Laravel Technical Challenge

Unit Conversion System

General Notes

- Estimated time: 2 Hours
- You cannot use any 3rd party libraries
- Use Laravel framework to solve this problem
- The resulting code should be uploaded to any VCS providers (i.e. Gitlab, Github, …) and a link needs to be shared with us.

Problem Description

Introduction

We want to construct a unit conversion system that is able to provide the following functionalities:

- Provide the ability to define a different types of units (i.e. liter)
- Provide the ability to define different types of subunits as follows (i.e. Each liter has 1000 milliliters)
- Provide the ability to create a simple product.
- Each product has quantities in terms of units or subunits.
- No need for fancy UI (Interactions can be either: plain html, api or tests)

Preparations

Construct a database as mentioned in the problem description. Then, feed the database with the following:

- a single unit (liter)
- a single subunit (milliliters) where 1 liter = 1000 milliliters.
- A single product
- A product quantity in term of liter, and a product quantity in term of milliliters

Requirements

- Provide one function to calculate how many milliliters in 9 liters.
- Provide one function to calculate what are the total number of **units** each product may have

  Note: if the product has quantities in subunits, then, it needs to be converted to match the provided unit
  Example : a product has a quantity of 1 liter and 500 milliliters, the output of this function should be 1.5 liter.

Bonus Requirement (optional)

Extend the previous requirement to return the total number of units or subunits the product may have:

Example : a product has a quantity of 1 liter and 500 milliliters, the output of this function should be 1.5 liter if the provided unit type is liter **or** 1500 milliliters if the provided type is milliliters.

Good luck