

Tool Analysis Document: Code Review Tool for Visual Studio Code

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Contents

1	Installation and Usage	1
2	Ease of Use	1
3	Benefits and Findings	2
4	Conclusion	3

1 Installation and Usage

The installation process of the Code Review tool for Visual Studio Code was straightforward and hassle-free, aligning with the standard procedure for adding extensions in Visual Studio Code (see Figure 1). Upon navigating to the Visual Studio Code Marketplace, a simple search for "Code Review" presented the tool, and clicking the "Install" button added it seamlessly to my development environment. The tool integrated smoothly into the Visual Studio Code interface, requiring minimal setup to begin using it for code review and grading purposes.

2 Ease of Use

Utilizing the tool for a project involved selecting code segments and adding notes directly within the code editor. This process was intuitive, leveraging the context menu to add feedback quickly (see Figure 2). Categories and priorities could be easily assigned to each comment, enhancing the clarity and relevance of feedback. The ability to generate detailed reports in HTML

format (see Figure 3) was particularly useful, providing a comprehensive overview of all comments and feedback for a given project.

3 Benefits and Findings

The Code Review tool significantly improved the efficiency and effectiveness of the code review process. Key benefits included:

Contextual Feedback: Being able to tie feedback directly to specific lines of code or code blocks greatly enhanced the clarity and usefulness of the comments (see Figure 5).

Categorized Feedback: The categorization feature helped in organizing feedback based on various aspects such as functionality, design, and code quality (see Figure 4).

Improved Learning Experience: users receiving feedback through this tool reported a better understanding of their mistakes and areas for improvement.

Streamlined Grading: The tool streamlined the grading process by providing a structured format for feedback and simplifying the review process.

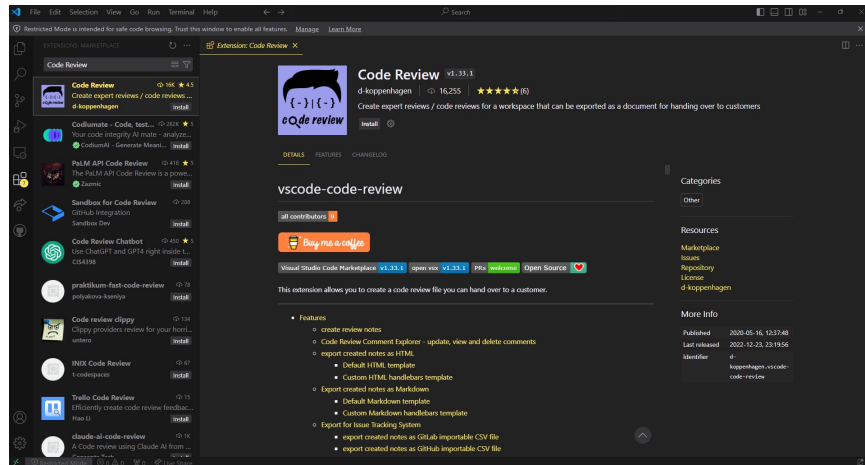


Figure 1: A screenshot showing the tool being selected and installed from the Visual Studio Code Marketplace.

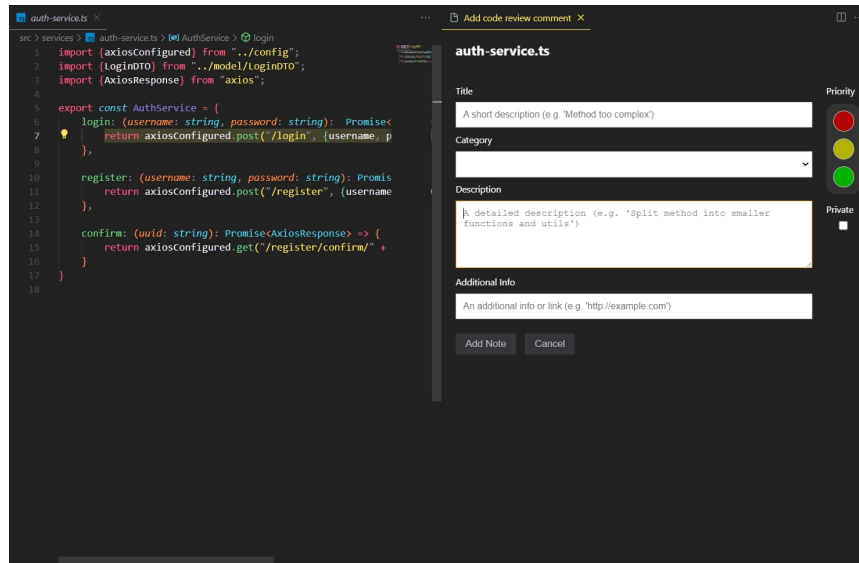


Figure 2: A screenshot demonstrating how to select a code segment and add a comment via the context menu.

4 Conclusion

The Code Review tool for Visual Studio Code offers a robust solution for providing detailed, contextual, and organized feedback for programming assignments. Its ease of installation and intuitive usage make it an invaluable resource for educators seeking to enhance the learning experience in programming courses. The tool's benefits in streamlining the grading process and improving student comprehension of feedback are evident, marking it as a significant advancement in educational tools for programming instruction.

