

LynkFast AI v3 Implementation Guide

Introduction

With version 2, we have implemented various techniques that will utilize vector storage and unlimited files on our APIs. However there were several shortcomings:

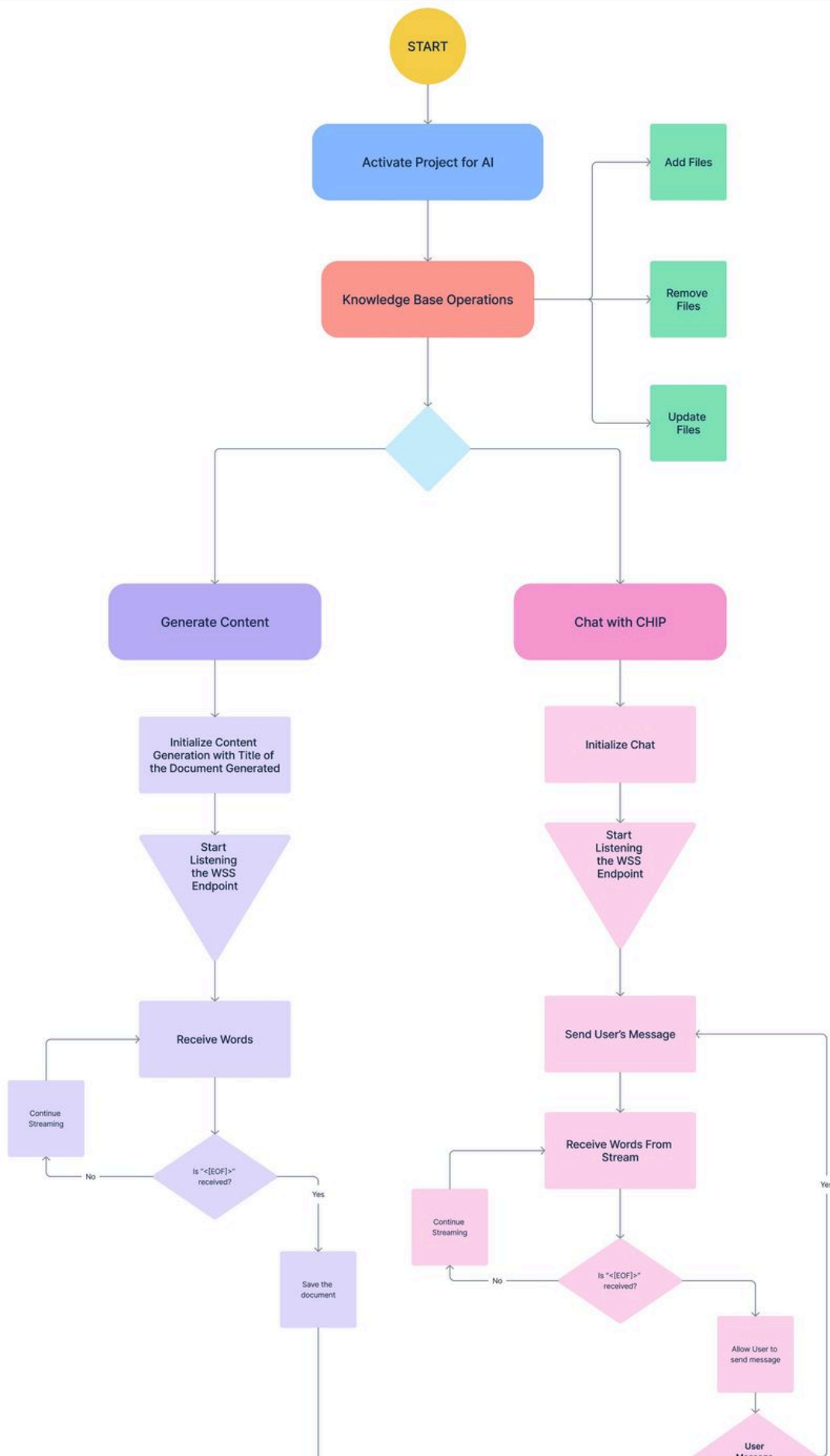
- All APIs UX was poorly designed,
- PDF Processing was not including images or any other mediums,
- Content Generation was:
 - Slow,
 - Repetitive,
 - Expensive
 - Error Prone
- CHIP (Chat) was:
 - Not Accurate at all.

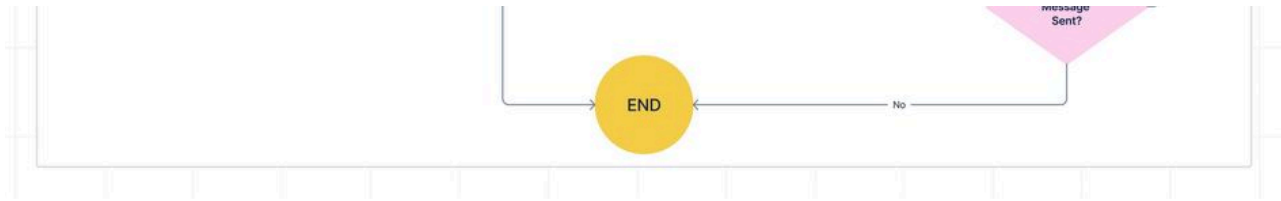
With these in mind, we have implemented version 3 to resolve these issues.

What's new with v3?

- Nearly all endpoints are now deprecated, in which replaced with OpenAI GPT-4o Assistant
- Both Content Generation & Messaging “streams-out” the content, so users can now see the writing in action. This aims to keep the users engaged.
- File Processing is now detached operation, meaning, you can directly attach a file to a project and that should be automatically added to the system, without waiting for PDF endpoint to resolve.
- Since we switched to “omni” model, we can attach images to the both endpoints, like floor plan can be attached. (Currently not implemented)
- Quality should be increased.

