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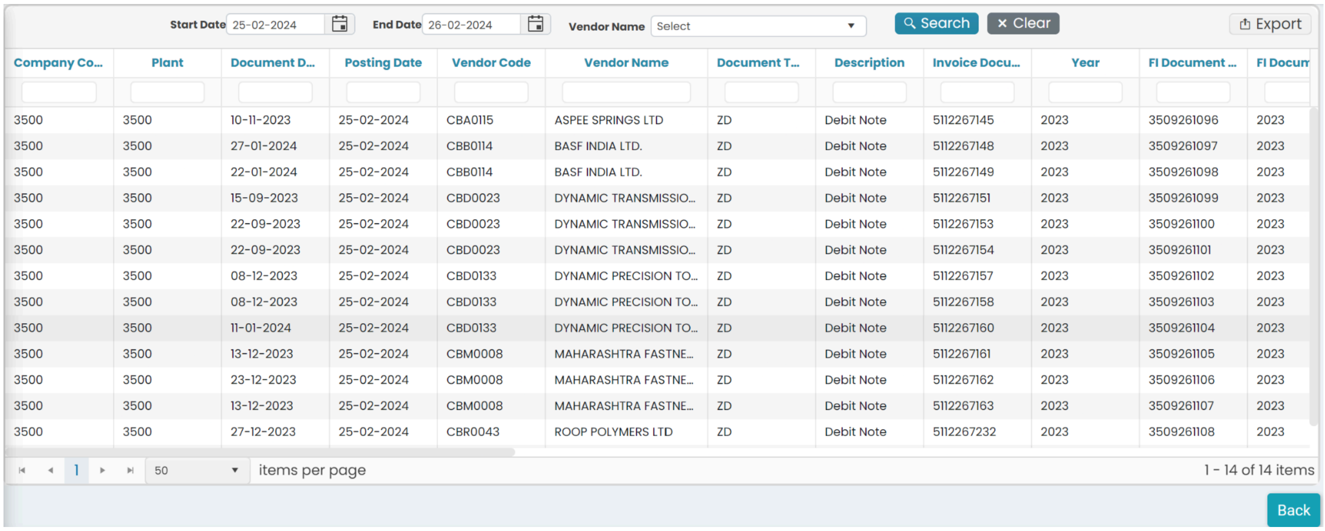
Credit Note

1. Introduction

A credit note is a financial document issued by a seller to a buyer, indicating a reduction in the amount owed. It is commonly used to rectify billing errors, acknowledge returned goods, or adjust previously invoiced amounts.

The purpose of this document is to provide a comprehensive understanding of the requirements for the development of the Credit Note API.

This document outlines the essential functionalities and requirements for a Credit Note API with a focus on the specified columns outlined in the Figma screen.



Start Date 25-02-2024 End Date 26-02-2024 Vendor Name Select

Company Co...	Plant	Document D...	Posting Date	Vendor Code	Vendor Name	Document T...	Description	Invoice Docu...	Year	FI Document ...	FI Docum
3500	3500	10-11-2023	25-02-2024	CBA0115	ASPEE SPRINGS LTD	ZD	Debit Note	5112267145	2023	3509261096	2023
3500	3500	27-01-2024	25-02-2024	CBB0114	BASF INDIA LTD.	ZD	Debit Note	5112267148	2023	3509261097	2023
3500	3500	22-01-2024	25-02-2024	CBB0114	BASF INDIA LTD.	ZD	Debit Note	5112267149	2023	3509261098	2023
3500	3500	15-09-2023	25-02-2024	CBD0023	DYNAMIC TRANSMISSIO...	ZD	Debit Note	5112267151	2023	3509261099	2023
3500	3500	22-09-2023	25-02-2024	CBD0023	DYNAMIC TRANSMISSIO...	ZD	Debit Note	5112267153	2023	3509261100	2023
3500	3500	22-09-2023	25-02-2024	CBD0023	DYNAMIC TRANSMISSIO...	ZD	Debit Note	5112267154	2023	3509261101	2023
3500	3500	08-12-2023	25-02-2024	CBD0133	DYNAMIC PRECISION TO...	ZD	Debit Note	5112267157	2023	3509261102	2023
3500	3500	08-12-2023	25-02-2024	CBD0133	DYNAMIC PRECISION TO...	ZD	Debit Note	5112267158	2023	3509261103	2023
3500	3500	11-01-2024	25-02-2024	CBD0133	DYNAMIC PRECISION TO...	ZD	Debit Note	5112267160	2023	3509261104	2023
3500	3500	13-12-2023	25-02-2024	CBM0008	MAHARASHTRA FASTNE...	ZD	Debit Note	5112267161	2023	3509261105	2023
3500	3500	23-12-2023	25-02-2024	CBM0008	MAHARASHTRA FASTNE...	ZD	Debit Note	5112267162	2023	3509261106	2023
3500	3500	13-12-2023	25-02-2024	CBM0008	MAHARASHTRA FASTNE...	ZD	Debit Note	5112267163	2023	3509261107	2023
3500	3500	27-12-2023	25-02-2024	CBR0043	ROOP POLYMERS LTD	ZD	Debit Note	5112267232	2023	3509261108	2023

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2. Functional Requirements

2.1 **Capture Credit Note Information**

- **Company Code**: A code that represents the specific company within the organization. It is essential for organizational and financial categorization.
- **Plant**: The plant associated with the credit note transaction. This information is critical for organizations with multiple locations or plants.

