REDINGTON – DEVELOPER TEST

Mini Code Project

This mini project is an opportunity to show us your development knowledge, coding style and thought process. It is intentionally flexible allowing you to approach the problem how you would like and to make you solution as concise or extensive as you see fit.

Please ensure you can talk about **how** and **why** you built the project in the way that you did. While this is an artificially small project, we are looking for you to demonstrate as much of your skill and coding practice as possible.

Project Brief

Our investment consultants are looking for a tool that will allow them to enter probabilities and carry out basic calculations.

The Calculator

The user should be able to enter two valid probabilities (0 to 1 e.g. 0.5 is valid, while 1.1 or -0.1 is not). The user should be able to choose from the following functions:

1. CombinedWith: P(A)P(B)   e.g. 0.5 * 0.5 = 0.25

2. Either: P(A) + P(B) – P(A)P(B)   e.g. 0.5 + 0.5 – 0.5*0.5 = 0.75

What to build

Use a technology you feel comfortable with, for example C# / MVC / React / Angular

- A Backend which does the 'calculation' this can be an API or other type of service
- A Frontend which allows users to enter two numbers, select a function, and see the result
- Validation to check the integrity of the input
- Appropriate unit testing.

Bonus points for including:

- A log that includes the date, type of calculation, the inputs and the result. No database required – a text file is fine.

What we want to see

- Maintainable code that is well structured and easy to extend
- Be prepared to explain your choices.

We do NOT want to see

- User Security - Authentication / Authorization
- Database

Delivery

Please send us a zipped set of source code (no modules), or upload to GitHub and provide a link