Guidelines

The objective of this coding exercise is to get an understanding on how you would approach writing production-ready code. We will be looking at your coding conventions, design approach and evidence of good coding practice.

Depending on your submission we may or may not ask you questions about your submission during the following interview.

This should be written C# and submitted in a git repo.

Scenario

Serko Expense has a new requirement to import data from text received via email.

The data will either be:

- Embedded as 'islands' of XML-like content
- Marked up using XML style opening and closing tags

The following text illustrates this:

```
Hi Yvaine,

Please create an expense claim for the below.  Relevant details are marked up as
requested…

<expense><cost_centre>DEV002</cost_centre>
      <total>1024.01</total><payment_method>personal card</payment_method>
</expense>

From: Ivan Castle
Sent: Friday, 16 February 2018 10:32 AM
To: Antoine Lloyd <Antoine.Lloyd@example.com>
Subject: test

Hi Antoine,

Please create a reservation at the <vendor>Viaduct Steakhouse</vendor> our
<description>development team's project end celebration dinner</description> on
<date>Tuesday 27 April 2017</date>.  We expect to arrive around
7.15pm.  Approximately 12 people but I'll confirm exact numbers closer to the day.

Regards,
Ivan
```

Your task is to write a REST service that:

- Accepts a block of text
- Extracts the relevant data
- Calculate the **GST** and **total excluding GST** based on the extracted `<total>` (it includes GST)
- Makes the extracted and calculated data available to the service's client

This is a test exercise. Anything not explicitly specified in this document is open to the candidate's interpretation. This includes the style and content of the web service messages, coding standards and application structure.

Failure Conditions

The following failure conditions should be detected and made available to the client:

- Opening tags that have no corresponding closing tag. In this case the whole message should be rejected.
- Missing `<total>`. In this case the whole message should be rejected.
- Missing `<cost_centre>`. In this case the 'cost centre' field in the output should be defaulted to 'UNKNOWN'.