

EcoTrack — Entrega Sprint 2 (Java Advanced)

Davi Vasconcelos Souza Rm 559906

Gustavo Dantas Oliveira 560685

Paulo Neto Rm 560262

Links de Entrega

- GitHub: <https://github.com/davivsouza/ecotrack-oracle-api-full>

Evolução Sprint 2

Implementação do HATEOAS Nível 3, refatoração de código, documentação completa e gestão de configuração no GitHub.

Padrões de Projeto Implementados

Repository Pattern, Service Layer Pattern, DTO Pattern, Converter Pattern e Builder Pattern.

Configurações Especiais

Conversão UUID ↔ RAW(16) e validações com @NotBlank, @Email e @Valid.

Documentação Adicional

Arquitetura, DER, Classes e Coleção Postman organizadas em 'documentos/' e 'postman/'.

Padrão REST e HATEOAS

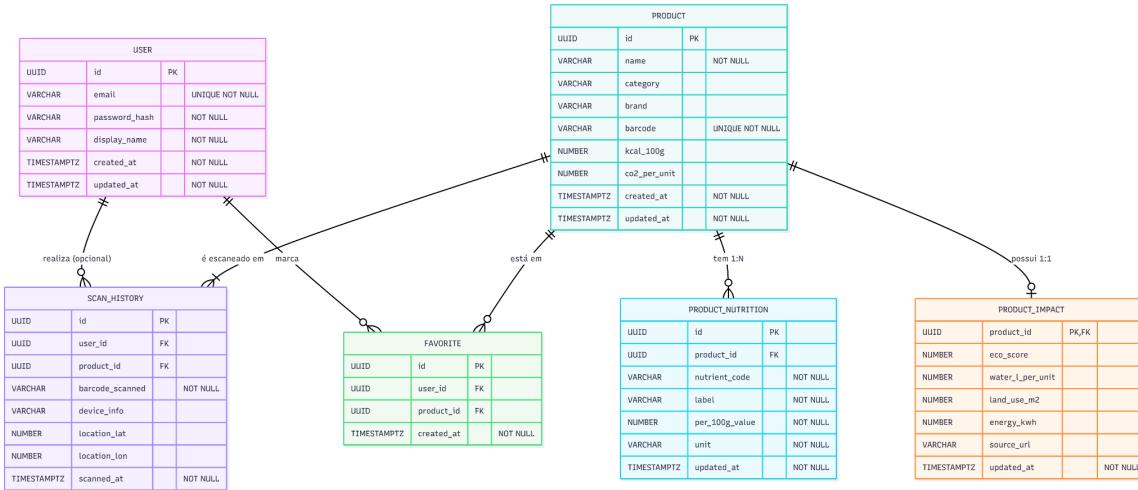
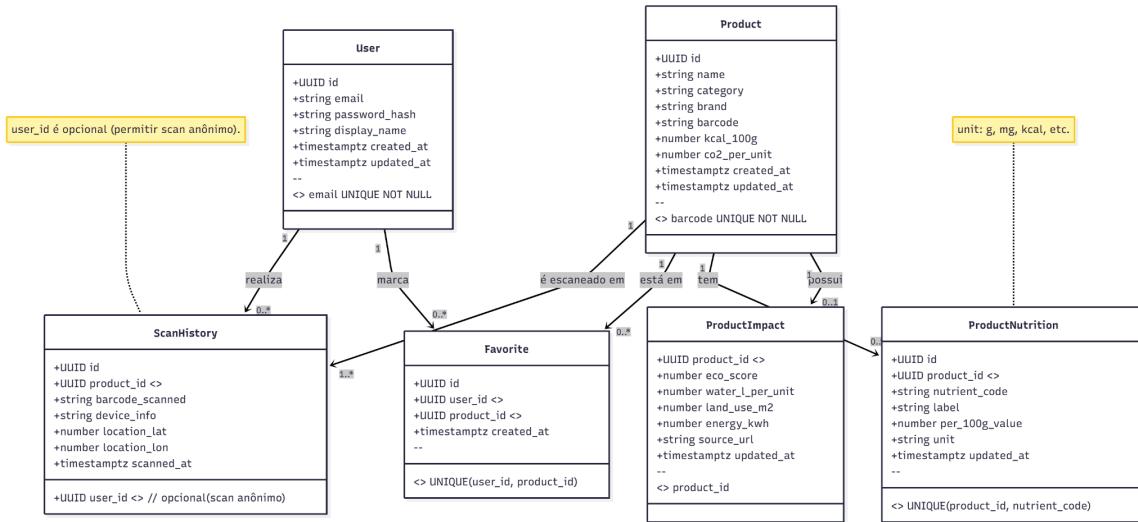
A aplicação está no nível 3 do modelo de maturidade de Richardson, com links hipermidiáticos que permitem navegação dinâmica entre recursos.

