

Problem presentation

We need a warehouse that users can configure themselves:

- Configuration of unique product names, e.g., "Plastic ABS", "Plastic PS"
- Configuration of the department that produces or stores it and dynamically manages capacity: e.g., "Warehouse A", "capacity 200"
- Configuration of the packaging used by the company, e.g., "Big bag"
- Configuration of product status that the company wants to use, for example: "for recycling", "for transport", etc.
- An admin account for managing the entire application,
- Accounts such as Leader and Manager.
- Transport between departments and dynamic capacity management

First Run

Upon the first launch of the application, you need to log in at

<http://localhost:8080/login>

Username: admin

Password: admin

You will receive a **JSON** response with a token and a list of actions you can do on the server.

Of course this are actions than can do Admin, similar response you will recive after log at **LIEDER** or **MANAGER** account.

1. You should configure **department** by using this

"uri": "http://localhost:8080/api/v1/departments/addDepartment",

Your admin **BEARER**

"token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXLTJ5IiwiaWF0IjoiMTUxMjM0MjM0In0="

and **POST**

```
{  
  "departmentName": "Department1",  
  "totalCapacity": 100  
}
```

That's what you should receive

```
{  
  "id": 1,  
  "actions": [  
    {  
      "name": "Get department",  
      "uri": "http://localhost:8080/api/v1/departments/1",  
      "method": "GET",  
      "params": []  
    },  
    {  
      "name": "Add to produces",  
      "uri": "http://localhost:8080/api/v1/departments/1/removeFromProduces?productNameId={???}",  
      "method": "PUT",  
      "params": []  
    },  
    {  
      "name": "Remove from produces",  
      "uri": "http://localhost:8080/api/v1/departments/1",  
      "method": "PUT",  
      "params": []  
    }  
  ],  
  "departmentName": "Department1",  
  "totalCapacity": 100.00,  
  "currentCapacity": 100.00,  
  "productList": [],  
  "produces": []  
}
```

2. You should configure **product name** by using this

"uri": "http://localhost:8080/api/v1/productNames/add?departmentId=???"

Your admin **BEARER**

"token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXLTJ5IiwiaWF0IjoiMTUxMjM0MjM0In0="

POST

```
{  
  "productName": "Product name"  
}
```

As param you should post **departmentId** of department with produces your product, in your case **departmentId = 1**

Thats what you should receive

```
{  
  "id": 1,  
  "actions": [  
    {  
      "name": "Get product name",  
      "uri": "http://localhost:8080/api/v1productNames/1",  
      "method": "GET",  
      "params": []  
    },  
    {  
      "name": "Remove product name",  
      "uri": "http://localhost:8080/api/v1productNames/1",  
      "method": "DELETE",  
      "params": []  
    },  
    {  
      "name": "Update product name",  
      "uri": "http://localhost:8080/api/v1productNames/1",  
      "method": "PUT",  
      "params": []  
    }  
  ],  
  "productName": "Product name",  
  "producedByDepartment": "Department1"  
}
```

3. You should configure **product status** by using this

```
"uri": "http://localhost:8080/api/v1/productStatuses/add"
```

Your admin **BEARER**

"token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXLTJ5In0.eyJ1bmludGVudCI6ImFkbWVudCJ9.eyJ1bmludGVudCI6ImFkbWVudCJ9"

POST

```
{
  "statusName": "To sell"
}
```

Thats what you should recive

```

    "id": 1,
    "actions": [
      {
        "name": "Get product status",
        "uri": "http://localhost:8080/api/v1productStatuses/1",
        "method": "GET",
        "params": []
      },
      {
        "name": "Remove product status",
        "uri": "http://localhost:8080/api/v1productStatuses/1",
        "method": "DELETE",
        "params": []
      },
      {
        "name": "Update product status",
        "uri": "http://localhost:8080/api/v1productStatuses/1",
        "method": "PUT",
        "params": []
      }
    ],
    "statusName": "To sell"
  }
}

```

4. You should configure **packaging** by using this

"uri": `http://localhost:8080/api/v1/packaging-s/add`

Your admin **BEARER**

"token": `"eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXLTJ5IiwiaWF0IjoiMTYxMjM0MjM0In0="`

