

## Code assignment

*for Deltager.no*

A company has an inventory of products. The products are bundled in containers. Each container contains one or more products.

We want you to create a simple frontend and backend for managing products and packages. Important functionality includes adding new products and assigning a product to a container.

We are mostly looking for good architecture in this task. If the final product is not working 100% that is ok as long as all functionality is implemented in code.

Some specifications required:

### Database:

- Use EF core to define/create database
- Use an in-memory database, no need to create a physical file.
- Pre-populate the database with dummy products and containers when starting the site.

Container table

Id: int

Name: string

Product table

Id: int

Name: string

ProductType: string

ProductPackages link table

ProductId: int

ContainerId: int

### Backend:

- Implement REST API using the latest version of Net Core (5).
- Include api, domain and repository layers.
- Optionally use "Automapper" to map domain entities to DTO's
- Optionally use "MediatR" for handling requests

Three endpoints will be required:

- 1) A POST method for adding new products. (Containers can be pre-populated)
- 1) A PUT endpoint that takes a container with included products. Update the connection between them by adding, removing products from the container as required.
- 2) A GET Endpoint to list all containers and its related products

**Frontend:**

- Implement using the latest version of Angular.
- Use Angular Material for UI