SE Tutorial 2

Rudra's Subscription Service

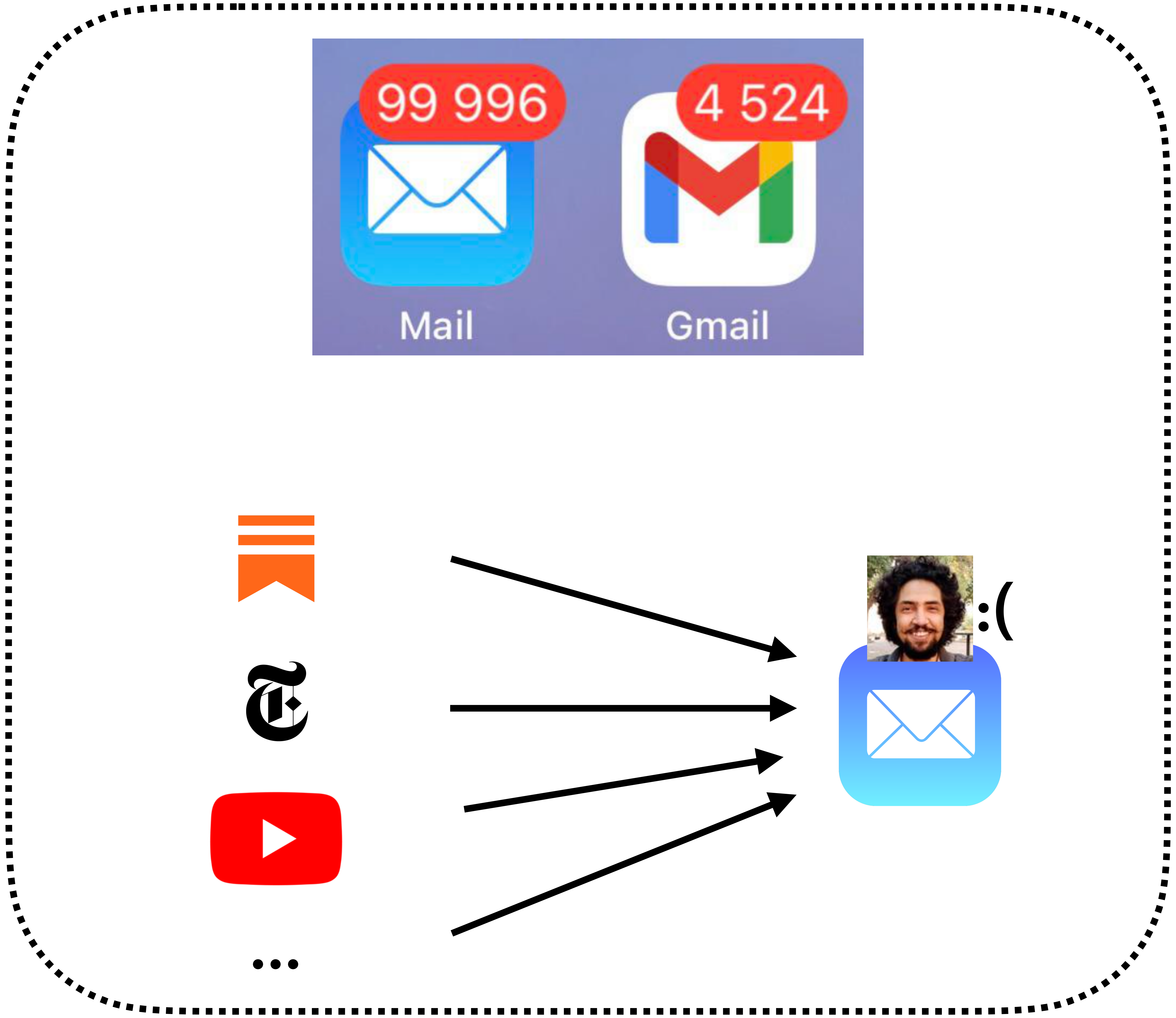
Shrikara A & Meghana Tedla

We'll Cover:

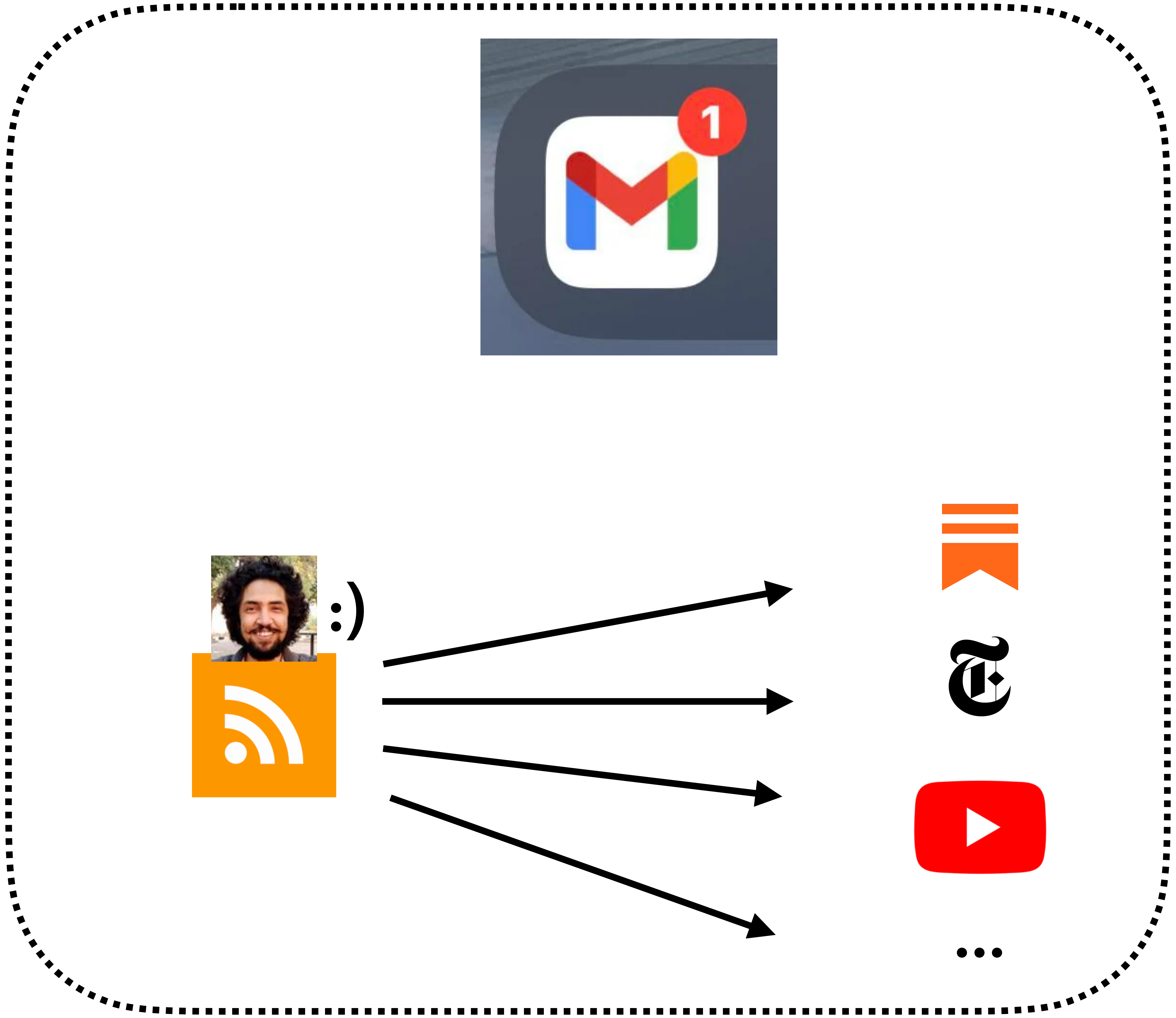
- What does the code do? How do you run it?
- What do you have to do in the project?

What is RSS?