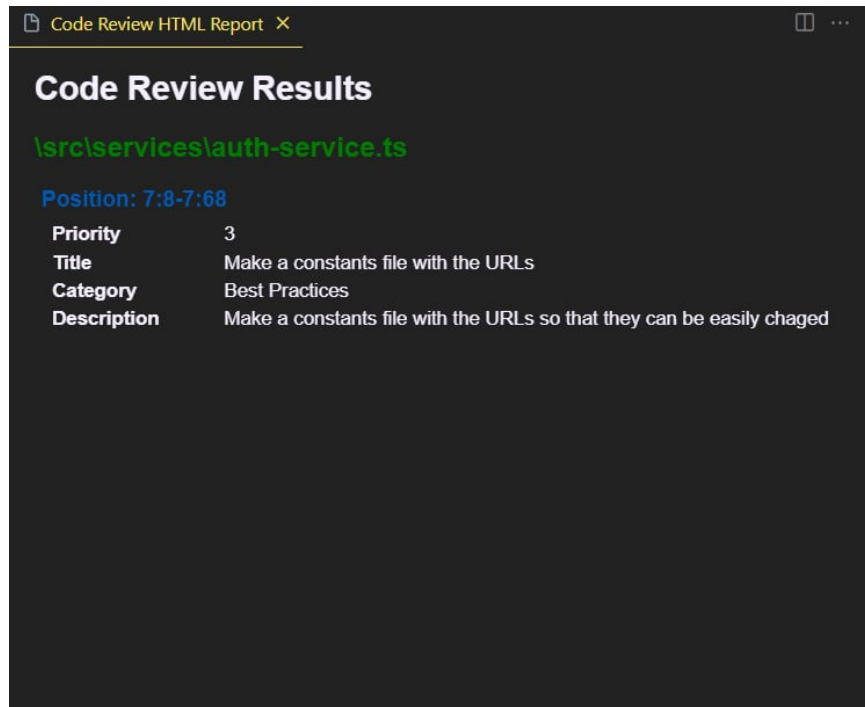


Figure 3: An image displaying the HTML report generated by the tool, summarizing all feedback for a project.

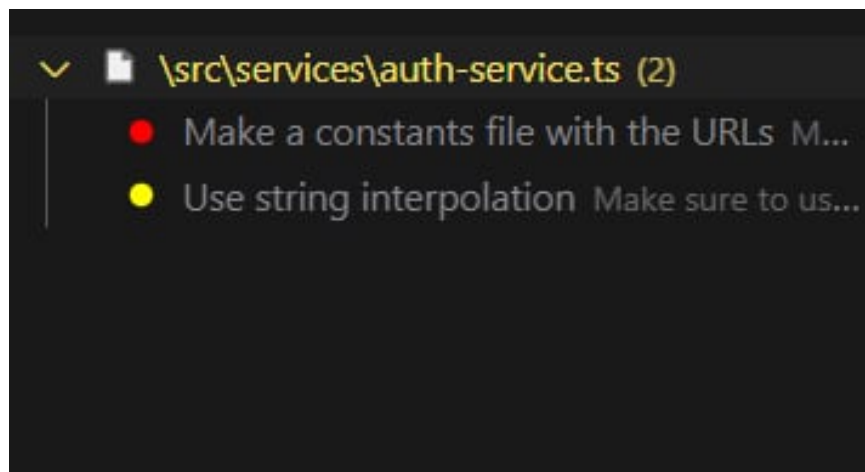
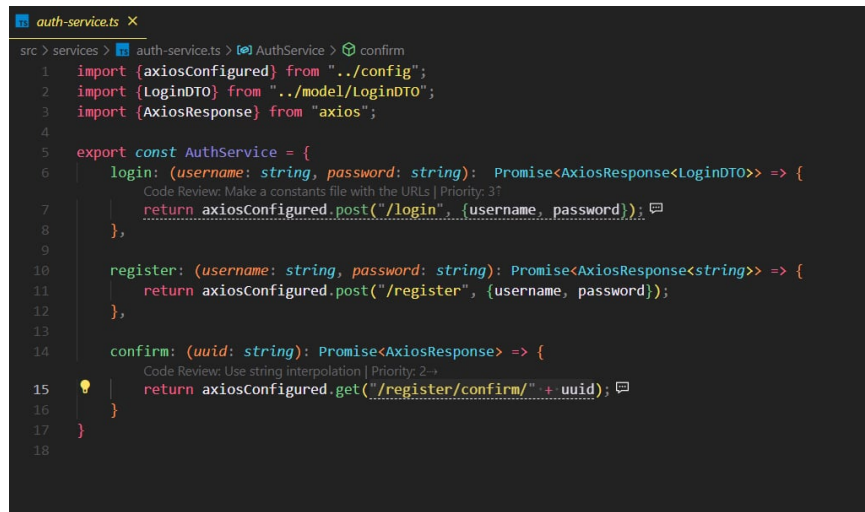


Figure 4: A screenshot showcasing the tool's interface with categorized feedback for various code segments.



```
auth-service.ts X
src > services > auth-service.ts > AuthService > confirm
1 import { axiosConfigured } from "../config";
2 import { LoginDTO } from "../model/LoginDTO";
3 import { AxiosResponse } from "axios";
4
5 export const AuthService = {
6   login: (username: string, password: string): Promise<AxiosResponse<LoginDTO>> => {
7     Code Review: Make a constants file with the URLs | Priority: 3↑
8     return axiosConfigured.post("/login", {username, password});
9   },
10
11   register: (username: string, password: string): Promise<AxiosResponse<string>> => {
12     return axiosConfigured.post("/register", {username, password});
13   },
14
15   confirm: (uuid: string): Promise<AxiosResponse> => {
16     Code Review: Use string interpolation | Priority: 2→
17     return axiosConfigured.get("/register/confirm/" + uuid);
18   }
19 }
```

Figure 5: An image highlighting a specific code segment with detailed feedback provided using the tool.