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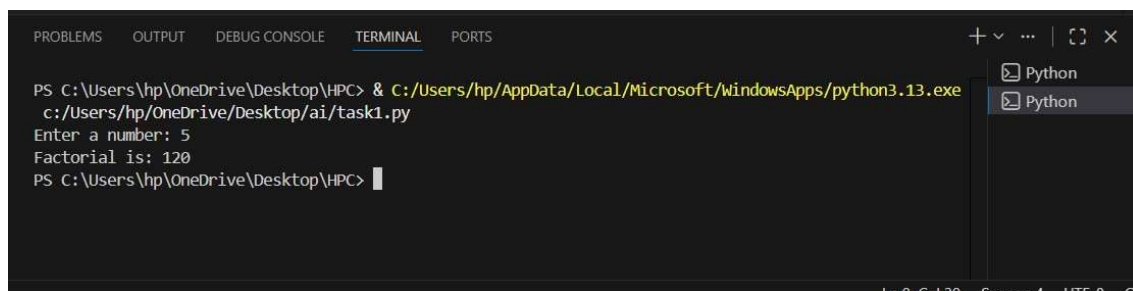
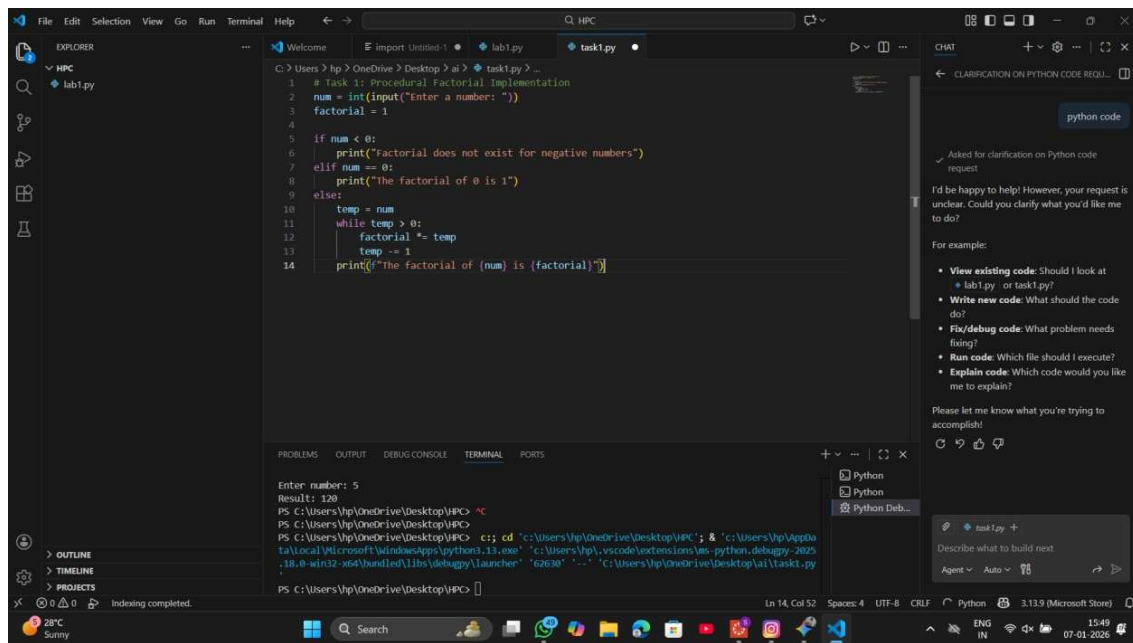
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AI Assisted Coding

