Fire Door Inspection & Remediation App - Technical Specification

1. Overview

This app is designed to streamline fire door inspections and remediation tracking across care homes. It allows users to upload inspection reports, extract actionable tasks, and monitor progress until completion.

2. Front-End

The front-end will be built using React and hosted on Azure Static Web Apps for scalable and secure delivery. It will include user authentication, a dashboard to display inspection status, photo uploads, and task tracking.

3. Back-End

The back-end will use Node.js with Express, hosted on Azure App Service. It will handle business logic, manage APIs for data exchange between front-end and database, and interface with Azure Blob Storage and Azure Functions.

4. Database

Azure Database for PostgreSQL will be used to store inspection data, remediation tasks, user accounts, and metadata about uploaded reports and images.

5. File Storage

Azure Blob Storage will securely store uploaded PDFs and images associated with each inspection and remediation task.

6. Authentication

User authentication and role-based access control will be managed via Azure Active Directory B2C.

7. Automated Task Generation

An Azure Function will trigger on PDF upload, extract relevant inspection data using OCR/text parsing, and auto-generate a list of remediation tasks linked to specific fire doors. These tasks will be written to the database.

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8. Monitoring and Analytics

Azure Monitor and Application Insights will track application performance and provide usage analytics.

9. Cost Efficiency

The architecture is designed to keep costs minimal, suitable for low-frequency usage by a small number of users. Pay-as-you-go Azure pricing ensures affordability and scalability.