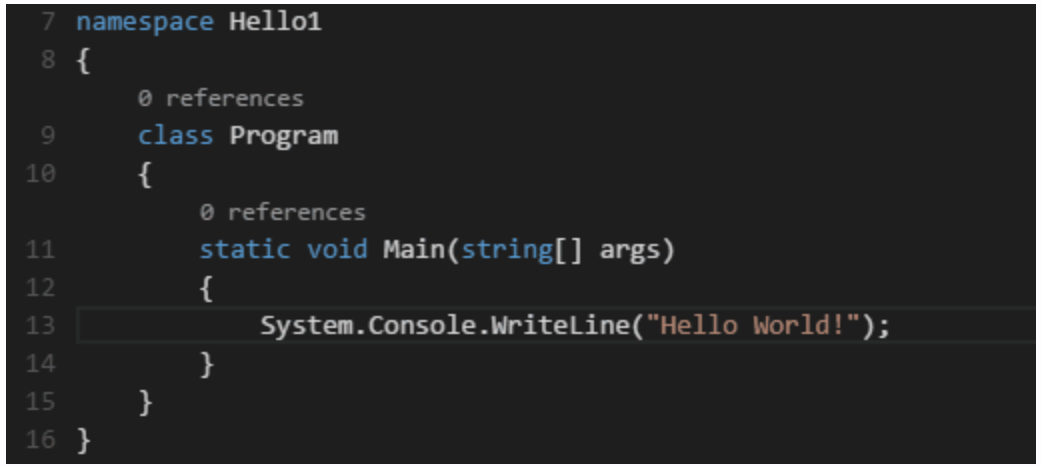
Keep selecting text with `Ctrl+D` and update over multiple locations in a file.



Expanding and Shrinking Selection

Shift+Alt+Left and Shift+Alt+Right

Great for finding the start and end of a long `<div>`

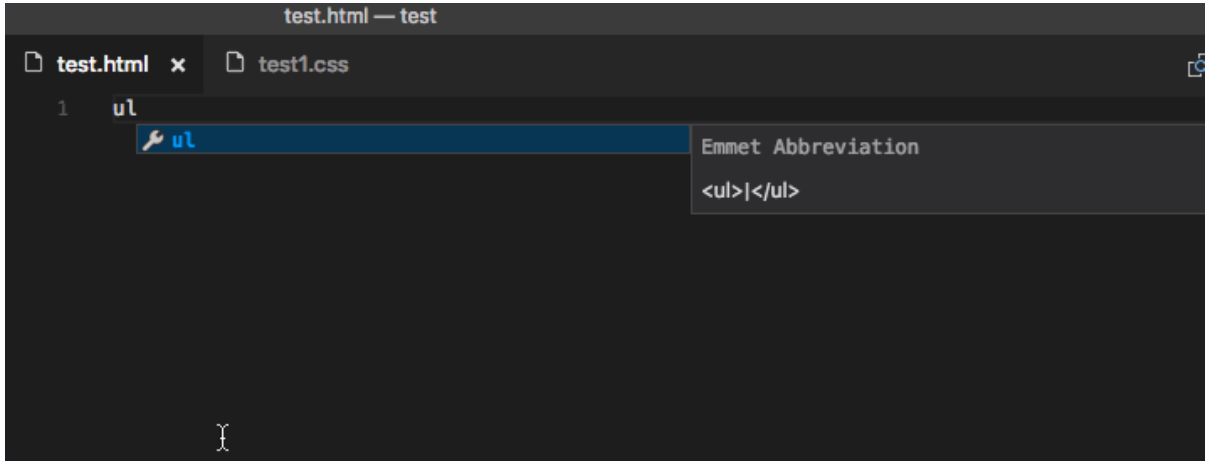


Folding

Hide Text for easier reading

Fold Level [1|2|3|4], Fold All, Unfold All

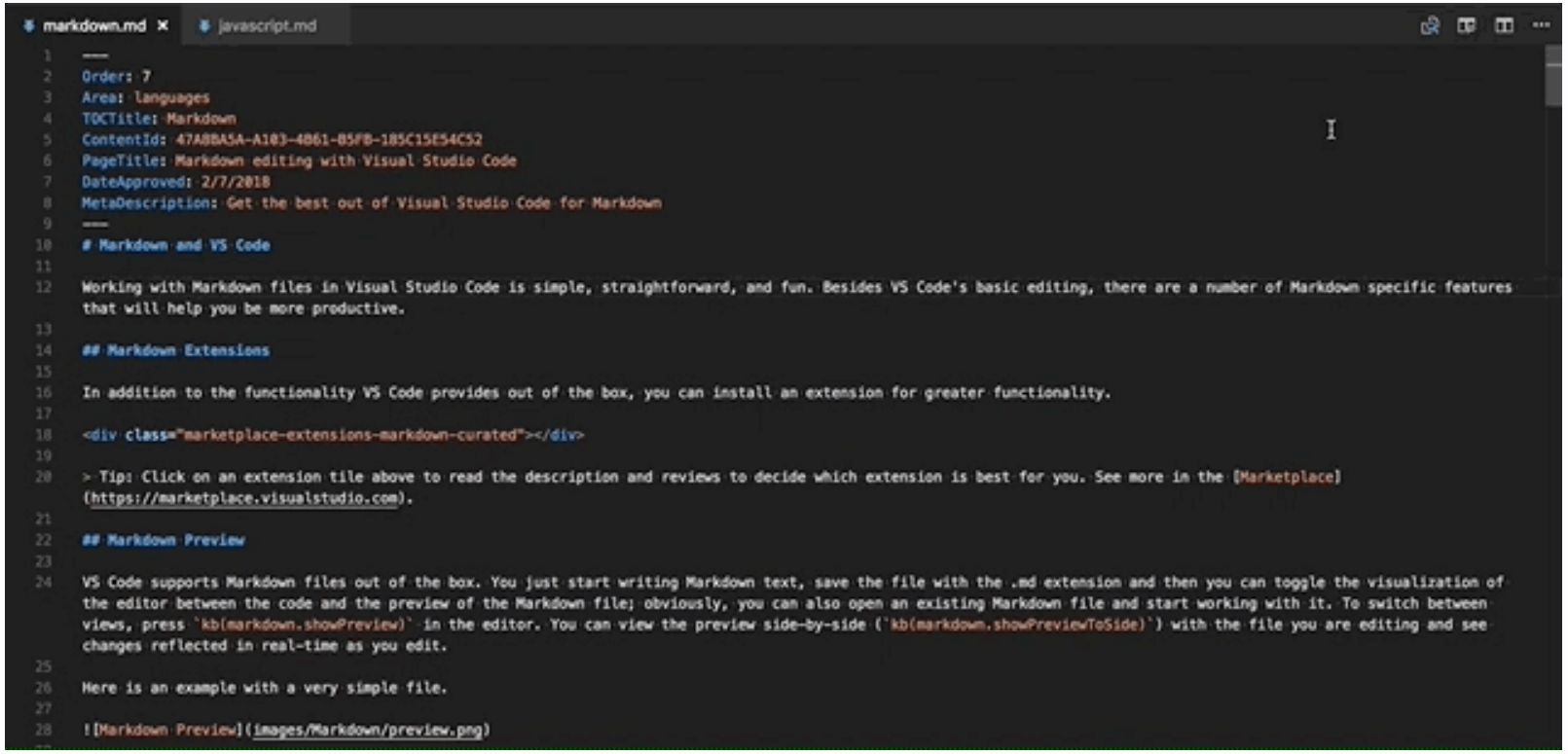
```
class App extends Component {

    constructor() {
        super();
        this.state = {
            notes: [
                {
                    text: "go to the grocery store"
                },
                {
                    text: 'read medium article about engineering'
                },
                {
                    text: 'create build session'
                },
                {
                    text: 'fix bug #232'
                }
            ]
        };
    }
```



Emmet

Generate HTML and CSS from shorthand. Works with multi-cursors

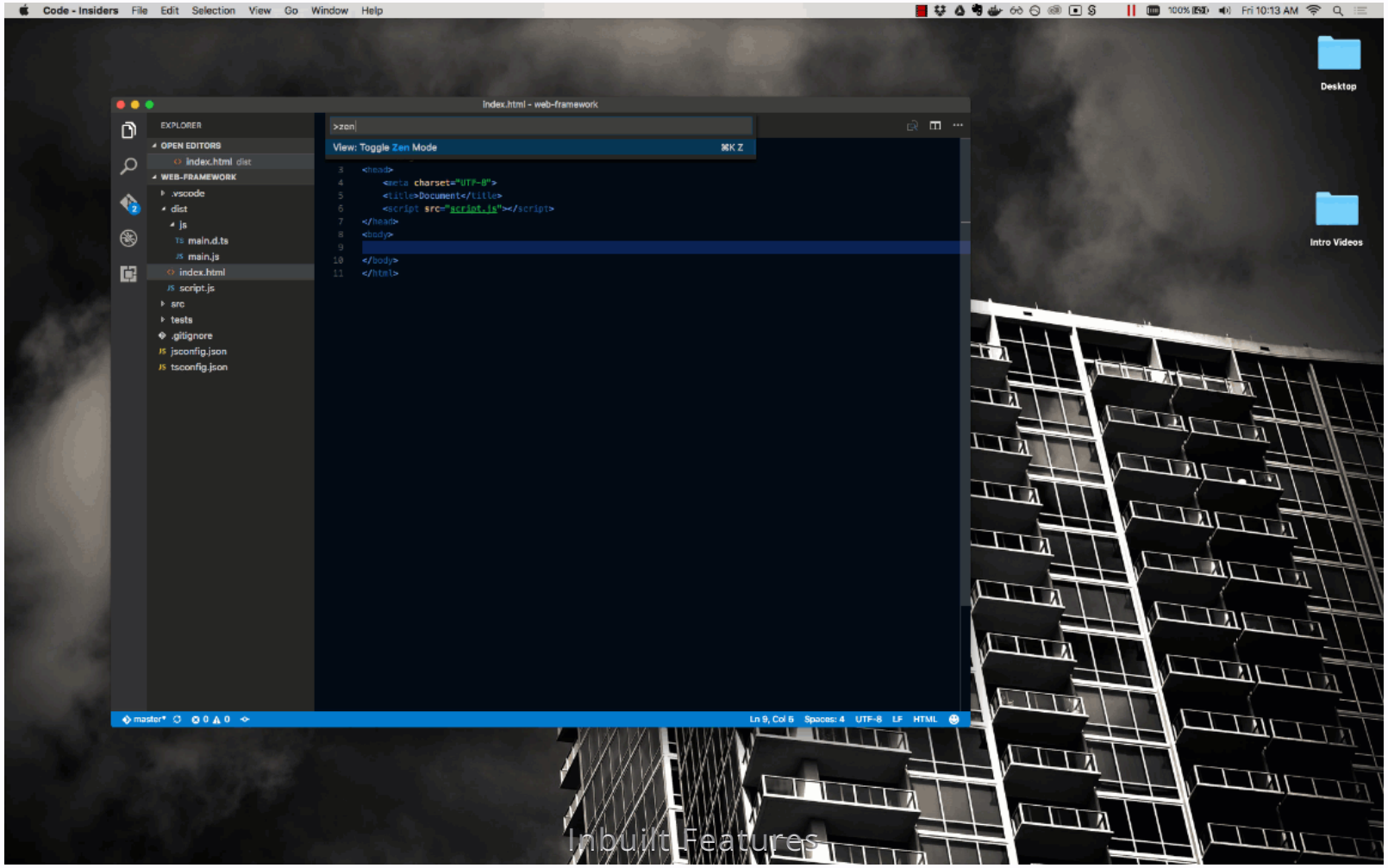
Markdown preview



Productivity / Focus

Zen Mode

Focus on the code with Zen Mode

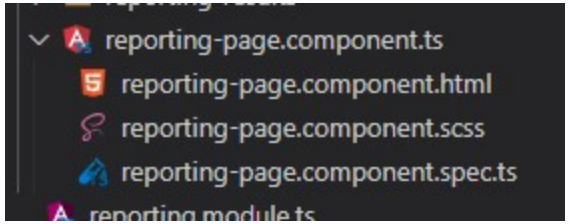


Errors

Jump to the next error with `F8`

File Nesting

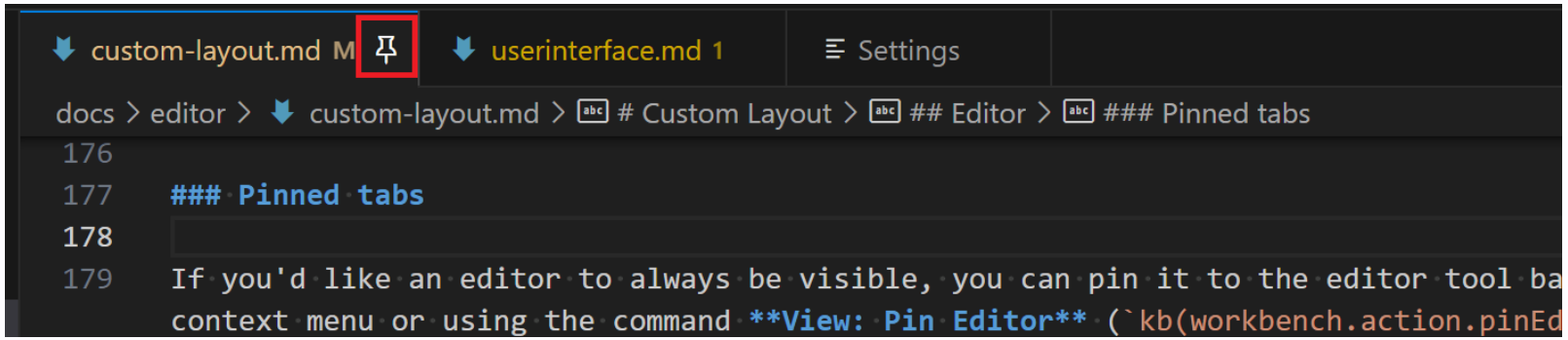
Nest related files under a parent file in the explorer.




```
"explorer.fileNesting.patterns": {
    "*.component.ts": "$(capture).component.html, $(capture).component.spec.ts, $(capture).component.scss",
    "README*": "AUTHORS,CHANGELOG*,CODE_OF_CONDUCT*,CONTRIBUTING*,LICENSE*"
  }
```

