Develop a RESTful Service that will return list of products with annual cost based on the consumption. Our goal should be implementing the solution using SOLID principle, Clean Architecture and write Unit & integration tests.

Tariff Comparison

Develop a model to build up the following two products and to compare these products based on their annual costs. The comparison should accept the following input parameter:

- Consumption (kWh/year)

and create a list of these products with the columns

- Tariff name
- Annual costs (€/year)

The list should be sorted by costs in ascending order.

Products

1. Product A

Name: “basic electricity tariff”
Calculation model: base costs per month 5 € + consumption costs 22 cent/kWh Examples:

- Consumption = 3500 kWh/year => Annual costs = 830 €/year (5€ * 12 months = 60 € base costs + 3500 kWh/year * 22 cent/kWh = 770 € consumption costs)
- Consumption = 4500 kWh/year => Annual costs = 1050 €/year (5€ * 12 months = 60 € base costs + 4500 kWh/year * 22 cent/kWh = 990 € consumption costs)
- Consumption = 6000 kWh/year => Annual costs = 1380 €/year (5€ * 12 months = 60 € base costs + 6000 kWh/year * 22 cent/kWh = 1320 € consumption costs)

2. Product B

Name: “Packaged tariff”
Calculation model: 800 € for up to 4000 kWh/year and above 4000 kWh/year additionally 30 cent/kWh.

- Consumption = 3500 kWh/year => Annual costs = 800 €/year
- Consumption = 4500 kWh/year => Annual costs = 950 €/year (800€ + 500 kWh * 30 cent/kWh = 150 € additional consumption costs)
- Consumption = 6000 kWh/year => Annual costs = 1400 €/year (800€ + 2000 kWh * 30 cent/kWh = 600 € additional consumption costs)