

CODING ASSIGNMENT

Java or .NET Developer

Prepared for Internal

INTRODUCTION

PRE-REQUISITES

To take this challenge you will quite simply need to have access to a computer, email and software that can create a Java or C# application. We strongly recommend that you have a suitable professional environment in which to work.

INSTRUCTIONS

The purpose of this assessment is to complete a simple programming assignment. You are required to:

- Produce a working, object-oriented and tested source code to solve the problem
- Walk through your code with the assessor, answering questions on the code and programming/design choices as requested by the assessor

These should be supplied to the BJSS in electronic format, preferably as a complete project from your IDE of choice. If you have any issues with the programming assignment, please ensure that you inform BJSS immediately. You are expected to work on this task on your own, without help or advice from others. If you need clarification on any aspect of the assessment, please seek help from BJSS by emailing the [Recruitment team](#).

CODING ASSIGNMENT

Write a program and associated unit tests that can price a basket of goods, accounting for special offers.

The goods that can be purchased, which are all priced in GBP, are:

- Soup – 65p per tin
- Bread – 80p per loaf
- Milk – £1.30 per bottle
- Apples – £1.00 per bag

Current special offers are:

- Apples have 10% off their normal price this week
- Buy 2 tins of soup and get a loaf of bread for half price

The program should accept a list of items in the basket and output the subtotal, the special offer discounts and the final price.

Input should be via the command line in the form `PriceBasket item1 item2 item3 ...`

For example: `PriceBasket Apples Milk Bread`

Output should be to the console, for example:

```
Subtotal: £3.10
Apples 10% off: -10p
Total: £3.00
```

If no special offers are applicable, the code should output:

```
Subtotal: £1.30
(no offers available)
Total: £1.30
```

The code and design should meet these requirements but be sufficiently flexible to allow for future extensibility. The code should be well structured, suitably commented, have error handling and be tested.