Web Mapping Application Using Angular, LeafletJS, Terra Draw, and OpenStreetMap

Objective:

To build a web application similar to Google My Maps, allowing users to create custom maps with various geographic markers, shapes, and layers using Angular, LeafletJS, Terra Draw, and OpenStreetMap.

Technologies:

Frontend Framework: Angular

Mapping Library: LeafletJS

Drawing Plugin: Terra Draw (LeafletJS plugin)

Map Tiles: OpenStreetMap

Google My Maps	https://www.google.com/mymaps
LeafletJS	https://leafletjs.com/
OpenStreetMap	https://www.openstreetmap.org/
Terra Draw	https://github.com/JamesLMilner/terra-draw
Angular	https://angular.dev/overview

Project Phases:

Phase 1: Setup and Basic Map Integration

- Project Setup
- Set up the Angular development environment.
- Create a new Angular project.
- Integrate LeafletJS and OpenStreetMap
- Install and configure LeafletJS in the Angular project.
- Display a basic map using LeafletJS.
- Add a tile layer from OpenStreetMap to the map.

Phase 2: Adding Interactivity

- Markers and Popups
- Allow users to add markers to the map.
- Implement popups for markers with customizable information.
- Layers and Controls
- Implement layer controls to toggle different map layers.
- Add base layers and overlays.

Phase 3: Drawing and Editing Tools

- Integrate Terra Draw
- Install and configure Terra Draw in the Angular project.
- Enable basic drawing tools (e.g., points, lines, polygons).
- Advanced Drawing Features
- Allow users to edit and delete drawn shapes.
- Implement snapping and other advanced drawing features.

Phase 4: Saving and Loading Maps

- Save Maps
- Implement functionality to save the current state of the map (markers, shapes, layers) to a backend or local storage.
- Load Maps
- Allow users to load previously saved maps.

Deliverables:

- Functional Web Application: A fully functional web mapping application with features as outlined in the project phases.
- Documentation: Comprehensive documentation including:
- Project setup and configuration.
- GitHub Repository URL with all the source code

Timeline:

Phase 1: 3 days

Phase 2: 4 days

Phase 3: 4 days

Phase 4: 4 days