Workflow





Endpoints

POST /project-initialize

This function initializes the project.

Headers

x-api-key : <ai_api_key>

Payload

```
1 {
2   "project_id": "<unique_project_id>"
3 }
```

Possible Responses

Status Code	Message	Note
412	Function Initialization Error	Check Your Payload
515	OpenAI Vector Store Creation Error	Contact Developer
516	Chat Assistant Creation Error	Contact Developer
517	Content Generation Assistant Creation Error	Contact Developer
512	DynamoDB Insert Error	Contact Developer
200	Successful	

GET /knowledge-base/<project-id>

This function provides information of the current file count and utilized storage.

Headers

x-api-key : <ai_api_key>

Payload

No Payload.

Possible Responses

Status Code	Message	Note
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412	Function Initialization Error	Check Your Payload
400	No Project ID found	Check Project ID
523	Vector Store Error	Contact Developer
200	Successful & Vector Store is Ready	<pre> 1 { 2 "status":"ready", 3 "usage_byte":int, 4 "file_count":int 5 }</pre>
202	Successful & Vector Store is still Processing	<pre> 1 { 2 "status":"in_progress", 3 "usage_byte":int, 4 "file_count":int 5 }</pre>
204	Successful & Vector Store is expired, re-initialize the project.	<pre> 1 { 2 "status":"expired", 3 "usage_byte":int, 4 "file_count":int 5 }</pre>

PUT /knowledge-base/<project-id>/<file-id>

Inserts file to the vector store.

Headers

x-api-key : <ai_api_key>

Payload

```

1 {
2   "file_name":"<file_name_with_extension>",
3   "file":"<base64_encoded_bytes>"
4 }
```

Possible Responses

Status Code	Message	Note
412	Function Initialization Error	Check Your Payload
400	Prerequisites Error	Check Project ID & File ID
515	Base64 Decode Error	Contact Developer
516	OpenAI Upload Error	Contact Developer
517	Vector Store Attach Error	Contact Developer
512	DynamoDB Error	Contact Developer
200	Successful	

PATCH /knowledge-base/<project-id>/<file-id>

Updates the file indicated in the vector store.

Headers

x-api-key : <ai_api_key>

Payload

```
1 {
2   "file_name": "<file_name_with_extension>",
3   "file": "<base64_encoded_bytes>"
4 }
```

Possible Responses

Status Code	Message	Note
412	Function Initialization Error	Check Your Payload
400	Prerequisites Error	Check Project ID & File ID
515	Base64 Decode Error	Contact Developer
516	File Detach Error	Contact Developer
517	File Delete Error	Contact Developer
518	OpenAI Upload Error	Contact Developer
517*	Vector Store Attach Error	Contact Developer
512	DynamoDB Error	Contact Developer
200	Successful	

*This is known issue, it will be fixed later.

DELETE /knowledge-base/<project-id>/<file-id>

Removes file from the Vector Store

Headers

x-api-key : <ai_api_key>

Payload

No Payload.

Possible Responses

Status Code	Message	Note
412	Function Initialization Error	Check Your Payload

400	Prerequisites Error	Check Project ID & File ID
515	Base64 Decode Error	Contact Developer
516	File Detach Error	Contact Developer
517	File Delete Error	Contact Developer
512	DynamoDB Error	Contact Developer
200	Successful	

POST /content-generation

This triggers the document generation assistant and streams out the content from the Real-time API Endpoint. The generated content can be obtained from the GET endpoint with ID as well.

Headers

x-api-key : <ai_api_key>

Payload

```

1 {
2   "document_title":"<Title of the Document>",
3   "project_id":"<project_id>"
4 }
```

Possible Responses

Status Code	Message	Note
412	Function Initialization Error	Check Your Payload
400	Prerequisites Error	Check Project ID
523	AI Thread Error	Contact Developer
515	AppSync Error	Contact Developer
516	SNS Error	Contact Developer
512	DynamoDB Error	Contact Developer
200	Successful	<pre> 1 { 2 "channel_name":"<content_generation_channel_name>", 3 "realtime_endpoint":"<WSS Endpoint>", 4 "api_key":"<WSS Endpoint's API KEY>", 5 "generation_id":"<unique_generation_id>" 6 }</pre>

GET /content-generation/<project_id>/<generation_id>

Provide you either partial or full content depend on the generation status.

Headers

x-api-key : <ai_api_key>

Payload

No Payload.

Possible Responses

Status Code	Message	Note
412	Function Initialization Error	Check Your Payload
400	Prerequisites Error	Check Project ID or Generation ID
512	DynamoDB Error	Contact Developer
200	Content Generation Completed	<pre>1 { 2 "document": "<base64_document>" 3 }</pre>
202	Content Generation Still Progresses	<pre>1 { 2 "document": [3 { 4 "index": int, 5 "message": string 6 }, 7 ... 8] 9 }</pre>

GET /chat/<project_id>

Provides you chat channel that can be used for real-time chatting capabilities.

Headers

x-api-key : <ai_api_key>

Payload

No Payload.

Possible Responses

Status Code	Message	Note
412	Function Initialization Error	Check Your Payload
400	Bad Request	Check Project ID
523	AI Thread Error	Contact Developer
515	AppSync Error	Contact Developer

512	DynamoDB Error	Contact Developer
200	Successful	<pre>1 { 2 "channel_name": "<chat_channel_name>", 3 "realtime_endpoint": "<WSS Endpoint>", 4 "request_endpoint": "<GraphQL Endpoint>", 5 "api_key": "<Endpoint's API KEY>", 6 }</pre>