Problem Statement

Develop an application that searches documents from a cloud storage service like (Google Drive, Dropbox, etc.) based on the content inside the document.

Requirements

Connectivity to Online Storage (Google Storage):

- Connect storage service using Google Drive APIs.
- Fetch and retrieve files using the Drive service's APIs.

Supported File Formats:

- Support .csv, .txt, .pdf, or .docx files.
- Extract text content from files using (Apache Tika)

Indexing:

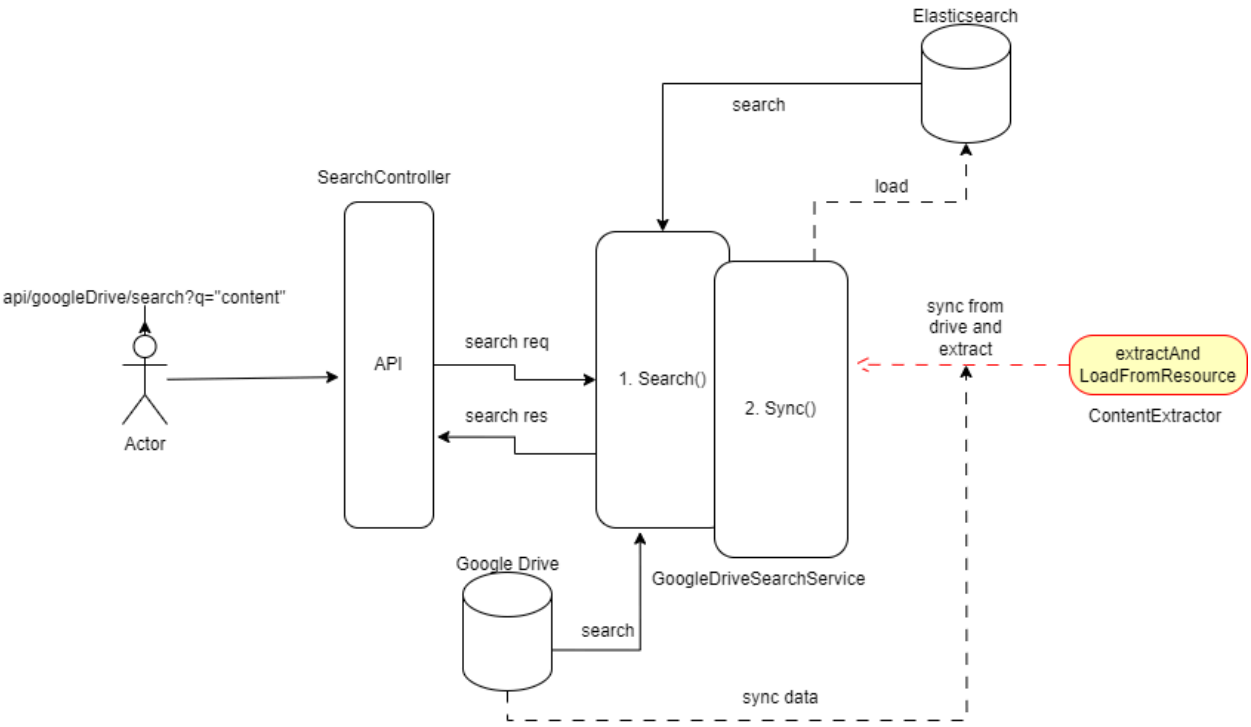
- Index file content for text search capabilities.
- Choose Elasticsearch for indexing

API for Search:

- Provide an API that takes a search term/token as input. (Spring Boot Rest API)
- Returns a list of files and their HTTP URLs

User Interface:

- Consumes the search API and displays files matching the query.



Implementation Plan

Connectivity Module:
Implement a module to connect Google Drive storage (GoogleDriveClient.class)

File Fetching:
Fetch files using the Drive service's APIs. (GoogleDriveClient#listFiles)

Content Extraction:
ContentExtractor uses Apache Tika to extract text content.

Indexing Module:
ElasticSearchConsumer implements a suitable storage solution for indexing features like (building index requests, saving indexes, read data).

Search API:
SearchController handles search requests.

User Interface Module:
Postman Get Method call
http://localhost:8080/api/googleDrive/search?q="e"

Sync Job:
The GoogleDriveSearchService initiates a synchronization job offline, extracting data using the ContentExtractor from Google Drive files and indexing it into Elasticsearch.
Users can invoke a content-based search query, and obtain results. In the background, when a user initiates a search, the system initially retrieves content and metadata from Elasticsearch, followed by the GoogleDriveClient listing the necessary files