Endpoints Principais

Módulo	Endpoints
Produtos	GET /api/products; GET /api/products/{id}; GET /api/products/barcode/{code}; GET /api/products/category/{name}; GET /api/products/search?q=...; POST

	/api/products; PUT /api/products/{id}; DELETE /api/products/{id}
Usuários	POST /api/users; GET /api/users/by-email?email=...; GET/PUT/DELETE /api/users/{id}
Escaneios	POST /api/scan (email, barcode); GET /api/scan/history?email=...
Favoritos	POST /api/scan/favorite/{productId}?email=...; DELETE /api/scan/favorite/{productId}?email=...; GET /api/scan/favorites?email=...
Impacto	GET /api/impact/{productId}; POST /api/impact
Nutrição	GET /api/nutrition/{productId}; POST /api/nutrition; DELETE /api/nutrition/{id}

UML e Diagrama de Entidade-Relacionamento



TESTES

ADD FAVORITES

The screenshot shows a Postman interface with the following details:

- URL:** {{base}}/api/scan/favorite/603ed76e-3bb0-4254-9b1a-411166892832?email=demo@ecotrack.com
- Method:** POST
- Body:** JSON (checkbox checked)
- Response Status:** 201 Created
- Response Body (JSON):**

```

1  {
2    "id": [
3      {
4        "userId": "2e5296ec-dd85-46b6-b8be-dc476ad2b386",
5        "productId": "603ed76e-3bb0-4254-9b1a-411166892832"
6      },
7      "user": [
8        {
9          "id": "3e8296ec-dd85-46b6-b8be-dc476ad2b386",
10         "email": "demo@ecotrack.com",
11         "passwordHash": "hashedpassword123",
12         "displayName": "Usuário Demo",
13         "createdAt": "2025-10-11T19:57:39.748468-03:00",
14         "updatedAt": "2025-10-11T19:57:39.748468-03:00"
15       },
16       "product": [
17         {
18           "id": "603ed76e-3bb0-4254-9b1a-411166892832",
19           "name": "Granola Integral",
20           "category": "Cereais",
21           "kcal100g": 380,
22           "co2PeUnit": 0.9,
23           "barcode": "7891000310101"
24         },
25         "createdAt": "2025-10-11T19:59:11.710264-03:00"
26     ],
27     "createdAt": "2025-10-11T19:59:11.710264-03:00"
28   ],
29   "updatedAt": "2025-10-11T19:59:11.710264-03:00"
30 }

```

RECORD SCAN

The screenshot shows a Postman interface with the following details:

- URL:** {{base}}/api/scan
- Method:** POST
- Body:** raw (checkbox checked)
- Response Status:** 201 Created
- Response Body (JSON):**

```

1  {"email": "demo@ecotrack.com", "barcode": "7891000310101"}

```

Below the main response, there is another JSON object representing a scan record:

```

1  {
2    "id": "10a1023d-8fc8-439f-b977-cb46e1ff8598",
3    "user": [
4      {
5        "id": "2e5296ec-dd85-46b6-b8be-dc476ad2b386",
6        "email": "demo@ecotrack.com",
7        "passwordHash": "hashedpassword123",
8        "displayName": "Usuário Demo",
9        "createdAt": "2025-10-11T19:57:39.748468-03:00",
10       "updatedAt": "2025-10-11T19:57:39.748468-03:00"
11     },
12     "product": [
13       {
14         "id": "603ed76e-3bb0-4254-9b1a-411166892832",
15         "name": "Granola Integral",
16         "category": "Cereais",
17         "kcal100g": 380,
18         "co2PeUnit": 0.9,
19         "barcode": "7891000310101"
20       },
21       "scannedAt": "2025-10-11T19:59:58.5135005-03:00",
22       "source": "MOBILE"
23     ],
24     "createdAt": "2025-10-11T19:59:58.5135005-03:00"
25   ],
26   "updatedAt": "2025-10-11T19:59:58.5135005-03:00"
27 }

```

CREATE/UPsert PRODUCT

EcoTrack Oracle API / Create/Upsert Product

POST | {{base}} /api/products

Params Authorization Headers (9) Body Scripts Settings

Body Cookies Headers (5) Test Results

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```

1 {
2   "id": null,
3   "name": "Banana",
4   "category": "Frutas",
5   "kcal100g": 380.0,
6   "co2PerUnit": 0.9,
7   "barcode": "7891000310101"
8 }
```

Send | Save | Share | [Schema](#) [Beautify](#)

Body Cookies Headers (5) Test Results

201 Created | 50 ms | 310 B | Save Response

{ JSON | Preview | Visualize }

```

1 {
2   "id": "e20f5718-2919-48a3-9a75-bf39a7b7d1f3",
3   "name": "Banana",
4   "category": "Frutas",
5   "kcal100g": 380.0,
6   "co2PerUnit": 0.9,
7   "barcode": "7891000310101"
8 }
```

LIST PRODUCTS

EcoTrack Oracle API / List Products

GET | {{base}} /api/products

Params Authorization Headers (6) Body Scripts Settings

Query Params

Key	Value	Description	Bulk Edit
Key	Value	Description	

Send | Save | Share | [Schema](#) [Beautify](#)

Body Cookies Headers (5) Test Results

200 OK | 27 ms | 456 B | Save Response

{ JSON | Preview | Visualize }

