# Programming Assessment

## Guidelines:

The goal of this assessment is to validate your ability to create a high quality, production ready application including unit tests that meets the stated requirements. Please consider programming best practices as you design your solution, including good Object-Oriented principles and proper coding grammar.

This assessment will be scored not only on whether your application produces the correct output, but also to what degree your solution is extensible and maintainable.

- Please include instructions for how to compile and run your application.
- Unit tests must be included, and those tests should cover key components of the application.
- If additional steps are required to compile and run the solution, instructions must be provided. A console application is sufficient.
- No user input should be required to produce the transaction output.

## Problem Statement

1. Basic sales tax is applicable at a rate of 10% on all goods, except candy, popcorn and coffee, which are exempt.

2. Import duty is an additional sales tax applicable on all imported goods at a rate of 5%, with no exemptions.

3. When items are purchased a receipt is produced which lists the name of all the items and their price (including tax), finishing with the total cost of the items, and the total amounts of sales taxes paid.

4. Sales tax is rounded up to the nearest multiple of $0.05. This rounding is done by item, by type of tax (basic sales and import duty).

5. Write an application that prints out the receipt details for these shopping baskets.

**Input:**

**Shopping Basket 1:**

1 16lb bag of Skittles at 16.00
1 Walkman at 99.99
1 bag of microwave Popcorn at 0.99

**Shopping Basket 2:**

1 imported bag of Vanilla-Hazelnut Coffee at 11.00
1 Imported Vespa at 15,001.25

**Shopping Basket 3:**

1 imported crate of Almond Snickers at 75.99
1 Discman at 55.00
1 Imported Bottle of Wine at 10.00
1 300# bag of Fair-Trade Coffee at 997.99

**Output**

**Output 1:**

1 16lb bag of Skittles: 16.00
1 Walkman: 109.99
1 bag of microwave Popcorn: 0.99 Sales Taxes: 10.00
Total: 126.98

**Output 2:**

1 imported bag of Vanilla-Hazelnut Coffee: 11.55
1 Imported Vespa: 17,251.5
Sales Taxes: 2,250.8
Total: 17,263.05

**Output 3:**

1 imported crate of Almond Snickers: 79.79
1 Discman: 60.5
1 imported bottle of Wine: 11.5
1 300# Bag of Fair-Trade Coffee: 997.99
Sales Taxes: 10.8
Total: 1,149.78