Technical Test - PHP/MySQL

Last Updated: 27 Feb 2020

What we are looking for :

- PHP v7.2 or higher
- SOLID design principles
- Object orientated design
- Unit tests for business logic
- Security considerations
- Easy to understand code
- Vanilla PHP

This test should make use of vanilla PHP to find and save a product to MySQL. Please provide the completed code to use via Github which includes a README detailing any installation steps and how to run / test the code.

1. Product Finder

Find a product.

- Inputs: product code (string)
- Outputs: product data in JSON format (string)

2. **Product Saver**

Save a product. If the product does not already exist, create it, otherwise update it.

- Inputs: product code (string)
- Inputs: array containing a list of attributes with their values (see below)
- Outputs: array containing a list of errors

The code should do the following:

- Validate the attributes passed in
- Transform any prices according to the rules below
- Save data to MySQL (if valid)

Pricing rules:

- the base currency is GBP. Exchange rates: USD 2.55, CAD 3.0
- when the price override attribute is set to true, the foreign currency prices passed in are saved
- when price override attribute is set to false, the foreign currency prices passed in are ignored and automatically generated from the base currency price based on exchange rates
- if the special price is provided, it should be lower than the normal price

Product Attributes:

- description (string)
- normal price override (bool)
- normal price (array)
    - [currency code] (float)
- special price override (bool)
- special price (array)
    - [currency code] (float)

Example input to the product save :

```
[
   'description' => 'product description',
   'normal_price_override' => false,
   'normal_price' => [
       'GBP' => 10.00,
       'USD' => 20.00,
       'CAD' => 30.00
   ],
   'special_price_override' => true,
   'special_price' => [
       'GBP' => 1.00,
       'USD' => 2.00,
       'CAD' => 3.00
   ]
]
```

The above data would result in the following data when saved.

```
[
   'description' => 'product description',
   'normal_price_override' => false,
   'normal_price' => [
       'GBP' => 10.00,
       'USD' => 25.50,
       'CAD' => 30.00
   ],
   'special_price_override' => true,
   'special_price' => [
       'GBP' => 1.00,
       'USD' => 2.00,
       'CAD' => 3.00
   ]
]
```