POST

```
{  
  "packagingName": "Big Bag",  
  "capacity": 2,  
  "weight": 2  
}
```

That's what you should receive

```
1  {  
2    "id": 1,  
3    "actions": [  
4      {  
5        "name": "Get packaging",  
6        "uri": "http://localhost:8080/api/v1/packaging-s/1",  
7        "method": "GET",  
8        "params": []  
9      },  
10     {  
11       "name": "Update packaging",  
12       "uri": "http://localhost:8080/api/v1/packaging-s/1",  
13       "method": "PUT",  
14       "params": []  
15     },  
16     {  
17       "name": "Remove packaging",  
18       "uri": "http://localhost:8080/api/v1/packaging-s/1",  
19       "method": "DELETE",  
20       "params": []  
21     }  
22   ],  
23   "packagingName": "Big Bag",  
24   "capacity": 2.00,  
25   "weight": 2.00  
26 }
```

5.Let's add your first product by using this

```
"uri": http://localhost:8080/api/v1/products/addProduct?
departmentId=1&productNameId=1&productStatusId=1&packagingId=1"
```

Your admin **BEARER**

"token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXLTJ0eS9yZWRlbnQifQ=="

POST

```
{
  "grossWeight": 1300,
  "shift": "FIRST_SHIFT"
}
```

Thats what you should recive

```
"id": 1,
"actions": [
  {
    "name": "Get product",
    "uri": "http://localhost:8080/api/v1/products/1",
    "method": "GET",
    "params": []
  },
  {
    "name": "Delete product",
    "uri": "http://localhost:8080/api/v1/products/1",
    "method": "DELETE",
    "params": []
  },
  {
    "name": "Transport product",
    "uri": "http://localhost:8080/api/v1/products/1/transport?departmentId={???}",
    "method": "PUT",
    "params": []
  }
],
"productName": "Product name",
"grossWeight": 1300.00,
"netWeight": 1298.00,
"capacity": 2.00,
"packaging": "Big Bag",
"location": "Department1",
"productStatus": "To sell",
"shift": "FIRST_SHIFT",
"productionDate": "2024-03-14T10:28:31.943+00:00"
```

Lets check our department now by

```
"uri": "http://localhost:8080/api/v1/departments/1"
```

```

"departmentName": "Department1",
"totalCapacity": 100.00,
"currentCapacity": 98.00,
"productList": [
  {
    "id": 1,
    "actions": [ ... ],
    "productName": "Product name",
    "grossWeight": 1300.00,
    "netWeight": 1298.00,
    "capacity": 2.00,
    "packaging": "Big Bag",
    "location": "Department1",
    "productStatus": "To sell",
    "shift": "FIRST_SHIFT",
    "productionDate": "2024-03-14T10:28:31.943+00:00"
  }
],
"produces": [
  "Product name"
]