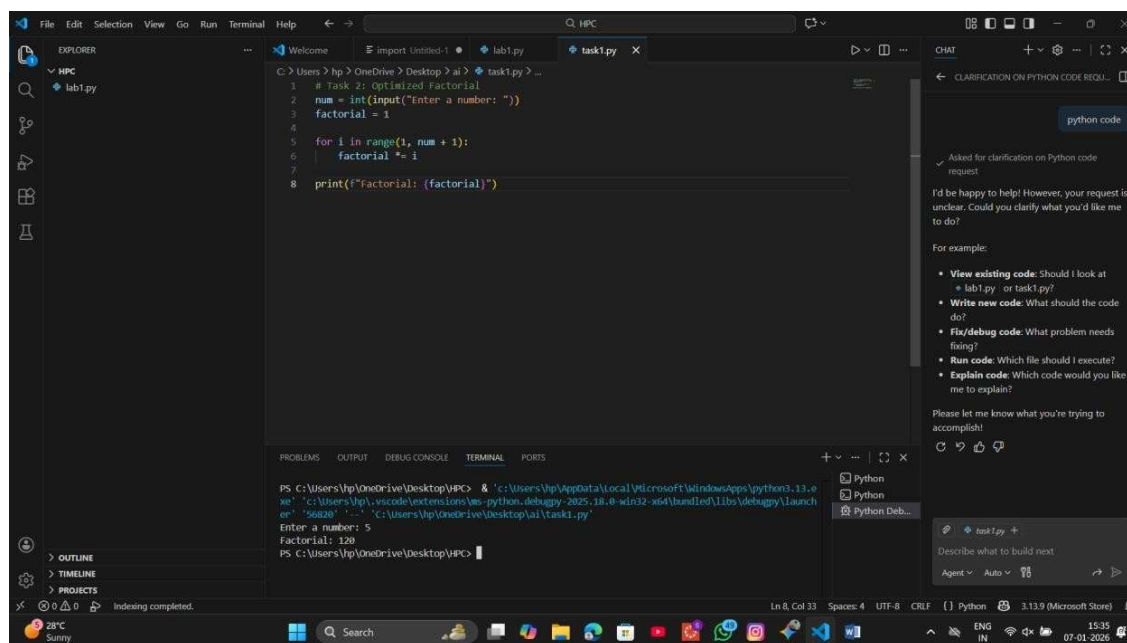
Task 0: Environment Setup:-

The image shows two screenshots related to environment setup. The top screenshot is a screenshot of the Visual Studio Code (VS Code) interface. The left sidebar shows the 'EXTENSIONS: MARKETPLACE' view with a search for 'github'. The 'GitHub Copilot' extension is highlighted, showing it is installed. The main editor area displays the 'GitHub Copilot' extension page, which includes details about the extension, its features, and installation instructions. The bottom screenshot shows a GitHub repository page for 'AIAC_2143' by user 'Hemanthkumar2143'. The repository is public and has 1 branch and 0 tags. The main content area shows a list of files: 'AIAC_2143_3.1.pdf', 'AIAC_2143_3.3.pdf', and 'README.md'. The 'README' file is selected, showing its content.

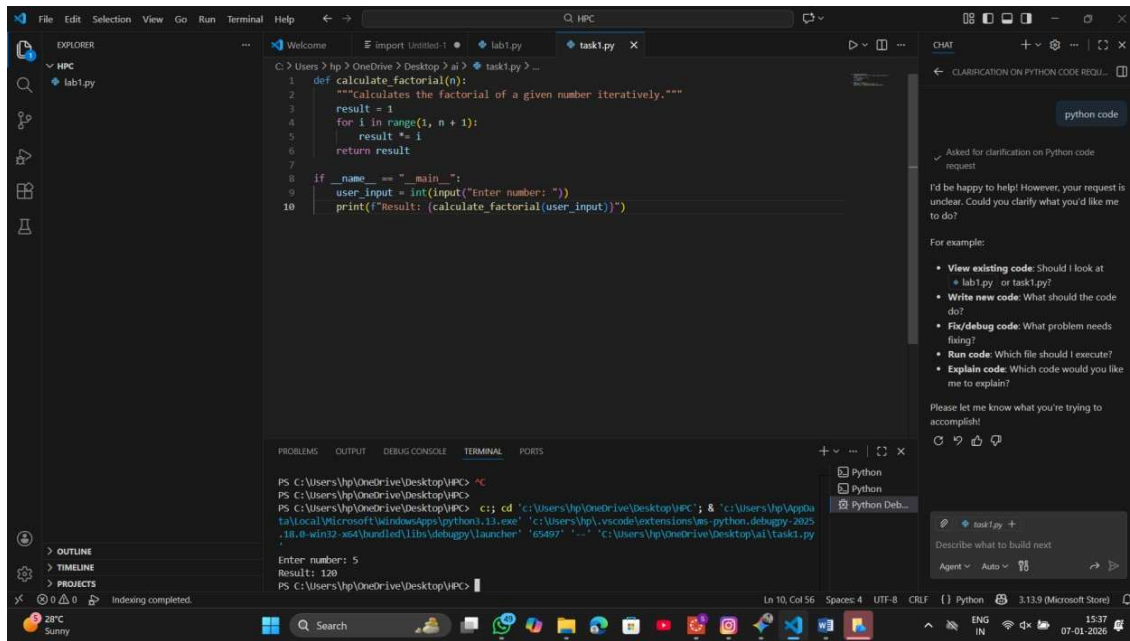
Task 1: Non-Modular Logic (Factorial):-



Task 2: AI Code Optimization:-



Task 3: Modular Design:-



Task 4: Comparative Analysis:-

Criteria	Procedural (Task 1 & 2)	Modular (Task 3)
Logic Clarity	Linear and straightforward for very small tasks but becomes "spaghetti code" as complexity grows.	High clarity; the mathematical logic is isolated from the input/output logic.
Reusability	None. To use the logic elsewhere, the code must be manually copied and pasted.	High. The function can be imported into other Python files or called multiple times in one script.
Debugging Ease	Difficult. Errors in logic are mixed with errors in user input handling.	Simple. You can test the function with specific values (Unit Testing) to ensure the math is correct.
Project Suitability	Suitable only for small, one-off scripts or prototypes.	Essential for enterprise-level, large-scale software development.
AI Dependency Risk	High. AI might generate redundant variables or inefficient loops in long scripts.	Low. AI is highly specialized and accurate when asked to write specific, single-purpose functions.

Task 5: Iterative vs Recursive Thinking:-

