**Itinerary-planning**

Table of Contents

[1.Introduction 2](#_Toc206517063)

[1.1.1 Key Features: 2](#_Toc206517064)

[2. Tech Stack 3](#_Toc206517065)

[3. Data Dictionary 4](#_Toc206517066)

[3.1.1 Suggestion 5](#_Toc206517067)

[3.1.2 Comments 6](#_Toc206517068)

[3.1.3 DLQ 6](#_Toc206517069)

[3.1.4 Poll Details 7](#_Toc206517070)

[4.REST API Endpoints 8](#_Toc206517071)

[4.1.1 {tripID}/add 9](#_Toc206517072)

[4.1.2 {suggestionId}/delete 10](#_Toc206517073)

[4.1.3 {suggestionId}/view 11](#_Toc206517074)

[4.1.4 suggestion/view-all 12](#_Toc206517075)

[4.1.5 {suggestionId}/comments 13](#_Toc206517076)

[4.1.6 {suggestionId}/comments/{commentId} 14](#_Toc206517077)

[4.1.7 {suggestionId}/comments/{commentId} 15](#_Toc206517078)

[4.1.8 {suggestionId}/create-poll 16](#_Toc206517079)

[4.1.9 {suggestionId}/like 17](#_Toc206517080)

[4.1.10 {suggestionId}/dislike 17](#_Toc206517081)

[4.1.11 {suggestionId}/remove-vote 18](#_Toc206517082)

[4.1.12 {suggestionId}/all-polls 19](#_Toc206517083)

[4.1.13 ask-ai/{question} 20](#_Toc206517084)

[5. Resilience4j Configuration 21](#_Toc206517085)

[5.1.1 Circuit Breaker Configuration 21](#_Toc206517086)

[5.1.2 Rate Limiter Configuration 21](#_Toc206517087)

[6. Project Structure 22](#_Toc206517088)

# 1.Introduction

The Communication Suggestion Service is a platform designed to enhance idea sharing and collaboration within a team or organization. It allows users to add, manage, and engage with suggestions through comments, polls, and AI-powered insights. This service helps streamline feedback and decision-making processes.

## 1.1.1 Key Features:

* Add/Delete Suggestions
* View All Suggestions
* Comment on Suggestions
* Create/View Polls
* AI-Powered Suggestions & Insights

# 2. Tech Stack

|  |  |
| --- | --- |
| Technology | Version |
| JDK | 17 |
| Maven | 3.6.3 |
| Spring Boot | 3.5.3 |
| mongodb | 8.0.11 |
| Kafka | 7.4.3 |
| Zookeeper | 7.4.3 |
| Zipkin | 2.23 |
| Redis | 8.0.3 |
| Qdrant - Vector Database | 1.15.3 |

# 3. Data Dictionary

Database : Accounts

|  |  |  |
| --- | --- | --- |
| No | Table Name | Description |
| 1 | **Suggestion** | The suggestions table stores user-submitted travel suggestions related to a trip. |
| 2 | **Comment** | The Comment class represents a user comment made on a suggestion. |
| 3 | **DLQ** | The DLQ class represents a Dead Letter Queue entry that stores messages or events which failed to process correctly, including details about the error, the original object, and the timestamp of the failure. |
| 4 | **Poll Details** | The Poll Details class represents the details of a poll related to a travel suggestion. It includes poll metadata such as the question, related suggestion and trip IDs, creation and expiration times, voting limits, and the available options. |

## 3.1.1 Suggestion

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Data Type | Description | Sample Value |
| comments | List<Comment> | List of user comments associated with the suggestion | [{"comment": "Great idea!"}] |
| createdAt | String | Timestamp when the suggestion was created | "2025-08-18T10:23:45Z" |
| description | String | Detailed content of the suggestion | "Visit during off-season" |
| destinationName | String | Name of the suggested destination | "Paris" |
| downVotes | int | Total number of downvotes | 3 |
| downVoters | List<String> | List of user IDs who downvoted | ["user123", "user789"] |
| isCommentAllowed | Boolean | Flag to allow or disallow comments | true |
| isEmbedded | Boolean | Indicates if this suggestion is embedded | false |
| suggestionId | String | Unique identifier of the suggestion | "sug001" |
| tags | List<String> | Tags related to the suggestion | ["museum", "historic"] |
| title | String | Title of the suggestion | "Must-visit landmarks" |
| tripId | String | Trip ID linked with the suggestion | "trip456" |
| upVotes | int | Total number of upvotes | 10 |
| upVoters | List<String> | List of user IDs who upvoted | ["user001", "user456"] |
| userId | String | ID of the user who made the suggestion | "user001" |
| username | String | Username of the suggesting user | "traveler\_joe" |

