

# API Documentation

*BD2 Project Group 03*

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# 1 Products

## 1.1 Search and Filter Products

---

GET /api/products

---

**Description** Search and filter products according to various criteria.

### Query Parameters (all optional)

- name (string)
- categoryId (int)
- minPrice, maxPrice (decimal)
- minSize, maxSize (decimal)
- minInventory, maxInventory (int)
- minSize, maxSize (int)
- warehouseId (int)
- page (int)
- all (boolean)
- size (int)

### Response body

---

```
[
  {
    "productId": "int",
    "name": "string",
    "description": "string",
    "unitPrice": "decimal",
    "unitSize": "decimal",
    "categoryName": "string",
    "inventoryCount": "int",
    "transactionsCount": "int",
    "isLowStock": "boolean",
    "isBestSelling": "boolean"
  },
  "... "
]
```

---

**Response:** 200 OK

## 1.2 Get Single Product (with stock per warehouse)

---

GET /api/products/{productId}

---

**Description:** Retrieve product details and current inventory in each warehouse.

**Path Parameters:**

- productId (int)

**Response body:**

---

```
{
  "productId": "int",
  "name": "string",
  "description": "string",
  "unitPrice": "decimal",
  "unitSize": "decimal",
  "categoryName": "string",
  "categoryId": "int",
  "inventory": [
    {
      "warehouseId": "int",
      "warehouseName": "string",
      "quantity": "int"
    },
    "...",
  ],
  "transactions": [
    {
      "transactionId": "int",
      "date": "date(yyyy-mm-dd)",
      "type": "enum(SUPPLIER_TO_WAREHOUSE, WAREHOUSE_TO_WAREHOUSE, WAREHOUSE_TO_CUSTOMER)",
      "price": "decimal",
      "quantity": "int",
      "employeeName": "string",
      "employeeId": "int",
    },
    "...",
  ]
}
```

---

**Response:** 200 OK

## 1.3 Low-Stock Products

---

GET /api/products/low-stock

---

**Description:** List products whose quantity in a given warehouse is below 5.

**Query Parameters (optional):**

- warehouseId (int)

**Response body:**

---

```
["int", "..."]
```

---

**Response:** 200 OK

## 1.4 Best-Selling Products

---

GET /api/products/best-selling

---

**Description:** Top 3 best-selling products in a warehouse.

**Query Parameters:**

- warehouseId (int) (optional)
- period (enum: week | month | year | allTime)

**Response body:**

---

```
["int", "..."]
```

---

**Response:** 200 OK

## 1.5 Create Product

---

POST /api/products

---

**Description:** Register a new product.

**Request Body:**

---

```
{  
  "name": "string",  
  "description": "string",  
  "unitPrice": "decimal",  
  "unitSize": "decimal",  
  "categoryId": "int"  
}
```

---

**Response:** 201 Created + created product object

## 1.6 Update Product

---

PUT /api/products/{productId}

---

**Description:** Update one or more attributes of a product.

**Path Parameters:**

- productId (int)

**Request Body:**

---

```
{  
  "name": "string",  
  "description": "string",  
  "unitPrice": "decimal",  
  "unitSize": "decimal",  
  "categoryId": "int"  
}
```

---

**Response:** 200 OK + updated product object

## 1.7 Delete Product

---

DELETE /api/products/{productId}

---

**Description:** Remove a product permanently.

**Path Parameters:**

- productId (int)

**Response:** 204 No Content + deleted product object

## 2 Categories

### 2.1 List Categories

---

GET /api/categories

---

**Description:** List all product categories.

**Query Parameters (all optional)**

- name (string)
- page (int)
- all (boolean)
- size (int)

**Response body:**

---

```
[
  {
    "categoryId": "int",
    "name": "string",
    "description": "string"
  },
  "..."
```

---

**Response:** 200 OK

## 2.2 Create Category

---

POST /api/categories

---

**Description:** Register a new product category.

**Request Body:**

---

```
{
  "name": "string",
  "description": "string"
}
```

---

**Response:** 201 Created + created category object

## 2.3 Update Category

---

PUT /api/categories/{categoryId}

---

**Description:** Update one or more attributes of a category.

**Path Parameters:**

- categoryId (int)