```

1 [
2   {
3     "id": "e20f5718-2919-48a3-9a75-bf39a7b7d1f3",
4     "name": "Banana",
5     "category": "Frutas",
6     "kcal100g": 388,
7     "co2PerUnit": 8.9,
8     "barcode": "7891000310101"
9   },
10   {
11     "id": "603ed76e-3bb6-4254-9b1a-411166892832",
12     "name": "Granola Integral",
13     "category": "Cereais",
14     "kcal100g": 388,
15     "co2PerUnit": 8.9,
16     "barcode": "7891000310101"
17   }
18 ]
```

LIST USERS

HTTP EcoTrack Oracle API / List Users

GET {{base}} /api/users

Params Authorization Headers (6) Body Scripts Settings

Query Params

Key	Value	Description
Key	Value	Description

Body Cookies Headers (5) Test Results

{ } JSON ▾ Preview Visualize

```
1 [  
2 {  
3   "id": "2e5296ec-dd85-46b6-b0be-dc476ad2b386",  
4   "email": "demo@ecotrack.com",  
5   "passwordHash": "hashedpassword123",  
6   "displayName": "Usuário Demo",  
7   "createdAt": "2025-10-11T19:57:39.740468-03:00",  
8   "updatedAt": "2025-10-11T19:57:39.740468-03:00"  
9 }]  
10 ]
```

CREATE USER

HTTP EcoTrack Oracle API / Create User

POST {{base}} /api/users

Params Authorization Headers (9) Body Scripts Settings

none form-data x-www-form-urlencoded raw binary GraphQL JSON ▾

Cookies Schema Beautify

```
1 {  
2   "id": null,  
3   "email": "demo@ecotrack.com",  
4   "passwordHash": "hashedpassword123",  
5   "displayName": "Usuário Demo"  
6 }
```

Body Cookies Headers (5) Test Results

201 Created 205 ms 401 B Save Response

{ } JSON ▾ Preview Visualize

```
1 {  
2   "id": "2e5296ec-dd85-46b6-b0be-dc476ad2b386",  
3   "email": "demo@ecotrack.com",  
4   "passwordHash": "hashedpassword123",  
5   "displayName": "Usuário Demo",  
6   "createdAt": "2025-10-11T19:57:39.740468-03:00",  
7   "updatedAt": "2025-10-11T19:57:39.740468-03:00"  
8 }
```

CREATE NUTRITION

The screenshot shows a POST request to {{base}} /api/nutrition. The Body tab is selected, showing a JSON payload:

```
1 {  
2     "id": null,  
3     "product": {  
4         "id": "683ed76e-3bb8-4254-9b1a-411166892832"  
5     },  
6     "nutriKey": "Proteinas",  
7     "nutriValue": "12g por 100g"  
8 }
```

The response tab shows a 201 Created status with a response body:

```
1 {  
2     "id": "d0c98det-1cf-4b78-bfc2-eedda61e529",  
3     "product": {  
4         "id": "683ed76e-3bb8-4254-9b1a-411166892832",  
5         "name": "Granola Integral",  
6         "category": "Cereais",  
7         "kcal100g": 398,  
8         "co2PexUnit": 0.9,  
9         "barcode": "7891008310101"  
10    },  
11    "nutriKey": "Proteinas",  
12    "nutriValue": "12g por 100g"  
13 }
```

LIST NUTRITION

HTTP EcoTrack Oracle API / List Nutrition

GET {{base}} /api/nutrition/603ed76e-3bb0-4254-9b1a-411166892832

Params Authorization Headers (6) Body Scripts Settings

Query Params

	Key	Value
	Key	Value

Body Cookies Headers (5) Test Results | ⚙️

{ } JSON ▾ Preview Visualize | ▾

```
1 [  
2 {  
3   "id": "d0c98de6-a1cf-4b78-bfc2-eedae61e529",  
4   "product": {  
5     "id": "603ed76e-3bb0-4254-9b1a-411166892832",  
6     "name": "Granola Integral",  
7     "category": "Cereais",  
8     "kcal100g": 380,  
9     "co2PerUnit": 0.9,  
10    "barcode": "7891000310101"  
11  },  
12  "nutriKey": "Proteinas",  
13  "nutriValue": "12g por 100g"  
14}  
15]
```

DELETE NUTRITION

EcoTrack Oracle API / Delete Nutrition

DELETE | {{base}}/api/nutrition/d0c98de6-a1cf-4b78-bfc2-eeddae61e529

Params Authorization Headers (6) Body Scripts Settings Cookies

Query Params

Key	Value	Description	Bulk Edit
Key	Value	Description	

Body Cookies Headers (3) Test Results

Raw | Preview | Visualize | 204 No Content | 46 ms | 112 B | Save Response

1