## 

## 3.1.2 Comments

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Data Type | Description | Sample Value |
| commentId | String | Unique identifier for the comment | "cmt123" |
| userId | String | ID of the user who posted the comment | "user001" |
| text | String | The actual content of the comment | "This place looks amazing!" |
| createdAt | String | Time when the comment was created | "2025-08-18T14:22:10" |

## 3.1.3 DLQ

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Data Type | Description | Sample Value |
| id | String | Unique identifier for the DLQ entry | "dlq001" |
| tittle | String | Title or brief description of the error | "Vote Processing Failed" |
| exception | String | Exception or error message details | "NullPointerException at line 23" |
| object | Object | The original object or message that failed | { "suggestionId": "sug123", "vote": "up" } |
| timestamp | String | Time when the failure was logged | "2025-08-18T16:45:30" |

## 3.1.4 Poll Details

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Data Type | Description | Sample Value |
| pollID | String | Unique identifier of the poll | "poll001" |
| suggestionId | String | ID of the suggestion the poll is associated with | "sug123" |
| tripId | String | ID of the related trip | "trip456" |
| question | String | Poll question | "Which date is best for the trip?" |
| createdAt | String | Time the poll was created | "2025-08-18T12:00:00" |
| expireTime | String | Poll expiration time | "2025-08-25T12:00:00" |
| maxVotes | int | Maximum number of votes allowed per user | 1 |
| maxVoteOptionID | String | ID of the option with the highest votes | "opt003" |
| options | List<Options> | List of options available in the poll | [Option1, Option2, Option3] |

4.REST API Endpoints  
**Base URL:** <http://localhost:8222/api/v1/suggestion/>

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Method | Endpoint | Description |
| 1 | POST | {tripID}/add | Add a new suggestion |
| 2 | DELETE | {suggestionId}/delete | Delete a suggestion |
| 3 | GET | {suggestionId}/view | View a suggestion |
| 4 | GET | view-all | View all my suggestions |
| 5 | POST | {suggestionId}/comments | Post a comment on suggestion |
| 6 | PUT | {suggestionId}/comments/{commentId} | Update a comment |
| 7 | DELETE | {suggestionId}/comments/{commentId} | Delete a comment |
| 8 | POST | {suggestionId}/create-poll | Create a poll on suggestion |
| 9 | POST | {suggestionId}/like | Like a suggestion |
| 10 | POST | {suggestionId}/dislike | Dislike a suggestion |
| 11 | POST | {suggestionId}/remove-vote | Remove vote from suggestion |
| 12 | GET | {suggestionId}/all-polls | Get all polls for suggestion |
| 13 | POST | ask-ai/{question} | Ask AI a question |

## 4.1.1 {tripID}/add

This endpoint allows users to create a suggestion on trip.

|  |  |
| --- | --- |
| Field | Value |
| Method | POST |
| URL | http://localhost:8222/api/v1/suggestion/{tripID}/add |
| Authorization | Bearer Token |
| Auth Role | User |
| Path Variable | tripId (Long) |
| Request Body | JSON |
| Response Body | Response DTO |
| DTO | AddSuggestionDTO |
| Internal Service Dependency | Yes (Trip Service) |

**Internal Service Dependency**

Before creating the FD suggestion, this endpoint calls the following internal service to validate the existence of the trip:

* **Service**: Trip Service
* **Endpoint Called**: GET /api/v1/trip/{tripId}
* **Purpose**:  
  To verify whether the specified tripId exists in the system before proceeding with the suggestion.

**Example**

{

  "destinationName": "Delhi",

  "title": "Best street food spots in Delhi?",

  "description": "Street food recommendations",

      "tags": [

        "delhi",

        "street-food",

        "indian-cuisine",

        "foodie",

        "must-try",

        "budget-eats",

        "delhi-food",

        "local-experience"

    ]

}

}



## 4.1.2 {suggestionId}/delete

This endpoint is used for delete suggestions

|  |  |
| --- | --- |
| Field | Value |
| Method | DELETE |
| URL | http://localhost:8222/api/v1/suggestion/{suggestionId}/delete |
| Authorization | Bearer Token |
| Auth Role | User |
| Path Variable | suggestionId (Long) |
| Request Body | None |
| DTO | N/A |
| Internal Service Dependency | Yes (SuggestionService) |

## 4.1.3 {suggestionId}/view

This end point is used for view suggestions by suggestion id.

|  |  |
| --- | --- |
| Field | Value |
| Method | GET |
| URL | http://localhost:8222/api/v1/suggestion/{suggestionId}/view |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | None |
| Path Variable | suggestionId (Long) |
| DTO | N/A |
| Internal Service Dependency | Yes (SuggestionService) |

