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Create unit tests using the Generate Tests smart action

6 minutes

The Generate Tests smart action is a feature of GitHub Copilot that helps you create unit tests for your code. It analyzes the code in the current file and generates test cases based on the code's structure and behavior. This feature is particularly useful for developers who want to ensure their code is thoroughly tested and meets quality standards.

The Generate Tests smart action can be used to generate unit tests for an entire file, or a specific selection of code.

Generate unit tests for a file

The Generate Tests smart action can be used to generate unit tests for an entire file. This is useful when you want to create tests for all functions and methods in the file without having to select each one individually.

To generate unit tests for a file, follow these steps:

1. Open the file that contains the code you want to test.

2. Right-click inside the code editor, select **Copilot**, and then select **Generate Tests**.

3. GitHub Copilot analyzes the code and generates unit tests for all functions and methods in the file.

   The generated tests are displayed in the code editor, typically in a new test file or at the end of the current file, depending on your project's structure and testing framework.

   The generated tests should include assertions and test cases that cover various scenarios for each function or method.

4. Review the generated tests.

   You can make adjustments, such as changing the test names, modifying or removing test cases, or adding additional assertions.

   Select **Accept** or **Close** to accept or discard the suggested unit tests.

5. Save the test file.

   Test files are typically saved to a separate "tests" directory in a project that's configured for unit tests. Your options will depend on your project's structure and testing framework.

6. Run the tests to ensure they pass and verify the functionality of your code.

7. If necessary, refine the tests by adding additional test cases or modifying existing ones.

8. Save the file again after making any changes to the tests.

Generate unit tests for a selection

The Generate Tests smart action can also be used to generate unit tests for a specific selection of code. This is useful when you want to create tests for a specific function or method without generating tests for the entire file.

To generate unit tests for a selection of code, follow these steps:

1. Open the file that contains the code you want to test.

2. Select the code block that you want to test.

3. Right-click the selected code, select **Copilot**, and then select **Generate Tests**.

4. GitHub Copilot analyzes the selected code and generates unit tests for the selected function or method.

5. Review the generated tests and make any necessary adjustments.

6. Save the file.

7. Run the tests to ensure they pass and verify the functionality of your code.

8. If necessary, refine the tests by adding additional test cases or modifying existing ones.

9. Save the file again after making any changes to the tests.

Summary

The Generate Tests smart action is a powerful tool that can help you create unit tests for your code quickly and efficiently. By using this feature, you can ensure that your code is thoroughly tested and meets quality standards. Whether you want to generate tests for an entire file or a specific selection of code, the Generate Tests smart action can help you achieve your testing goals.

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< Previous   Next >