**Request Body:**

---

```
{
  "name": "string",
  "description": "string"
}
```

---

**Response:** 200 OK + updated category object

## 2.4 Delete Category

---

DELETE /api/categories/{categoryId}

---

**Description:** Remove a category permanently.

**Path Parameters:**

- categoryId (int)

**Response:** 204 No Content + deleted category object

## 3 Warehouses

### 3.1 List Warehouses

---

GET /api/warehouses

---

**Description:** List all warehouses.

**Query Parameters (all optional)**

- name (string)
- regionId (int)
- minCapacity, maxCapacity (decimal)
- minOccupied, maxOccupied (decimal)
- minEmployees, maxEmployees (int)
- minProducts, maxProducts (int)
- minTransactions, maxTransactions (int)
- page (int)
- all (boolean)
- size (int)

**Response body:**

---

```
[
  {
    "warehouseId": "int",
    "name": "string",
    "capacity": "int",
    "occupiedCapacity": "decimal",
    "address": "string",
    "employeesCount": "int",
    "productsSum": "int",
    "transactionsCount": "int"
  },
  "... "
]
```

---

**Response:** 200 OK



## 3.2 Get Warehouse Details

---

GET /api/warehouses/{warehouseId}

---

**Description:** Retrieve detailed information about a specific warehouse.

**Path Parameters:**

- warehouseId (int)

**Response body:**

---

```
{
  "warehouseId": "int",
  "name": "string",
  "capacity": "int",
  "occupiedCapacity": "int",
  "address": "string",
  "totalItems": "int",
  "totalValue": "decimal",
  "employees": [
    {
      "employeeId": "int",
      "name": "string",
      "surname": "string",
      "email": "string",
      "phoneNumber": "string",
      "position": "string"
    },
    "...",
  ],
  "products": [
    {
      "productId": "int",
      "name": "string",
      "quantity": "int",
      "unitPrice": "decimal"
    },
    "...",
  ],
  "transactions": [
    {
      "transactionId": "int",
      "date": "date(yyyy-mm-dd)",
      "description": "string",
      "type": "enum(SUPPLIER_TO_WAREHOUSE, WAREHOUSE_TO_WAREHOUSE, WAREHOUSE_TO_CUSTOMER)",
      "totalPrice": "decimal",
      "employeeId": "int",
      "employeeName": "string"
    },
    "...",
  ],
  "occupancyHistory": [
    {
      "date": "date(yyyy-mm-dd)",
      "occupiedCapacity": "decimal"
    }
  ]
}
```

```
    },  
    "..."  
  ]  
}
```

---

**Response:** 200 OK

### 3.3 Create Warehouse

---

POST /api/warehouses

---

**Description:** Register a new warehouse.

**Request Body:**

---

```
{  
  "name": "string",  
  "capacity": "int",  
  "regionId": "int",  
  "countryId": "int",  
  "city": "string",  
  "postalCode": "string",  
  "street": "string",  
  "streetNumber": "int"  
}
```

---

**Response:** 201 Created + created warehouse object

### 3.4 Update Warehouse

---

PUT /api/warehouses/{warehouseId}

---

**Description:** Update one or more attributes of a warehouse.

**Path Parameters:**

- warehouseId (int)

**Request Body:**

---

```
{  
  "name": "string",  
  "capacity": "int",  
  "regionId": "int",  
  "countryId": "int",  
  "city": "string",  
  "postalCode": "string",  
  "street": "string",  
  "streetNumber": "int"  
}
```

---

**Response:** 200 OK + updated warehouse object

### 3.5 Delete Warehouse

---

DELETE /api/warehouses/{warehouseId}

---

**Description:** Remove a warehouse permanently.

**Path Parameters:**

- warehouseId (int)

