

Inventory Management System

User Manual & System Overview

Introduction

Welcome to the Inventory Management System!

This system allows you to manage Branches, Products, Items, and view detailed Reports about inventory status, sales, and deficiencies.

The system launches through a Command Line Interface (CLI) that provides simple and clear options for interacting with your inventory database.

How It Works

When the program starts (Main.java):

- A ServiceFactory is initialized to manage all system services.
- Several Fake Branches, Products, and Items are automatically created for demonstration.
- The CLI is launched, allowing user interaction.

Initial data includes:

- Branches: Haifa, Beer Sheva, Tel Aviv
- Products: Milk, Chocolate, Cheese, Cake, Water
- Items: Several items added across different branches.

Main Menu Options

Once the CLI is opened, you have these options:

- 1. Manage Branches
- 2. Manage Products
- 3. Manage Items
- 4. Reports
- 0. Exit

```
Welcome to inventory management system!
```

```
1. Manage Branches.
```

```
2. Manage Products.
```

```
3. Manage Items.
```

```
4. Reports.
```

```
0. Exit.
```

```
. Press number to choose option
```

Branch Management

In the Branches Menu you can:

- Add Branch
- Remove Branch
- Rename Branch
- Change Branch Address
- List All Branches

```
1. Add new Branch.
```

```
2. Remove Branch.
```

```
3. Change Branch Name.
```

```
4. Change Branch Address.
```

```
5. Show All Branches.
```

```
0. Return to main menu.
```

```
. Press number to choose option
```

Product Management

In the Products Menu you can:

- Add Product
- Remove Product
- Update Product Details
- View All Products
- Update Minimal Quantity for Products

```
1. Add new Product.  
2. Remove Product.  
3. Update Product.  
4. Show All Products.  
5. Update minimal quantity for Product  
0. Return to main menu.  
Press number to choose option
```

Item Management

In the Items Menu you can:

- Add Item
- Remove Item
- Purchase Item
- Update Item Details
- View All Items

```
1. Add new Item.  
2. Remove Item.  
3. Purchase Item.  
4. Update Item.  
5. Show All Items.  
0. Return to main menu.  
Press number to choose option
```

Reports

The Reports Menu provides:

- Deficiency Report
- Sales Report
- Defected Items Report
- Expired Items Report

```
1. View Deficiency Report.  
2. View Sales Report.  
3. View Defected Items Report.  
4. View Expired Items Report.  
0. Return to main menu.  
Press number to choose option
```

Important Rules

- Branch Validation: Cannot add/move items to a non-existing branch.
- Product Validation: Cannot add items to non-existing products.
- Minimal Quantity: Must be a non-negative integer.
- Expiration Date: Items must have a valid future expiration date.
- Input Validation: All inputs are validated to avoid crashes.

Glossary

Key terms used in the system:

- Branch: A physical location where products are stored.
- Product: A general merchandise category.
- Item: A specific unit of a product.
- Report: Summarized views of inventory, sales, defects, or expirations.

Starting the System

Run the Main class to launch the CLI and start managing your inventory!