**Miracle Property Management System**

**Project Type:** C# Console Application  
**Database:** SQL Server  
**Team Size:** 5 Members  
**Development Tools:** Visual Studio 2022 Community Edition, GitHub

**1. Project Overview**

This is a lightweight console-based application aimed at helping landlords manage their properties and tenants. The app allows an admin to add/view properties and tenants, assign tenants to properties, and update property availability.

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| **2. 👥 Team Roles & Responsibilities** |
| | **Member Role** | **Responsibility** | | --- | --- | | **Team Leader** | Overall coordination, GitHub management, task allocation, integration | | **Secretary** | Documenting the project, writing reports and user guides | | **Tester** | Testing functionalities, reporting bugs, ensuring app stability | | **Front-End Dev** | Building the console interface and input validation | | **Back-End Dev** | Writing logic for database interaction and main operations | |

**3. ⚙️ Core Features**

| **Feature** | **Description** |
| --- | --- |
| **Login System (Admin only)** | Basic login to access the system |
| **Add Property** | Add new property with details like address, rent, status |
| **View All Properties** | List all properties with their availability |
| **Add Tenant** | Add tenant with name and ID |
| **View All Tenants** | List all tenants and assigned property |
| **Assign Tenant to Property** | Link a tenant to a property and mark it as occupied |
| **Vacate Property** | Remove tenant from a property and mark it as available |

**4.** **🗃️ Database Tables**

**Property Table**

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| PropertyID | INT (PK) | Unique ID |
| Address | VARCHAR | Property address |
| Rent | DECIMAL | Monthly rent |
| Status | VARCHAR | Available / Occupied |

**Tenant Table**

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| TenantID | INT (PK) | Unique ID |
| Name | VARCHAR | Tenant full name |
| PropertyID | INT (FK) | Linked property ID (nullable if unassigned) |

**5. Console Menu Structure**

========= Miracle Property Management =========

1. Add Property

2. View All Properties

3. Add Tenant

4. View All Tenants

5. Assign Tenant to Property

6. Vacate Property

7. Exit

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**6. Tools & Technologies**

| **Tool** | **Purpose** |
| --- | --- |
| Visual Studio 2022 | Coding and debugging (C#) |
| SQL Server | Data storage and retrieval |
| GitHub | Source control and team collaboration |
| MSTest | Unit testing for C# application |