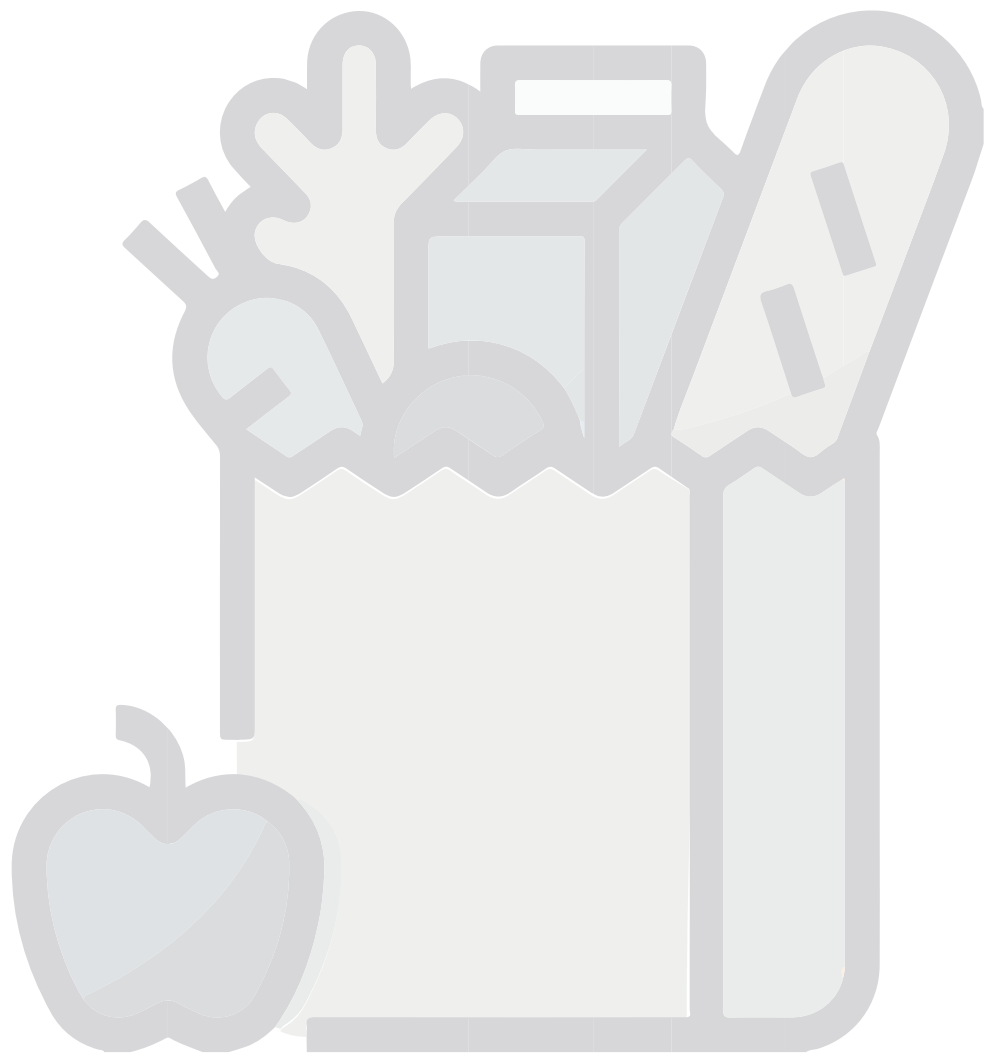# .NET BACKEND TEST

Minimart API

We own a chain of mini marts spread around the city, called COCO.

All stores share the same products/categories with their pricing and descriptions but keep their own stock. Every product belongs to at least one category.