- **Document Date**: The date of the credit note document is a crucial piece of information to be captured. It signifies when the credit note was created or issued.

- **Posting Date**: The posting date is vital for financial record-keeping. It represents the date when the credit note is officially recorded in the system.

- **Vendor Code**: A unique identifier for the vendor involved in the credit note transaction. This code facilitates seamless vendor identification.

- **Vendor Name**: The name of the vendor corresponding to the vendor code. This information provides clarity and context to the credit note.

- **Document Type**: The type of credit note document, specifying its nature or purpose (e.g., return, discount, adjustment).

- **Description**: A textual description providing additional details about the credit note transaction.

- **Invoice Document**: A reference to the original invoice document associated with the credit note.

- **Year**: The year in which the credit note is processed. This information aids in chronological organization.

- **FI Document**: Financial document details related to the credit note.

2.2 Validate and Process Credit Note

- **Verify Mandatory Fields**: Ensure that all mandatory fields are populated to prevent incomplete transactions.
    - Vendor Name
    - Start and End Dates

- **Validate Date Formats**: Implement validation checks to ensure the correct format(DD/MM/YYYY), preventing inconsistencies.

- **Check Vendor and Company Code**: Validate the vendor and company codes to ensure accuracy and prevent unauthorized transactions.

- **Verify Invoice Document**: Confirm the existence of the referenced invoice document to maintain transaction integrity.

3. Non-Functional Requirements

3.1 **Performance**

- **Response Time**: Maintain a good response time to ensure swift and responsive system behavior.

3.2 **Security**

- **User Authentication**: Authenticate and authorize users to ensure access control and prevent unauthorized usage.

3.3 **Reliability**

- **Data Integrity**: Ensure data integrity and consistency to avoid discrepancies in credit note transactions.

4. Pagination and Filters

4.1 **Pagination**

- Introduce an endpoint to retrieve a paginated list of credit notes, allowing clients to specify the page and the number of entries per page.

- Include information about the total number of credit notes and the current page in the API response.

4.2 **Filters**

- Introduce endpoints supporting filter based search.
- Include the filtered list of credit notes in the API response.

4.3 **Combined Pagination and Filters**

- Allow clients to paginate through a filtered dataset.

6. Task Overview

6.1 : Creating Requirement Document
6.2 : Getting the requirement document reviewed
6.3 : Understanding the data flow and creating a roadmap for the task
6.4 : Creating User Stories
6.5 : Getting it reviewed
6.3 : Implementing the frontend using React.js

- Frontend Tasks:
    - Design UI Components:
        - Create UI components for capturing credit note information.
        - Include dropdowns for selecting vendor name and document type.
    - Implement Validation on Frontend:
        - Implement client-side validation.
        - Ensure date fields follow the specified format(DD/MM/YYYY).
        - Display error messages for incomplete or incorrect data.
    - Display Credit Note Details:
        - Create a display component to show the captured credit note information.
    - Integrate with Backend:
        - Set up API calls to send credit note data to the backend for validation and processing.
        - Handle API responses and display appropriate messages to the user.
    - Create Pagination and Filters UI:
        - Design UI elements for paginated credit note lists.
    - User Authentication:
        - Implement a user authentication mechanism to secure access to credit note functionalities.
        - Design login and authorization screens.

6.4 : Designing the Database
6.5 : Implementing the Backend using Java and Springboot

- Backend Tasks:
    - APi Endpoints:

    - Implement API endpoints for capturing credit note information (POST /credit-notes).
    - Create endpoints for validating and processing credit notes.

  - Data Validation:
    - Validate mandatory fields on the backend to ensure completeness.
    - Implement checks for date format and correct vendor and company codes.

  - Pagination and Filters Endpoints:
    - Create API endpoints for retrieving paginated credit note lists (GET /credit-notes).
    - Implement filter based search.

  - User Authentication and Authorization:
    - Implement user authentication middleware.
    - Set up role-based access control for credit note functionalities.

  - Performance Optimization:
    - Optimize API responses for quick and efficient processing.
    - Monitor and improve response times.

  - Security Measures:
    - Set up logging to track any suspicious or unauthorized activities.

  - Testing:
    - Perform unit testing for each endpoint and functionality.
    - Conduct integration testing to ensure seamless interaction between frontend and backend.

- Documentation:
  1. Generate comprehensive API documentation detailing endpoint usage and payload structures.
  2. Provide clear instructions for frontend developers on how to interact with the backend.

- Deployment:

  1. Prepare the backend for deployment, considering scalability and reliability.
  2. Deploy the system in a secure environment.

- **Estimated Completion Time : 2-3 Weeks**