Configuration Manual

MSc Research Project
MSc in Cybersecurity

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Project Submission Sheet
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Configuration Manual

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1 Welcome

More and more people are using WordPress to build websites because it's easy and powerful. But with its ecosystem, unsecured plugins can bring security issues. That's where our VS Code IDE extension, "WordPress Security Scan", helps.

This extension is helpful for developers. When a developer writing code for a new plugin, our tool gives you information and warnings to make sure you are using secure coding standards which can help to prevent common vulnerabilities in WordPress plugins. This way, the websites built using your plugins are less likely to have vulnerabilities.

In this manual, we'll show you how to use "WordPress Security Scan" to make your code for plugin is secure.

2 Prerequisites

- Hardware: Laptop or Desktop

- Operating System: Any OS.

- Internet Connection.

- Visual Studio Code: You can download it from VS Code's official website.

- Node.js: Needed for running the extension. Download it from Node's official website.

3 How To Setup

Please follow the steps to use extension:

1. Open VS Code

2. Open the Project: In VS Code, go to File and Open Folder and select project folder.

3. In the terminal, navigate to the extension's root directory.

4. Run npm install to install all the necessary dependencies.(*npm Docs*; n.d.)

4 Run Extension

After installing node packages, now we will use or extension

1. In VS Code, press F5 or go to Run and click on Start Debugging. This will open a new VS Code window.
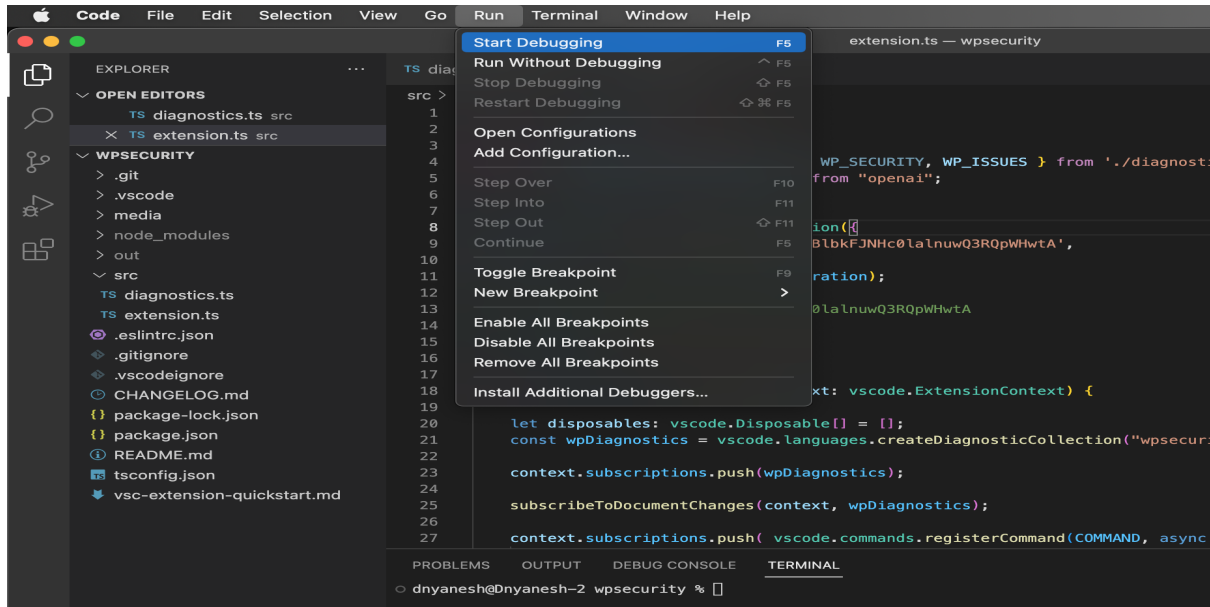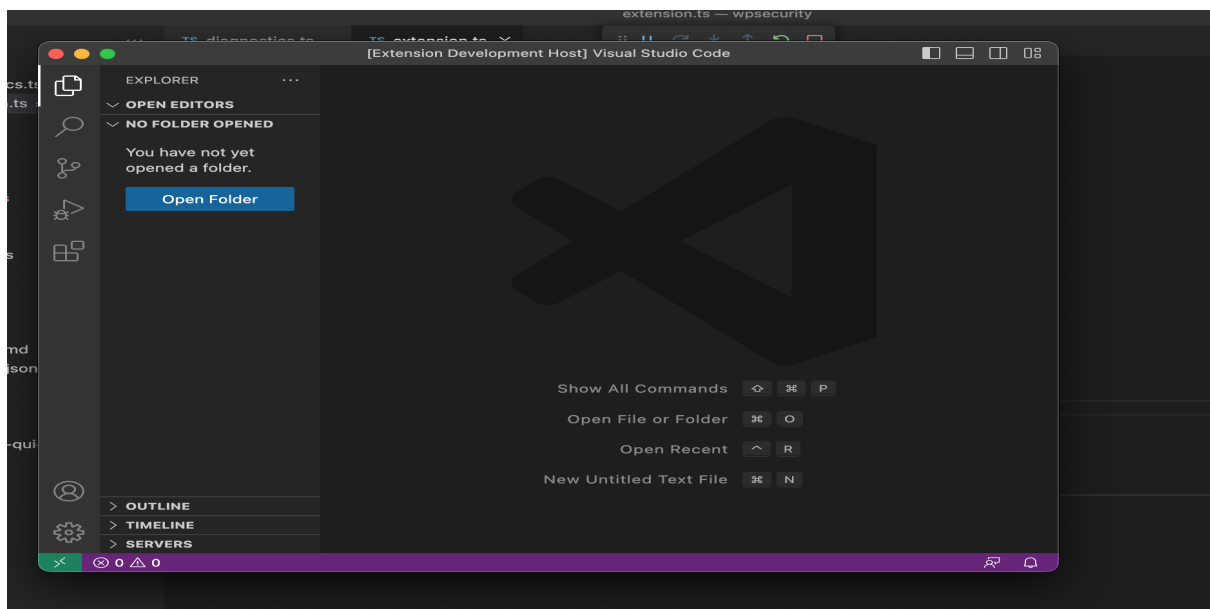

