Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	20 Jun 2025
Team ID	LTVIP2025TMID5942
Project Name	Smart SDLC – AI Requirement Analyzer
Maximum Marks	5 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	File Upload	Upload plain .txt file containing raw software requirements
FR-2	API Integration	Connect to OpenRouter API using secure key
FR-3	AI-Powered Analysis	Send file content as prompt to Mistral model
FR-4	Requirement Extraction	Extract structured requirements from AI response
FR-5	Output Display	Display extracted results in a clean, readable format
FR-6	Error Handling	Show clear messages for invalid file types, missing API key, etc.
FR-7	Cloud Deployment	Deploy application to Streamlit Cloud

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	The Streamlit UI must be simple, intuitive, and user-friendly to allow effortless uploading and analysis by technical and non-technical users.
NFR-2	Security	API keys and file data should be securely stored using secrets.toml; no sensitive data should be exposed or stored unencrypted.
NFR-3	Reliability	The application must consistently produce valid outputs and gracefully handle edge cases and errors.
NFR-4	Performance	The AI-generated requirement analysis should be completed within 5 seconds of submission.
NFR-5	Availability	The deployed application on Streamlit Cloud should be accessible 24/7 with minimal downtime.
NFR-6	Scalability	The system must handle multiple concurrent users and large .txt files without impacting performance.