**Example**

{

    "status": "200",

    "message": "Suggestions",

    "data": {

        "suggestionId": "68a2d148e5f1eb8c0dd4c886",

        "tripId": "1",

        "destinationName": null,

        "userId": "dc875d03-b236-4423-9dd0-f98d7f1fc9bc",

        "username": "john\_doe",

        "title": "Which hotel is best in Rajasthan",

        "description": "Hotel",

        "isCommentAllowed": true,

        "isEmbedded": true,

        "tags": [

            "rajasthan",

        ],

        "upVotes": 0,

        "downVotes": 0,

        "upVoters": [],

        "downVoters": [],

        "comments": [],

        "createdAt": "2025-08-18T12:37:51.277092100"

    }

}

## 4.1.4 suggestion/view-all

This endpoint returns all suggestions

|  |  |
| --- | --- |
| Field | Value |
| Method | GET |
| URL | http://localhost:8222/api/v1/suggestion/view-all |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | None |
| DTO | N/A |
| Internal Service Dependency | No |

**Example**

{

    "status": "200",

    "message": "Suggestions",

    "data": {

        "suggestionId": "68a2d148e5f1eb8c0dd4c886",

        "tripId": "1",

        "destinationName": null,

        "userId": "dc875d03-b236-4423-9dd0-f98d7f1fc9bc",

        "username": "john\_doe",

        "title": "Which hotel is best in Rajasthan",

        "description": "Hotel",

        "isCommentAllowed": true,

        "isEmbedded": true,

        "tags": [

            "rajasthan",

        ],

        "upVotes": 0,

        "downVotes": 0,

        "upVoters": [],

        "downVoters": [],

        "comments": [],

        "createdAt": "2025-08-18T12:37:51.277092100"

    }

}

## 4.1.5 {suggestionId}/comments

|  |  |
| --- | --- |
| Field | Value |
| Method | POST |
| URL | http://localhost:8222/api/v1/suggestion/{suggestionId}/comments |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | JSON |
| Path Variable | SuggestionID (String) |
| Response Body | Response DTO |
| DTO | AddCommentDTO |
| Internal Service Dependency | No |

Example:

{

    "text":"Try the parathas at Paranthe Wali Gali in Chandni Chowk. Tons of variety and full of flavor."

}

## 4.1.6 {suggestionId}/comments/{commentId}

This endpoint is edit comment.

|  |  |
| --- | --- |
| Field | Value |
| Method | PUT |
| URL | http://localhost:8222/api/v1/suggestion/{suggestionId}/comments/{commentId} |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | JSON |
| DTO | AddCommentDTO |
| Response Body | Response DTO |
| Path Variable | SuggestionId(String), CommentId(String) |
| Internal Service Dependency | No |

**Example**

{

    "text":"Hotel The Taj Skyline edited"

}

## 4.1.7 {suggestionId}/comments/{commentId}

This endpoint is used to delete comment

|  |  |
| --- | --- |
| Field | Value |
| Method | DELETE |
| URL | http://localhost:8222/api/v1/suggestion/{suggestionId}/comments/{commentId} |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | None |
| Path Variable | suggestoinId (String),commentId(String) |
| DTO | N/A |
| Internal Service Dependency | N/A |

## 4.1.8 {suggestionId}/create-poll

This endpoint is used to create poll.

|  |  |
| --- | --- |
| Field | Value |
| Method | POST |
| URL | http://localhost:8222/api/v1/suggestion/{suggestionId}/create-poll |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | JSON |
| Path Variable | suggestoinId (String),commentId(String) |
| DTO | CommunitySuggestionPoll |
| Internal Service Dependency | N/A |

**Example**

{

    "question":"Which is best place in Gujarat",

    "expireTime":12, // in hours

    "options":["Somnath","Dwark","Gir","Ambaji"]

}

## 4.1.9 {suggestionId}/like

This endpoint up-vote suggestion

|  |  |
| --- | --- |
| Field | Value |
| Method | POST |
| URL | http://localhost:8222/api/v1/suggestion/{suggestionId}/like |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | None |
| Path Variable | suggestoinId (String) |
| DTO | N/A |
| Response Body | ResponseDTO |
| Internal Service Dependency | Yes (VoteService) |

## 4.1.10 {suggestionId}/dislike

This vote is used to down-vote suggestions

|  |  |
| --- | --- |
| Field | Value |
| Method | POST |
| URL | http://localhost:8222/api/v1/suggestion/{suggestionId}/dislike |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | None |
| Response Body | ResponseDTO |
| DTO | N/A |
| Internal Service Dependency | N/A |

