

## ■AI-Driven Development — 30-Day Challenge (Task 4)

Marks: 10 | Deadline: 48 Hours

Class Slot: Friday — 6:00 PM to 9:00 PM

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### 1. What Are MCP Servers?

MCP (Model Context Protocol) servers act as a bridge between your AI model or CLI and the tools you want it to use.

They provide access to:

- Files
- APIs
- Local functions
- External systems like GitHub, Firebase, Supabase

In simple terms:

An MCP server gives your model tools so it can DO actions instead of only replying with text.

### 2. Why MCP Servers Are Useful

- Add abilities to an AI model instantly
- Standard format → easy to plug into any system
- No need to manually wire every tool
- More modular and maintainable
- Students don't need backend expertise

### 3. The Problem

Gemini CLI cannot create full agents itself.

It has limited agent■building support.

Creating full agents inside Gemini CLI becomes frustrating.

### 4. The Solution — Context7

Context7 is a full MCP server with:

- Python documentation

- OpenAgents SDK docs
- Supabase docs
- FastAPI docs
- Modern frameworks
- Auto-updating documentation

This ensures Gemini CLI stays compatible and error-free.

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

Follow the official guide:

<https://www.notion.so/Personalization-Chatbot-with-Chainlit-2b2644e5197680728913dc57ee7df803>

#### 6. Practical Task — Study Notes Summarizer & Quiz Generator Agent

Tech Used:

- OpenAgents SDK
- Streamlit
- PyPDF
- Gemini CLI
- Context7 MCP

##### A. PDF Summarizer

- Upload PDF → extract text → generate structured summary

##### B. Quiz Generator

- Create MCQs or mixed-style quizzes using original PDF text

Students must upload:

- GitHub repository
- Screenshot of Gemini CLI prompt inside the repo

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