Test for Angular/Laravel Developer

TEST

You have 10 days to complete these exercises. You may send your answers and solution in a separate document.

If questions arise, let us know.

Good luck!

QUESTIONS:

Angular

1. What is the main idea behind signals?

2. What are the pros and the cons of standalone components?

3. What is the difference between pure and impure pipes?

4. What is RxJS?

5. What are Value Accessors? Where can you use them?

6. How can components communicate with each other?

7. What is AsyncPipe? How may you use it?

Laravel

8. What are Middlewares? For which purpose you may use them?

9. How does exception handling work in Laravel?

10. How can you programmatically run external scripts in Laravel?

11. In which ways can you query all data from a database table?

12. How would you write into a database table user requests that failed due to authentication or authorization issues?

PRACTICAL EXERCISE:

13. Create a basic Book Store Administration web application.

Database: PostgreSQL:

- books table:
    - columns:
        - 'id' (unique)
        - 'author'
        - 'title'
        - 'publish_date' (timestamp)
        - 'isbn'
        - 'summary'
        - 'price' (integer)
        - 'on_store' (integer - number of available copies)
    - You may use the attached JSON data for the table (books.json)

Backend: Laravel (version 10)

- Create an API based on the books table that supports CRUD operations
- API should send JSON responses

Frontend: Angular (version 16 or 17) with Angular Material

- Application and components should be standalone
- Create Header and Footer for the app (you may use Telekom Scale Header and Footer but not obligatory: Telekom Scale Library)
- Enable the user to delete books (your decision how you implement it)

- **Application Pages**:
  - Books Overview:
    - Display the books with Angular Material table component
    - Implement the table in its own component for reuse
    - Implement client side pagination for the table
    - Don't display in the table the whole summary just up to 30 characters
  - Book Details:
    - Enables the users to view the details and to update a book
    - use Angular Reactive Form
  - Add Book:
    - Enables the user to create a new book entry
    - use Angular Reactive Form

Please send the result:

- Laravel files zipped with exception of the vendor folder
- Angular files zipped with exception of the node_modules folder

Happy coding!