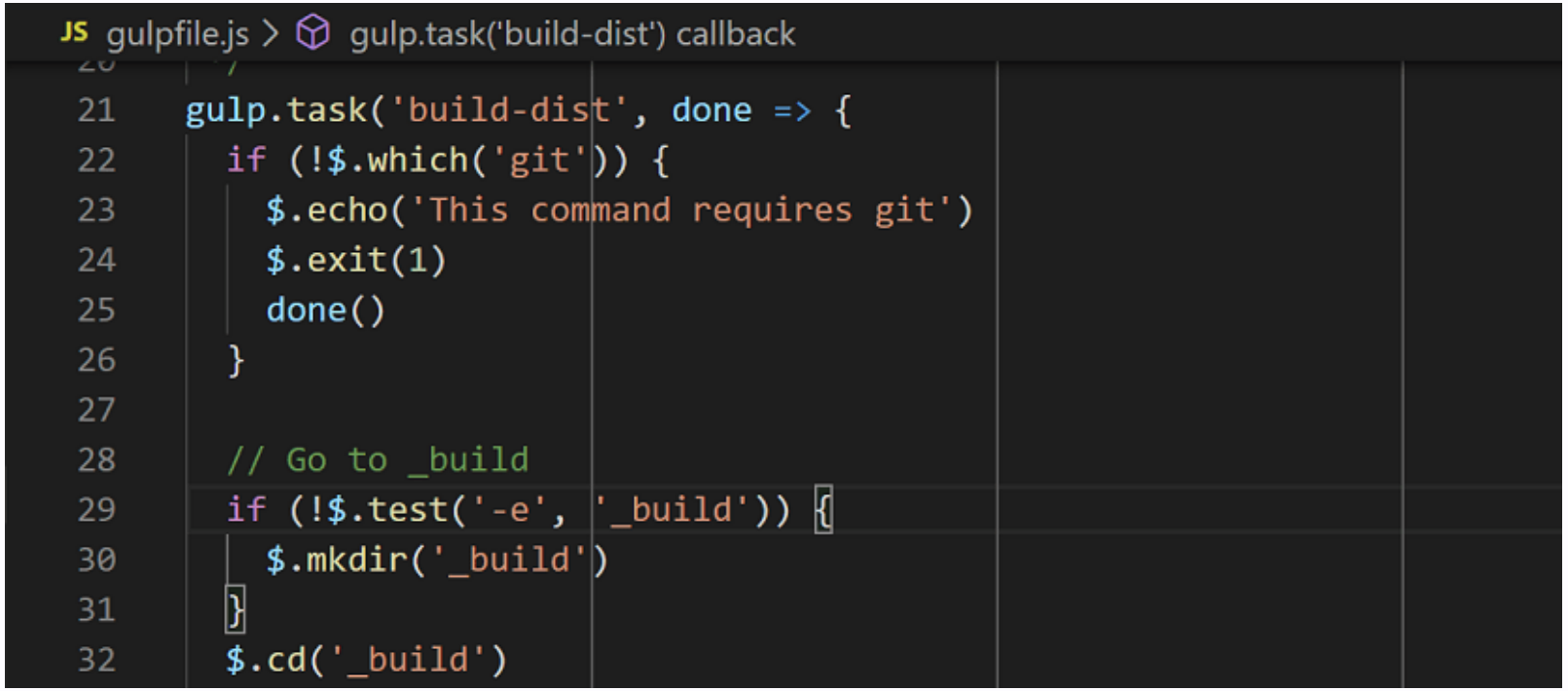
Pinned Tabs

Pinned Tabs allow you to keep a file open



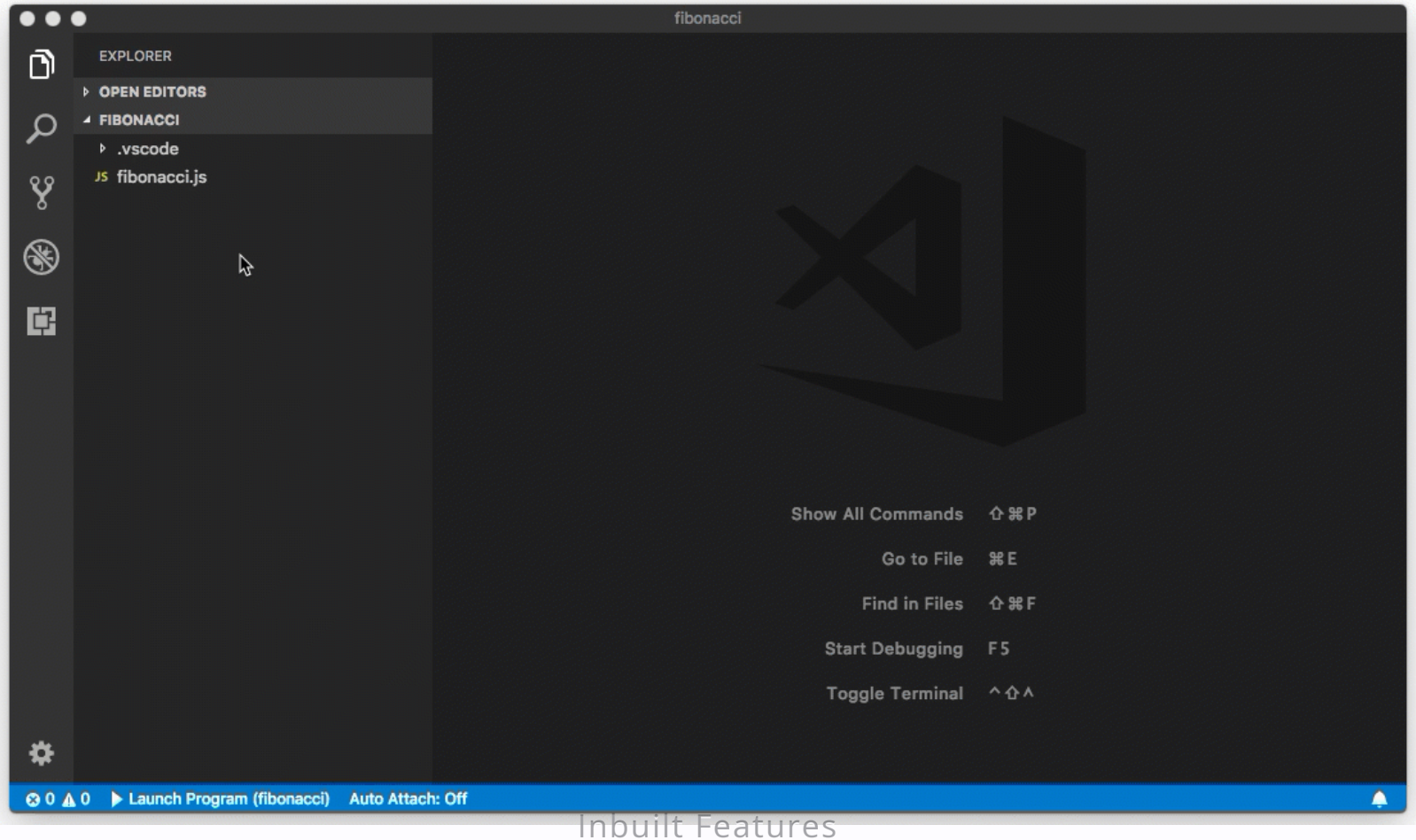
Vertical Rulers

Make sure your code isn't getting too long and hard to read.

