





Criteria	Code Comments	Markdown	Jupyter Notebook
 Purpose	Explain code logic, add notes within code files	Create formatted documentation and text	Combine code, text, and output for interactive documents
 File Extensions	.py, .js, .c, etc. (depends on the language)	.md, .markdown	.ipynb
 Ownership	General standard across programming languages	Developed by John Gruber (open-source standard)	Initially developed by Fernando Pérez and IPython team (open-source)
 Syntax Format	Language-specific comment symbols (// , # , /* */)	Uses simple markup like # , ** , []()	Uses Markdown for text cells and Python for code cells
 Text Formatting	Limited to plain text	Supports bold, italics, headings, etc.	Supports full Markdown formatting with rendered output
 Execution Capability	No code execution	No code execution	Code cells can be executed, showing results inline
 Interactivity	Not interactive	Not interactive	Interactive; supports widgets, graphs, etc.
 Use Cases	Inline code documentation	README files, project documentation	Data analysis, teaching, research papers
 Visual Output	Plain text only	Styled text formatting	Visual output such as graphs, images, and tables
 Integration	Integrated into code editors and IDEs	Supported by most text editors and Git platforms	Requires Jupyter environment or compatible software
 Learning Curve	Minimal; simple to use	Easy for basic formatting; more for advanced features	Moderate; requires learning notebook environment
 Version Control	Managed as part of code	Easy to version-control (e.g., GitHub)	More complex to version-control due to JSON format

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 Execution Environment	Runs in the specific programming environment	Not executable	Executable in Jupyter Notebook, JupyterLab, or similar platforms
 Collaboration	Shared as part of code reviews	Easy to collaborate via platforms like GitHub	Collaborative using JupyterHub and shared notebooks
 Examples of Use	# This is a code comment	# This is a Markdown heading	Markdown cell: # Heading + Code cell: <code>print("Hello")</code>
 Link to GitHub Repo	Used within codebase (e.g., Sample Repo)	Often found in README files	Common in Jupyter repos