Nodejs Lab 3

1. **Install Mongoose**
   - **Add Mongoose to your Node.js project.**
   - **Connect your application to a MongoDB database.**
2. **Apply MVC Architecture**
   - **Organize your project using the MVC pattern:**
     - **Model → Define the Post schema using Mongoose**
     - **Controller → Handle business logic and CRUD operations**
     - **Routes → Define API endpoints and link them to controllers**
3. **CRUD Operations for Posts**
   - **Using Mongoose, implement CRUD operations for the `posts` resource:**
     - **GET → Retrieve all posts**
     - **GET → Retrieve a single post by ID**
     - **POST → Create a new post**
     - **PUT → Update an existing post**
     - **DELETE → Remove a post**
4. **Research Task**

   Search and explain the purpose of the following field in MongoDB documents:
   "__v": 0

   - **Write a short explanation of what it represents and why it exists.**

Bonus Questions (Optional)

1. **Schema Validation**
   - **Add required fields and data validation to the Post schema.**
2. **Timestamps**
   - **Enable `createdAt` and `updatedAt` in the Mongoose schema.**
3. **Error Handling**
   - **Handle invalid MongoDB ObjectIds and missing posts.**
4. **Environment Variables**
   - **Store the MongoDB connection string in an `.env` file.**