We offer voucher discounts that apply to certain seasons and select products, these only apply to a particular store and under certain conditions:

• Product is included in voucher promo (can be more than one)

• Today's date is inside the voucher's date range

• Only valid for a specific store

• Limit on number of products it applies to (for example, 20% off on GrandCookies on up to 6 units; 10% off on Cleaning products except SuperMuscle 1l, 5% off on second unit)

Every store can manage their own profile for "personal information" (workdays and hours, address, logo)

SYSTEM REQUIREMENTS

From the tech side, you will need to use:

• ASP.NET Web API written in C#

• .NET (Preferably .NET Core 3.x or higher, .NET Framework 4.7.2 or higher is also acceptable)

• Dapper (preferred) or Entity Framework as ORM

• SQL Express

• IIS Express

• Json.NET (Newtonsoft.Json)

• Use of interfaces is encouraged wherever suitable

• Unit tests using any of the options natively supported by the framework. Look for at least 60% to 70% of coverage

From the project side, you will have to:

• Provide access to a git repository where we can check for updates (keep commits as small and frequent as possible, not critical but best practice)

• Document your code

• All code, commits and documentation must be in English

• The entire project must work via REST, no front-end, no admin-panel. CRUD methods should work by sending and returning JSON formatted objects

• Provide us with a DER diagram of the database

• Create a 'Setup' method that anyone can execute to initialize the project with the initial database information (the SQL database file shouldn't be sent)

• Provide an API Swagger documentation

The system should:

• Be able to setup all data from a simple GET

• Be able to query available stores at a certain time in the day and return only those that apply

• Be able to query all available products, across stores, with their total stock.

• Be able to query if a product is available, at a certain store, and return that product's info

• Be able to query available products for a particular store

• Be able to manage a simple virtual cart (add/remove from it). It cannot allow to add a product that has NO stock

• Be able to check the validity of a Voucher code on said virtual cart. Calculate discounts and return both original and discounted prices

INITIAL LOAD

There are 3 COCO stores in the city:

• COCO Downtown

• COCO Bay

• COCO Mall

We are currently managing 22 different products, from cleaning items to beverages and food.

Sodas

- Cold Ice Tea
- Coffee flavoured milk
- Nuke-Cola
- Sprute
- Slurm
- Diet Slurm

Cleaning

- Atlantis detergent
- Virulanita
- Sponge, Bob
- Generic mop

Food

- Salsa Cookies
- Windmill Cookies
- Garlic-o-bread 2000
- LACTEL bread
- Ravioloches x12
- Ravioloches x48
- Milanga ganga
- Milanga ganga napo

Bathroom

- Pure steel toilet paper
- Generic soap
- PANTONE shampoo
- Cabbagegate toothpaste

COCO Bay doesn't have stock of:

Sodas

- Diet Slurm

Bathroom

- PANTONE shampoo
- Pure steel toilet paper
- Generic soap
- Cabbagegate toothpaste

COCO Mall doesn't have stock of:

Food

- Ravioloches x12
- Ravioloches x48
- Milanga ganga
- Milanga ganga napo

Cleaning

- Atlantis detergent
- Virulanita

• Sponge, Bob
• Generic mop

COCO Downtown doesn't have stock of:

Sodas

• Sprute
• Slurm

Cleaning

• Atlantis detergent
• Virulanita
• Sponge, Bob
• Generic mop

Bathroom

• Pure steel toilet paper

For the rest of products and their stock, you are free to load as many as you like for them.

REGARDING VOUCHERS

COCO Bay has:

COCO1V1F8XOG1MZZ: 20% off on Wednesdays and Thursdays, on Cleaning products, from Jan 27th to Feb 13th

COCOKCUD0Z9LUKBN: Pay 2 take 3 on "Windmill Cookies" on up to 6 units, from Jan 24th to Feb 6th

COCO Mall has:

COCOG730CNSG8ZVX: 10% off on Bathroom and Sodas, from Jan 31th to Feb 9th

COCO Downtown has:

COCO2O1USLC6QR22: 30% off on the second unit (of the same product), on "Nuka-Cola", "Slurm" and "Diet Slurm", for all February

COCO0FLEQ287CC05: 50% off on the second unit (of the same product), on "Hang-yourself toothpaste", only on Mondays, first half of February.