

Challenge.

The design and coding challenge consists of developing a small exercise for which the following classes are provided in a .NET MVC project.

For development, Visual Studio will be used (do not confuse it with Visual Studio Code).

The project was created using Visual Studio's Wizard and is delivered with the DbContext implementation already completed.

There are 3 models:

- Customer: Represents a customer
- Order: Represents an order associated with a customer
- OrderDetail: Represents an order item

A view must be implemented that displays the following results:

- The customer with the highest spending will be the one whose aggregated amount of all items from all orders is the highest.
- A general list of customers; pagination is not required.
- Top 5 most frequently purchased items, with the comparison criterion being the total number of items across all orders for each SKU.
- The Top 5 items should be displayed in a pie chart.

Considerations:

- Unit tests must be done using xUnit.
- There are no restrictions regarding how the software should be organized; it is part of the challenge to properly organize the classes, applying principles such as SOLID, DRY, KISS, etc.
- Scaffolding of the model can be done to create a web console from which to manage customers, orders, and items, or the data can be generated through a seeder.
- All classes must have at least one relevant test, whether they are services or controllers.
- Document in the project's readme all assumptions made during the design and implementation, as well as any diagrams that are considered useful.

The objective is that this test should take no more than 8 hours.

To deliver the challenge, there are two options:

1. Through a GitHub repository from the person completing the challenge, in which case the repository must be public at the time of evaluation.
2. By submitting a zip file containing the project folder.
3. The software must compile and run, also it must contain the relevant information to populate the databases, if these conditions are not satisfied then the challenge will be considered failed.