

TASK # 03

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PART A: REASEARCH QUESTION (SHORT ANSWERS)

Q1. What new improvements were introduced in Gemini 3.0?

- Gemini 3 Pro brings **much stronger reasoning**, outperforming earlier models on key AI benchmarks.
- It supports a **very large context window** (up to 1 million tokens), enabling it to process extremely long documents or multimodal inputs.
- The model has **advanced multimodal capabilities**, handling text, images, audio, video, and code.
- There's a new **Deep Think mode**, which boosts its intelligence for very complex tasks (especially reasoning-heavy ones).
- On security and safety, Gemini 3 has **better safeguards**: reduced sycophancy, more resistance to prompt injection, and stronger protections against misuse.

Q2. How does Gemini 3.0 improve coding & automation workflows?

- It introduces “**vibe coding**”, where you can describe what you want in natural language and Gemini 3 can generate a working, interactive app or codebase for you.
- Gemini 3 Pro has better **agentic capabilities**: it can autonomously plan and execute multi-step workflows, using its tool-use ability.
- Integration with **Google Antigravity**, a new “agent-first” development platform, allows Gemini agents to operate in the editor, terminal, and browser; they generate “Artifacts” to document their actions (plans, screenshots, etc.) so you can verify what the agent is doing.
- Gemini 3 supports **long-horizon planning**, meaning it can maintain coherent tool usage and decision-making across longer workflows (e.g., simulated business or multi-step software tasks).
- For developers, it’s available via **Gemini API**, **Google AI Studio**, **Vertex AI**, **Gemini CLI**, and is also compatible with IDEs / platforms like Cursor, JetBrains, GitHub, Replit, etc.

3. How does Gemini 3.0 improve multimodal understanding?

- The multimodal reasoning is significantly enhanced: Gemini 3 sets new state-of-the-art scores on benchmarks for image reasoning (MMMU-Pro) and video understanding (Video-MMMU).
- It has **vision + spatial reasoning**: it can understand spatial relationships, trajectories, and points, which is useful for robotics, XR (extended reality), and other embodied tasks.
- For **document understanding**, it goes beyond simple OCR; Gemini 3 can interpret complex documents, reason about them, and extract structured information.
- Developers can **configure vision processing** in the Gemini API with finer control over latency vs. fidelity, to tailor the model's performance to the needs of their application.
- The **1 million-token context window** helps in multimodal tasks because it allows combining long inputs (e.g., long docs, video transcript + images) in a single prompt/session.

4. Name any two developer tools introduced with Gemini 3.0.

Here are two (among others):

1. **Google Antigravity** — an agent-first development platform where Gemini agents have direct access to editor, terminal, and browser; they can autonomously plan, execute, and validate tasks.
2. **Gemini CLI** — a command-line interface, allowing you to generate, prototype, and code directly from your terminal using Gemini 3.

PART B: PRACTICAL TASK

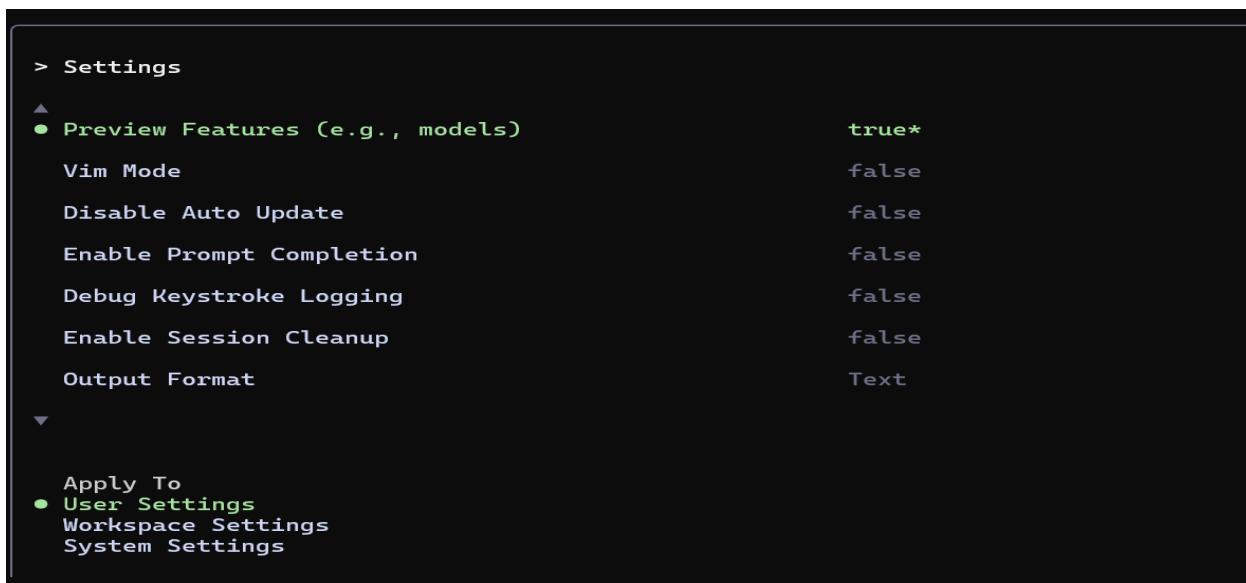
Update the Gemini 3.0 model

Using the /model command in Gemini CLI, update the Gemini model to the latest version

(3.0).



The screenshot shows the Gemini 3.0 CLI interface. At the top, there is a large blue and purple pixelated logo with the word "GEMINI". Below it, a message box contains the text: "Gemini 3 is now available. Join the waitlist at <https://goo.gle/enable-preview-features>". Underneath this, a "Tips for getting started:" section lists three items: 1. Ask questions, edit files, or run commands. 2. Be specific for the best results. 3. /help for more information. A second message box below says: "You are running Gemini CLI in your home directory. It is recommended to run in a project-specific directory." At the bottom, the terminal prompt shows the user running the command: "Using: 1 GEMINI.md file > /model". The command "/model" is highlighted in a red box. To the right of the command, the output shows "no sandbox (see /docs)" and "auto".



The screenshot shows the Gemini 3.0 CLI settings menu. The menu is organized into sections with collapsible arrows. The "Settings" section contains the following options and their values:

Setting	Value
Preview Features (e.g., models)	true*
Vim Mode	false
Disable Auto Update	false
Enable Prompt Completion	false
Debug Keystroke Logging	false
Enable Session Cleanup	false
Output Format	Text

Below the "Settings" section, there is a "▼" symbol indicating more options. The "Apply To" section contains the following options:

- User Settings
- Workspace Settings
- System Settings