ai-campus-assignment

🎯 AI Campus Assignment

Building the Future with AI-Powered Development

⏰ Timeline: 24 Hours to Excellence

You have **1 day** to complete this assignment and showcase your technical prowess.

🎯 Mission Overview

Your challenge is to **build a small, functional application** that demonstrates your programming skills, ability to leverage AI tools effectively, and understanding of industry-standard coding practices.

📋 What We're Evaluating

Skill Area	What We're Looking For
AI Integration	Effective use of **Gemini CLI** to build applications
Code Quality	Application of **OOP concepts** (encapsulation, modularity) and clean, organized code
Documentation	*(Bonus Points)* Professional API documentation using **Postman** or **Swagger/OpenAPI**

🛠️ Technical Requirements

1. 🔐 Authentication System

- Implement basic username/password login functionality
- Auth libraries are optional, but document your architectural decisions in design notes

2. 📊 CRUD Operations

Choose Your Domain: Select any object that interests you

Examples: Task, Shipment, Product, Note, Expense, Student, etc.

Required Fields:

- ✅ Text field
- ✅ Enum (dropdown selection)
- ✅ Boolean field
- ✅ One calculated field (derived from ≥2 inputs)

Implementation:

- Complete Create, Read, Update, Delete endpoints
- Simple UI using React, another framework, or minimal HTML

3. 📑 Listing & Data Management

Core Features:

- ✅ Pagination (5–10 items per page)
- ✅ At least one useful filter

Bonus Features:

- 🌟 Sorting capabilities
- 🌟 Search functionality

🔧 Development Tools & Platforms

Hosting Options

- **Free Platforms:** Render, Vercel, and similar services

Development Approach

- ✅ Build from scratch or use established frameworks (Next.js, Flask, etc.)
- ❌ **Avoid** low/no-code tools like Replit, Lovable that auto-generate full applications

AI Integration

- 🤖 **Strongly Encouraged:** Use Gemini CLI throughout development
- 📝 Document your AI usage and methodology

📤 Submission Requirements

🔗 Core Deliverables

Item	Description	Format
1. Code Repository	Complete source code	Public repo or private invite
2. Live Application	Deployed, functional app	Hosted link (any free platform)
3. Development History	Hourly commits during development	Git log screenshot in `/docs/commits.md`
4. AI Documentation	At least 6 prompts with context and changes	Detailed explanations
5. Demo Video	3–5 minute walkthrough	Link in `/docs/video.md`
6. Architecture Documentation	Database schema & class/module breakdown	Technical documentation
7. API Documentation	*(Optional but recommended)*	Postman/Swagger collection

📈 Development Tracking

- **Commit Frequency:** Push changes at least once per hour
- **Progress Documentation:** Show hourly development progress in your video
- **Code Evolution:** Initial commits can be incomplete - show your iterative process!

🔍 Optional: Advanced API Documentation

Documentation Standards

Choose one approach:

- **Option A:** Postman Collection
- **Option B:** Swagger/OpenAPI Specification

Testing Coverage

Include comprehensive test cases for:

Test Category	Scenarios to Cover
Validation Testing	Invalid/missing fields, incorrect enum values
Boundary Testing	Pagination limits, calculated field edge cases
Security Testing	Unauthorized access attempts
Integration Testing	End-to-end CRUD operations

Local Setup Documentation

- Step-by-step setup instructions
- Command examples with sample output
- Environment configuration guide

  💡 Pro Tip: Complete your core application before implementing advanced documentation features.

⚠️ Academic Integrity

Anti-Plagiarism Policy

Important Notice: All submissions undergo comprehensive plagiarism evaluation.

Automatic Disqualification Triggers:

- Similar or duplicate prompts across candidates

- Copied code without proper attribution
- Identical implementation patterns

Our Commitment: We value originality and authentic problem-solving approaches.

🚀 Ready to Begin?

Transform this challenge into an opportunity to showcase your technical skills, creativity, and ability to leverage AI tools effectively.

Good luck, and happy coding! 🎉

This assignment is designed to evaluate real-world development skills while embracing the future of AI-assisted programming.