

# Coding Tests

## Generic Coding Instructions

- Should be written in either .net -or- java
- Should adopt OOP and clean code practices
- Should be accompanied by unit tests & preferably written using TDD approach
- Should commit code to a public git repository (github) under a public handle
- Use generic package names; dont reference Maersk or any other Maersk brand
- Commits should be incremental so that one can look at the commit log and make sense of how the code has progressed along with the test cases. (recommended atleast upto 20 commits to show how the code progresses; larger number of commits isn't a problem)
- Dont spend more than 1.5 hours - 2 hours. The important thing is to understand how the code shapes up and not to cover the entire range of spelling

## Problem Statement 2 : Promotion Engine

We need you to implement a simple promotion engine for a checkout process. Our Cart contains a list of single character SKU ids (A, B, C....) over which the promotion engine will need to run.

The promotion engine will need to calculate the total order value after applying the 2 promotion types

- buy 'n' items of a SKU for a fixed price (3 A's for 130)
- buy SKU 1 & SKU 2 for a fixed price ( C + D = 30 )

The promotion engine should be modular to allow for more promotion types to be added at a later date (e.g. a future promotion could be x% of a SKU unit price). For this coding exercise you can assume that the promotions will be mutually exclusive; in other words if one is applied the other promotions will not apply

### Test Setup

Unit price for SKU IDs

A	50
B	30
C	20
D	15

Active Promotions

3 of A's for 130  
2 of B's for 45  
C & D for 30

Scenario A

1 * A	50
1 * B	30
1 * C	20
=====	
Total	100

Scenario B

5 * A	130 + 2*50
5 * B	45 + 45 + 30
1 * C	20
=====	
Total	370

Scenario C

3 * A	130
5 * B	45 + 45 + 1 * 30
1 * C	-
1 * D	30
=====	
Total	280

## Problem Statement 1 : Spell the Number

Please write code which takes a whole number and spells it out in words. For instance if 13456 is input it should be spelled as "thirteen thousand four hundred and fifty six". The developer could choose to spell it out using [https://en.wikipedia.org/wiki/Indian\\_numbering\\_system](https://en.wikipedia.org/wiki/Indian_numbering_system) or international numbering system <https://www.math-only-math.com/international-numbering-system.html>

## References

- <https://hackernoon.com/introduction-to-test-driven-development-tdd-61a13bc92d92>

