README – Inventory Management System (Java)

Project Overview

This project is a console-based Inventory Management System written in Java. It demonstrates key OOP concepts such as encapsulation, inheritance, polymorphism, and abstraction. The system allows users to add, view, update, and remove products.

Features

• Add a Product (Electronics, Clothing, Food)

• View Inventory

• Update Stock

• Remove a Product

• Input validation using try-catch

Program Structure

Main Class:

InventoryManagementSystem

Classes:

• Product – Base class (name, price, stock)

• Electronics – Extends Product with brand

• Clothing – Extends Product with size

• Food – Extends Product with expiration date

How the System Works

The program displays a menu:

1. Add a Product

2. View Inventory

3. Update Stock

4. Remove a Product

5. Exit

Products are stored in a fixed-size array of 10 elements.

How to Run

1. Compile:

javac InventoryManagementSystem.java

2. Run:

java InventoryManagementSystem

Limitations

• Limited to 10 products

• No database

• No file storage

• No search or sorting

Possible Improvements

• Use ArrayList

• Add search function

• Add sorting

• File saving/loading

• GUI using Swing/JavaFX