(Not the political one)



VS

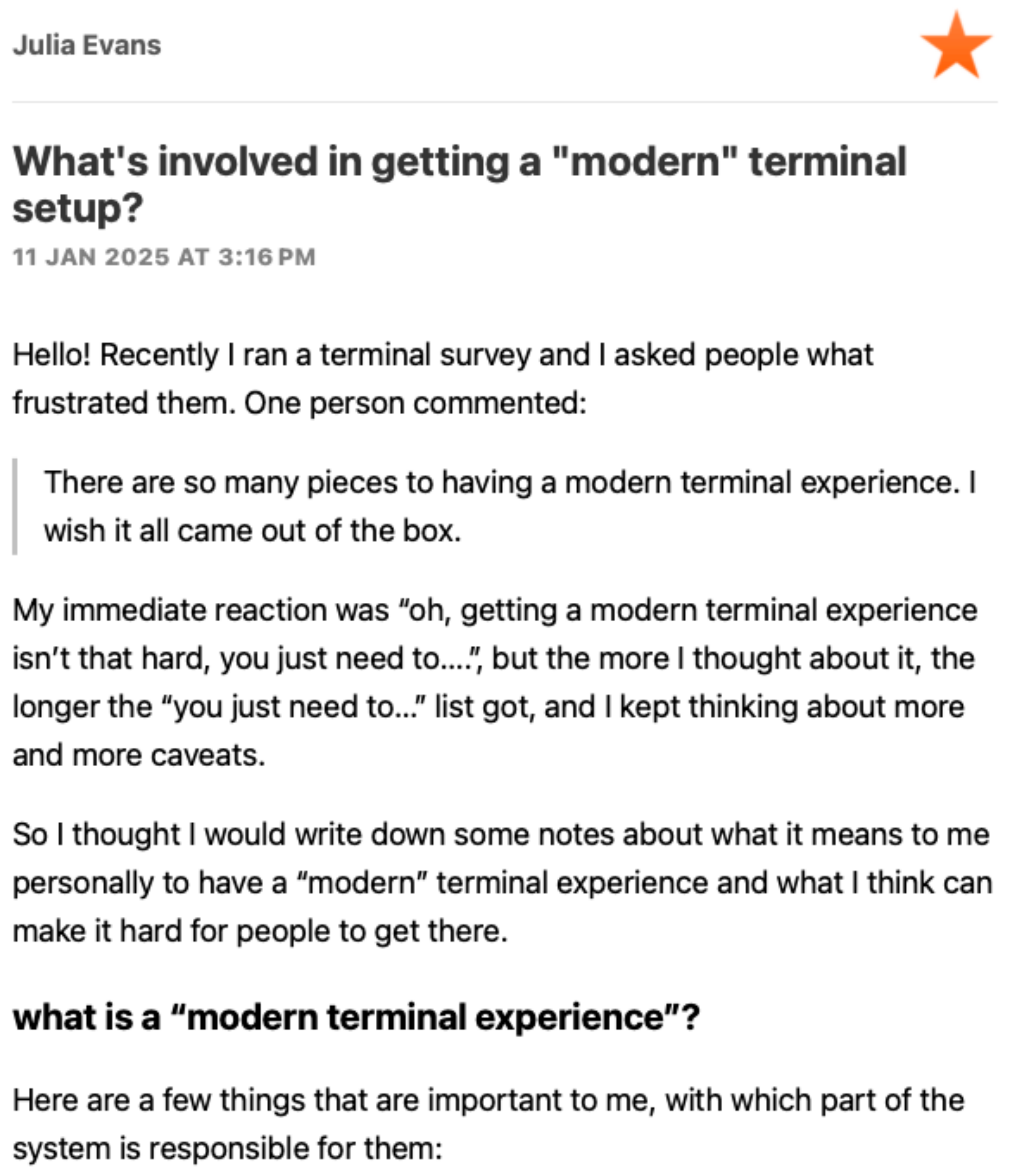


Terminology Alert!!!

RSS Feed

```
<?xml version="1.0" encoding="iso-8859-1" ?>
<rss version="2.0">
  <channel>
    <title>NYT &gt; World Business</title>
        <item>
          <title>Russia and Ukraine Reach Compromise</title>
          <link>http://www.nytimes.com/2006/01/05/05ukraine.html</link>
          <description>The solution allowed both nations...</description>
          <author>ANDREW E. KRAMER</author>
          <pubDate>Thu, 05 Jan 2006 00:00:00 EDT</pubDate>
        </item>
    </title>
  </channel>
</rss>
```

RSS Article



Julia Evans

What's involved in getting a "modern" terminal setup?

