Project Design Phase-II

Data Flow Diagram & User Stories

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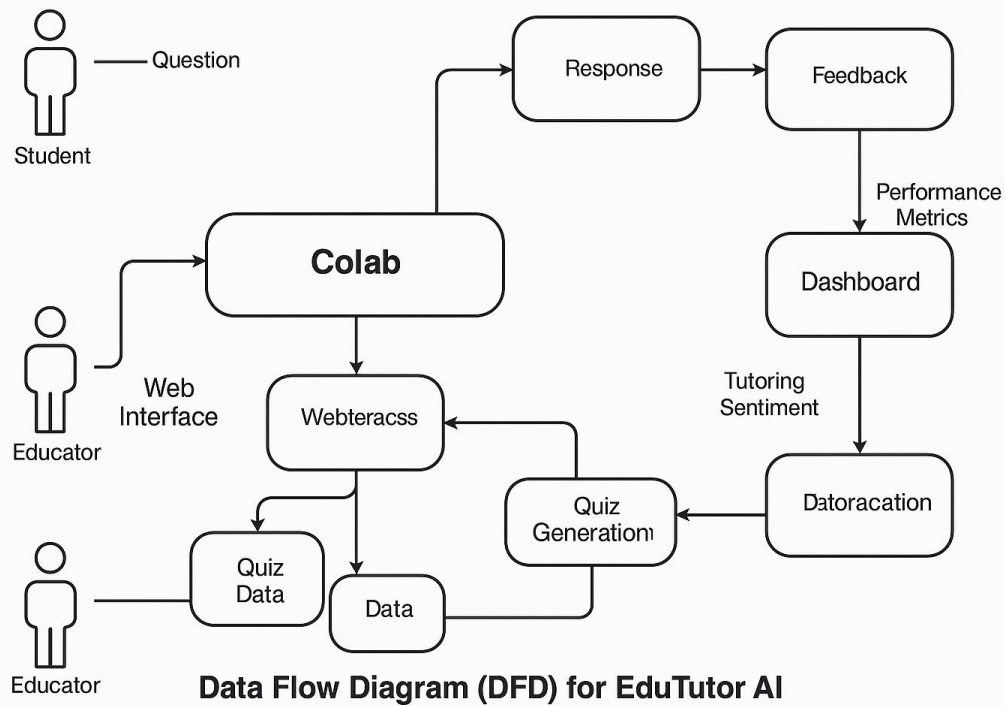Project Name: edututor ai: personalized learning with generative ai and lms

Platform: [Google Colab / Web / Mobile]

Maximum Marks: 4 Marks

DATA FLOW DIAGRAMS

The Data Flow Diagram (DFD) for EduTutor AI illustrates how users (students and educators) interact with the system for educational queries, assessments, and personalized tutoring. Users input questions or tasks through a web interface or chatbot, which are then processed via FastAPI and sent to an LLM like OpenAI's GPT through Hugging Face. The system returns intelligent responses, generates quizzes, and logs interaction data. A real-time dashboard displays student performance analytics, usage stats, and sentiment on tutoring feedback.

Data Flow Diagram (DFD) for EduTutor AI

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User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Student (Web User)	Chat Assistant	USW-1	As a student, I can ask subject-related questions using the assistant	AI-generated answers are accurate and contextual	High	Sprint-1
Student (Web User)	Quiz Generation	USW-2	As a student, I can generate quizzes for a selected topic	Quizzes appear with MCQs and are auto-graded	High	Sprint-1
Student (Web User)	Feedback Submission	USW-3	As a student, I can submit feedback on the tutoring session	Feedback is logged and sentiment is analyzed	Medium	Sprint-2
Educator/Admin	Performance Dashboard	USA-1	As an admin, I can view student performance and sentiment data	Dashboard updates with quiz and feedback metrics	High	Sprint-2
Developer	API Integration	USDEV-1	As a developer, I can integrate	Responses are routed through the API and	High	Sprint-1

			the LLM using Hugging Face APIs	logged		
Developer	Prompt Engineering	USDEV-2	As a developer, I can test prompt performance and adjust for better accuracy	Prompt performance is logged and optimized	Medium	Sprint-1
Student (General)	Confirmation Notification	USW-4	As a user, I receive confirmation after quiz or feedback submission	Message is shown post submission	Medium	Sprint-1