**Gazetteer Project Plan**

**1. Goals:**

Build a mobile-first, single-page web app that also works on phones, tablets and desktops and profiles every country with an interactive map that shows a variety of open data about each country (weather, geography, demography, etc.).

**2. Core Functionality**

1. **Auto‑detect user location** and highlight their country.
2. <select> loaded with all ISO‑listed countries.
3. **Leaflet map** featuring:
   * Border polygon of the selected country.
   * Marker layers for capital, major cities, POIs, etc using GeoNames and other APIs.
   * Clustering (Leaflet.markercluster) and utility buttons (EasyButton / ExtraMarker).
4. **Modal / off‑canvas info panel** with tabs:
   1. *General*: Country name, capital, ISO codes, flag, population, area.
   2. *Weather*: Current & 3‑day forecast (OpenWeather).
   3. *Currency*: Show currency (RESTCountries API)
   4. *Explore*: Wikipedia summary + links, GeoNames POIs.
5. **Loader spinner** during initial render.

**3. Technical Stack**

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| **Layer** | **Tech** |
| Front‑end | HTML5, CSS3 (Bootstrap 5), JavaScript ES6, jQuery, Leaflet 1.9 + MarkerCluster, EasyButton, ExtraMarker |
| Back‑end | PHP 8 with cURL; |
| APIs | OpenCage, GeoNames, Rest Countries, OpenWeather |
| Tooling | VS Code, Git, XAMPP, Dinahosting FTP (FileZilla), Chrome DevTools |

**4. Architecture & Data Flow**

1. **Page loads →** Bootstrap & Leaflet initialise.
2. **Geolocation →** get user location via JS and send to PHP.
3. **PHP calls OpenCage →** get country info
4. Then use that info to:

- Draw the border

- Show markers

- Load weather, flag, population, etc.

1. **Show everything in modal** when town is clicked.