Example Calculation Question - use with various platforms and frameworks

**QUESTION ONE - Calculate Shipping Cost**

Calculate the cost for shipping various packages form different locations to different destinations.

*Express Carrier Company* provides services **from-to** or **to-from** only three countries ***(NZ, AU, US)***. The table below describes the cost-in-US-dollars according to the weight of the shipments delivered or dispatched

|  |  |  |  |
| --- | --- | --- | --- |
| **From** | **To** | **Weight in KGs** | **Cost in US dollars** |
| NZ  US | US  NZ | Less than 5 | **$ 45.00** |
| Between 5 and 10 inclusive | **$ 50.00** |
| More than 10 | **$ 55.00** |
| NZ  AU | AU  NZ | Less than 5 | **$ 10.00** |
| Between 5 and 10  inclusive | **$ 15.00** |
| More than 10 | **$ 20.00** |
| AU  US | US  AU | Less than 5 | **$ 30.00** |
| Between 5 and 10  inclusive | **$ 35.00** |
| More than 10 | **$ 40.00** |

Note for all local deliveries i.e. from NZ to NZ or from US to US or from AUS to AUS charges are fixed at **US$7.50** no matter what the shipment weight is.

|  |  |
| --- | --- |
| Inputs | **Weight** in kilograms – (variable type **Double**)  **CountryCodeFrom** – **String**  **CountryCodeTo** – **String** |
| Output | **Cost** – (variable type **Decimal**) |

Include code for any relevant validations.

Return suitable error messages for error conditions.  
Include relevant self-documentation eg comments, helpful variable names, clear constructs.

With your code you need to format and run test input data depending on the framework.

Create and test this calculator in the framework and language as specified by the lecturer/parent question. Show your lecturer.

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**QUESTION TWO**

Consume the above remote public method or function with a client app as specified by the lecturer/parent question.

This form display will take user input as specified in the diagram below:

|  |  |
| --- | --- |
| Title and other heading elements. | |
| Select Country FROM:  Select Country TO: | [dropdown list]  [dropdown list] |
| Weight in kilograms: | [textbox] |
|  | [Submit] (button) |
| Shipping Cost: | [readonly textbox OR label] |

Create this as a client app that communicates with the remote method   
from QUESTION ONE and displays the calculated **Shipping Cost**   
for any **Country FROM**, **Country TO** and **Weight** that users may input**.**

Your code needs to VALIDATE in some way that these inputs are valid.

Include relevant self-documentation eg comments, helpful variable names, clear constructs.