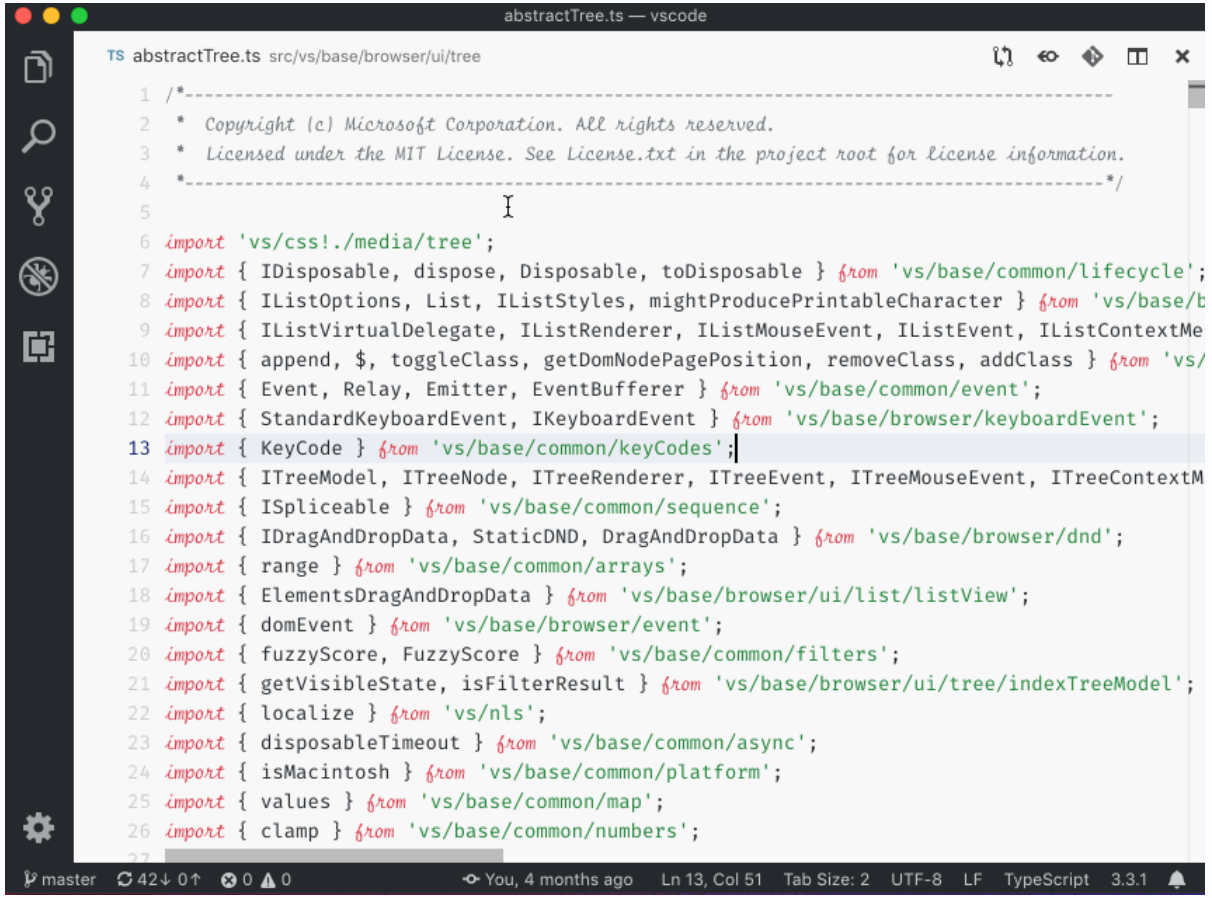


LogPoints

Non-breaking log points to show logging

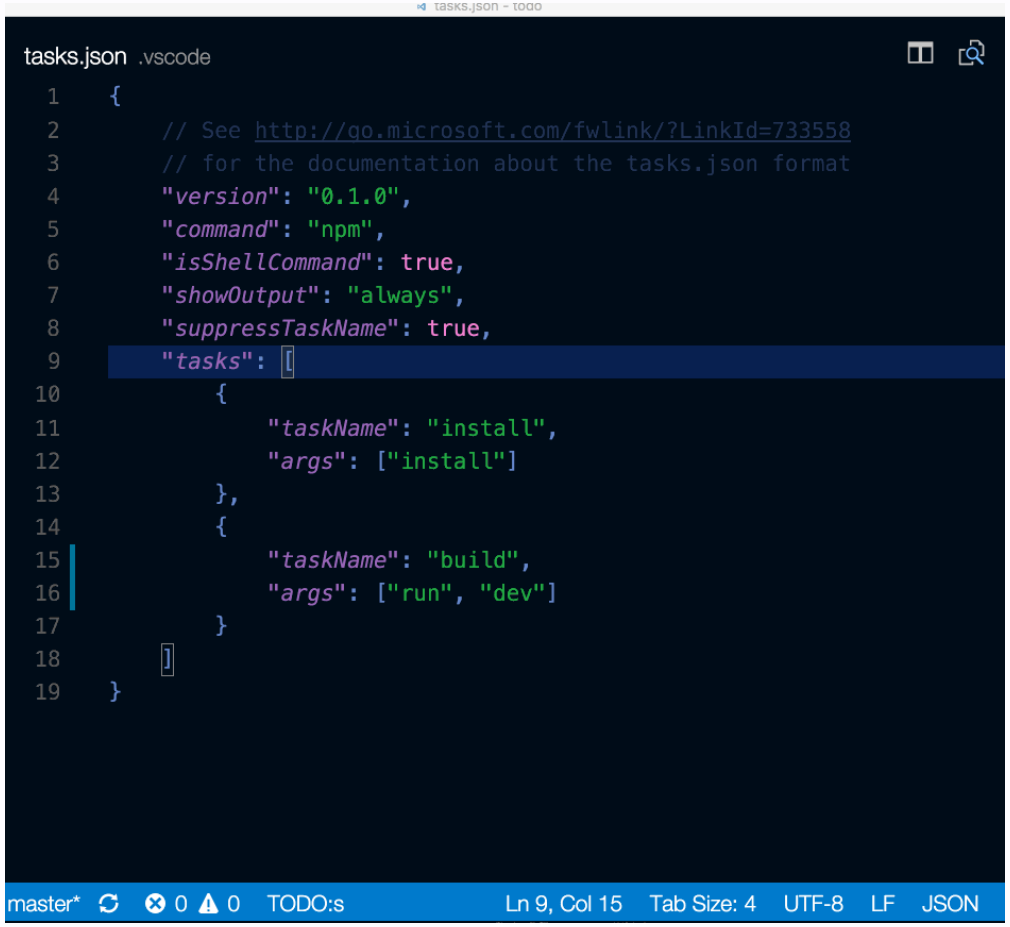


Screencast Mode



Task Runners

Run tasks like build, test and other custom tasks in Task Runners.

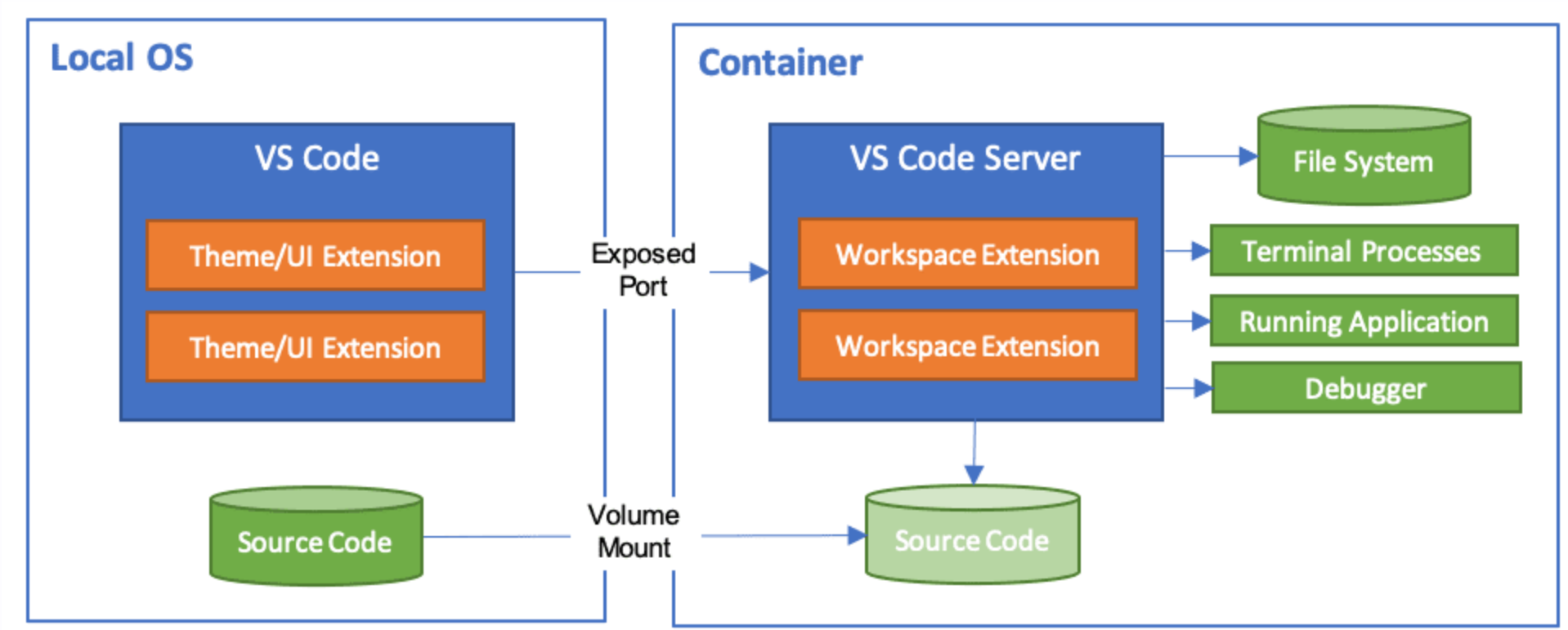


Remote Development

Remote	Description
Remote via SSH	Connect to remote machines with Visual Studio Code via SSH.
Work in WSL	Work in Windows Subsystem for Linux.
Develop in Containers	Work in a Docker Container.
GitHub Codespaces	Work in codespace with Visual Studio Code.

Dev Containers

Dev Containers uses a `devcontainer.json` file in your project tells VS Code how to access (or create) a development container with a well-defined tool and runtime stack.


Local OS
VS Code
Theme/UI Extension
Theme/UI Extension
Source Code
Exposed Port
Volume Mount
Container
VS Code Server
Workspace Extension
Workspace Extension
Source Code
File System
Terminal Processes
Running Application
Debugger

Extensions

Installation

Install extensions with `Ctrl+Shift+X`. You can add to the workspace `@recommended` extensions for a project.

Most Popular extensions can be found with `@popular`

Extension Packs

Extension Packs

Marp

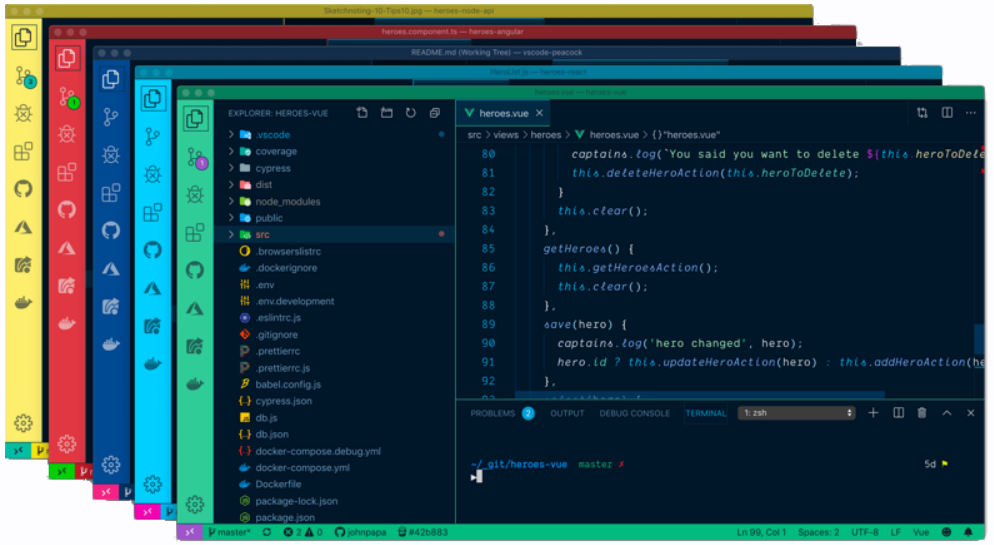
This slide deck written in Markdown within VSCode. I used the Marp extension preview it.

https://marp.app/

Marp has a CLI - so this slide has a CICD pipeline 😁

Peacock

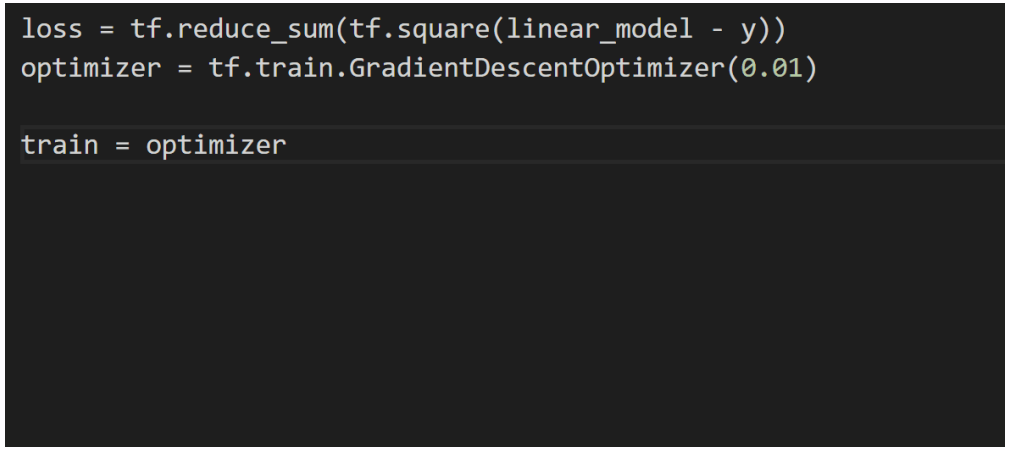
Peacock allows you to colour code VS Code.

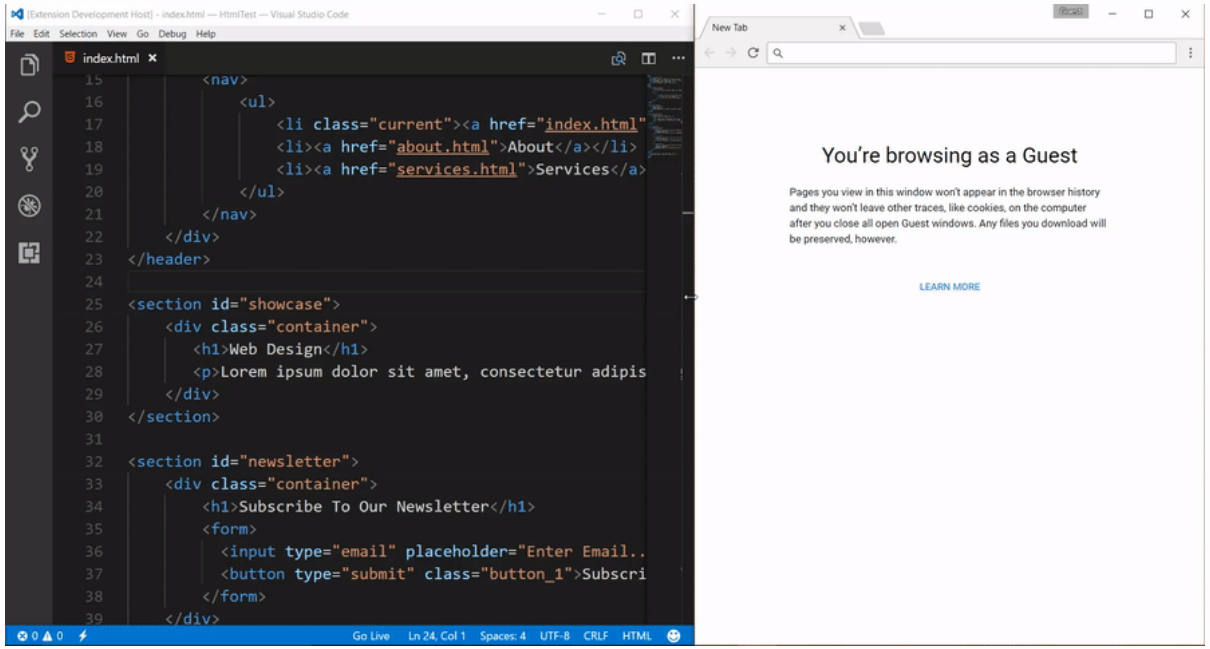


IntelliCode

AI-assisted development features for Python, TypeScript/JavaScript and Java developers