```

For better understand lets check data base

PRODUCT NAME

	department_id	id	name
1	1	1	Product name

DEPARTMENT

	current_capacity	total_capacity	id	department...
1	98.00	100.00	1	Department1

PACKAGNG

	capacity	weight	id	name
1	2.00	2.00	1	Big Bag

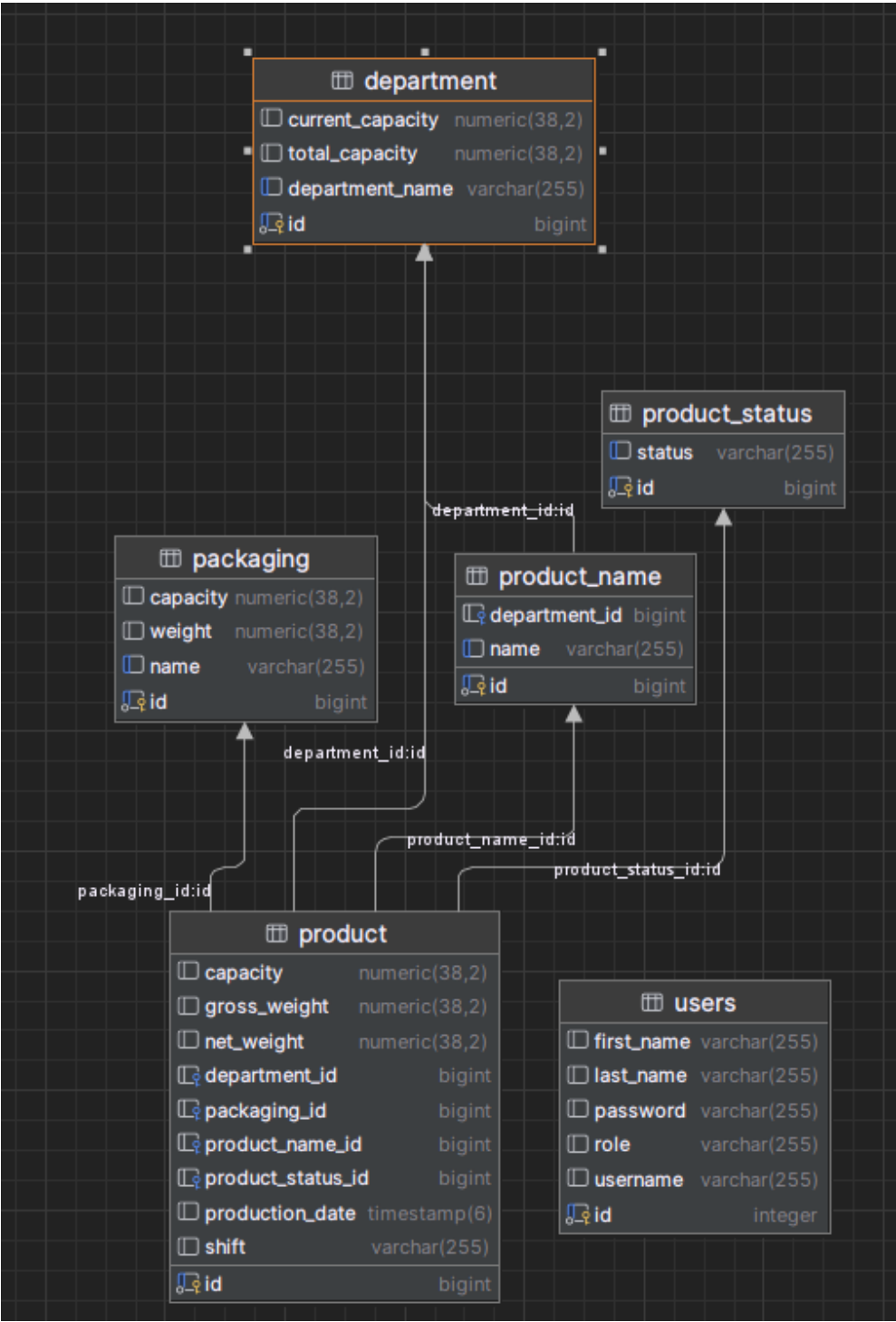
PRODUCT STATUS

id	status
1	To sell

PRODUCT

capacity	gross_weight	net_weight	department_id	id	packaging_id	product_name_id	product_status_id	production_date	shift
1	2.00	1300.00	1298.00	1	1	1	1	2024-03-14 11:28:31.943000	FIRST_SHIFT

DIAGRAM




```

    "actions": [
      {
        "name": "Get department by id",
        "uri": "http://localhost:8080/api/v1/departments/{departmentId}",
        "method": "GET",
        "params": []
      },
      {
        "name": "Get packaging by id",
        "uri": "http://localhost:8080/api/v1/packaging-s/{packagingId}",
        "method": "GET",
        "params": []
      },
      {
        "name": "Get all packaging's",
        "uri": "http://localhost:8080/api/v1/packaging-s",
        "method": "GET",
        "params": []
      }
    ]
  }
}

