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

Date	2 February 2026
Team ID	**LTVIP2026TMIDS50288**
Project Name	Gemini Historical Artifact Description
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The application should have a simple and easy-to-use interface so beginners can upload an image and generate description without training.
NFR-2	Security	The Gemini API key must be stored securely in the .env file and not exposed in the source code or GitHub.
NFR-3	Reliability	The system should consistently generate artifact descriptions without crashing or producing empty output.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Access Web Application	Open application in browser. Display project title and interface (Streamlit UI).
FR-2	Image Upload	Upload artifact image (jpg, jpeg, png). Preview uploaded image on screen.
FR-3	Text Prompt Input	User enters artifact name or description. Accept user text in input box.
FR-4	AI Description Generation	Send image + prompt to Gemini API. Generate artifact description using AI model.
FR-5	Display Output	Show generated historical description. Display origin, period, material, and cultural significance.
FR-6	Error Handling	Show error if image not uploaded. Show API or processing error message.

FR-7	Interesting Fact Feature	Show historical fact while processing. Inform user that generation is in progress.

Non-functional Requirements:

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

NFR-4	Performance	The AI response should be generated within a few seconds after clicking the generate button.
NFR-5	Availability	The web application should be accessible whenever the server and internet connection are available.
NFR-6	Scalability	The system should support multiple users generating descriptions at the same time without major slowdown.