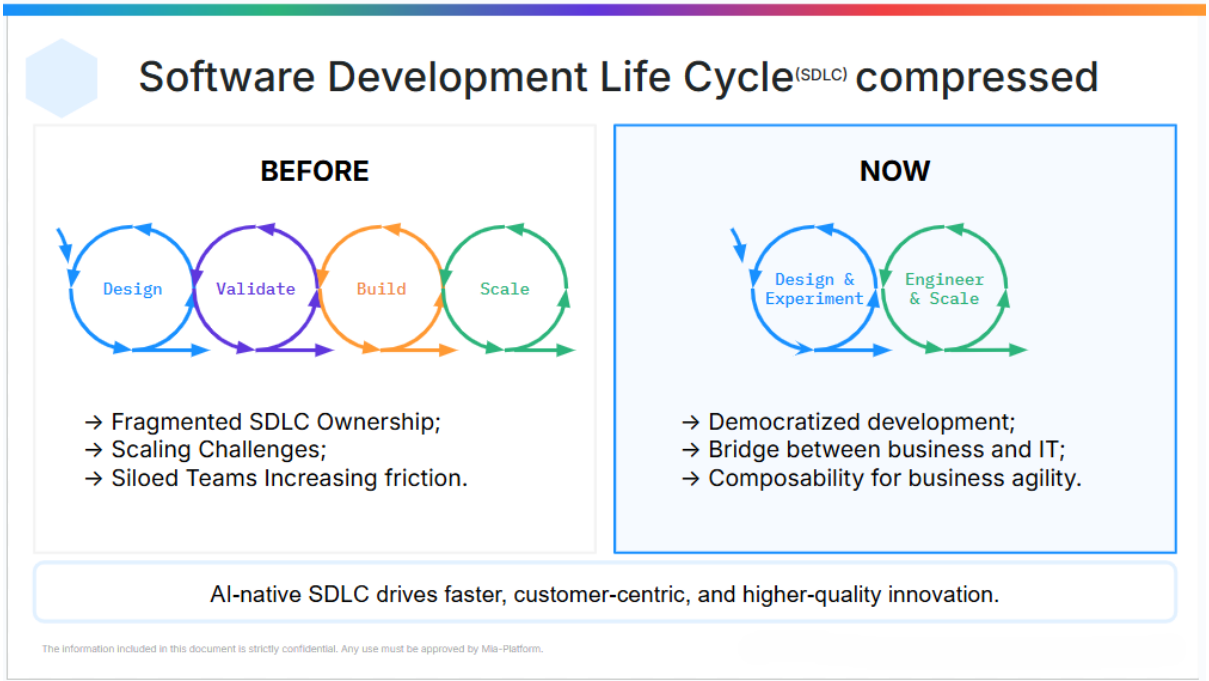
Project Design Phase-II
Data Flow Diagram & User Stories

Date	27 June 2025
Team ID	LTVIP2025TMID59202
Project Name	SmartSDLC – AI-Enhanced Software Development Lifecycle
Maximum Marks	4 Marks

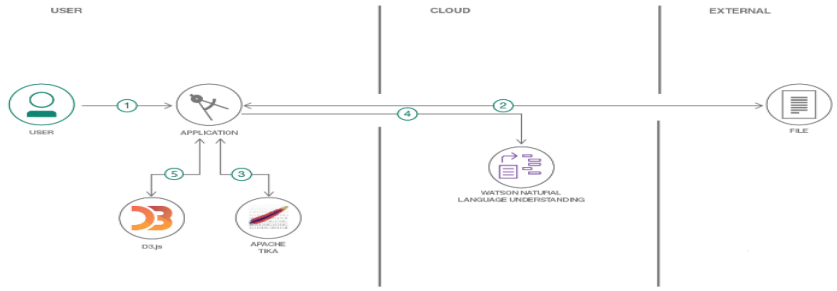
Data Flow Diagrams:

The Data Flow Diagram (DFD) for the SmartSDLC – AI-Enhanced Software Development Lifecycle project illustrates how data moves across various components of the system. At its core, the system begins with user interactions such as registration and task input through a web interface or voice input. These inputs are processed by AI modules—such as a requirement analyzer, code assistant, and task generator—which utilize services like IBM Watson STT and AI models for automation. The processed data flows into storage systems like IBM Cloudant and GitHub repositories, while project status, analytics, and code suggestions are presented back to users through a unified dashboard. External APIs like Jira and GitHub support real-time syncing and version control. The DFD clearly visualizes how SmartSDLC integrates AI to enhance software development workflows, from planning and coding to deployment and monitoring.

Example: (Simplified)



Flow



1. User configures credentials for the Watson Natural Language Understanding service and starts the app.
2. User selects data file to process and load.
3. Apache Tika extracts text from the data file.
4. Extracted text is passed to Watson NLU for enrichment.
5. Enriched data is visualized in the UI using the D3.js library.

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN -1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN -2	As a user, I will receive a confirmation email once I have registered for the application.	I can receive confirmation email & click confirm	High	Sprint-1
		USN -3	As a user, I can register for the application through Facebook.	I can register & access the dashboard with Facebook Login	Low	Sprint-2

		USN-4	As a user, I can register for the application through Gmail.	I can register & access the dashboard using Gmail login	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password.	I am redirected to the dashboard after successful login	High	Sprint-1
	Dashboard	USN-6	As a user, I can view my current tasks and project progress on a dashboard.	Dashboard shows task list, status updates, and recommendations	High	Sprint-2
Customer (Web user)	Task Management	USN-7	As a user, I can create, edit, and delete development tasks.	Tasks reflect correctly in project tracker	High	Sprint-2
Customer Care Executive	Support Ticket Management	USN-8	As a support executive, I can view and respond to user queries and tickets.	I can respond and mark tickets as resolved	Medium	Sprint-3
Administrator	User & Role Management	USN-9	As an admin, I can add, edit, and remove users and assign roles.	User roles are correctly applied and updated in the system	High	Sprint-1
	System Monitoring	USN-10	As an admin, I can monitor AI module performance and service health.	System shows uptime and error logs for AI services	High	Sprint-3
	Integration with GitHub & Jira	USN-11	As an admin, I can configure and manage integrations with GitHub and Jira.	Sync with GitHub and Jira is functional and logs changes	Medium	Sprint-3

	AI Code Assistance	USN-12	As a user, I can receive AI-generated code suggestions for selected tasks.	AI provides relevant suggestions within the IDE or dashboard	High	Sprint-3