**Response:** 204 No Content + deleted warehouse object

## 4 Inventory Operations

### 4.1 Receive from Supplier

---

POST /api/inventory/receive

---

**Description:** Receive products from a supplier into a warehouse.

**Request body:**

---

```
{
  "warehouseId": "int",
  "supplierId": "int",
  "employeeId": "int",
  "items": {
    "productId(int)": "int",
    "...":
  }
}
```

---

**Response:** 201 Created + created transaction object

### 4.2 Transfer Between Warehouses

---

POST /api/inventory/transfer

---

**Description:** Transfer products between warehouses.

**Request body:**

---

```
{
  "fromWarehouseId": "int",
  "toWarehouseId": "int",
  "employeeId": "int",
  "items": {
    "productId(int)": "int",

```

```
    "..."  
  }  
}
```

---

**Response:** 201 Created + created transaction object

### 4.3 Deliver to Client

---

POST /api/inventory/delivery

---

**Description:** Deliver products to a client from a warehouse.

**Request body:**

---

```
{  
  "warehouseId": "int",  
  "clientId": "int",  
  "employeeId": "int",  
  "items": {  
    "productId(int)": "int",  
    "..."  
  }  
}
```

---

**Response:** 201 Created + created transaction object

## 5 Transactions

### 5.1 List Transactions

---

GET /api/transactions

---

**Description:** List all transactions.

**Query Parameters (all optional):**

- fromDate (date)
- toDate (date)
- type (enum: SUPPLIER\_TO\_WAREHOUSE, WAREHOUSE\_TO\_CLIENT, WAREHOUSE\_TO\_WAREHOUSE)
- minTotalPrice, maxTotalPrice (decimal)
- minTotalSize, maxTotalSize (decimal)
- warehouseId (int)
- clientId (int)
- supplierId (int)
- employeeId (int)

- page (int)
- all (boolean)
- size (int)

**Response body:**

---

```
[
  {
    "transactionId": "int",
    "date": "date(yyyy-mm-dd)",
    "description": "string",
    "type": "enum(SUPPLIER_TO_WAREHOUSE, WAREHOUSE_TO_WAREHOUSE, WAREHOUSE_TO_CUSTOMER)",
    "employeeName": "string",
    "fromWarehouseName": "string",
    "toWarehouseName": "string",
    "clientName": "string",
    "supplierName": "string",
    "totalPrice": "decimal",
    "totalSize": "decimal"
  },
  "...
]
```

---

**Response:** 200 OK

## 5.2 Get Transaction Details

---

GET /api/transactions/{transactionId}

---

**Description:** Retrieve detailed information about a specific transaction.

**Path Parameters:**

- transactionId (int)

**Response body:**

---

```
{
  "transactionId": "int",
  "date": "date(yyyy-mm-dd)",
  "description": "string",
  "type": "enum(SUPPLIER_TO_WAREHOUSE, WAREHOUSE_TO_WAREHOUSE, WAREHOUSE_TO_CUSTOMER)",
  "employeeId": "int",
  "employeeName": "string",
  "fromWarehouseId": "int",
  "fromWarehouseName": "string",
  "toWarehouseId": "int",
  "toWarehouseName": "string",
  "clientId": "int",
  "clientName": "string",
  "supplierId": "int",
  "supplierName": "string",
}
```

---

```
"totalItems": "int",
"totalPrice": "decimal",
"products": [
  {
    "productId": "int",
    "name": "string",
    "quantity": "int",
    "unitPrice": "decimal",
    "categoryName": "string"
  },
  "...
]
```

---

**Response:** 200 OK

## 6 Clients

### 6.1 List Clients

---

GET /api/clients

---

**Description:** List all clients.

#### Query Parameters (all optional)

- name (string)
- regionId (int)
- minTransactions, maxTransactions (int)
- warehouseId (int)
- page (int)
- all (boolean)
- size (int)

**Response body:**

---

```
[
  {
    "clientId": "int",
    "name": "string",
    "email": "string",
    "phoneNumber": "string",
    "address": "string",
    "transactionsCount": "int"
  },
  "...
]
```

---

**Response:** 200 OK

## 6.2 Get Client Details (with history)

---

GET /api/clients/{clientId}

---

**Description:** Retrieve detailed information about a specific client.

**Path Parameters:**

- clientId (int)

