2. AI Agent Prompt / API Logic

Service Endpoint: POST https://api.example.com/reports/generate (production) — for local testing the API is POST <http://localhost:5000/reports>.

The frontend sends a JSON body like { reportType, reportingYear, client, requestedAt } to that endpoint.

Backend Agent's Role: The backend service validates and enriches the incoming JSON, generates a unique output filename, and then invokes the C# OpenXML routine (ReportGenerator.CreateSimpleReport) with the validated inputs and target path. After generation the backend stores or exposes the file and returns a download URL (or a file reference) to the frontend.

3. Architectural Explanation:

DOCX creation with the OpenXML SDK runs on the server because it requires a stable runtime, server-side libraries, and access to internal data/storage that should not be exposed to client code. Centralized generation also enables consistent formatting, auditing, secure storage, and avoids relying on the end-user's Office host capabilities.

4. Bonus feature

Feature: "Recent Clients" quick-select list (saved in localStorage) surfaced under the Client input so frequently used client names/IDs can be selected with one tap, it reduces repetitive typing and input errors for repeat users, speeding up report generation in a narrow task pane and improving workflow efficiency.