Introduction to Web Mapping with Leaflet

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Agenda

1. Introduction to Leaflet
2. Key features of Leaflet
3. Getting started with Leaflet
4. Enhancing the web map
5. Leafletjs plugins
6. Conclusion

Introduction to Leaflet

- Leaflet is an open-source JavaScript library for creating interactive web maps.
- It provides a lightweight and flexible framework for displaying map data on websites and mobile applications.
- Leaflet is widely used due to its simplicity, versatility, and extensive plugin ecosystem.
- It supports various map providers, such as OpenStreetMap, Mapbox, and Google Maps

Key features of leaflet

- Lightweight
- Cross-platform compatibility
- Customizability
- Interactivity
- Extensibility

Getting Started with Leaflet

1. Include the Leaflet library in your HTML page.
2. Create a container element for the map.
3. Set up the map options, such as initial center coordinates and zoom level.
4. Initialize the map using the container element and options.
5. Add layers, markers, and other map components as needed.

Enhancing your leaflet map

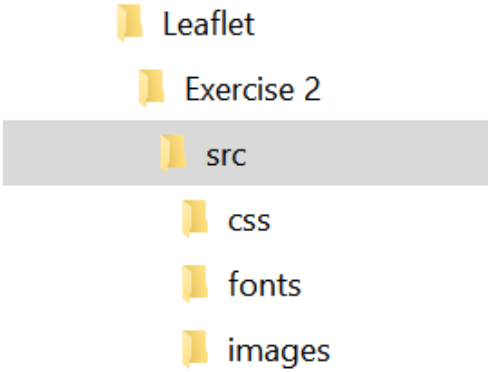
1. Customize the map appearance, such as tile layers and controls.
2. Leaflet allows you to add various layers and markers to enhance your web map.
3. Layers: You can overlay additional data, such as GeoJSON, WMS, or tile layers, on top of the base map.
4. Markers: You can add markers to indicate specific points of interest or locations on the map.

Leaflet plugins

- Leaflet has a vibrant ecosystem of plugins that extend its core functionality.
- These plugins provide additional features and tools to enhance your web mapping applications.
- These plugins can be easily integrated into your Leaflet project by including their JavaScript and CSS files.

First Web Map Setup

src



Index.html

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="UTF-8">
        <title>Webmap 201</title>
        <link rel="stylesheet" href="src/leaflet.css">
        <link rel="stylesheet" href="src/css/bootstrap.css">
        <script src="src/leaflet-src.js"></script>
        <script src="src/jquery-3.2.0.min.js"></script>
        <style>
            #mapdiv {
                height:100vh;
            }
        </style>
    </head>
    <body>
        <div id="side-bar" class="col-md-3"></div>
        <div id="mapdiv" class="col-md-9"></div>
        <script>
            var mymap;
            var lyrOSM;

            mymap = L.map('mapdiv', {
            center:[25.5788, 91.8933], zoom:7});
            lyrOSM = L.tileLayer('http://{s}.tile.osm.org/{z}/{x}/{y}.png');
            mymap.addLayer(lyrOSM);

        </script>
    </body>
</html>
```

Adding External layer from Bhuvan

```
    var lulc  = L.tileLayer.wms('https://bhuvan-vec2.nrsc.gov.in/bhuvan/wms',{
    layers: 'lulc:AS_LULC50K_0506',
    format: 'image/png',
    transparent:true,
    zIndex: 1
});
mymap.addLayer(lulc)
```

```
  L.control.layers(

  {
  'OSM':lyrOSM
  },
  {
  'LandUseLandCover':lulc
  }

  ).addTo(mymap)
```

Thank you