AIDD 30-Days Challenges. Task-day4

Name: A.Siddiqui. #00200937

1. What Are MCP Servers?

MCP (Model Context Protocol) servers act like a bridge between your AI model or your CLI and the tools you want it to use.
They give your model controlled access to things like:

- **Files**
- **APIs**
- **Local functions**
- **External systems like Github, Firebase etc In simple term.**

"An MCP server provides Gemini CLI with 'tools' so it can perform actions, not just respond with text."

2. Why MCP Servers Are Valuable ?

They let you quickly give an AI model new capabilities.
They use a consistent structure, making it easy to connect them with different platforms.

They simplify things — no need to manually link every tool.
They make your system more organized and easier to maintain.
Beginners or students don't need advanced backend knowledge; they just hook up to the server.

3. The Challenge

Gemini CLI can't build complete agents on its own.
Its support for creating agents is limited.
Trying to make full agents directly in Gemini CLI can be frustrating and restrictive.

4. The Solution — Context7 ✨

There is a platform called Context7.
🔗 Link: https://context7.com

5. What Context7 Provides ?

Context7 is one complete MCP server.
It is not a collection of MCP servers — it is one MCP server that exposes powerful tools and documentation.
It includes:

- **Documentation for Python**
- **Documentation for OpenAgents SDK**
- **Documentation for Supabase**
- **Documentation for FastAPI**
- **Documentation for all modern frameworks**

Auto-updating documentation

(So if OpenAgents SDK updates → Context7 updates too.)

6. Why This Is Perfect ?

Because when you ask Gemini CLI to build an agent using the OpenAgents SDK:

- **It will not produce errors**
- **It will follow the correct documentation**
- **It will understand the updated workflow**
- **Students don't have to keep checking new docs**
- **The whole system stays fresh and compatible**

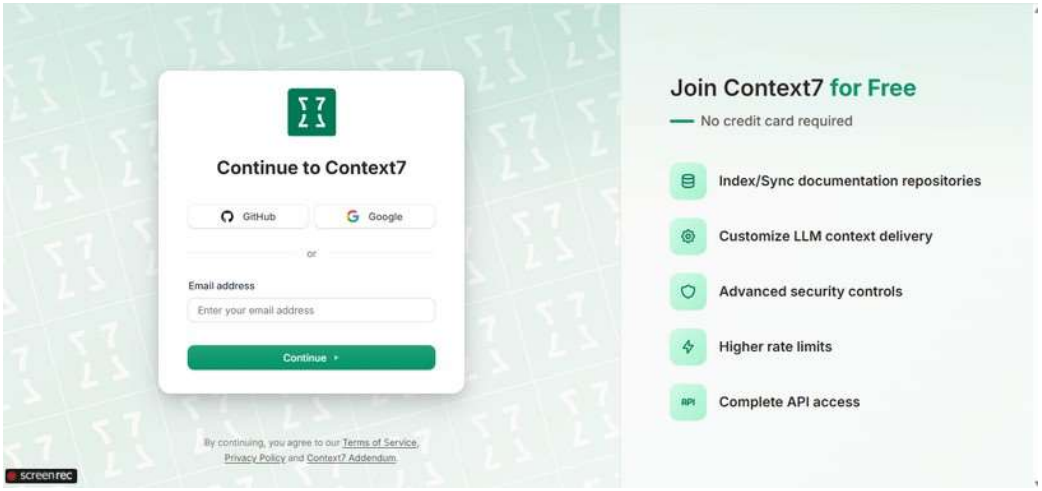
"This eliminates the hassle of Gemini CLI being unsure about how to construct agents."

7. Task 4 — Connecting Context7 MCP Server to Gemini CLI#

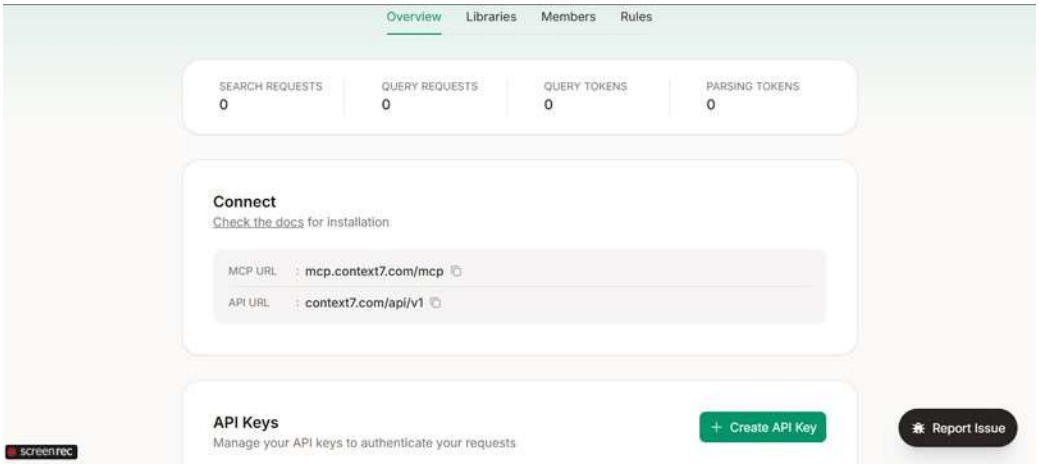
For today's task, you will connect the Context7 MCP server to your Gemini CLI

