

User Interaction for API Mockup Tool

Welcome Screen

- Display Welcome Message — A warm and friendly welcome message to introduce users to the tool.
- Explain Tool Capabilities — Briefly explain the capabilities and features of the tool.
- Options
 - Create New API — Option to start creating a new API specification from scratch.
 - Modify Existing API — Option to edit or refine an existing API specification.
- Provide Tutorial/Guided Tour — Offer a guided tour for first-time users to familiarize them with the tool.

Starting a New API

- Choose Input Method
 - Text Prompt
 - Enter High-Level Description — Allow users to enter a high-level description of the API they need.
 - Example — For example, "Fetch user details by user ID".
 - File Upload
 - Upload OpenAPI Spec (JSON or YAML) — Allow users to upload an existing specification in OpenAPI (JSON or YAML) format.
 - Parse File and Display Summary — Parse the uploaded file and display a summary of the specification.

Processing Initial Input

- Text Prompt Handling
 - Use OpenAI for Initial Specification — Use OpenAI to generate an initial API specification based on the text prompt.
 - Example OpenAI Prompt — Example: "Generate an API specification for fetching user details by user ID."
 - Receive and Parse Response — Receive the response from OpenAI and parse it to create an initial API specification.
 - Validate Response — Ensure the response is in the correct format and meets the required standards.
- File Upload Handling
 - Parse Uploaded File — Parse the uploaded OpenAPI spec (JSON or YAML) file.
 - Generate Preliminary Specification — Generate a preliminary API specification based on the parsed content.
 - Validate Parsed Content — Ensure the parsed content meets the required standards.

Iterative Refinement

- Iterative Process
 - Series of Questions — Ask a series of questions based on the current state of the specification.
 - User Answers — User provides answers to the questions.
 - Update Specification — Update the specification accordingly.
- Display Updated Specification — Display the updated specification after each round of questions.
- Iteration Limit — Implement a configurable limit on the number of iterations to prevent infinite loops.

Error Handling and Validation

- Input Validation
 - Validate User Inputs — Validate user inputs (text prompts and file uploads) to ensure they are in the correct format.
 - Provide Feedback — Provide feedback and request corrections if needed.
 - Request Corrections — Allow users to correct their inputs.
- Response Validation
 - Validate OpenAI Responses — Validate OpenAI responses to ensure they are complete and correctly formatted.
 - Handle Malformed/Incomplete Responses — Handle cases where the response is malformed or incomplete.
- Error Messages and Recovery
 - Clear Error Messages — Provide clear and informative error messages to the user.
 - Recovery Options — Offer options to recover from errors and continue the process.
 - Retry Process — Allow users to retry the process if an error occurs.

Clarifying Requirements

- Predefined Options for Attributes
 - Common Attributes — Provide predefined options for common attributes (e.g., string, integer, boolean).
 - User Selection — Allow users to select from these options to simplify the process.
- Examples of Follow-up Questions
 - What details do you need about the user? — Do you want to include any query parameters or headers?
 - Can you provide a sample request and response?
- Identifying Gaps and Ambiguities
 - Analyse Initial Specification — Analyse the initial API specification to identify any missing or unclear details.
 - Generate Follow-up Questions — Generate follow-up questions to gather the required information.

Handling Different User Scenarios

- Non-Technical User
 - Provide High-Level Description — Allow non-technical users to provide a general description of the API.
 - Generate Basic Specification — Generate a basic specification using OpenAI.
 - Simple, Guided Questions — Ask simple, guided questions to refine the specification.
 - Examples and Templates — Provide examples and templates for common API patterns.
 - Select Predefined Attributes/Endpoints — Allow the user to select from predefined attributes and endpoints.
- Technical User
 - Upload Detailed OpenAPI Spec — Allow technical users to upload a comprehensive specification file.
 - Identify Enhancements — Identify potential enhancements based on the uploaded file.
 - Add Endpoints/Parameters/Responses — Ask the user if they want to add more endpoints, parameters, or response types.
 - Manual Specification Editing — Provide options to manually edit the specification.

Confirming and Saving Specification

- Version Control
 - Save to Database — Save the specification to the database.
 - Track Changes — Implement version control to track changes.
 - Revert to Previous Versions — Allow reverting to previous versions.
- Review and Confirmation
 - Display Final Specification — Display the final API specification for user review.
 - Highlight Changes/Additions — Highlight changes and new additions.
 - User Confirmation/Modification — Ask the user to confirm or make further modifications.
 - Save with Version Number — Save the confirmed specification with a version number.