creditshelf Backend Engineer Code Challenge v1.0

Welcome to creditshelf code challenge. We hope you find this challenge interesting, but most importantly, it leads the way for you to become a Backend Engineer at Creditshelf.

- The challenge is not supposed to be fully finished but of course, the more you achieve, the better.

What to Deliver?

You need to deliver a link of a Github repository with:

- Base Code
- README.md with instructions on how to run it.

Resources:

1. Companies products csv files
2. Sales csv file
3. Exchange Rates API public api to get currency exchange rates

Tech Requirements:

1. Create a spring boot app (you can use any embedded server e.g. jetty or tomcat)
2. All data transfer from the sales and financial reports endpoints should be in JSON, wrapped in a response object like the following:

```
{
    "response": {}
}
```

3. Create a database to store all companies, products and sales information. You can use any database to do it, for example, you can use an embedded in-memory (e.g. H2) database, or create a way to generate the database when the application starts and remove it when the application shuts down.
4. Dockerize the image and send the settings for the application via environment variables as needed.
5. Write tests in order to have good test coverage, there is no minimum coverage required but the more, the better.

Challenge Description:

You received a request from some "companies" with different segments from high tech to magical accessories. They want an API that enables them to easily see their sales and financial results, this means that you need to read their products description file and sales file and transform them into useful information.

Feature 1: As a User, I would like to upload products and sales files

1. Create an endpoint to upload files;

2. Store in the database the companies, products, and sales information;
3. Create a constraint to avoid duplication in the data.

Feature 2: As a User, I would like to see all the sales by company

1. Create an endpoint to get all sales by company;
2. Fields required: `Order Number`, `Order Date`, `Total`, and the list of products with: `Product Name`, `Quantity` and `Sale Price`;

Feature 3: As a User, I would like to have a company revenues report

1. Create an endpoint to get a yearly revenues report by company;
2. The revenue report is the sum of all sales for a given company, the report needs to be divided by month and it needs to have the `year to date` which is the aggregation of all months from the beginning of the year to the last month;

Feature 4: As a User, I would like to have a company net profit report

1. Create an endpoint to get a yearly net profit report by company;
2. The net profit report is `sale price - product cost`, the report needs to be divided by month and it needs to have the `year to date` which is the aggregation of all months from the beginning of the year to the last month;

Important: All the values must be converted to EUR.

Final Words:

Good luck with the project and we hope this can be your first project in creditshelf.