Create a RESTful API using express.js and create a database and index in MongoDB

Overview:

In this assignment, you will create a RESTful API using Express.js and integrate it with MongoDB to perform CRUD operations on a database.

Objective:

The objective of this assignment is to familiarize yourself with building RESTful APIs using Express.js and using MongoDB as the database to store and retrieve data.

Assignment Details:

Set up a new Express.js project.
Install necessary dependencies such as Express.js, MongoDB driver, and any other required middleware.
Create routes for performing CRUD operations (Create, Read, Update, Delete) on a resource.
Integrate MongoDB with your Express.js application to store and retrieve data.
Test your API using tools like Postman or curl to ensure all endpoints are functioning correctly.

Guidelines:

- Use proper error handling techniques to handle exceptions and errors that may occur during API operations.
- Implement middleware for parsing incoming requests, handling CORS, etc.
- Follow RESTful API best practices for designing your routes and endpoints.

Submission Requirements:

- Submit your project files, including all code files and any additional configuration files required for running the application.
- Include a README file with instructions on how to set up and run the application locally.
- Provide a brief explanation of each route and its functionality.

Assignment Criteria:

Your assignment will be evaluated based on the following criteria:

- Implementation of CRUD operations: Ensure that all CRUD operations are implemented correctly and function as expected.
- Code quality: Write clean, well-structured code with proper comments and documentation.
- Error handling: Implement proper error handling techniques to handle exceptions and errors gracefully.
- Integration with MongoDB: Successfully integrate MongoDB with your Express.js application and demonstrate the ability to store and retrieve data from the database.
- RESTful API design: Design your API following RESTful principles, with intuitive and consistent endpoint naming and usage.

Conclusion:

By completing this assignment, you will gain hands-on experience in building RESTful APIs using Express.js and integrating them with MongoDB. This knowledge will be valuable for developing backend systems and web applications in real-world scenarios.

Examples:

You can refer to online tutorials and documentation for examples and guidance on building RESTful APIs with Express.js and MongoDB. Additionally, you may find sample projects on GitHub or other code repositories for reference.