



## Price calculation exercise

### Problem Statement

Create a basket that allows products to be added and provides a total cost of the basket including applicable discounts.

### Pointers

The solution should be in C#.

We are looking for a solution that shows a good understanding of the SOLID principles, object-oriented programming (or functional) and that displays a working knowledge of TDD. We expect to see a Git repository with regular commits to see how you came to your solution, please remember a .gitignore to prevent unnecessary files being committed.

Keep things simple, do not over-engineer anything, make sure your code is manageable and easy to follow. This problem does **not** require a database, a UI or a console application to be submitted to save time.

If you think your solution is too short, feel free to add some commentary to justify the decisions you have taken, if possible, by quoting books, blog posts or talks that have influenced you in the way you have coded.

Above all, code as if you're coding for yourself.

### Available products

Product	Cost
Butter	£0.80
Milk	£1.15
Bread	£1.00

### Offers

- Buy 2 Butter and get a Bread at 50% off
- Buy 3 Milk and get the 4th milk for free

### Scenarios

- **Given** the basket has 1 bread, 1 butter and 1 milk **when** I total the basket **then** the total should be £2.95
- **Given** the basket has 2 butter and 2 bread **when** I total the basket **then** the total should be £3.10
- **Given** the basket has 4 milk **when** I total the basket **then** the total should be £3.45
- **Given** the basket has 2 butter, 1 bread and 8 milk **when** I total the basket **then** the total should be £9.00