**Full Stack Development with MERN**

**Database Design and Development Report**

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| --- | --- |
| Date |  |
| Team ID |  |
| Project Name |  |
| Maximum Marks |  |

**Project Title**: [Your Project Title]

**Date**: [Date of Report]

**Prepared by**: [Your Name or Team Name]

**Objective**

The objective of this report is to outline the database design and implementation details for the [Your Project Title] 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 accommodate the following entities and relationships:

**1. Users**

- Attributes: [list attributes like \_id, name, email, password, createdAt, updatedAt]

**2. Posts**

- Attributes: [list attributes like \_id, title, content, author (references User), createdAt, updatedAt]

**3. Comments**

- Attributes: [list attributes like \_id, text, post (references Post), author (references User), createdAt, updatedAt]

**Implement the Database using MongoDB**

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

Database Name: [your\_database\_name]

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**

* Database connection: Give Screenshot of Database connection done using Mongoose
* The backend APIs interact with MongoDB using Mongoose ODM Key interactions include:
  + User Management: CRUD operations for users.
  + Post Management: CRUD operations for posts, with user authentication.
  + Comment Management: CRUD operations for comments associated with posts.