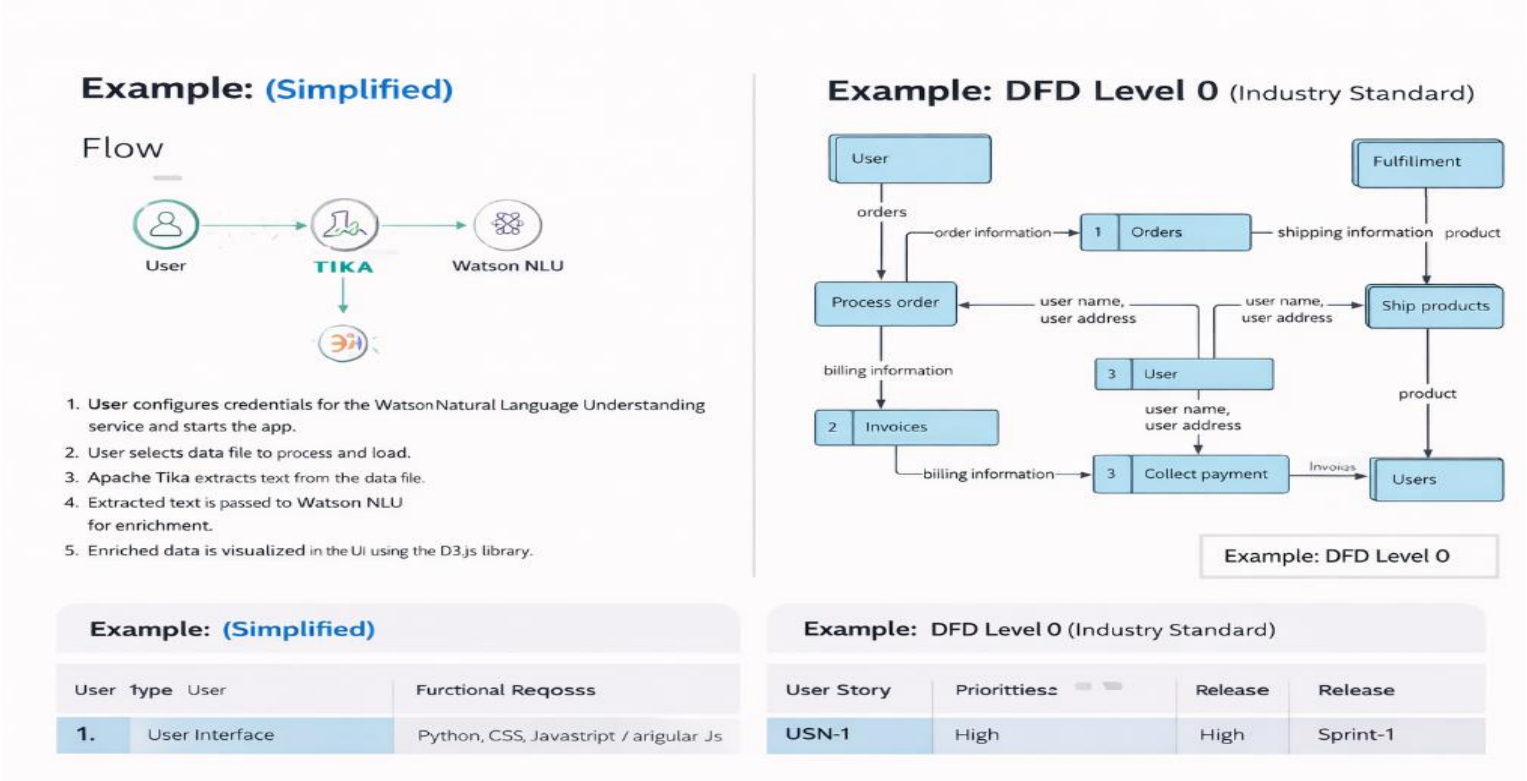
Project Design Phase-II

Data Flow Diagram & User Stories

Date	18 February 2026
Team ID	LTVIP2026TMIDS24197
Project Name	Civil Engineering Insight Studio
Maximum Marks	4 Marks

Part-1: Data Flow Diagrams (DFD)

DFD Level 0



DFD Level 1 (Detailed Flow)

Part-2: User Stories

User Types

- Civil Engineer (Web User)
- Project Manager
- Administrator

User Stories Table

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Civil Engineer (Web User)	Image Upload	USN-1	As a civil engineer, I can upload a construction site image for analysis	I can successfully upload JPG/PNG images	High	Sprint-1
Civil Engineer (Web User)	Prompt Input	USN-2	As a user, I can enter a text prompt describing what analysis I need	I can type and submit a prompt successfully	High	Sprint-1
Civil Engineer (Web User)	AI Analysis	USN-3	As a user, I can receive a detailed structural description after submission	The system generates structured output with materials, components, and insights	High	Sprint-1
Civil Engineer (Web User)	Material Detection	USN-4	As a user, I can identify construction materials from the image	Materials such as concrete, steel, and bricks are listed in the response	High	Sprint-1
Project Manager	Progress Monitoring	USN-5	As a project manager, I can analyze project progress from site images	The response includes completed and planned elements	High	Sprint-1
Project Manager	Report Generation	USN-6	As a manager, I can generate a structured report from the AI output	The report is displayed in a clear, structured format	Medium	Sprint-2

Administrator	System Monitoring	USN-7	As an admin, I can monitor application usage and API performance	Usage logs and system performance data are accessible	Medium	Sprint-2
Administrator	API Management	USN-8	As an admin, I can securely manage API keys and configurations	API key stored securely in environment variables	High	Sprint-1
Civil Engineer	Error Handling	USN-9	As a user, I receive an error message if no image is uploaded	System shows warning when image is missing	High	Sprint-1
Project Manager	Documentation Storage	USN-10	As a manager, I can store generated reports for future reference	Reports are saved locally or in cloud storage	Medium	Sprint-2