

1. Introduction

XYZ Pharmaceuticals is a company involved in manufacturing and distributing pharmaceutical machinery such as Capsule/Encapsulation Equipment, Tablet Machines, and Liquid Filling Machines. The company aims to enhance its online presence through a web application that helps users interact, request product quotes, apply for jobs, and for admins to manage content and communication.

This document explains the core functionalities of the web application, written in plain English based on the provided code and requirement specifications.

2. Services Overview

2.1 Email Sending Service

Purpose: - To send automated or manual emails from the web application.

Where it is used: - When a user submits a contact form. - When a user submits a quote request. - When the admin wishes to email a job applicant.

Functionality: - Reads email settings (SMTP server, sender email/password) from configuration. - Builds and sends HTML emails. - Displays errors if sending fails.

Requirement Mapping: - Used in **Contact Us**, **Quote Us**, and **Admin Email Communication** sections.

2.2 File Upload & Deletion Service

Purpose: - To allow candidates to upload their resumes. - To allow deletion of uploaded files if needed.

Functionality: - Files are stored in a specific server folder structure. - Automatically renames files to avoid duplicates. - Allows deletion by checking file existence.

Requirement Mapping: - Used in the **Career** section (Resume Upload for job applicants).

3. Controller Actions

3.1 HomeController

Handles navigation and logic for the following pages:

Index: - Displays the homepage with links to all other pages.

About: - Displays the company description.

Products: - Retrieves and displays active product data: - Capsule Machines (e.g., Profill 100, Profill 3007, Model 8S) - Tablet Machines (e.g., TDP, VSP, CP 501) - Liquid Filling Equipment (e.g., DHF)

Contact (GET): - Displays a contact form.

Contact (POST): - Saves user-submitted messages. - Sends an email notification to admin.

Quote (GET): - Displays the quote form.

Quote (POST): - Saves quote requests. - Sends email to admin with all quote details.

Career, Privacy, Error: - Handles respective static or system pages.

4. Career Functionality (Admin & User)

Candidate Side:

- Can create an account.
- Can login using email/password.
- After login, candidate sees:
 - Personal Information Tab
 - Education Tab
 - Resume Upload Tab

Admin Side:

- Can log in and view all candidate details.
 - Can view resumes.
 - Can click "Email" to open a compose window (TO, Subject, Body, Send).
 - Uses EmailService to send interview call letters.
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5. Application Startup & Configuration (Program.cs)

- Registers services like EmailService and FileUploadService.
 - Sets up SQL Server database and identity roles (Admin, Candidate).
 - Initializes default data like sample products and the first admin account.
 - Uses session management for tracking file uploads.
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6. Summary of Key Functional Requirements & Mapping

Functionality	Supported By	Description
Display Products	HomeController.Products	Shows active Capsule, Tablet, and Liquid machines.
Submit Contact Message	HomeController.Contact (POST)	Saves message and emails admin.
Submit Quote Request	HomeController.Quote (POST)	Saves quote and emails admin.
Candidate Registration/ Login	Identity + Models + Views	Allows account creation and authentication.
Resume Upload	FileUploadService	Saves resume files to server.
Admin Email to Candidate	EmailService + Admin View	Compose and send interview call emails.
Admin View Candidate Info	Admin Dashboard	View and review candidate submissions.

7. Conclusion

This web application meets XYZ Pharmaceuticals' needs by providing interactive features for customers, job applicants, and administrative users. The system is designed using clean service-oriented principles, with separate modules for email, file handling, user management, and admin communication.

For further improvements, features like admin dashboards, email templates, and file type validation could be added in the future.

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