**Response body:**

---

```
{
  "clientId": "int",
  "name": "string",
  "email": "string",
  "phoneNumber": "string",
  "address": "string",
  "history": [
    {
      "transactionId": "int",
      "date": "date(yyyy-mm-dd)",
      "description": "string",
      "type": "enum(SUPPLIER_TO_WAREHOUSE, WAREHOUSE_TO_WAREHOUSE, WAREHOUSE_TO_CUSTOMER)",
      "employeeId": "int",
      "employeeName": "string",
      "fromWarehouseId": "int",
      "fromWarehouseName": "string",
      "toWarehouseId": "int",
      "toWarehouseName": "string",
      "clientId": "int",
      "clientName": "string",
      "supplierId": "int",
      "supplierName": "string",
      "totalItems": "int",
      "totalPrice": "decimal",
      "products": [
        {
          "productId": "int",
          "name": "string",
          "quantity": "int",
          "unitPrice": "decimal",
          "categoryName": "string"
        },
        "...",
      ]
    },
    "...",
  ]
}
```

---

**Response:** 200 OK

## 6.3 Create Client

---

POST /api/clients

---

**Description:** Register a new client.

**Request Body:**

---

```
{
  "name": "string",
  "email": "string",
  "phoneNumber": "string",
  "address": {
    "street": "string",
    "streetNumber": "int",
    "postalCode": "string",
    "city": "string",
    "countryId": "int",
    "regionId": "int"
  }
}
```

---

**Response:** 201 Created + created client object

## 7 Suppliers

### 7.1 List Suppliers

---

GET /api/suppliers

---

**Description:** List all suppliers.

- name (string)
- regionId (int)
- minTransactions, maxTransactions (int)
- warehouseId (int)
- page (int)
- all (boolean)
- size (int)

**Response body:**

---

```
[
  {
    "supplierId": "int",
    "name": "string",
    "email": "string",
```



```
    "phoneNumber": "string",
    "address": "string",
    "transactionsCount": "int"
  },
  "... "
]
```

---

Response: 200 OK

## 7.2 Get Supplier Details (with history)

---

GET /api/suppliers/{supplierId}

---

**Description:** Retrieve detailed information about a specific supplier.

**Path Parameters:**

- supplierId (int)

**Response body:**

---

```
{
  "supplierId": "int",
  "name": "string",
  "email": "string",
  "phoneNumber": "string",
  "address": "string",
  "history": [
    {
      "transactionId": "int",
      "date": "date(yyyy-mm-dd)",
      "description": "string",
      "type": "enum(SUPPLIER_TO_WAREHOUSE, WAREHOUSE_TO_WAREHOUSE, WAREHOUSE_TO_CUSTOMER)",
      "employeeId": "int",
      "employeeName": "string",
      "fromWarehouseId": "int",
      "fromWarehouseName": "string",
      "toWarehouseId": "int",
      "toWarehouseName": "string",
      "clientId": "int",
      "clientName": "string",
      "supplierId": "int",
      "supplierName": "string",
      "totalItems": "int",
      "totalPrice": "decimal",
      "products": [
        {
          "productId": "int",
          "name": "string",
          "quantity": "int",
          "unitPrice": "decimal",
          "categoryName": "string"
        },
        "... "
      ]
    }
  ]
}
```

```
}
  "...
]
}
```

---

**Response:** 200 OK

## 7.3 Create Supplier

---

POST /api/suppliers

---

**Description:** Register a new supplier.

**Request Body:**

---

```
{
  "name": "string",
  "email": "string",
  "phoneNumber": "string",
  "address": {
    "street": "string",
    "streetNumber": "int",
    "postalCode": "string",
    "city": "string",
    "countryId": "int",
    "regionId": "int"
  }
}
```

---

**Response:** 201 Created

## 8 Employees

### 8.1 List Employees

---

GET /api/employees

---

**Description:** List all employees.

- `partOfNameOrSurname` (string)
- `regionId` (int)
- `minTransactions, maxTransactions` (int)
- `warehouseId` (int)
- `page` (int)
- `all` (boolean)
- `size` (int)

