

OpenStreetMap, eine Alternative zu Google Maps

Mit einem simplen Beispiel möchte ich hier demonstrieren dass mit wenigen Zeilen Code mit OpenStreetMap bereits eine Kartendarstellung und in Verbindung mit Leaflet eine Positionsmarke möglich ist, selbst das Ermitteln einer Position zu einer Adresse ist unter zur Hilfenahme von nominatim.openstreetmap.org möglich.

[osm.htm \(/code/OpenStreetMap/osm.htm?mode=download\)](#) HTML (4,65 kByte) 18.01.2021 01:26

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<!DOCTYPE html >
<html lang="de">
  <head>
    <meta charset="utf-8" />
    <title>OpenStreetMap</title>
    <link rel="stylesheet" href="leaflet.css" />
    <script src="leaflet.min.js"></script>
    <meta http-equiv="Content-Security-Policy" content="default-src 'self'
https://nominatim.openstreetmap.org/; script-src 'self' 'unsafe-inline'; style-src 'self' 'unsafe-
inline'; img-src 'self' data: https://tile.openstreetmap.org/ " />
  </head>
  <body>
    <form id="geoRequest"><label for="label" style="display:inline-block; width:100px;text-
align:right">Name:</label><input type="text" id="label" value="Udo Schmal" /><br /><label
for="street" style="display:inline-block; width:100px;text-align:right">Strasse:</label><input
type="text" name="street" value="Olvengraben 41" /><br /><label for="city" style="display:inline-
block; width:100px;text-align:right">City:</label><input type="text" name="city" value="Geldern" />
<br /><label for="postalcode" style="display:inline-block; width:100px;text-align:right">Postalcode:
</label><input type="text" name="postalcode" value="47608" /><br /><label for="country"
style="display:inline-block; width:100px;text-align:right">Country:</label><input type="text"
name="country" value="de" /><br /><button type="submit" id="button">add marker</button><br /></form>
    <div id="mapDiv" style="width: 800px; height: 500px; max-width:100%;"></div>
    <script>
      function OpenStreetMap (id) {
        this.id = id;
        this.map = null;
      }

      OpenStreetMap.prototype = {
        requestGeo: function (obj, callback) {
          /* own Server installation http://nominatim.org/release-docs/latest/admin/Installation/ */
          var url = "https://nominatim.openstreetmap.org/search.php";
          function serialize(obj) {
            var str = [];
            for (var p in obj)
              if (obj.hasOwnProperty(p) && (['street', 'country', 'city', 'postalcode'].indexOf(p) !==
-1)) {
                str.push(encodeURIComponent(p) + "=" + encodeURIComponent(obj[p]));
              }
            return str.join("&") + '&format=json';
          }
          url = url + '?' + serialize(obj);
          var xhr = new XMLHttpRequest();
          xhr.open("GET", url, true);
          //xhr.setRequestHeader('Access-Control-Allow-Origin', '*');
          //xhr.setRequestHeader('Access-Control-Allow-Methods', 'GET, POST');
          //xhr.setRequestHeader('Content-Type', 'application/json');
          xhr.responseType = 'json';
          xhr.addEventListener('load', function (event) {
            if (xhr.status === 200) {
              if (xhr.response && xhr.response[0]) {
                var lat = xhr.response[0].lat;
                var lon = xhr.response[0].lon;
                var text = xhr.response[0].display_name;
                callback(lat, lon, text);
              }
            }
          });
          xhr.send();
        },
        createMap: function (lat, lon, zoom) {
          // initialize map
          this.map = L.map(this.id).setView([lat, lon], zoom);
          // set map tiles source
          L.tileLayer('https://tile.openstreetmap.org/{z}/{x}/{y}.png', {
            attribution: 'Map data &copy; <a href="https://www.openstreetmap.org/">OpenStreetMap</a>

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contributors',
  maxZoom: 18,
}).addTo(this.map);
},
setMarker: function (lat, lon, title, text) {
  if (this.map) {
    // add marker to the map
    marker = L.marker([lat, lon]).addTo(this.map);
    // add popup to the marker
    marker.bindPopup("<strong>" + title + "</strong><br />" + text);
  }
},
init: function (obj) {
  var self = this;
  this.requestGeo(obj, function(lat, lon, text) {
    self.createMap(lat, lon, 11);
  });
},
addItem: function (obj, title, text) {
  var self = this;
  var body = text;
  this.requestGeo(obj, function(lat, lon, text) {
    self.setMarker(lat, lon, title, body || text);
  });
},
addItems: function (arr) {
  var self = this;
  arr.forEach(function (item) {
    var title = item.name;
    var body = item.street + '<br />' +
      item.postalcode + ' ' + item.city;
    self.requestGeo(item, function(lat, lon, text) {
      self.setMarker(lat, lon, title, body || text);
    });
  });
}
};

var osm = new OpenStreetMap('mapDiv');
osm.init({country:'de', city:'Geldern', postalcode:'47608'});
var items = [
  {name: "Udo Schmal", street: "Olvengraben 41", country: 'de', city: 'Geldern', postalcode:
'47608'}
];
osm.addItems(items);
function onSubmit(event) {
  event.preventDefault();
  var label = '', data = {};
  var els = document.getElementById('geoRequest').elements;
  for (var i=0; i < els.length; i++) {
    if (els[i].name && els[i].value) {
      data[els[i].name] = els[i].value;
    } else if (els[i].id && els[i].id=="label") {
      label = els[i].value;
    }
  }
  osm.addItem(data, label, null);
}
var btn = document.getElementById("button");
btn.addEventListener('click', onSubmit);
</script>
</body>
</html>

```

Name:	<input type="text" value="Udo Schmal"/>
Strasse:	<input type="text" value="Olvengraben 41"/>
City:	<input type="text" value="Geldern"/>
Postalcode:	<input type="text" value="47608"/>
Country:	<input type="text" value="de"/>