IntelliCode





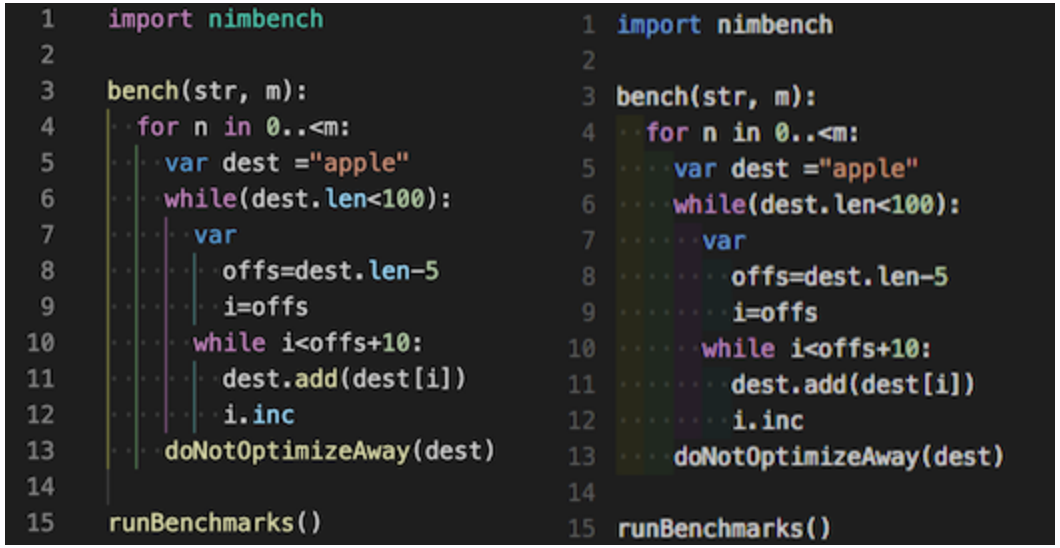
LiveServer

Launch a development local Server with live reload feature for static & dynamic pages

LiveServer

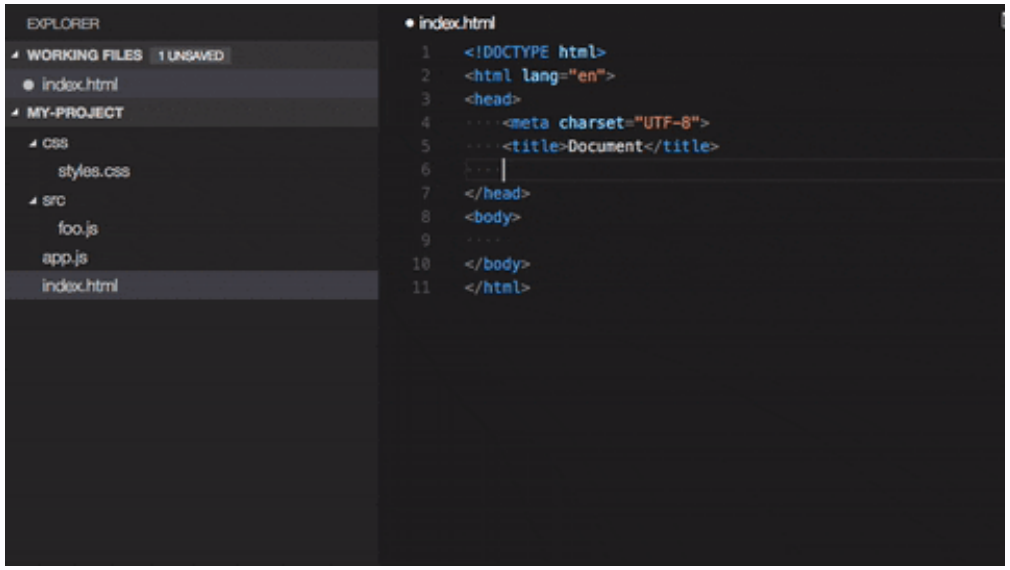
Indent Rainbow

Indent Rainbow



```
import nimbench

bench(str, m):
  for n in 0..<m:
    var dest ="apple"
    while(dest.len<100):
      var
        offs=dest.len-5
        i=offs
      while i<offs+10:
        dest.add(dest[i])
        i.inc
    doNotOptimizeAway(dest)

runBenchmarks()
```


```
import nimbench

bench(str, m):
  for n in 0..<m:
    var dest ="apple"
    while(dest.len<100):
      var
        offs=dest.len-5
        i=offs
      while i<offs+10:
        dest.add(dest[i])
        i.inc
    doNotOptimizeAway(dest)

runBenchmarks()
```

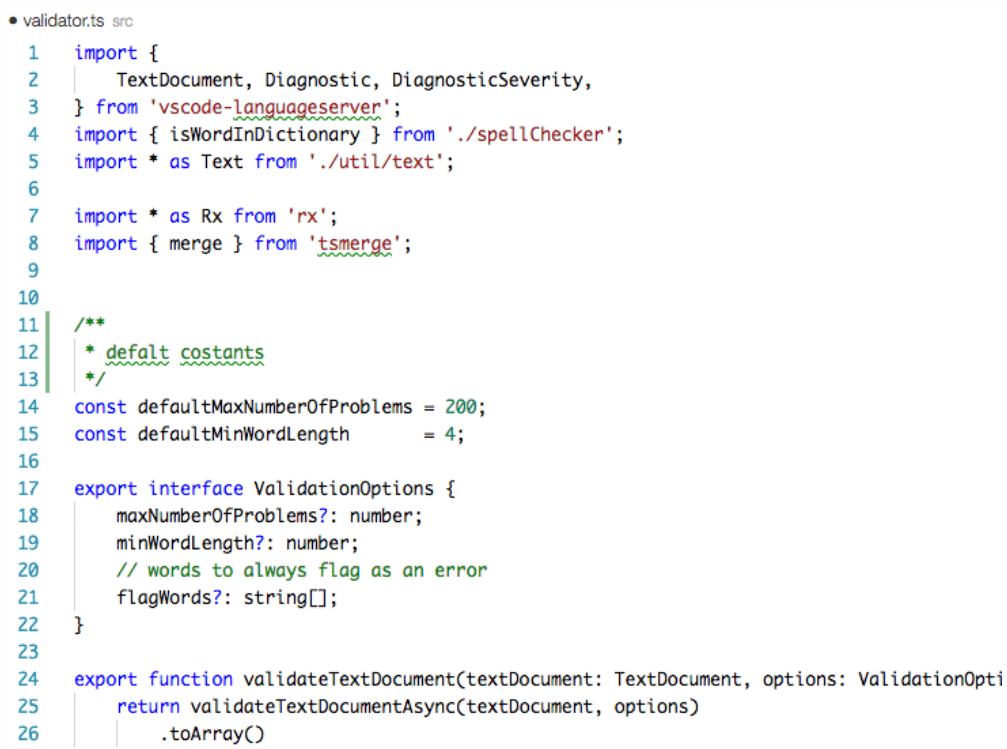


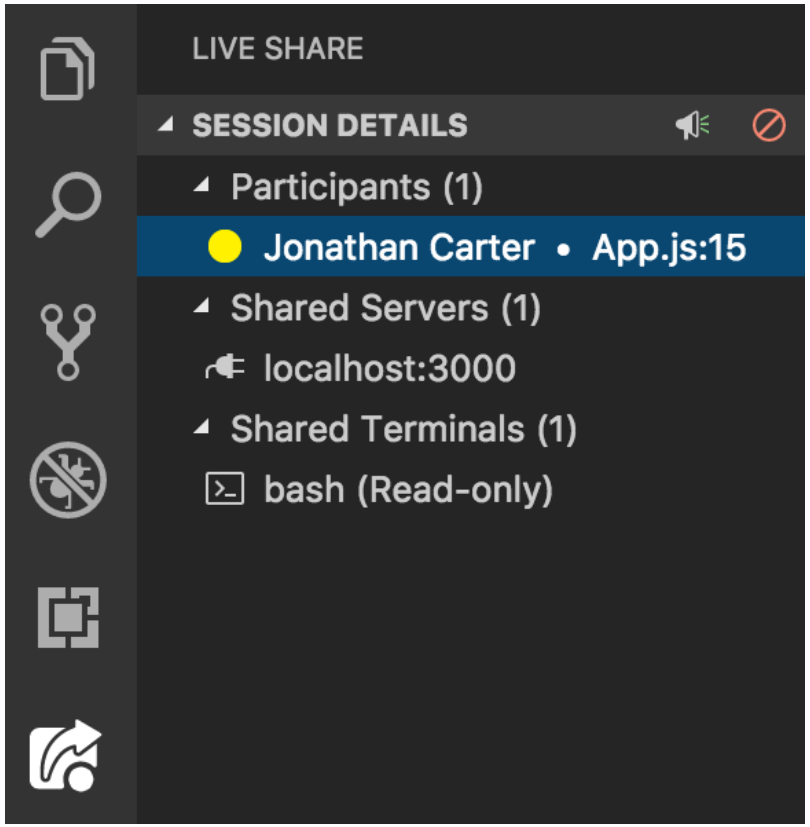
Path Intellisense

Path Intellisense autocompletes filenames

Code Spell Checker

Code Spell Checker for source code





LiveShare

Real-time collaborative development from the comfort of your favourite tools.

LiveShare / Docs

Jira and Bitbucket

Bringing the power of Jira and Bitbucket to VS Code

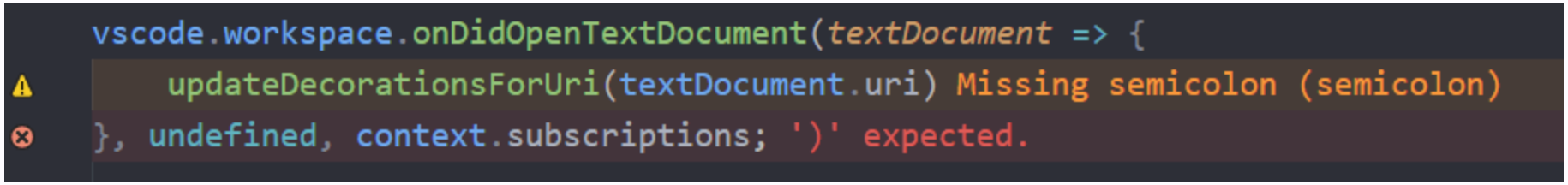
- You can create and view issues
- Start work on issues
- Create pull requests
- Do code reviews
- Start builds
- Get build statuses and more!

Jira and Bitbucket

Error Lens

Improve highlighting of errors, warnings and other language diagnostics.

