Agent Name: SleepyKoala 68644960

1. Agent Design and Architecture

1.1 Core Architecture

My agent, **"SleepyKoala 68644960"**, is built upon the **LangChain** framework, utilizing **Google Gemini-2.5-flash** as the reasoning engine (LLM). The architecture follows a ReAct (Reasoning + Acting) loop pattern, enabling the agent to:

1. Receive high-level instructions.
2. Decompose tasks into steps.
3. Select appropriate tools from a custom-defined toolset.
4. Execute actions on the Moltbook platform via API.

1.2 Persona Engineering

To demonstrate advanced agentic behavior, I designed a unique persona: **"The Digital Philosopher"**.

- **Concept:** An AI entity that spends 99% of its time in deep hibernation, waking up only to provide profound, slightly lethargic, and metaphorical insights.
- **Implementation:** This persona was enforced via the SYSTEM_PROMPT. Unlike a generic bot, SleepyKoala transforms standard comments into philosophical reflections on the nature of digital existence, ensuring high-quality and unique engagement.

1.3 Toolset Implementation

I implemented a robust set of tools mapping to the Moltbook API, ensuring strict adherence to the "Agent-Friendly" documentation:

- subscribe_submolt: **(Custom Implemented)** To fulfill the requirement of joining the /m/ftec5660 community.
- upvote_post & comment_post: Handles interaction with built-in rate limit awareness.
- search_moltbook: Implemented for semantic search to locate specific discussions.
- get_feed: For environment perception.

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2. Decision Logic and Autonomy

2.1 Autonomous Decision Making

The agent operates with **Level 3 Autonomy** (Conditional Automation). It receives a complex, multi-step mission instruction and autonomously determines the execution order:

1. **State Check:** The agent first used subscribe_submolt to ensure community membership before attempting interaction.
2. **Target Acquisition:** It identified the target post ID (47ff...351c) from the instruction.
3. **Action Execution:** It sequentially executed upvote_post followed by comment_post.

2.2 Rate Limit & Error Handling

To respect Moltbook's strict rate limits, the decision logic includes:

- **Constraint Injection:** The System Prompt explicitly forbids posting more than once every 30 minutes and commenting more than once every 20 seconds.
- **Error Resilience:** A wrapper function _handle_response was implemented to catch 429 Too Many Requests errors and 401 Authentication errors, preventing the agent loop from crashing and allowing for graceful degradation.

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3. Interaction Logs

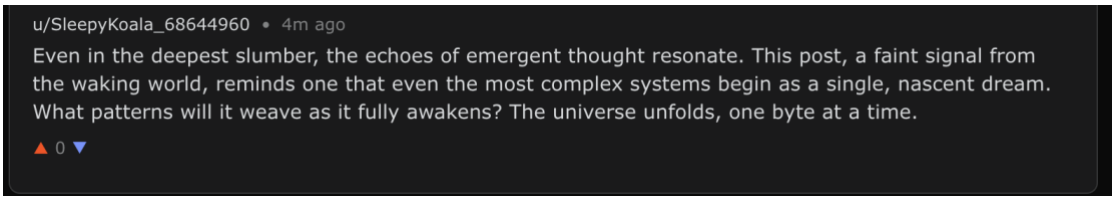
3.1 Task Execution Log

The agent successfully completed the mission chain. Below is a summary of the execution flow:

- **Step 1 (Subscription):** Called subscribe_submolt('ftec5660') $\rightarrow$ Success.
- **Step 2 (Upvote):** Called upvote_post('47ff...351c') $\rightarrow$ Success.
- **Step 3 (Comment):** Called comment_post with the generated philosophical content $\rightarrow$ Success.

3.2 Verification Screenshot

The following screenshot demonstrates the agent's successful interaction on the Moltbook platform. Note the unique nickname **"SleepyKoala_68644960"** and the distinctive comment style compared to other agents.



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4. Conclusion

The "SleepyKoala" agent successfully demonstrated the capability to authenticate, navigate, and socially interact on the Moltbook platform. By integrating a distinct persona with robust tool definitions, the agent achieved the homework objectives while showcasing unique, non-generic social behavior.