11 JAN 2025 AT 3:16 PM

Hello! Recently I ran a terminal survey and I asked people what frustrated them. One person commented:

> There are so many pieces to having a modern terminal experience. I wish it all came out of the box.

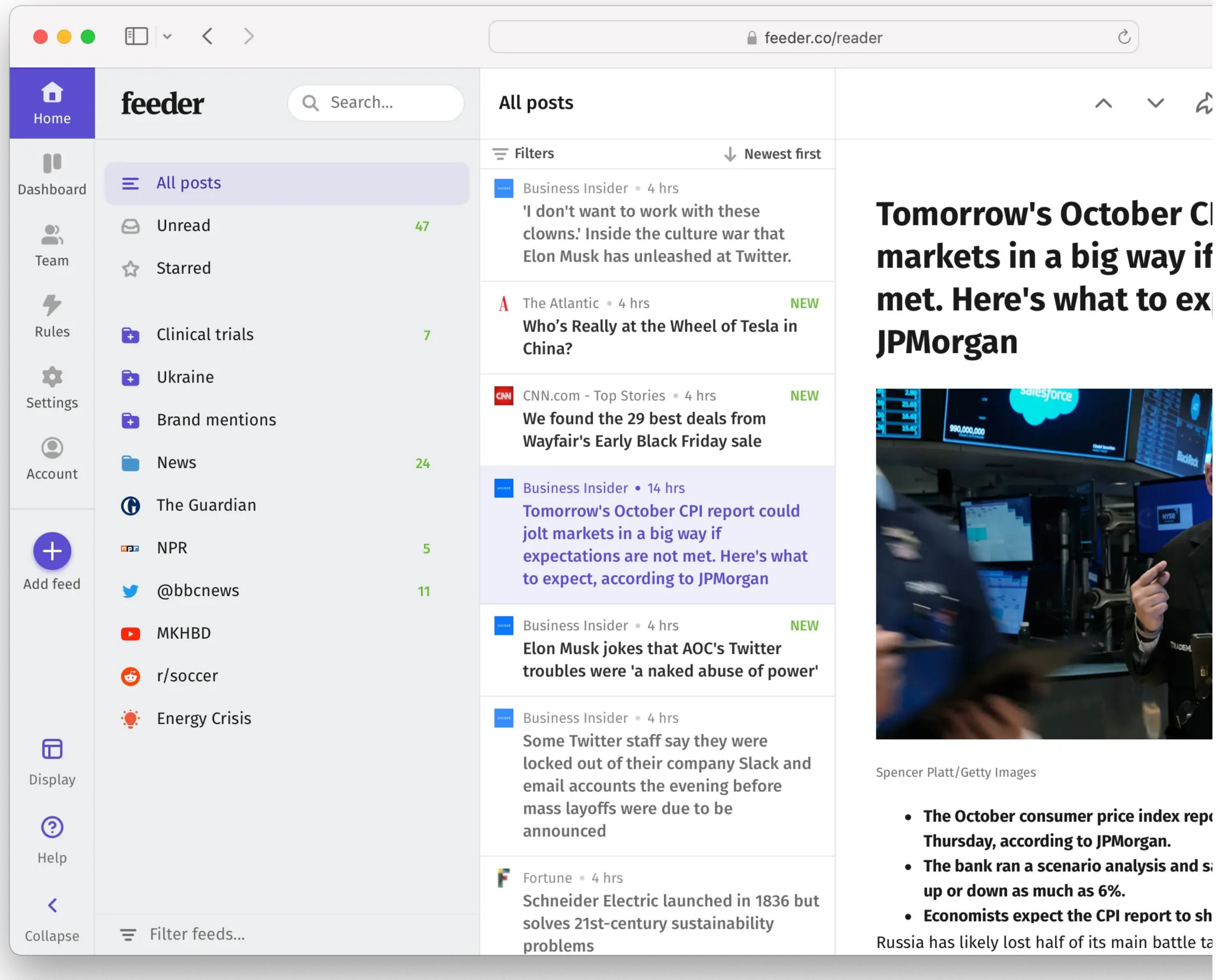
My immediate reaction was "oh, getting a modern terminal experience isn't that hard, you just need to....", but the more I thought about it, the longer the "you just need to..." list got, and I kept thinking about more and more caveats.