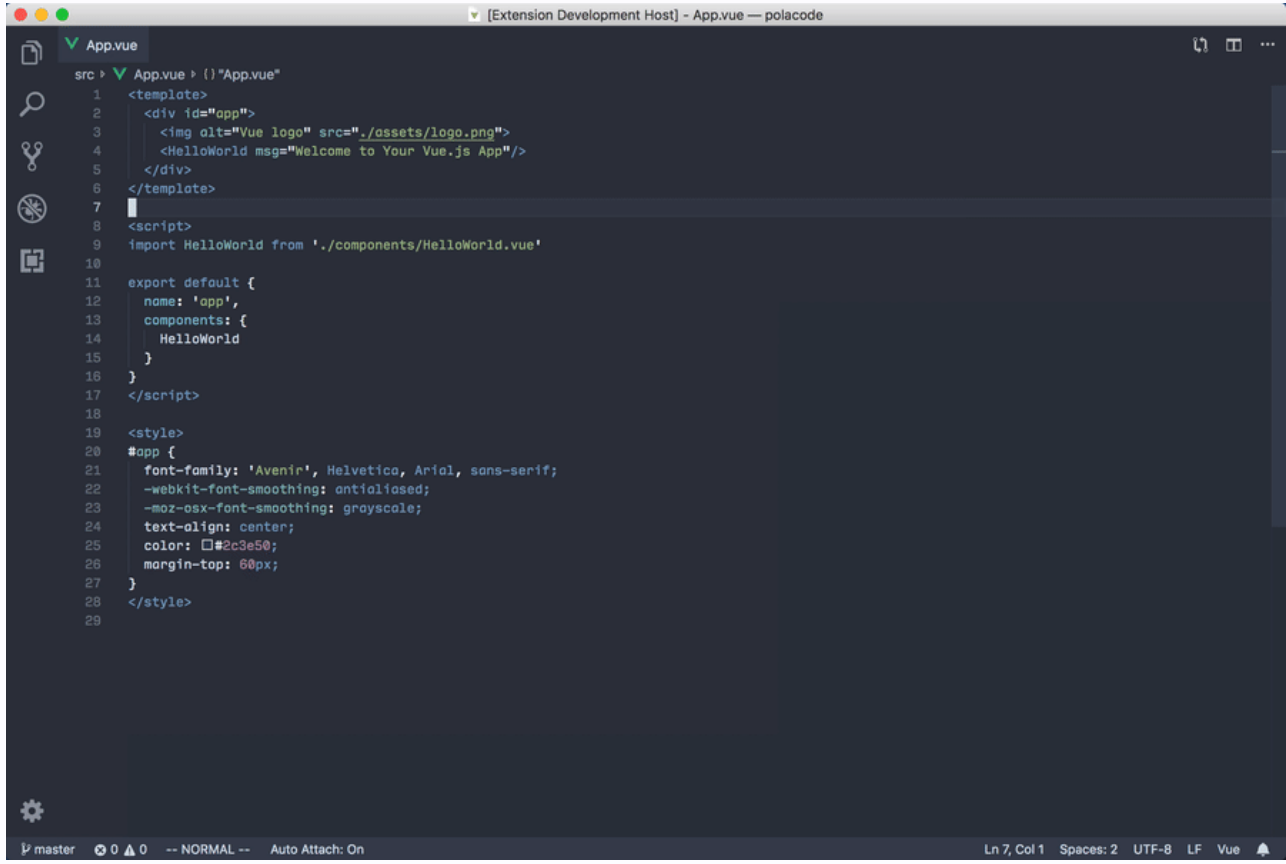
Error Lens



Polacode

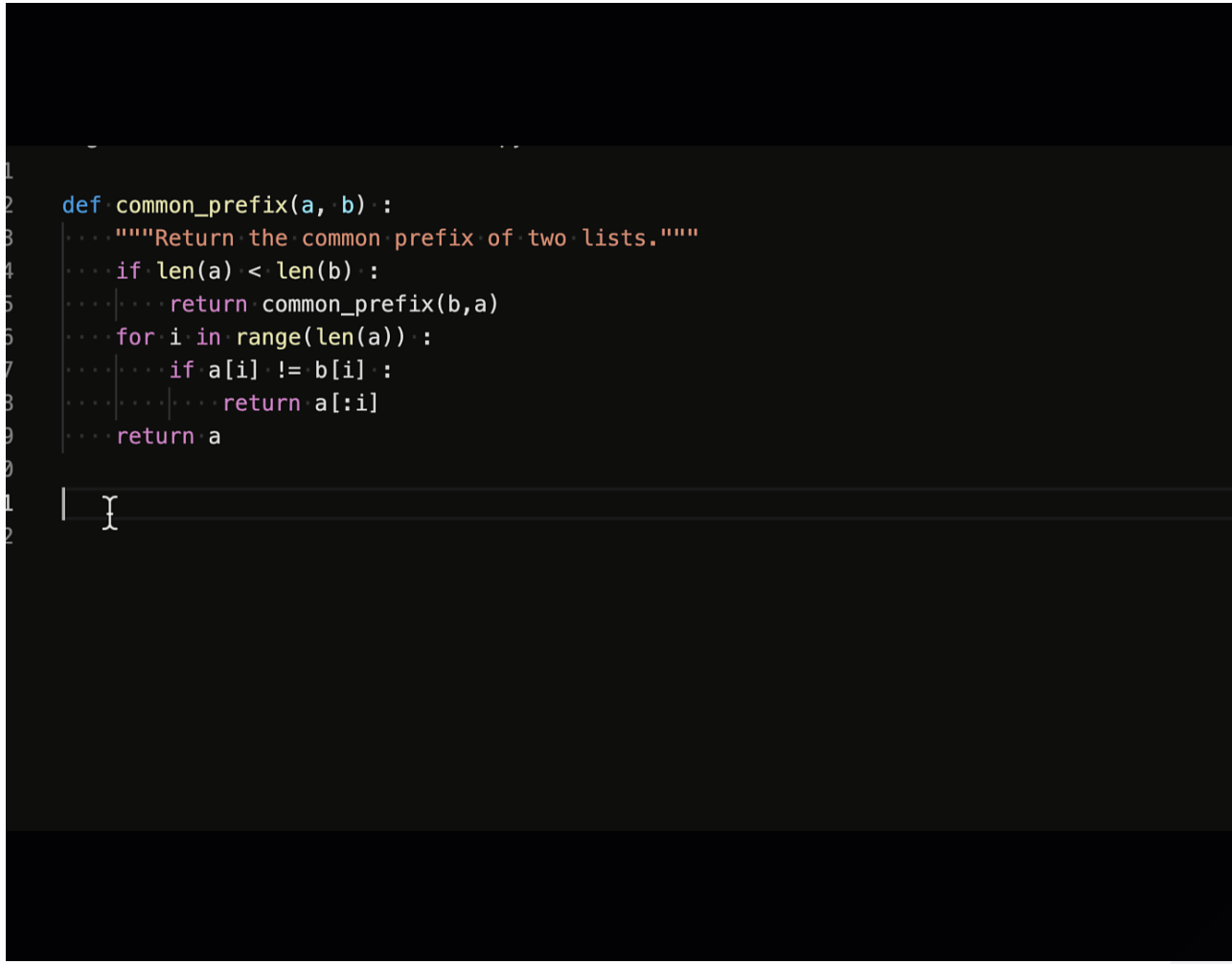
📸 Polaroid for your code. Take screenshots of your code

Polacode



GitHub Copilot

GitHub Copilot Your AI pair programmer

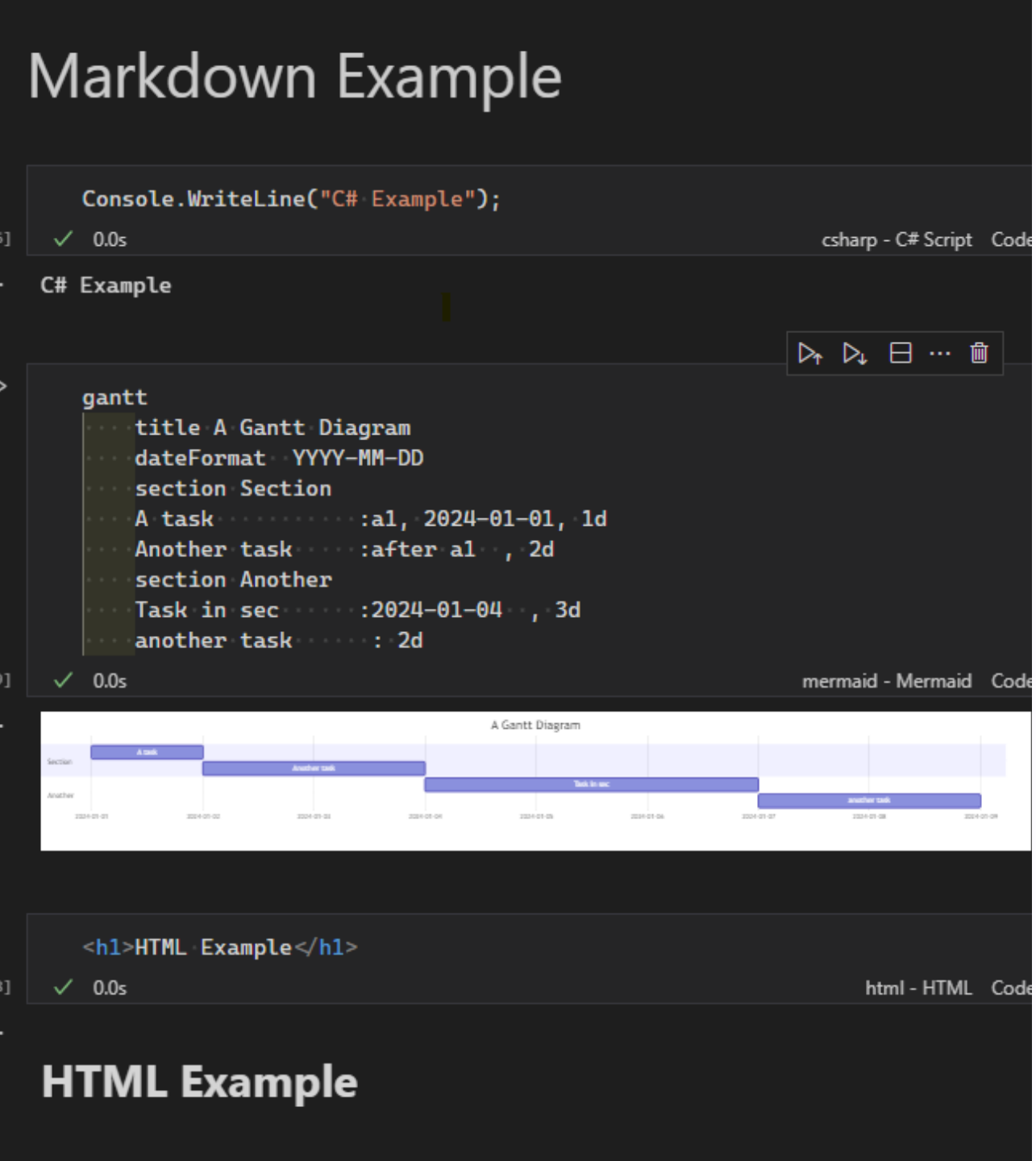


C# Dev Kit

Official C# extension from Microsoft

- Project System / Solution Explorer
- Code Editing (Uses the C# extension)
- Package Management
- Debugging
- Testing

C# Dev Kit



Polygot Notebooks

Polygot Notebooks allows

C#, F#, PowerShell, JavaScript, SQL, KQL, Python, R, HTML, HTTP, Mermaid.

