

## **BACKEND DOCUMENTATION - Clean D Seas**

### **USED TECHNOLOGY:**

- Node.js
- Framework: Express.js
- Template: EJS
- HTTP Client: Axios
- File Serving: Express

### **LOGIC & FUNCTIONING:**

#### **1. SERVER INITIALIZATION:**

- Creates Express application instance
- Sets port from environment variable (3001)
- Sets the EJS as template engine with views directory
- Takes static files from "public" directory

#### **2. ROUTING STRUCTURE:**

- PRIMARY ROUTE ("/"):
  - \* Calls random quotes from ZenQuotes API
  - \* Implements error handling with fallback default quote
  - \* Renders dynamic content using EJS template (index.ejs)
  - \* Purpose: Provides daily motivation related to ocean conservation

#### **3. DATA FLOW:**

- API Integration: Makes asynchronous HTTP requests to ZenQuotes API
- Data workaround: Extracts quote text and author from API response
- Error Handling: Implements try-catch
- Template Rendering: Passes quote data to EJS template for dynamic rendering

#### **4. ERROR HANDLING:**

- Network failures handled with default quote
- Console logging for development debugging

### **KEY FEATURES:**

- External API integration
- Template-based HTML rendering
- Personalized port settings
- Sufficient error handling architecture

### **DEPENDENCIES MANAGEMENT:**

- Express: Web server framework
- EJS: Dynamic HTML template
- Axios: HTTP client for external API calls
- Native Node.js modules (path): File path resolution

### **SERVER LIFECYCLE:**

1. Initialize dependencies and configuration
2. Set up middleware and view engine
3. Start listening on specified port
4. Handle incoming HTTP requests with appropriate responses