Full Stack Development with MERN
Database Design and Development Report

Date	22 June 2024
Team ID	SWTID1720433526
Project Name	Project - Book-Store
Maximum Marks	5 Marks

Project Title: Book-Store
Date: 19-07-2024
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Objective
The objective of this report is to outline the database design and implementation detaisl for the Book-Store project, including schema design and database management system (DBMS) integration.

Technologies Used
Database Management System (DBMS): MongoDB
Object-Document Mapper (ODM): Mongoose

Design the Database Schema
The database schema is designed to accomodate the following entities and relationships:

1. **Users** - Attributes: _id, name, email, password, createdAt, updatedAt.

2. **Posts** - Attributes: _id, title, content, author, createdAt, updatedAt.
3. **Comments** - Attributes: _id, text, post, author, createdAt, updatedAt.

Implement the Database using MongoDB

The MongoDB database is implemented with the following collections and structures:

Database Name: Books-Store-MERN

1. Collection: users

   - Schema:
   ```

   {

    _id: ObjectId,

    name: String,

    email: String,

    password: String,

    createdAt: Date,

    updatedAt: Date

   }
   ```


2. Collection: posts

   - Schema:
   ```

   {

    _id: ObjectId,

    title: String,

```
    content: String,

    author: ObjectId (references users),

    createdAt: Date,

    updatedAt: Date

  }
```


3. Collection: comments
  - Schema:
```
  {

    _id: ObjectId,

    text: String,

    post: ObjectId (references posts),

    author: ObjectId (references users),

    createdAt: Date,

    updatedAt: Date

  }
```


Integration with Backend

```
backend > JS config.js > ...
  1   export const PORT = 5555;
  2   |
  3   export const mongoDBURL = 'mongodb+srv://root:root@books-store-mern.kc6yg4d.mongodb.net/books-collection?retryWrites=true&w=majority&appName=Books-Store-MERN'
```

The backend APIs interact with MongoDB using Mongoose ODM Key interactions include:

User Managament: CRUD operations for users.

Post Management: CRUD operations for posts.

Comment Management: CRUD operationsf or comments associated with posts.