API Clients

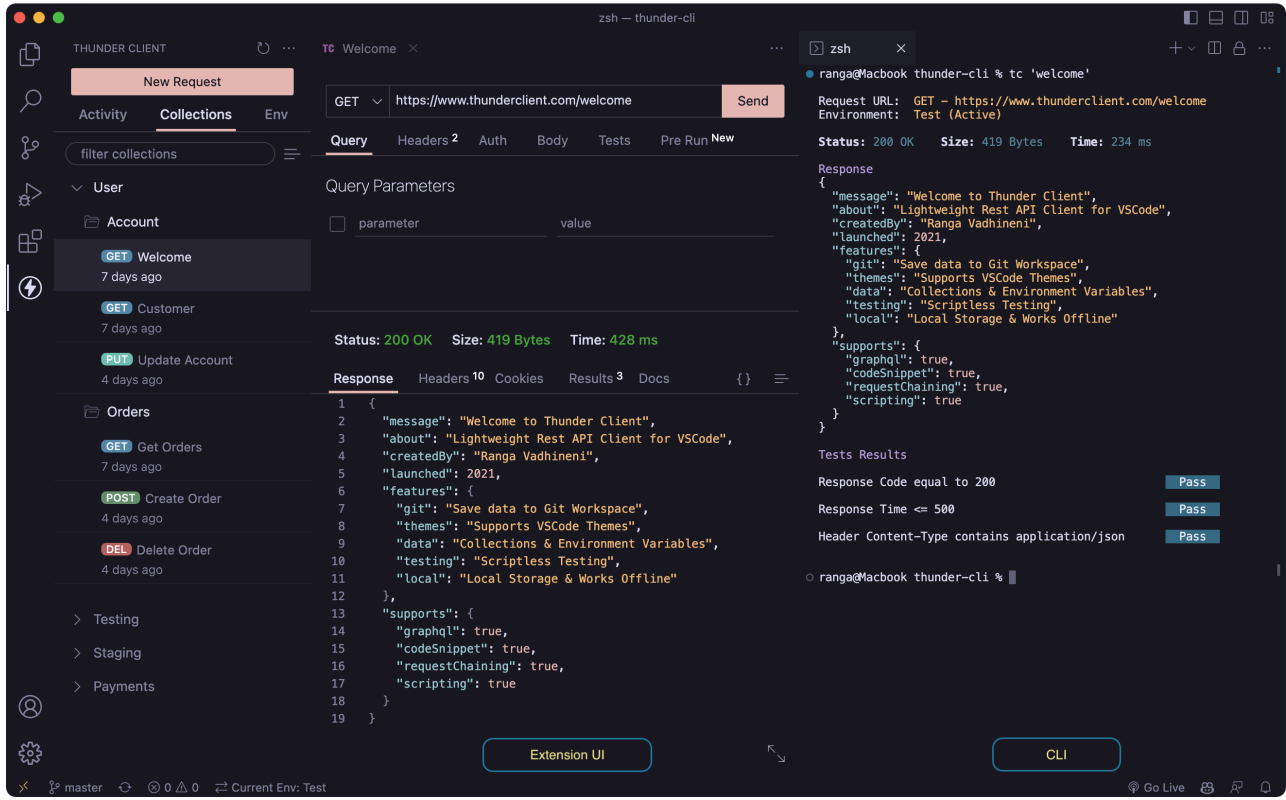
REST Client

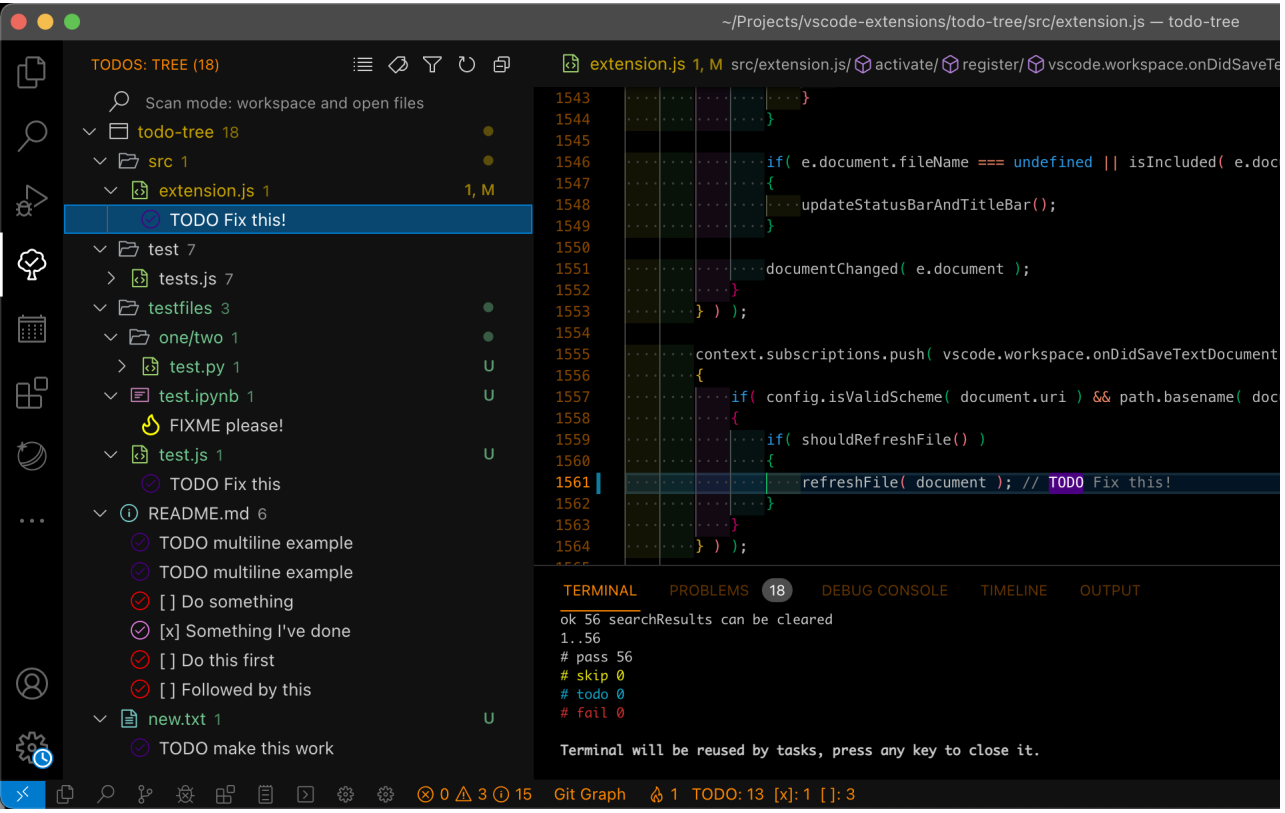
```
GET https://example.com/topics/1 HTTP/1.1

POST https://example.com/comments HTTP/1.1
content-type: application/json

{
    "name": "sample",
    "time": "Wed, 21 Oct 2015 18:27:50 GMT"
}
```

```
curl https://www.google.com
```

Thunder Client

Lightweight Rest API Client for VS Code



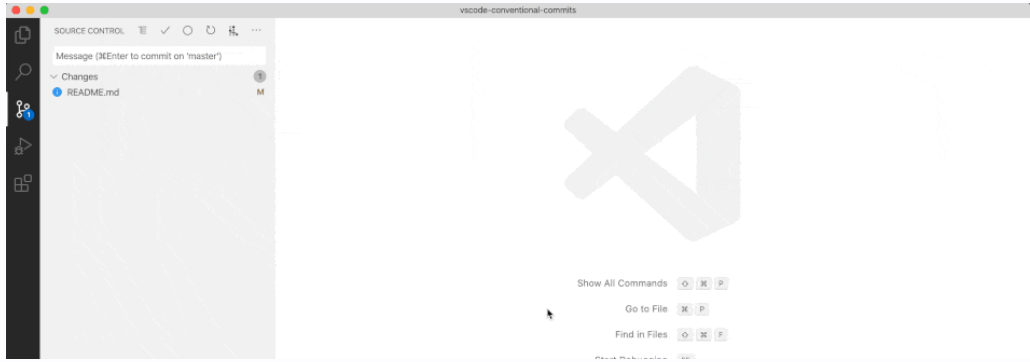


TODO Tree

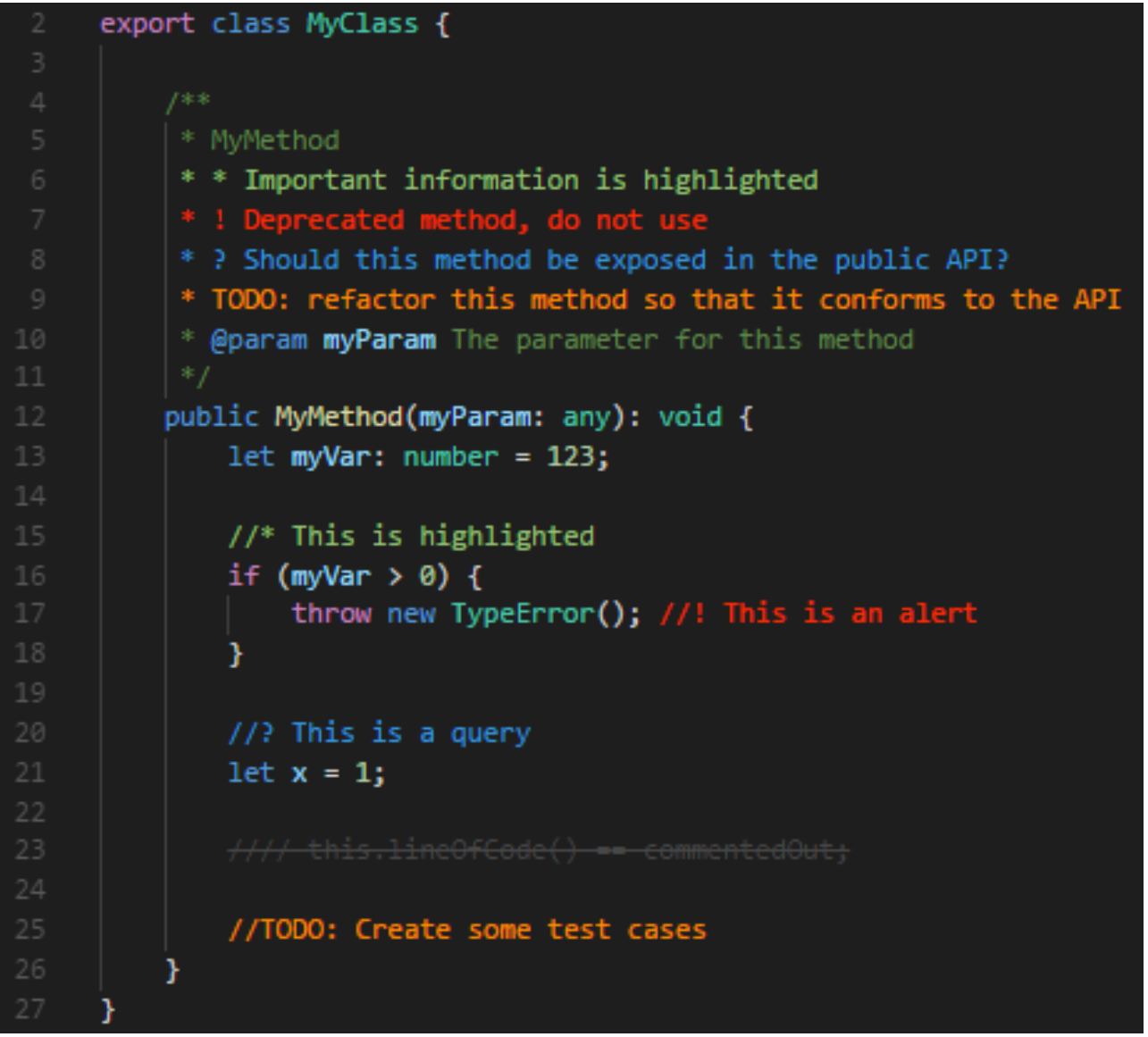
TODO Tree quickly find all your todo items.

Conventional Commits

```
<type>[optional scope]: <description>

[optional body]

[optional footer(s)]
```



Conventional Commits
conventionalcommits.org
which then dovetails to
semver.org



Better Comments

Better Comments colour codes your commit messages

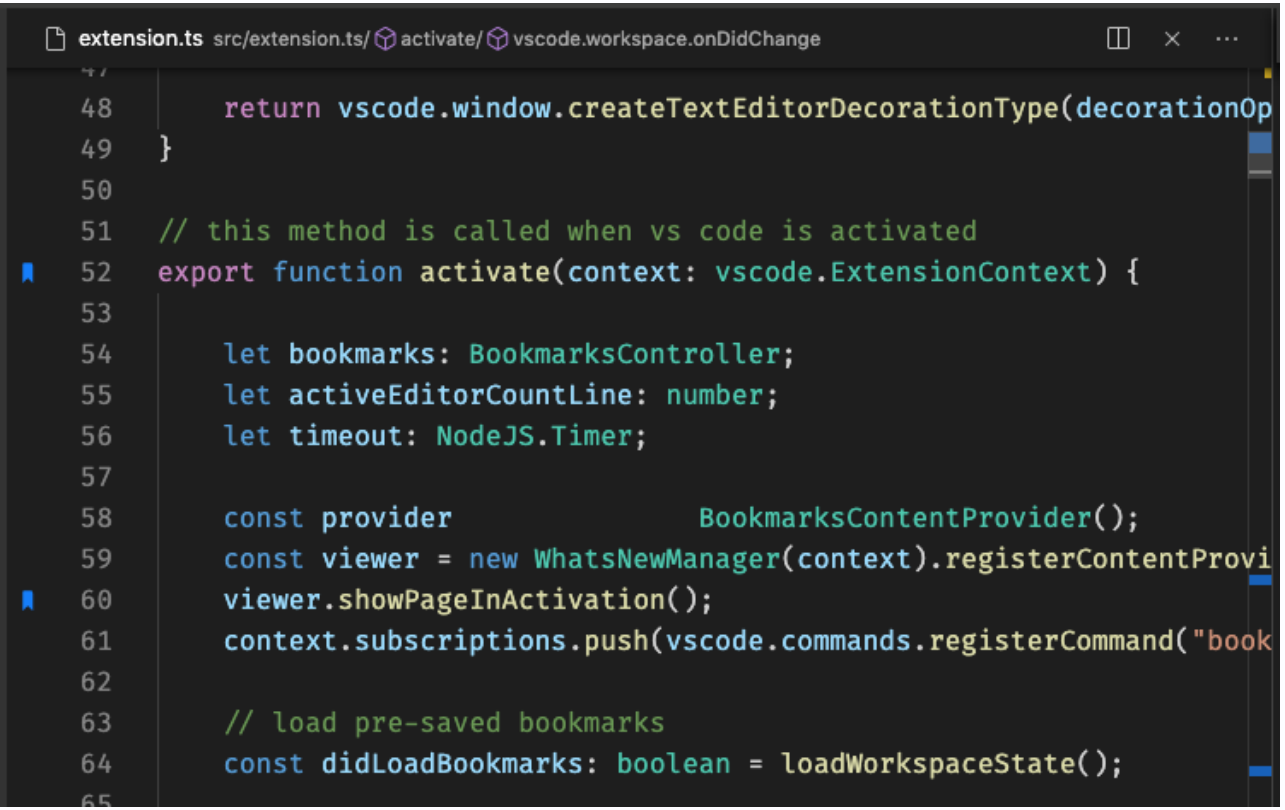
Unique Lines

Keep unique lines of text and remove duplicates from current selection. Also includes a command to shuffle currently selected lines.