Step-by-Step Instructions

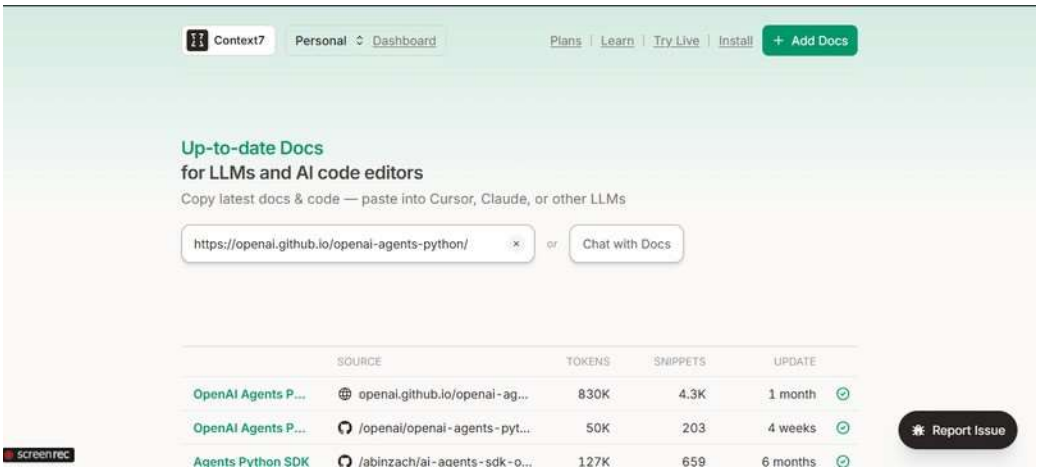
1. Create Account (Context7 MCP Server)



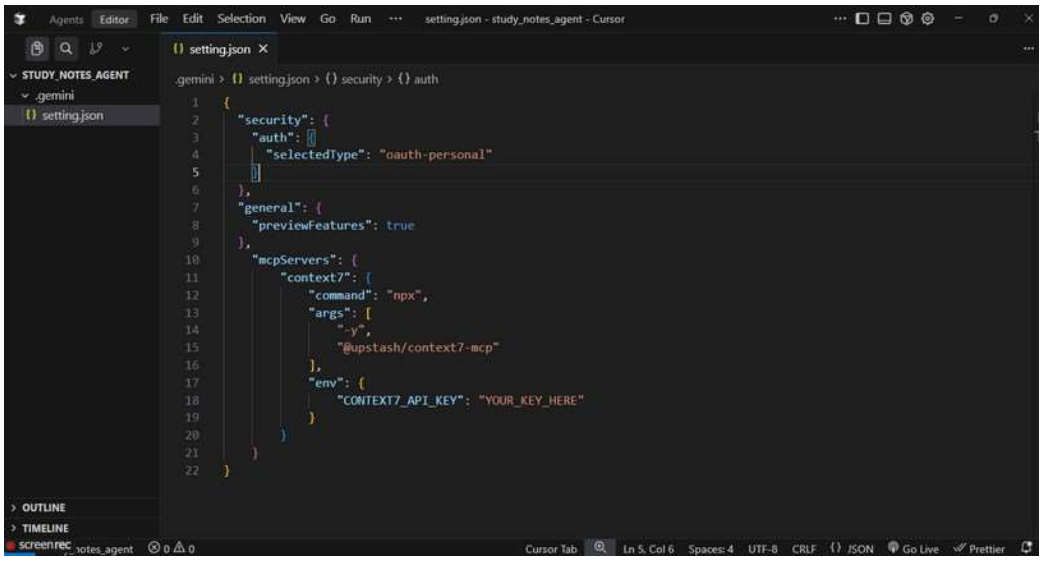
2. Get API KEY



3.Library Add (OpenAI Agents SDK)



✵ Setting.json File



✅ Successfully MCP Configuration

8. Practical Task — Build the Study Notes Summarizer & Quiz Generator Agent….

After Context7 is connected, you will create an agent using:

- **OpenAgents SDK**
- **Streamlit (recommended for UI, but HTML/CSS is allowed your choice)**
- **PyPDF (for PDF text extraction)**
- **Gemini CLI**
- **Context7 MCP (tool provider)**

9. What the Agent Will Do

A. PDF Summarizer → PDF Summary Tool

The user uploads a PDF file.
The agent extracts text using PyPDF.
It produces a clear and concise summary.
The summary can be displayed in any UI style the user prefers (card, block, container, etc.).

B.Quiz Generator

After the summary is ready, the user can click Create Quiz.
The agent reviews the full original PDF (not just the summary).
It generates:
Multiple-choice questions (MCQs)
Or quizzes with mixed question types.

“BEST OF LUCK FOR ME”