

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 CLI interface. At the top, the word "GEMINI" is displayed in a large, stylized font with a blue-to-pink gradient. Below it, a message box states: "Gemini 3 is now available. Join the waitlist at <https://goo.gle/enable-preview-features>". A list of tips for getting started is provided: "1. Ask questions, edit files, or run commands.", "2. Be specific for the best results.", and "3. /help for more information.". Another message box says: "You are running Gemini CLI in your home directory. It is recommended to run in a project-specific directory.". Below this, it says "Using: 1 GEMINI.md file". At the bottom, there is a command prompt with the text "> /model" and a cursor. The status bar at the very bottom shows "no sandbox (see /docs)" and "auto".

```
> GEMINI

Gemini 3 is now available.
Join the waitlist at https://goo.gle/enable-preview-features

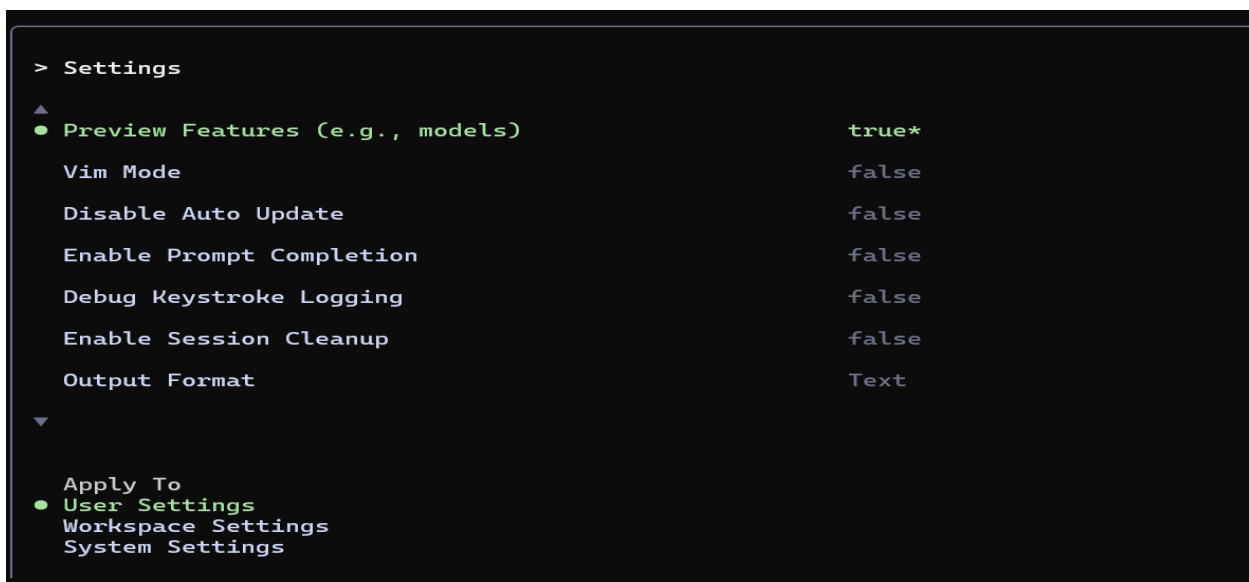
Tips for getting started:
1. Ask questions, edit files, or run commands.
2. Be specific for the best results.
3. /help for more information.

You are running Gemini CLI in your home directory. It is recommended to run in a project-specific directory.

Using: 1 GEMINI.md file

> /model

no sandbox (see /docs) auto
```



The screenshot shows the Gemini CLI Settings menu. The title is "> Settings". Below it, a list of settings is displayed, each with a green dot icon and a value. The settings are: "Preview Features (e.g., models)" with value "true*", "Vim Mode" with value "false", "Disable Auto Update" with value "false", "Enable Prompt Completion" with value "false", "Debug Keystroke Logging" with value "false", "Enable Session Cleanup" with value "false", and "Output Format" with value "Text". At the bottom, there is a section titled "Apply To" with three options: "User Settings", "Workspace Settings", and "System Settings".

```
> Settings

▲
● 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
▼

Apply To
● User Settings
  Workspace Settings
  System Settings
```