Figure 1: To Run extension start debugging

Figure 2: New Window

2. Use the keyboard shortcut Ctrl+Shift+P (on Windows) and Command +Shift+P (macOS), it will open a prompt window

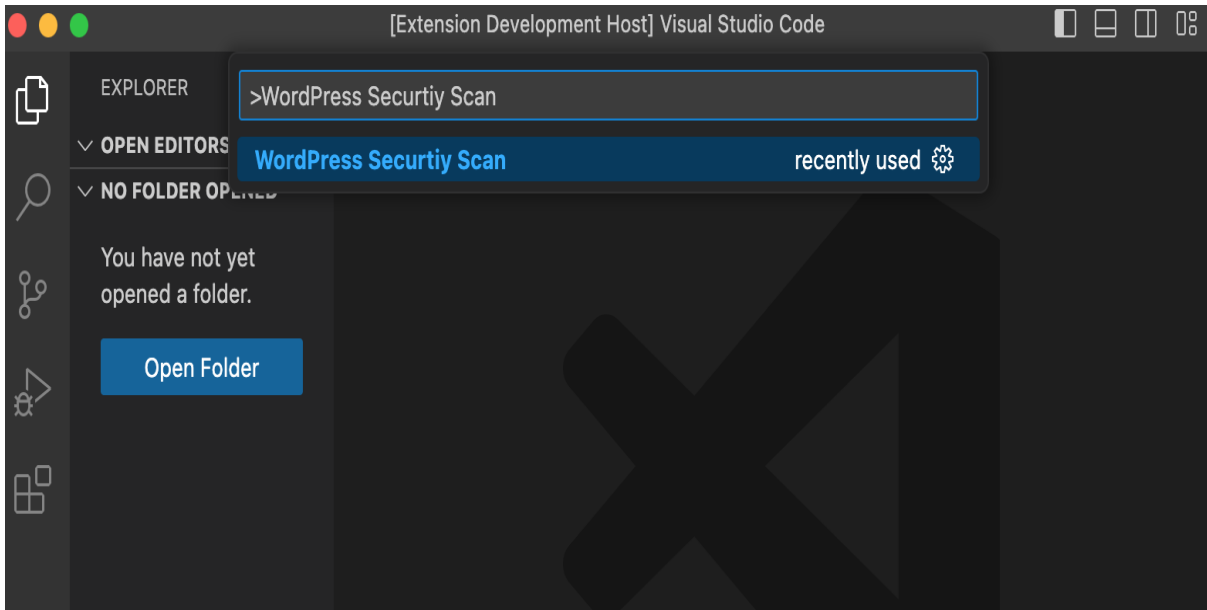3. Type 'WordPress Security Scan' and hit enter button

