**My Design - Billy’s Biscuits:**

For my database, I'm going to use the following entities and attributes:

**product** = { product\_id [PK], product\_name, product\_description, product\_category, product\_stock, product\_cost, product\_rating }

For product, I only want my e-commerce site to sell products from a range I control, this eliminates legal issues as well as buyer to seller disputes. I feel it would also be difficult to compete with already established companies such as Amazon and eBay as they already have the major stake in user base.

I have chosen to not include columns such as item\_weight and item\_dimensions as they are not needed for the items I want to sell.

**allergens** = { product\_id [FK], contains }

I am going to include a separate table for allergy information. An example of a row would be:

‘1234567’ ‘gluten’

I kept this a separate table as there are going to be products with a lot of allergens and to put them all in one column goes against normalisation; preventing proper queries.

**customer** = { customer\_id [PK], customer\_name, customer\_surname, customer\_email, password\_hash }

I only want to store a few customer details in the database, not only to save space and reduce query time, but also for the customer and their privacy.

**cart** = { cart\_id [PK], total\_cost }

The cart needs to be simple, as it needs to be updated regularly, so the quicker we can make the queries, the smoother everything will be.

**productsInCart** = { cart\_id [FK], product\_id [FK], quantity }

This has to be a separate table as sometimes there will be more than one item in a cart, and having them all in one table will be a nightmare to query and manage.

**order** = { order\_id [PK], customer\_id [FK], total\_cost }

**orderitems** = { order\_id [FK], item\_id [FK], item\_quantity }