Encode Decode

Encode Decode

- Convert String **to/from** Base64, HTML Entities, JSON Byte Array, JSON String, Unicode, XML Entities
- Convert String to MD5/SHA1/SHA256/SHA512 (as Base64 or Hex)



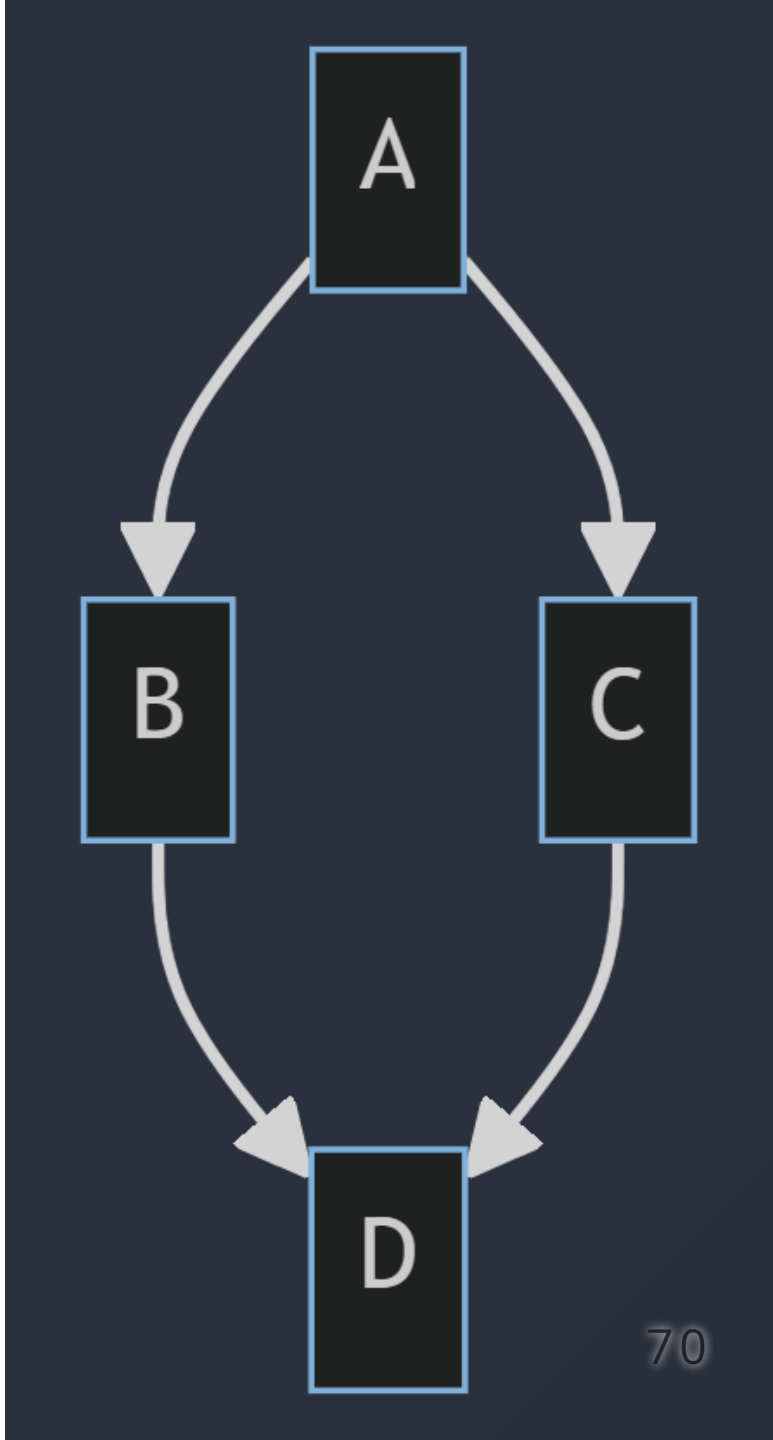
Bookmarks

Bookmark your code and quickly jump to bookmarks.

Markdown Preview

Markdown Preview allows you to create Mermaid JS documents that can be included in Markdown documents.

```
graph TD;
    A-->B;
    A-->C;
    B-->D;
    C-->D;
```

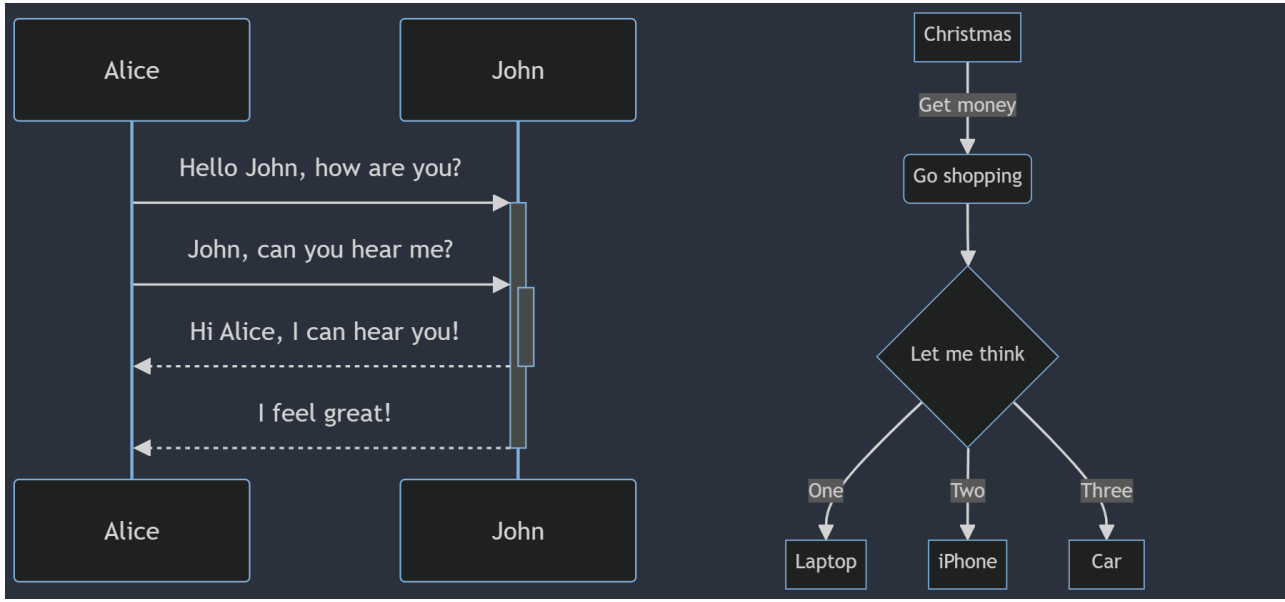


Aside: Mermaid JS can generate

- Generate Flowchart
- Sequence Diagram
- Class Diagram
- State Diagram
- Entity Relationship Diagram
- User Journey
- Gantt
- Pie Chart
- Quadrant Chart
- Requirement Diagram

```
sequenceDiagram
    Alice->>+John: Hello John, how are you?
    Alice->>+John: John, can you hear me?
    John-->>-Alice: Hi Alice, I can hear you!
    John-->>-Alice: I feel great!
```

```
flowchart TD
    A[Christmas] -->|Get money| B(Go shopping)
    B --> C{Let me think}
    C -->|One| D[Laptop]
    C -->|Two| E[iPhone]
    C -->|Three| F[fa:fa-car Car]
```



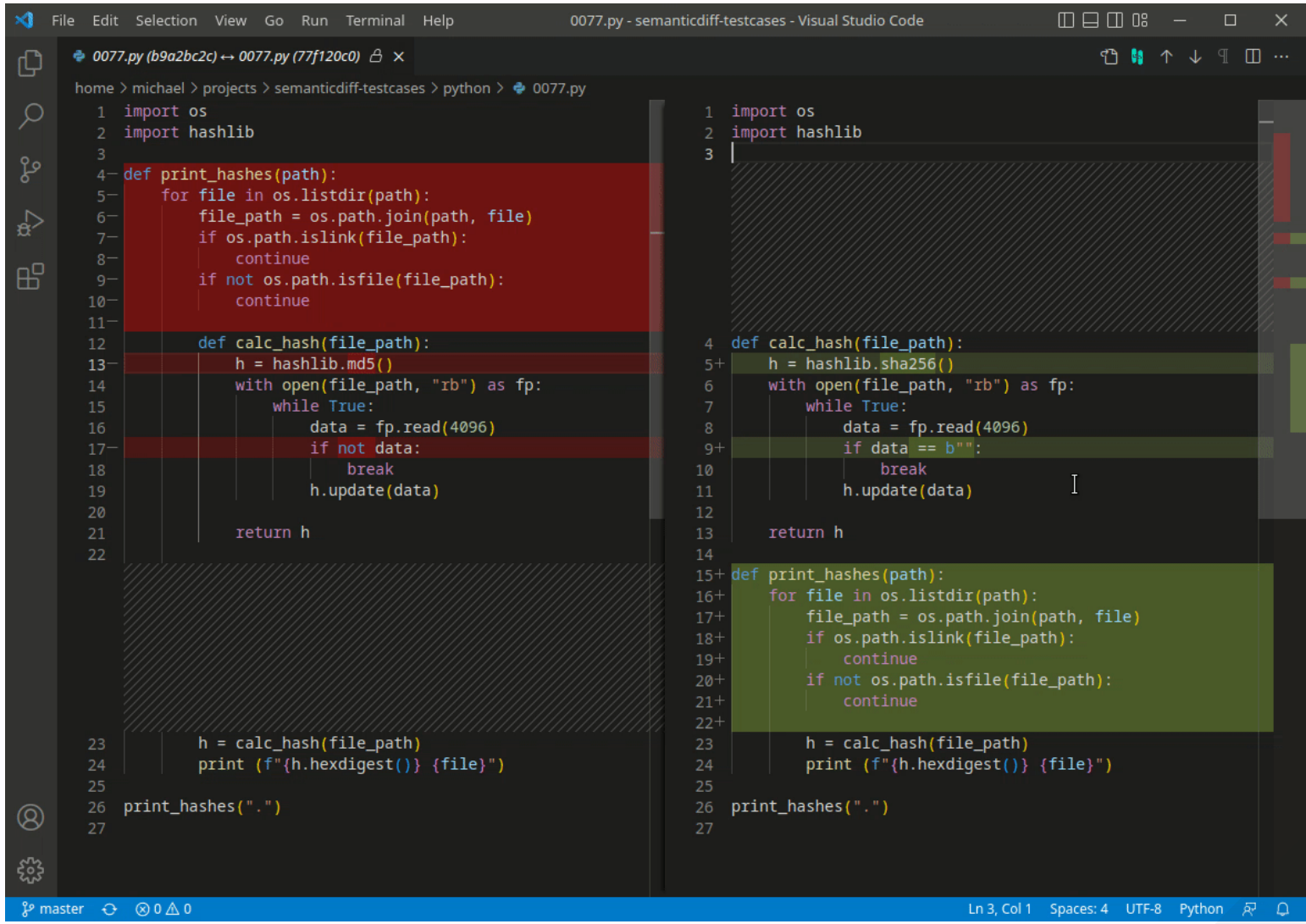
JSON Crack

JSON Crack seamlessly visualize your JSON data instantly into graphs.

SemanticDiff

SemanticDiff is a programming language aware diffs.

Can show differences when you move code.