```

```
{
  "name": "Get product name by id",
  "uri": "http://localhost:8080/api/v1/productNames/{productId}",
  "method": "GET",
  "params": []
},
{
  "name": "Get all product names",
  "uri": "http://localhost:8080/api/v1/productNames",
  "method": "GET",
  "params": []
},
{
  "name": "Get product status by id",
  "uri": "http://localhost:8080/api/v1/productStatuses/{productId}",
  "method": "GET",
  "params": []
},
{
  "name": "Get all product statuses",
  "uri": "http://localhost:8080/api/v1/productStatuses",
  "method": "GET",
  "params": []
},
{
  "name": "Add product",
  "uri": "http://localhost:8080/api/v1/products/addProduct",
  "method": "POST",
  "params": [
    "departmentId",
    "productId",
    "productId",
    "packagingId"
  ]
},
{
  "name": "Get product by id",
  "uri": "http://localhost:8080/api/v1/products/{productId}",
  "method": "GET",
  "params": []
}
```

```
    },
    {
      "name": "Update product",
      "uri": "http://localhost:8080/api/v1/products/{productId}",
      "method": "PUT",
      "params": [
        "productId",
        "productNameId",
        "packagingId",
        "productStatusId"
      ]
    },
    {
      "name": "Add new department",
      "uri": "http://localhost:8080/api/v1/departments/addDepartment",
      "method": "POST",
      "params": []
    },
    {
      "name": "Remove from produces",
      "uri": "http://localhost:8080/api/v1/departments/{departmentId}/removeFromProduces",
      "method": "PUT",
      "params": []
    },
    {
      "name": "Get all departments",
      "uri": "http://localhost:8080/api/v1/departments",
      "method": "GET",
      "params": []
    },
    {
      "name": "Add new packaging",
      "uri": "http://localhost:8080/api/v1/packaging-s/add",
      "method": "POST",
      "params": []
    },
    {
      "name": "Delete packaging",
      "uri": "http://localhost:8080/api/v1/packaging-s/{packagingId}",
```

```
        "method": "DELETE",
        "params": []
    },
    {
        "name": "Update packaging",
        "uri": "http://localhost:8080/api/v1/packaging-s/{packagingId}",
        "method": "PUT",
        "params": []
    },
    {
        "name": "Add product name",
        "uri": "http://localhost:8080/api/v1/productNames/add",
        "method": "POST",
        "params": [
            "departmentId"
        ]
    },
    {
        "name": "Remove product name",
        "uri": "http://localhost:8080/api/v1/productNames/{productNameId}",
        "method": "DELETE",
        "params": []
    },
    {
        "name": "Update product name",
        "uri": "http://localhost:8080/api/v1/productNames/{productNameId}",
        "method": "PUT",
        "params": []
    },
    {
        "name": "Add product status",
        "uri": "http://localhost:8080/api/v1/productStatuses/add",
        "method": "POST",
        "params": []
    },
    {
        "name": "Remove product status",
        "uri": "http://localhost:8080/api/v1/productStatuses/{productStatusId}",
        "method": "DELETE",
        "params": []
    }
]
```

```

    },
    {
      "name": "Update product status",
      "uri": "http://localhost:8080/api/v1/productStatuses/{productId}",
      "method": "PUT",
      "params": []
    },
    {
      "name": "Delete product",
      "uri": "http://localhost:8080/api/v1/products/{productId}",
      "method": "DELETE",
      "params": []
    },
    {
      "name": "Get all by product name",
      "uri": "http://localhost:8080/api/v1/products/allByName",
      "method": "GET",
      "params": []
    },
    {
      "name": "Get all by status",
      "uri": "http://localhost:8080/api/v1/products/allByStatus",
      "method": "GET",
      "params": [
        "statusId"
      ]
    },
    {
      "name": "Get all by status and name",
      "uri": "http://localhost:8080/api/v1/products/allByStatusAndName",
      "method": "GET",
      "params": [
        "statusId",
        "productNameId"
      ]
    },
    {
      "name": "Get sum weight by name",
      "uri": "http://localhost:8080/api/v1/products/sumWeightByName",
      "method": "GET",

```

```
        "params": [
            "productId"
        ],
        {
            "name": "Transport product",
            "uri": "http://localhost:8080/api/v1/products/{productId}/transport",
            "method": "PUT",
            "params": [
                "departmentId",
                "optional: productId"
            ],
        },
    ],
```