## MMT .NET Core Technical Test

### Pre-requisites

The candidate is expected to have access to a computer, email, telephone/zoom account (in order to speak to the organiser should the need arise) and suitable software for developing .NET Core applications in C# - your own preference is fine here.

It also recommended that the candidate has access to a T-SQL development environment to test and produce the SQL files.

### Instructions

Submissions should be made to the organiser via a link to a Git repository hosting service such as GitHub.

You are expected to work on this task on your own without direct help and advice from others, although you may use online sources freely.

### Assignment

Our client requires an application that can be used across multiple channels to promote their range of products. For their first release, there will be no eCommerce functionality, although recommended selling prices will be displayed. All prices are in GBP.

A product has the following attributes:

* SKU
* Name
* Description
* Price

A category has the following attributes:

* Name

A product can only belong to one category. Product categories are defined below:

|  |  |
| --- | --- |
| Category | Filter |
| Home | All SKU’s in the range 1xxxx |
| Garden | All SKU’s in the range 2xxxx |
| Electronics | All SKU’s in the range 3xxxx |
| Fitness | All SKU’s in the range 4xxxx |
| Toys | All SKU’s in the range 5xxxx |

#### Tasks

1. Using .NET Core and C#, write a service that exposes the following functionality via an API:

1a. Featured products.

For initial launch, featured products are defined as those with SKU codes in the range 1xxxx,2xxxx and 3xxxx. However featured products may be changed for future promotions.

1b. Available categories

The list of all available category names.

1c. Products by category

When a category is selected, the list of all available products within that category.

2. Demonstrate the use of your service using a console application that consumes the API.

3. Using T-SQL, design a database schema to hold the product and category data.

You may add any additional attributes to your schema that you consider necessary to optimise for requirements.

You should present your schema as a .sql file that can be applied to an empty database called MMTShop.

Write stored procedures that can be used to retrieve the required data for the service.

You should present your solution as .sql files that can create the stored procedures in the above database against your chosen schema.

### General considerations

Your code and design should meet these requirements but be sufficiently flexible to allow future changes to the product and category lists.

Your code should be well-structured and make appropriate use of testing, comments and error handling.