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| Codigo Test |

# Objective

The goals of the test:

1. Able to create backend RESTful APIs using the Java, JPA and Spring Framework.
2. Able to implement caching mechanisms like Redis for performance optimization.
3. Able to secure APIs using authentication mechanisms (JWT or Bearer tokens).
4. Able to implement token expiration and refresh processes.
5. Capable of handling concurrent requests efficiently.
6. Able to design and document a functional flow diagram for the system.
7. Able to design a database relational diagram and schema.
8. Able to demonstrate knowledge of microservices architecture and its implementation.
9. Able to demonstrate knowledge of cloud system design diagrams.
10.  Capable of implementing scheduler tasks for promo code generation (if required).
11.  Proficient in creating and providing Postman collections and environment configurations for API testing.
12.  Able to create a user-friendly CMS UI for eVoucher management (optional, using Bootstrap templates).
13.  Proficient in frontend integration using Angular or React (optional for full-stack development).
14.  Able to follow best practices in code quality, modularity, scalability, and security.
15.  Able to deliver well-documented and structured code through GitHub.
16.  Capable of submitting a database schema with sample data for testing and verification.
17.  Able to effectively manage time and communicate any delays or challenges.

The reason for choosing .NET framework for the tests:

1. .NET supports robust testing framework (for ex. xUnit, Moq)
2. .NET is capable of handling complex requirements and supports highly scalable projects.
3. **Part of the current technology stack used by Cynapse.**

**Notes:** The project was created without the assistance of any AI tools (e.g., Copilot, ChatGPT).