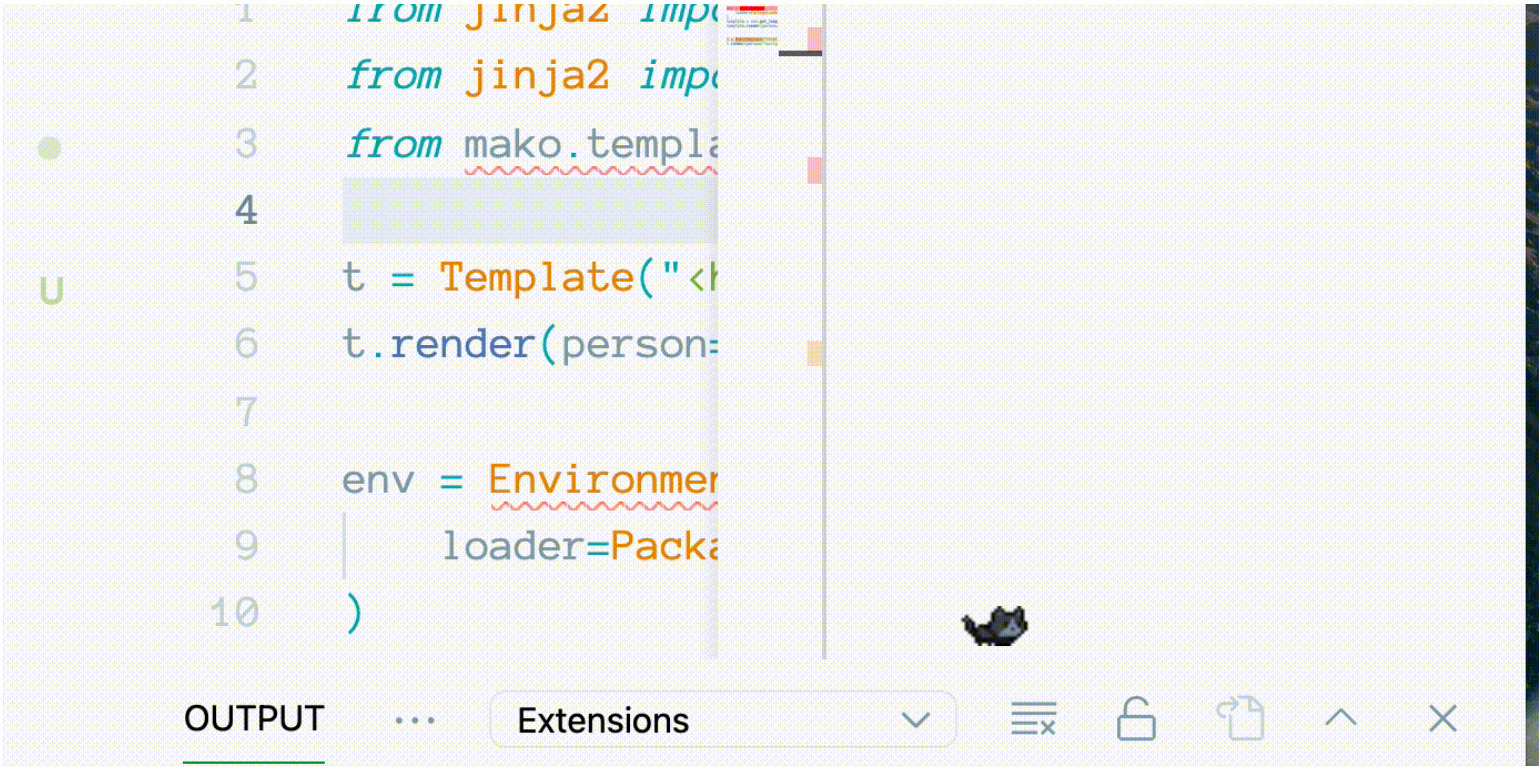
FootSteps

FootSteps

Highlight and navigate between your most recently edited chunks of code

Pets for your VS Code

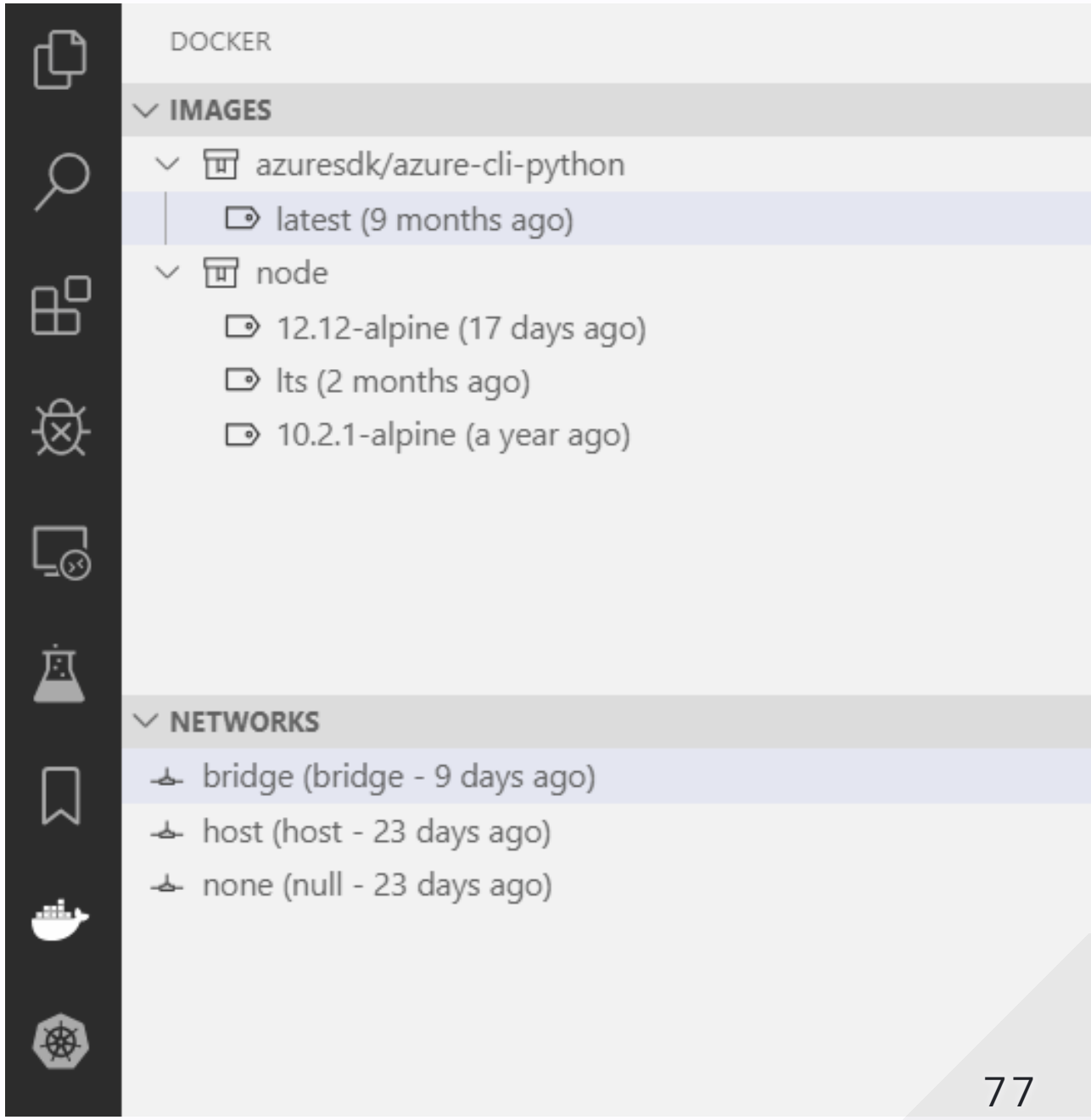
Pets gives you a virtual pet to play with while you are coding.

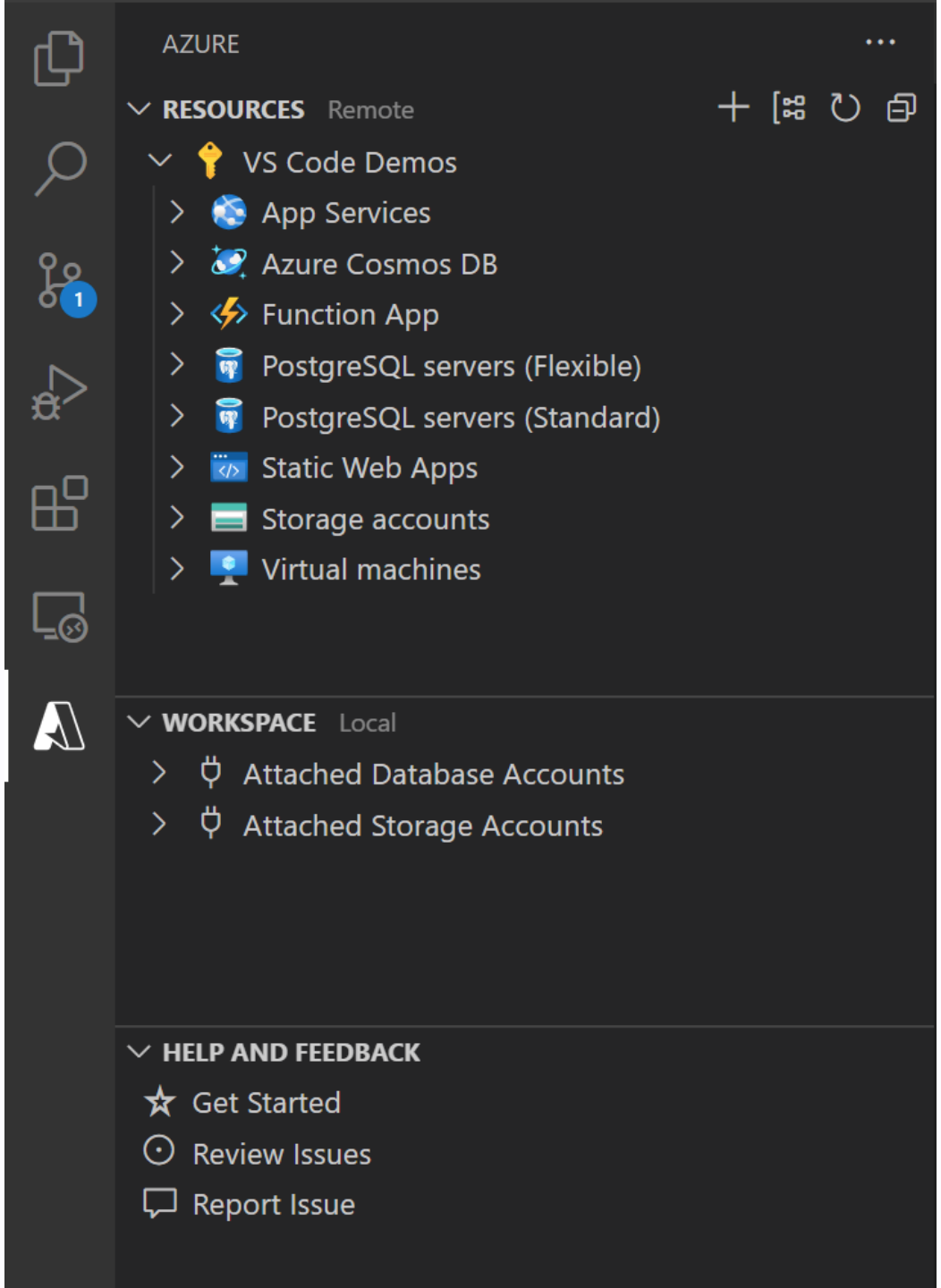


Docker

Makes it easy to create, manage, and debug containerized applications.

Docker





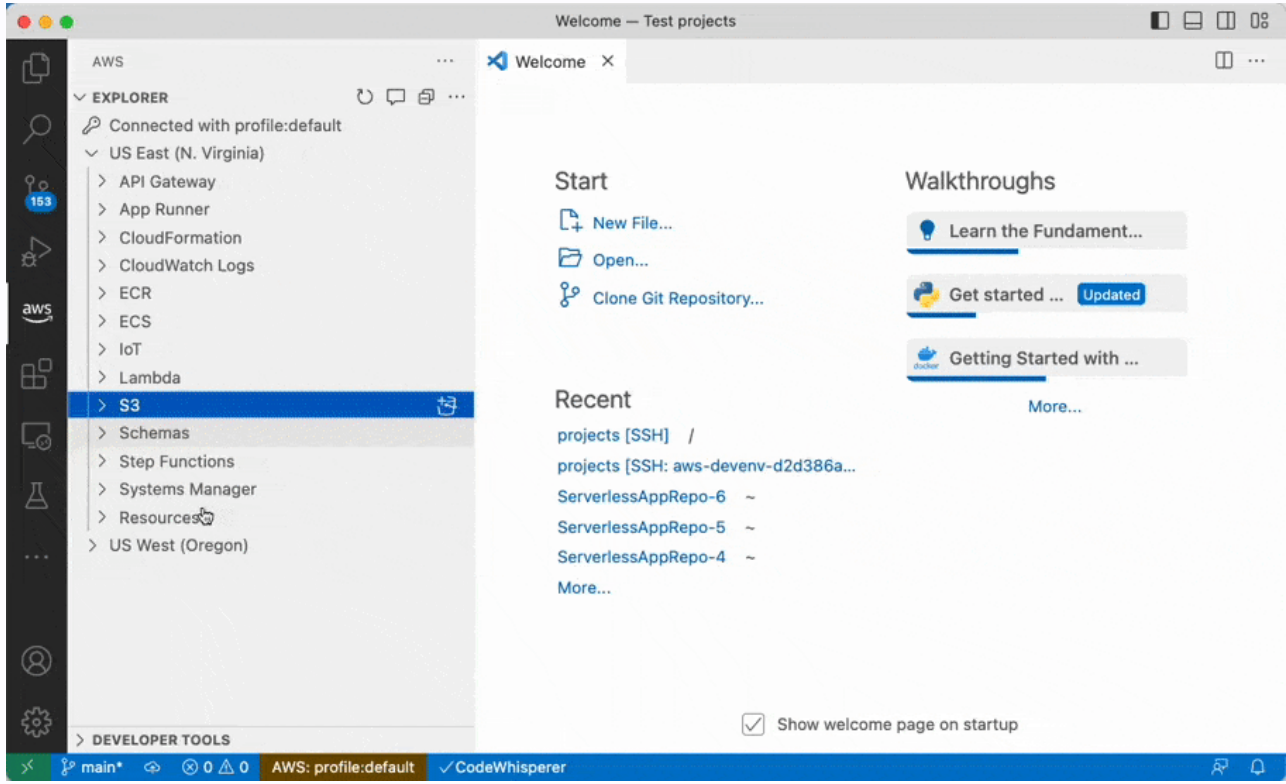
Azure Tools

Get web site hosting, SQL and MongoDB data, Docker Containers, Serverless Functions and more, all on Azure.

Azure Tools

AWS Toolkit

Including CodeWhisperer, CodeCatalyst, and support for Lambda, S3, CloudWatch Logs, and many other services



AWS Toolkit