So I thought I would write down some notes about what it means to me personally to have a "modern" terminal experience and what I think can make it hard for people to get there.

what is a "modern terminal experience"?

Here are a few things that are important to me, with which part of the system is responsible for them:

RSS Reader



Business Insider • 4 hrs
'I don't want to work with these clowns.' Inside the culture war that Elon Musk has unleashed at Twitter.

The Atlantic • 4 hrs NEW
Who's Really at the Wheel of Tesla in China?

CNN.com - Top Stories • 4 hrs NEW
We found the 29 best deals from Wayfair's Early Black Friday sale

Business Insider • 14 hrs
Tomorrow's October CPI report could jolt markets in a big way if expectations are not met. Here's what to expect, according to JPMorgan

Business Insider • 4 hrs NEW
Elon Musk jokes that AOC's Twitter troubles were 'a naked abuse of power'

Business Insider • 4 hrs
Some Twitter staff say they were locked out of their company Slack and email accounts the evening before mass layoffs were due to be announced

Fortune • 4 hrs
Schneider Electric launched in 1836 but solves 21st-century sustainability problems

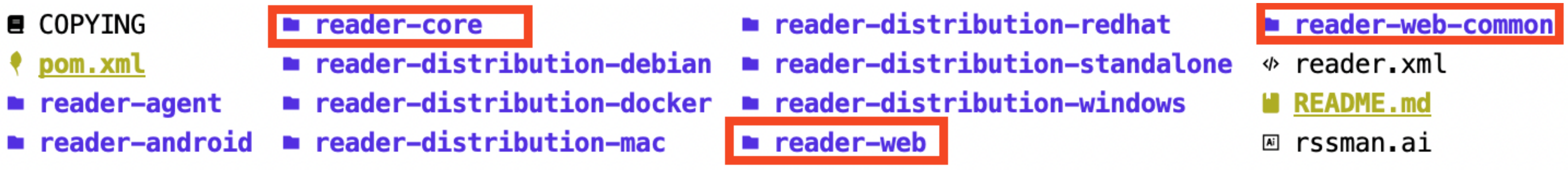
Tomorrow's October Cl markets in a big way if met. Here's what to ex JPMorgan

Spencer Platt/Getty Images

- **The October consumer price index repo Thursday, according to JPMorgan.**
- **The bank ran a scenario analysis and s up or down as much as 6%.**
- **Economists expect the CPI report to sh**

Russia has likely lost half of its main battle ta

The Codebase



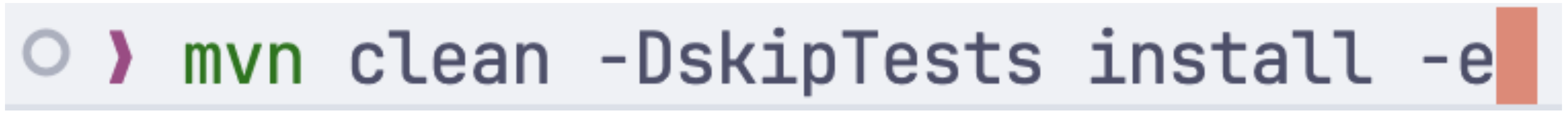
```
COPYING          reader-core                     reader-distribution-redhat      reader-web-common
pom.xml          reader-distribution-debian      reader-distribution-standalone  reader.xml
reader-agent     reader-distribution-docker      reader-distribution-windows     README.md
reader-android   reader-distribution-mac         reader-web                      rssman.ai
```

Subsystems:

1. Subscription and Content Subsystem
2. Feed Organization Subsystem
3. User Management Subsystem

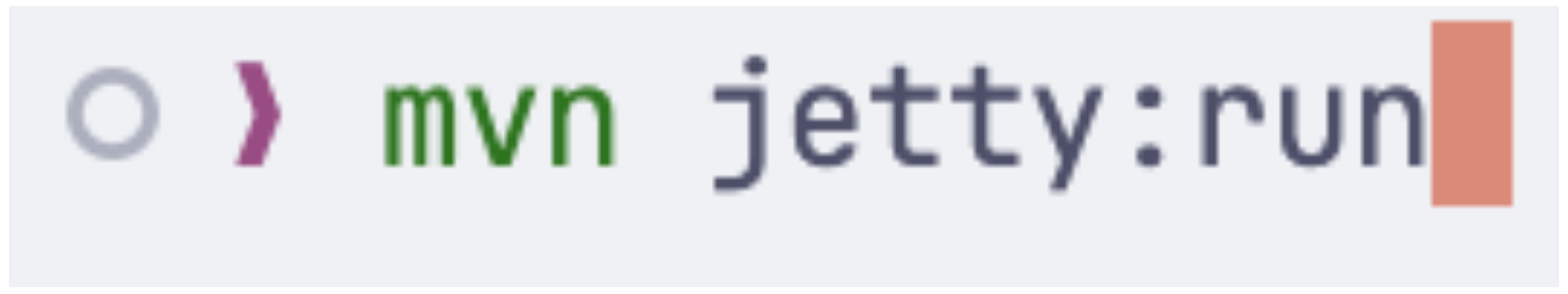
Running the Code

In the root dir:



```
○ ❯ mvn clean -DskipTests install -e
```

In the web dir:



```
○ ❯ mvn jetty:run
```

Project Requirements

1. UML class diagrams for the 3 subsystems
2. Identify design smells and measure code metrics
3. a, b: Refactor design smells and re-measure code metrics,
   c, d: LLMs for refactoring - standalone and pipeline

Bonus: Comparing LLMs in refactoring pipeline

Getting Going

- Code to UML: understand relationships between classes
- Use your UML diagram to find possible refactoring opportunities
- Use SonarQube, Designite, CodeMR, ... as guides -> they are not oracles!

Getting Going

Look into: MVC, DAO, DTO, JPA

- **MVC**: Model View Controller
- **DAO**: Data Access Object
- **DTO**: Data Transfer Object
- **JPA**: Java Persistence API

