

## ProductAPI

### 1. Products

/products

**Schema :**

```
[{
  "id": 0
  "name": "string",
  "salesPrice" : 0,
  "productTypeId" : 0

}]
```

**ProductDto**

Id - integer(\$int32) readOnly: true  
Name - string nullable: true readOnly: true  
salesPrice - number(\$double) readOnly: true  
productTypeId - integer(\$int32) readOnly: true

/products/ {id}

Id – int32 is parameter

### 2. Product Type

/product\_types

```
[{
  "id": 0
  "name": "string",
  "canBeInsured" : true

}]
```

**ProductTypeDto**

```
{
  id      integer($int32) readOnly: true
  name    string nullable: true readOnly: true
  canBeInsured  boolean readOnly: true
}
```

/product\_types/ {id}

### 3) ProblemDetails: 404

```
{  
  type    string nullable: true  
  title   string nullable: true  
  status  integer($int32) nullable: true  
  detail  string nullable: true  
  instance string nullable: true  
  < * >:  {  
  }  
}
```

---

- 1) Solution- multiple projects -(API) will include implementation & test cases
- 2) Solution should include tests, implementation, logging etc.
- 3) Design patterns, SOILD principles, separation of concerns
- 4) proper naming convention for classes, interfaces, methods
- 5) exception handling

### Implementation

1. calculates the total cost of insurance according to the rules below:
  - If product sales price is < € 500, no insurance
  - If product sales price=> € 500 but < € 2000, insurance cost is € 1000
  - If the product sales price=> € 2000, insurance cost is €2000
  - If the type of the product is a smartphone or a laptop, add € 500 more to the insurance cost.
2. Calculate the insurance cost for an order and for this, for all the products that are in a shopping cart.
3. logic around the insurance calculation, business analysts report shows that digital cameras are getting lost more than usual. Therefore, if an order has one or more digital cameras, add € 500 to the insured value of the order.
4. a new endpoint that will allow to upload surcharge rates per product type. This surcharge will then need to be added to the overall insurance value for the product type.

This endpoint will be simultaneously used by multiple users.