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TOPICS IN SOFTWARE ENGINEERING

ASSIGNMENT NO 3

**REPORT ON VISUAL STUDIO CODE**

**Question no 1: What Refactoring Strategies they use?**

**REFACTORING STRATEGIES**

Source code refactoring can improve the quality and maintainability of your project by restructuring your code while not modifying the runtime behavior. Visual Studio Code supports refactoring operations to improve your code base from within your editor such as:

* Extract Method
* Extract Variable
* Rename symbol
* Extensions with refactoring

**Renaming** is a common operation related to refactoring source code and VS Code has a separate Rename Symbol command. There are also **Extensions** that support refactoring by looking in the VS Code Marketplace. Code is broke into smaller chunks to find and **Extract** fragmentation.

Code refactoring tool in Visual Studio code is as follows

* Visual studio intellicode.

**Question no 2: How they apply rewrite?**

Microsoft started from scratch with no guarantees of backwards compatibility. As writing code from scratch opens the door for new users, markets, platforms and technologies. Not from scratch, but, Microsoft already had some important parts lying around, such as the in-browser Monaco editor. Because VS Code is a Node.js app, they were able to take advantage of the rich JavaScript ecosystem.

Microsoft succeeded in building an active open source community around VS Code. This community has multiplied the efforts of the in-house development team. Rewrites put the application on a platform that will make it easier to adapt to new development technology and approaches. Rewriting banishes legacy code, which decreases the gap between your existing software and emerging code options.

One final takeaway from the VS Code story is that things have changed fundamentally in the last few years, in a way that makes it easier than ever to prototype and create software.

**Question no 3:**

1. **Old Features / Newly Added Features**

Visual Studio Code is an undisputed favorite of developers, considering its vast levels of flexibility and innate ability to run multiple programming languages simultaneously. Since Microsoft continues to update the platform on a rolling month-on-month basis, the most recent version 1.69 was released in June 2022.

The added features are as follows:

* **Three-Way Merge Editor**

The merge editor provides diagnostics, breakpoints, and tests to assist you with your merged results.

* **Window Command Center**

You can enable the enhanced command center via the window.commandCenter setting.

* **Do Not Disturb Mode**

The new Do Not Disturb mode is necessary for hiding non-error notification popups. Track your notifications from the status bar, or hide them if they are irrelevant.

* **Light and Dark Themes**

Toggle between the light and dark themes with relative ease.

* **Minimap Context Menu**

The Minimap Context Menu displays a synopsis of your source code on the left side of your Virtual Studio Code editor window.

1. **Main Changes in Features**

* Better editor autoscrolling - Scrolling speed tuned to cursor location.
* Extensions view updates - Highlights extensions with updates or needing attention.
* JavaScript sourcemap toggling - Switch to debugging compiled rather than source code.
* Color theme tester - Use vscode.dev to preview color themes.
* Drag and drop Problems and Search results - Drag results to new or existing editor groups.
* Source Control diff editor management - Automatically close diff editors after Git operations.
* Fixed terminal dimensions - Set an active terminal's width and height.

1. **Current State**

* Customize Explorer auto reveal - Decide which files scroll into view in the Explorer.
* Hide Activity bar and Panel badges - Simplify the editor UI by toggling state badges.
* Audio cues for notebooks and diff view - Sounds for cell run results, added or removed lines.
* Merge editor Undo/Redo - Quickly revert or reapply merge conflict actions.
* Manage unsafe repositories - Prevent Git operations on folders not owned by you.
* JavaScript console.profile collection - Easily create CPU profiles for viewing in VS Code.
* Go to Definition from return - Jump to the top of JavaScript/TypeScript functions.
* Remote Tunnels - Create a connection to any machine, without needing SSH.
* Dev Container GPU support - Request a GPU when creating a Dev Container.