

# **Software Requirements Specification (SRS)**

**Home Appliance Repair Management System**

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## **1. Introduction**

### **1.1 Purpose**

This document describes the requirements for a simple internal system used by a home appliance repair company to manage customers, technicians, repair orders, invoices, and basic reports.

### **1.2 System Overview**

The system includes:

- A **C# console application** for daily operations
  - A **SQL Server LocalDB database** using **EF Core Code-First**
  - A **static HTML/CSS/Bootstrap UI prototype** (no backend)
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## **2. System Features**

### **2.1 Customer Management**

- Add customer
- Edit customer
- Delete customer (only if no orders exist)
- View all customers

## **2.2 Technician Management**

- Add technician
- Edit technician
- Delete technician (if no orders assigned)
- View all technicians

## **2.3 Repair Order Management**

- Create new repair order
- Assign technician
- Change status (Pending, Assigned, In Progress, Completed, Cancelled)
- Mark order as completed
- Enter service + parts cost
- Cancel order
- View all orders

## **2.4 Invoice Management**

- Auto-generate invoice when an order is completed
- Calculate total amount (service + parts)
- View all invoices

## **2.5 Reports**

- Order count by status
- Orders per technician

- Orders filtered by date
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## 3. User Interface Requirements

### 3.1 Console Application (Functional)

- Main menu
- Sub-menus for Customers, Technicians, Orders, Reports
- Input validation
- Clear navigation

### 3.2 Web UI Prototype (Static Only)

- Dashboard
  - Customers pages (list/add/edit)
  - Technicians pages
  - Repair orders pages
  - Invoice pages
  - Reports pages
- Designed using HTML5 + Bootstrap 5.
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## 4. Non-Functional Requirements

- **Database:** EF Core Code-First with migrations
- **Performance:** Console actions respond instantly

- **Usability:** Simple menu-driven interface
  - **Maintainability:** Clean code structure
  - **Security:** No login required (internal use only)
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## 5. Database Requirements

Entities:

- Customer
- Technician
- RepairOrder
- Invoice

Relationships:

- Customer → Orders (1-many)
  - Technician → Orders (1-many)
  - Order → Invoice (1-1)
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