

### Task: 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 ( $5\text{€} \cdot 12 \text{ months} = 60 \text{ €}$  base costs +  $3500 \text{ kWh/year} \cdot 22 \text{ cent/kWh} = 770 \text{ €}$  consumption costs)
- Consumption = 4500 kWh/year => Annual costs = 1050 €/year ( $5\text{€} \cdot 12 \text{ months} = 60 \text{ €}$  base costs +  $4500 \text{ kWh/year} \cdot 22 \text{ cent/kWh} = 990 \text{ €}$  consumption costs)
- Consumption = 6000 kWh/year => Annual costs = 1380 €/year ( $5\text{€} \cdot 12 \text{ months} = 60 \text{ €}$  base costs +  $6000 \text{ kWh/year} \cdot 22 \text{ cent/kWh} = 1320 \text{ €}$  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.

Examples:

- Consumption = 3500 kWh/year => Annual costs = 800 €/year
- Consumption = 4500 kWh/year => Annual costs = 950 €/year ( $800\text{€} + 500 \text{ kWh} \cdot 30 \text{ cent/kWh} = 150 \text{ €}$  additional consumption costs)
- Consumption = 6000 kWh/year => Annual costs = 1400 €/year ( $800\text{€} + 2000 \text{ kWh} \cdot 30 \text{ cent/kWh} = 600 \text{ €}$  additional consumption costs)

### Notes:

Please implement this task in C#, C++ or Java or any other object oriented language.

If you write tests for your implementation please provide them with your implementation.

Please develop only the logic described above, and no UI (webpage, etc.). You do not need a data base. All sample data can be hardcoded or added to the implementation by any other method of your choice.