# 24 Hour Java Spring Framework API Challenge / Project

## GOAL

The goal of this test is to create a consumable RESTful API for storing and retrieving sales data

Please note that solving the challenge should be solved using the Spring Boot framework by implementing a RESTful API.

## OVERVIEW

This test is built to help us assess several aspects:

1. How you manage to import a large amount of data from a CSV file
2. How you design / build a database schema to store the imported CSV data
3. How you approach designing a RESTful API. We are interested in how you organize code. While this application is trivial, we'd like to see it structured as if it would become an enterprise application.
4. Your familiarity with the current Java ecosystem, the Spring framework and especially Spring Boot.
5. Your use of Java and the Spring framework in a modern codebase.

## PREREQUISITES

Use this public domain Kaggle dataset for the CSV import, database and analysis.

1. A year's worth of sales from a fictitious pizza place, including the date and time of each order and the pizzas served, with additional details on the type, size, quantity, price, and ingredients.
    a. https://www.kaggle.com/datasets/mysarahmadbhat/pizza-place-sales

## REQUIREMENTS

You are allowed to utilize the following libraries:

1. Java (required)
2. Spring Boot (required)
3. Any Java library you see fit e.g. for API development and authentication

You may use supporting libraries to implement the features required in this test.

## Use Case

1. Create a public github repository to contain your work.
    a. Follow what you understand to be best git development practices
    b. Share this repository with us upon completion of the exercise

2. Build a simple backend application that supports the following oversimplified use-cases
    a. Create an import mechanism for the CSV files with the sales data
        i. This import mechanism should allow for the import of the dataset e.g. the different tables and the relationship between them.
        ii. It is up to you how you do it, but a simple one time import script would also be acceptable.
    b. Data is stored in a structured way in a new database schema which is designed by you and suitable for the data from the CSV files
        i. Please also explain why you have chosen this schema and how it is suitable for the imported data
    c. Process the data upon import e.g. import script
        i. This should yield the following results
            1. Store the right data in the right tables
            2. Create the correct relationships between the new data entries in the database
    d. Create a simple REST API to consume the insights. You are free to design your own schema for the REST API.
        i. Have the API return JSON data
        ii. Decide which endpoints are needed to access the different types of sales data and also add new data entries e.g. update the sales data like orders
    e. Bonus: This is optional, but we do value your ideas for additional insights into the sales data.
        i. (optional) What statistics would you like to produce which might be important for the business. More extra points for implementing your ideas and making these insights available via API endpoints.
        ii. (optional) Add authentication and quota for the requests (is is an extra bonus task if you have time)
3. Create a video recorded (ex. via zoom) demonstration of the application. This should be a walkthrough with voiceover discussing the application and explaining each of the decisions, considerations and tradeoffs that were made in your code. All of the use cases, as defined above, should be demonstrated across each of the targeted platforms: web browser
    a. Walkthrough video with voiceover of you running the web application and showing that all features work
    b. Walkthrough video with voiceover of you showing your code and explaining each of the decisions, considerations and tradeoffs that were made in your code.