Coding Challenge

Trip Price App	
Developer	Kevin Catania
Version	1.0
Release Notes	Initial release
Release Date	7th June 2024
Email	kevincatania14@gmail.com
Mobile	+356 99140498

Contents

Scenario

Creation of an endpoint and client to calculate trip prices based on age and trip length.

Total Calculation
- Total = Fixed Rate * Age Load * Trip Length
- Fixed-rate = 3 per day.

Age Load Table

Age	Load
18-30	0.6
31-40	0.7
41-50	0.8
51-60	0.9
61-70	1

Trip length is inclusive of both start date and end date so a start date of 2020-10-01 and an end date of 2020-10-30 will constitute a trip length of 30 days.

Worked Example:
- Total = (3 * 0.6 * 30) + (3 * 0.7 * 30) = 117.00

Prerequisites

- Apache
- MySQL

Notes

For clarification or setup questions, please feel free to contact me. If there are specific shortcomings related to business logic or optimisation, I am willing to discuss and provide an update.

Instructions

1. Extract trip_price_calculator folder to Apache directory

2. Import trip_price_calculator/API/trip_calculator.sql to MySQL

3. Update DB_SERVER, DB_USER, DB_PASSWORD and LOG_DIR in trip_price_calculator/API/config.php

4. Update api_prefix in trip_price_calculator/APP/config.js

5. Run trip_price_calculator/APP

http://localhost/trip_price_calculator/app

6. Logs are available at:

trip_price_calculator/API/DataAccess/Logs

7. Additional inline comments are available throughout trip_price_calculator

App Overview

Enter currency, age, start date and end date. Press Get Quote:
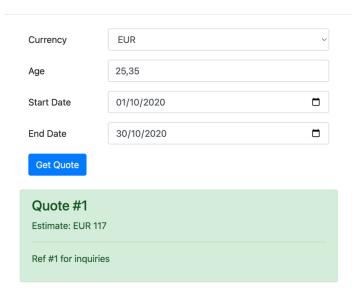
Trip Price Calculator

Currency	EUR ˅
Age	25,35
Start Date	01/10/2020 📅
End Date	30/10/2020 📅

[Get Quote]

Quote #1

Estimate: EUR 117

Ref #1 for inquiries

Unit Tests

Test Parameter	Expected Result	Actual Result	Remarks
EUR, 25+35, 1-10-2020, 30-10-2020	(3 x 0.6 x 30) + (3 x 0.7 x 30) = 117	117	**PASS**
USD, 25+35+100+twenty, 31-10-2020, 30-10-2020	Age + date errors	Age + date errors	**PASS**

1. Test parameters for correct intended input e.g. EUR, 25+35, 1-10-2020, 30-10-2020

Trip Price Calculator

Currency	EUR
Age	25,35
Start Date	01/10/2020
End Date	30/10/2020

Get Quote

Quote #1
Estimate: EUR 117

Ref #1 for inquiries

2. Test parameters for incorrect random input e.g. USD, 25+35+100+twenty, 31-10-2020, 30-10-2020

Trip Price Calculator

Currency	USD
Age	25,35,100,twenty
Start Date	31/10/2020
End Date	30/10/2020

Get Quote

Errors

Ages 18-70 supported, ages 100, twenty not supported

Start date 2020-10-31 cannot be after end date 2020-10-30

Check input

Improvement Suggestions

1. Usage of Symfony/Laravel/CodeIgniter in place of PHP
2. Usage of Angular/React/Vue in place of HTML/CSS/JS
3. Restricted API access