Figure 3: Hit enter button

4. Now the extension is activated and it will open a new tab with secure coding guidelines for WordPress plugin development.
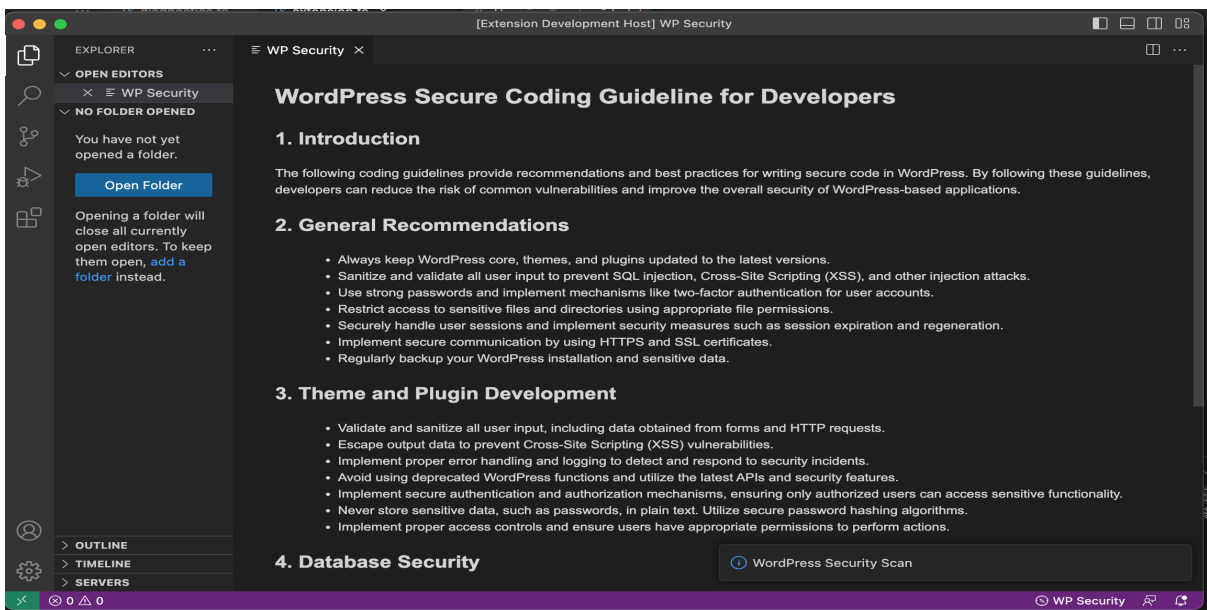

Figure 4: New Window

5   How extension work

After activation of the Extension, now we will start plugin development

1. Create a PHP file

2. Now write code, e.g. Suppose you printing or echoing any PHP variable "echo $user_input;"
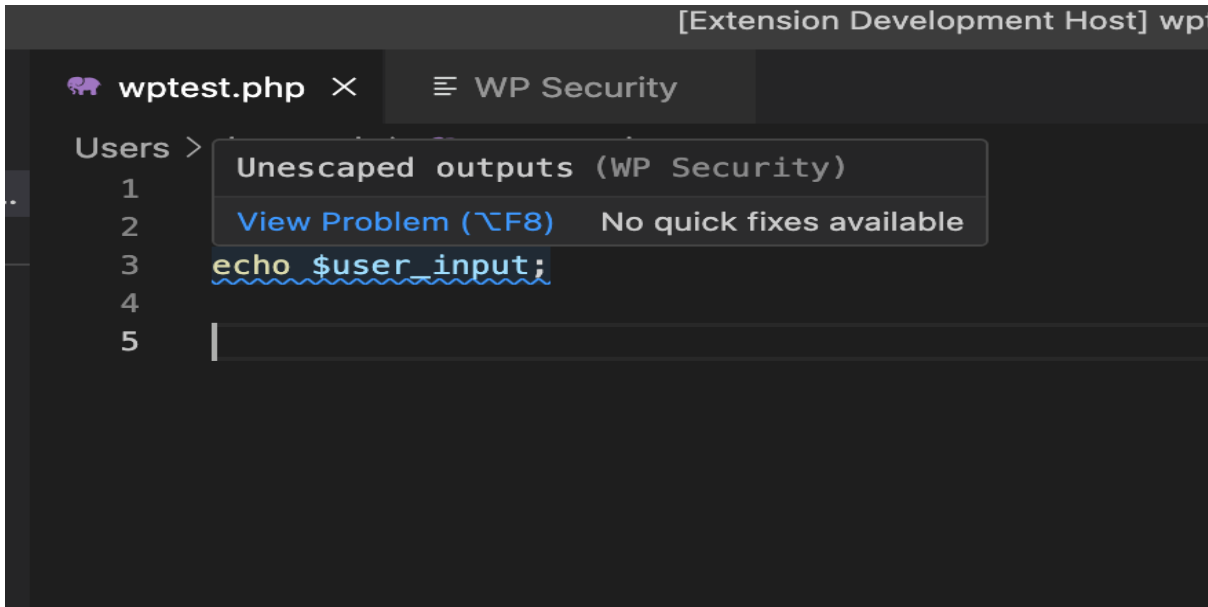

Figure 5: Highlights Code Issue

3. Now extension will highlight the variable because it is unescaped and can cause a security issue and if we use the escaping function it will remove the highlight.