## 4.1.11 {suggestionId}/remove-vote

This endpoint is used to remove up or down vote.

|  |  |
| --- | --- |
| Field | Value |
| Method | POST |
| URL | http://localhost:8222/api/v1/suggestion/{suggestionId}/remove-vote |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | None |
| DTO | N/A |
| Internal Service Dependency | Yes (VoteService) |

## 4.1.12 {suggestionId}/all-polls

This endpoint returns all poll list associated with suggestion id.

|  |  |
| --- | --- |
| Field | Value |
| Method | GET |
| URL | http://localhost:8222/api/v1/suggestion/{suggestionId}/all-polls |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | None |
| Response Body | Response DTO |
| DTO | N/A |
| Internal Service Dependency | No |

**Example:**

{

"status": "200",

"message": "polls",

"data": [

{

"pollID": "552",

"suggestionId": "68a2d148e5f1eb8c0dd4c886",

"tripId": "1",

"question": "Which is best place in Gujarat",

"createdAt": "2025-08-19T16:09:09.098946800",

"expireTime": "2025-08-20T04:09:09.099458",

"maxVotes": 0,

"maxVoteOptionID": null,

"options": [

{

"optionId": "602",

"text": "Somnath",

"votes": 0,

"url": "http://localhost:8222/api/v1/polls/552/602/vote"

},

{

"optionId": "603",

"text": "Dwark",

"votes": 0,

"url": "http://localhost:8222/api/v1/polls/552/603/vote"

},

{

"optionId": "604",

"text": "Gir",

"votes": 0,

"url": "http://localhost:8222/api/v1/polls/552/604/vote"

},

{

"optionId": "605",

"text": "Ambaji",

"votes": 0,

"url": "http://localhost:8222/api/v1/polls/552/605/vote"

}

]

}

]

}

## 4.1.13 ask-ai/{question}

This endpoint answer the users question.

|  |  |
| --- | --- |
| Field | Value |
| Method | POST |
| URL | http://localhost:8222/api/v1/suggestion/ask-ai/{question} |
| Authorization | Bearer Token |
| Auth Role | User |
| Request Body | None |
| Path Variable | qurstion (String) |
| DTO | N/A |
| Internal Service Dependency | Yes (OpenAi) |

**Example**

{

    "status": "200",

    "message": "must visit place in manali",

    "data": "Based on the user comments, Rohtang Pass and Solang Valley are must-visit places in Manali."

}

# 5. Resilience4j Configuration

## 5.1.1 Circuit Breaker Configuration

|  |  |  |
| --- | --- | --- |
| Property | Value | Description |
| register-health-indicator | true | Enables Spring Boot actuator health indicator for this circuit breaker. |
| event-consumer-buffer-size | 10 | Size of the ring buffer for event consumption. |
| failure-rate-threshold | 50 | Percentage of failures to trigger the circuit breaker to open. |
| minimum-number-of-calls | 5 | Minimum number of calls before calculating the failure rate. |
| automatic-transition-from-open-to-half-open-enabled | true | Allows automatic transition to half-open state. |
| wait-duration-in-open-state | 7s | Duration to wait before transitioning from open to half-open. |
| permitted-number-of-calls-in-half-open-state | 3 | Number of calls allowed in half-open state. |
| sliding-window-size | 10 | Size of the sliding window to record call outcomes. |
| sliding-window-type | COUNT\_BASED | Type of window (time-based or count-based). |

## 5.1.2 Rate Limiter Configuration

|  |  |  |
| --- | --- | --- |
| Property | Value | Description |
| limit-refresh-period | 5s | Time interval after which the rate limiter resets the limit. |
| limit-for-period | 10 | Number of allowed calls per refresh period. |
| timeout-duration | 1s | Max wait time for a permit to become available. |

# 6. Project Structure

account-service/

├── src/

│ ├── main/

│ │ ├── java/

│ │ │ └── com/

│ │ │ └── com.Iteinearyplanning.communitysuggestions /

│ │ │ ├── config/

│ │ │ ├── controller/

│ │ │ ├── service/

│ │ │ ├── repo/

│ │ │ ├── model/

│ │ │ ├── dto/

│ │ │ ├── kafka/

│ │ │ ├── validation/

│ │ │ └── CommunitySuggestionServiceApplication.java

│ └── resources/

│ ├── application.yml

│ ├── static/

│ └── templates/

├── test/

│ └── java/

│ └── com/

│ └── com.Iteinearyplanning.communitysuggestions /

│ └── CommunitySuggestionService/

│ ├── controller/

│ ├── service/

│ └── CommunitySuggestionService