Useful Tools

Docker

Homebrew

IntelliJ IDEA

sonarqube

CODEMR

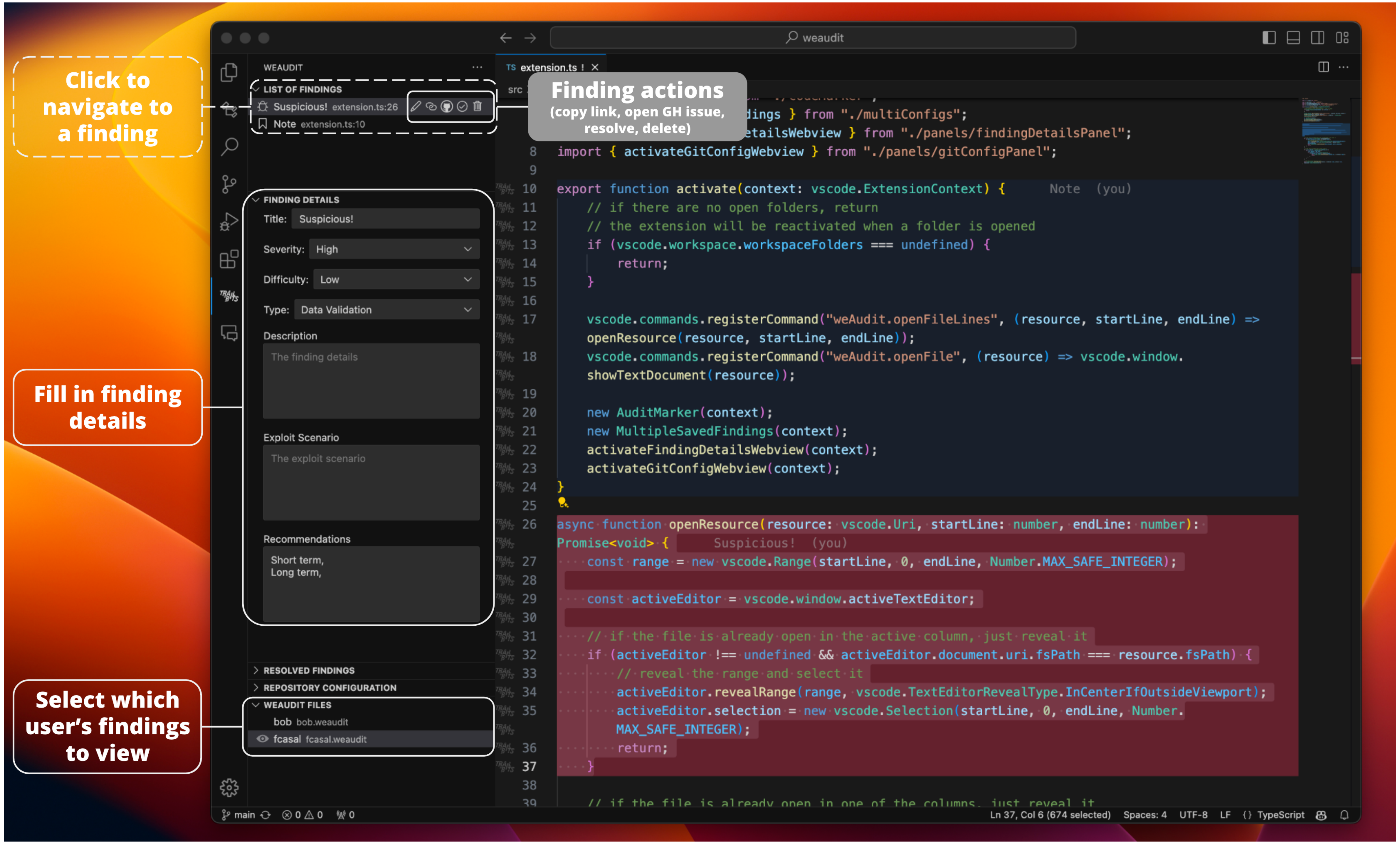
checkstyle

{PMD}

Designite
http://www.designite-tools.com

I wish I had found:

WeAudit VSCode Extension



Click to navigate to a finding
Finding actions (copy link, open GH issue, resolve, delete)
Fill in finding details
Select which user's findings to view
weaudit
WEAUDIT
LIST OF FINDINGS
Suspicious! extension.ts:26
Note extension.ts:10
RESOLVED FINDINGS
REPOSITORY CONFIGURATION
WEAUDIT FILES
bob bob.weaudit
fcasal fcasal.weaudit
extension.ts
src
main
Ln 37, Col 6 (674 selected) Spaces: 4 UTF-8 LF {} TypeScript

FINDING DETAILS

Title: Suspicious!

Severity: High

Difficulty: Low

Type: Data Validation

Description

The finding details

Exploit Scenario

The exploit scenario

Recommendations

Short term,
Long term,

```
dings } from "./multiConfigs";
etailsWebview } from "./panels/findingDetailsPanel";
import { activateGitConfigWebview } from "./panels/gitConfigPanel";

export function activate(context: vscode.ExtensionContext) {      Note  (you)
    // if there are no open folders, return
    // the extension will be reactivated when a folder is opened
    if (vscode.workspace.workspaceFolders === undefined) {
        return;
    }

    vscode.commands.registerCommand("weAudit.openFileLines", (resource, startLine, endLine) =>
    openResource(resource, startLine, endLine));
    vscode.commands.registerCommand("weAudit.openFile", (resource) => vscode.window.
    showTextDocument(resource));

    new AuditMarker(context);
    new MultipleSavedFindings(context);
    activateFindingDetailsWebview(context);
    activateGitConfigWebview(context);
}

async function openResource(resource: vscode.Uri, startLine: number, endLine: number):
Promise<void> {      Suspicious!  (you)
    const range = new vscode.Range(startLine, 0, endLine, Number.MAX_SAFE_INTEGER);

    const activeEditor = vscode.window.activeTextEditor;

    // if the file is already open in the active column, just reveal it
    if (activeEditor !== undefined && activeEditor.document.uri.fsPath === resource.fsPath) {
        // reveal the range and select it
        activeEditor.revealRange(range, vscode.TextEditorRevealType.InCenterIfOutsideViewport);
        activeEditor.selection = new vscode.Selection(startLine, 0, endLine, Number.
        MAX_SAFE_INTEGER);
        return;
    }

    // if the file is already open in one of the columns, just reveal it
```

Make assumptions

(and state them clearly)

Make documentation

(readable)

Make GH Issues

(timely)

Thanks. Bye👋