**Backend API Technical Requirement Document**

**BOOKS MANAGEMENT SYSTEM – LIST USER API**

**1. Overview**

This document outlines the requirements for creating backend API endpoints to list users for the Books Management System.

**2. Objective**

* Develop API endpoints to retrieve a list of users.
* Implement pagination and filtering options for user listing.
* Integrate the backend with the database to fetch user data.

**3. Success Criteria**

* API returns a success response with user data upon successful request.
* API returns an error response if there are issues fetching user data.
* User data is securely retrieved from the database.

**4. Endpoints**

* **GET /api/users**
  + **Purpose:** Retrieve a list of users.
  + **Query Parameters:**
    - **page**: Page number for pagination (default: 1)
    - **limit**: Number of users per page (default: 10)
    - **search**: Search term to filter users (optional)
  + **Response:**
    - Success (HTTP 200 OK):

Json { "success": true, "message": "Users retrieved successfully", "data": [ { "id": "string", "username": "string", "email": "string", "gender": "string", "age": "number", "contactNumber": "string" }, ... ] }

* + - Error (HTTP 500 Internal Server Error):

Json { "success": false, "message": "Internal server error" }

**5. Pagination**

* Implement pagination to limit the number of users returned per request.
* Allow users to specify the page number and limit through query parameters.

**6. Filtering**

* Implement filtering options to search for specific users based on criteria such as username, email, gender, etc.
* Allow users to specify search parameters through query parameters.

**7. Error Handling**

* Handle server errors and database query errors appropriately, returning an HTTP 500 Internal Server Error status code with an error message.