4. To understand this security issue, exertion will give information with the help of OpenAI API.

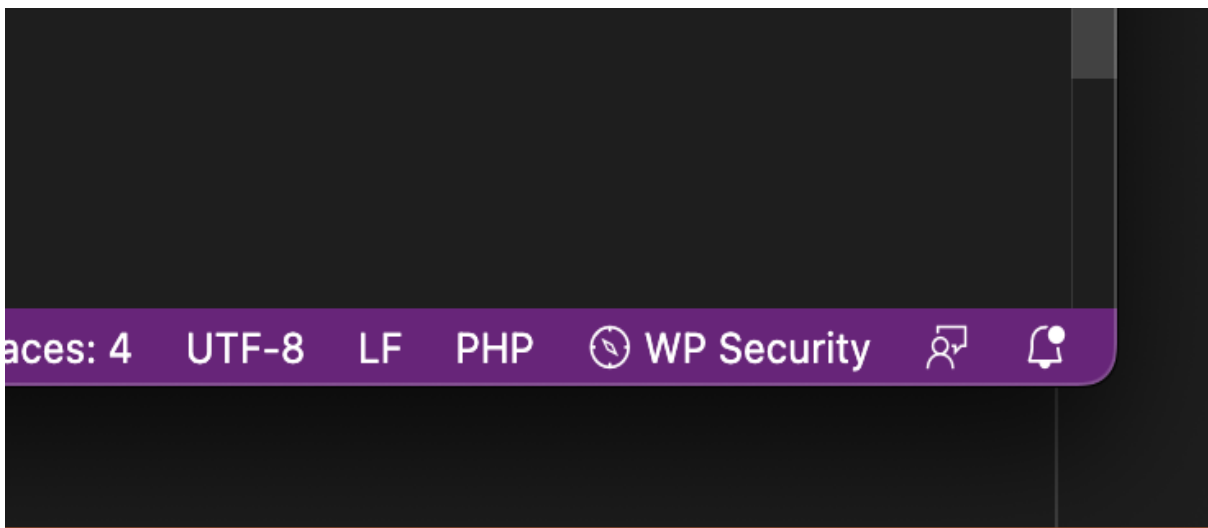5. To view the security report, click on the 'WP Security' button in the right bottom corner.
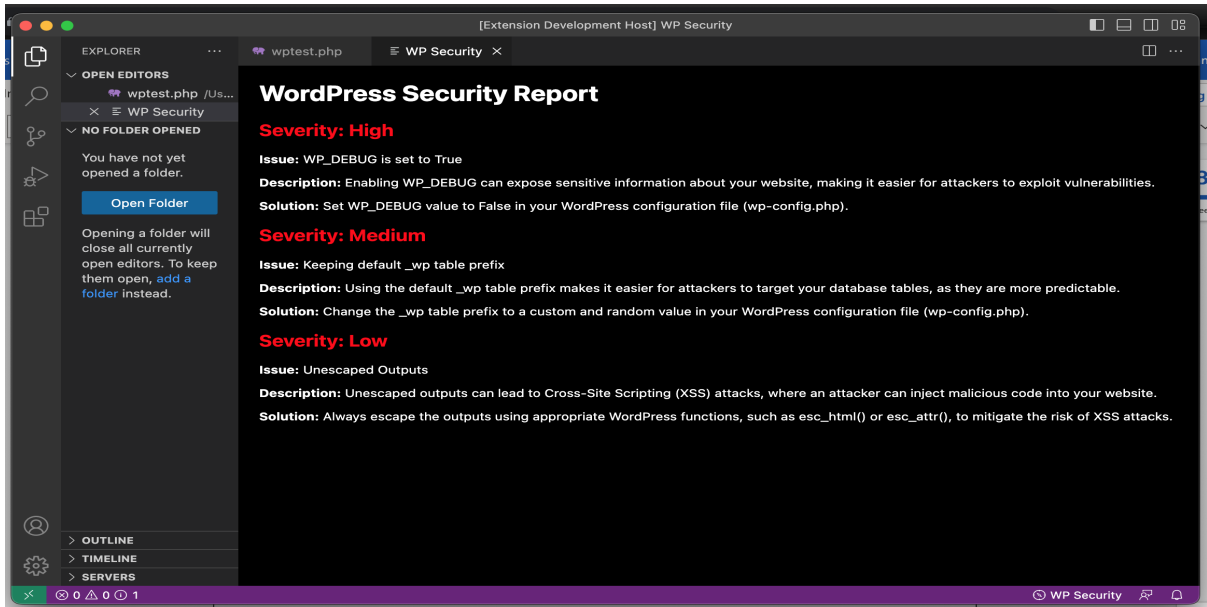

Figure 6: Button to get report

Figure 7: Report window

References

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