Junior Backend PHP Developer Case Study

Objective: Develop a small web application using PHP and the Symfony framework. This application will handle product data provided in a JSON file. The tasks will test your ability to work with databases, implement filtering, comparison, and search functionality, as well as generate downloadable files.

Tasks:

1. **JSON Data Import:**

   - You will be provided with a `product.json` file containing product data.
   - Your first task is to import this data into a MySQL or MariaDB database. Design the database schema appropriately based on the data structure in the JSON file.

2. **Web Application Setup:**

   - Create a small web application using the Symfony framework.
   - Set up routing, controllers, and views necessary to display the products.

3. **Product Listing Page:**

   - Implement a page that lists all the products stored in the database.
   - Each product should display key details like Product Name, EAN Number, Wattage, and Product Image.

4. **Product Detail Page:**

   - Each product in the listing should link to a detail page that displays all the data for that product.
   - Include an option to download the product data as an Excel file. Use a library like PhpSpreadsheet for generating the Excel file.

5. **Product Comparison Feature:**

   - On the product listing page, implement a feature that allows users to select and compare two products side by side.
   - The comparison should include all attributes available in the JSON data.

6. **PDF Generation:**

   - Allow the user to generate and download a PDF document containing the comparison results of two products. Use a library like Dompdf or TCPDF for this task.

7. **Filtering and Search:**

   - Implement filtering options on the product listing page to filter by attributes like Wattage, Dimmable, Protection Type, etc.
   - Implement a search feature that allows users to search for products by name or EAN Number. Use ElasticSearch or OpenSearch for the search functionality.

8. **Optional REST API:**

- As an optional task, implement a REST API that allows users to:
  - Add a new product to the database.
  - Retrieve product data in JSON format.

Deliverables:

- A fully functional Symfony web application.
- SQL file for database schema and data import.
- PHP code for handling data import, listing, detail views, filtering, comparison, PDF, and Excel generation.
- Documentation on how to set up and run the application, including any dependencies or configurations needed (just be super brief here)
- (Optional) Documentation for the REST API.

Evaluation Criteria:

- Code quality and organization.
- Correctness and completeness of the implementation.
- Use of Symfony best practices.
- Efficient and secure handling of data.
- Usability of the web application interface.
- (Optional) REST API design and implementation.

Good Luck!