### Query Parameters:

- warehouseId (int) (optional)

### Response body:

---

```
[
  {
    "employeeId": "int",
    "name": "string",
    "surname": "string",
    "email": "string",
    "phoneNumber": "string",
    "position": "string",
    "warehouseName": "string",
    "transactionsCount": "int"
  },
  "...
]
```

---

Response: 200 OK

## 8.2 Get Employee Details

---

GET /api/employees/{employeeId}

---

**Description:** Retrieve detailed information about a specific employee.

### Path Parameters:

- employeeId (int)

### Response body:

---

```
{
  "employeeId": "int",
  "name": "string",
  "surname": "string",
  "email": "string",
  "phoneNumber": "string",
  "position": "string",
  "warehouseId": "int",
  "warehouseName": "string",
  "transactionsCount": "int",
  "address": {
    "street": "string",
    "streetNumber": "int",
    "postalCode": "string",
    "city": "string",
    "countryId": "int",
    "countryName": "string",
    "regionId": "int",
    "regionName": "string"
  }
}
```

---

```

"history": [
  {
    "transactionId": "int",
    "date": "date(yyyy-mm-dd)",
    "description": "string",
    "type": "enum(SUPPLIER_TO_WAREHOUSE, WAREHOUSE_TO_WAREHOUSE, WAREHOUSE_TO_CUSTOMER)",
    "employeeId": "int",
    "employeeName": "string",
    "fromWarehouseId": "int",
    "fromWarehouseName": "string",
    "toWarehouseId": "int",
    "toWarehouseName": "string",
    "clientId": "int",
    "clientName": "string",
    "supplierId": "int",
    "supplierName": "string",
    "totalItems": "int",
    "totalPrice": "decimal",
    "products": [
      {
        "productId": "int",
        "name": "string",
        "quantity": "int",
        "unitPrice": "decimal",
        "categoryName": "string"
      },
      "... "
    ]
  },
  "... "
]
}

```

---

**Response:** 200 OK

### 8.3 Create Employee

POST /api/employees

---

**Description:** Register a new employee.

**Request Body:**

```

{
  "name": "string",
  "surname": "string",
  "email": "string",
  "phoneNumber": "string",
  "position": "string",
  "warehouseId": "int"
}

```

---

**Response:** 201 Created + created employee object

## 9 Dashboard

### 9.1 Summary Tiles

---

GET /api/dashboard/summary

---

**Description:** Retrieve summary tiles for the dashboard.

**Query Parameters:**

- warehouseId (int) (optional)

**Response body:**

---

```
{
  "productsCount": "int",
  "categoriesCount": "int",
  "monthlyReceipts": "int",
  "monthlyDeliveries": "int",
  "lowStockCount": "int",
  "topProduct": "string",
  "inventoryValue": "decimal",
  "turnoverLastWeek": "decimal",
  "lastReceiptDate": "date(yyyy-mm-dd)",
  "lastDeliveryDate": "date(yyyy-mm-dd)"
}
```

---

**Response:** 200 OK

## 10 Geography & Addresses

### 10.1 Regions

---

GET /api/regions

---

**Description:** List all regions.

**Response body:**

---

```
[
  {
    "regionId": "int",
    "name": "string"
  },
  "...
]
```

---

**Response:** 200 OK

## 10.2 Countries

---

GET /api/countries

---

**Description:** List all countries.

**Query Parameters:**

- `regionId` (int) (optional)

**Response body:**

---

```
[  
  {  
    "countryId": "int",  
    "name": "string",  
    "regionId": "int"  
  },  
  "..."  
]
```

---

**Response:** 200 OK

## 10.3 Addresses

---

POST /api/addresses

---

**Description:** Register a new address.

**Request body:**

---

```
{  
  "cityName": "string",  
  "postalCode": "string",  
  "countryId": "int",  
  "street": "string",  
  "streetNumber": "int"  
}
```

---

**Response:** 201 Created