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| Course: | Ubiquitous computing Laboratory (Honors) |
| Experiment No.: | 02 |

**AIM:** To Implement application for location-based messages.

**CODE**:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Get Location Details</title>

<link rel="stylesheet" href="https://unpkg.com/leaflet/dist/leaflet.css"/>

<link rel="preconnect" href="https://fonts.googleapis.com">

<link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>

<link href="https://fonts.googleapis.com/css2?family=Poppins:wght@300&display=swap" rel="stylesheet">

</head>

<body>

<style>

body {

font-family: 'Poppins', sans-serif;

margin: 20px; }

h1 {

color: #333;

font-weight: bold; }

#map {

height: 600px;

width: 700px;

margin-top: 20px;

border-radius: 20px;

position: fixed;

box-shadow: 0 10px 16px 0 rgba(0, 0, 0, 0.2), 0 6px 20px 0 rgba(0, 0, 0, 0.19) !important; }

#coordinates,

#weather-info,

#location-name,

#restaurant-info {

margin-left: 30px;

font-size: 25px;

}

#coordinates::before {

font-size: 40px;

content: '📌 '; }

#weather-info::before {

font-size: 40px;

content: '🌦️ '; }

#location-name::before {

font-size: 40px;

content: '🗺️ '; }

#restaurant-info::before {

font-size: 40px;

content: '🍔 '; }

#coordinates,

#weather-info,

#location-name {

border-bottom: 1px solid #ccc;

padding-bottom: 10px; }

#weather-info {

margin-bottom: 20px; }

</style>

<div style="position: fixed; display: flex; ">

<h1>🌍SELECT ANY LOCATION TO GET ALL THE DETAILS</h1>

</div>

<div style="display: flex; padding-top: 75px;">

<div id="map"></div>

<div style="margin-left: 700px;">

<p id="coordinates"></p>

<p id="location-name"></p>

<p id="weather-info"></p>

<p id="restaurant-info"></p>

</div>

</div>

<script src="https://unpkg.com/leaflet/dist/leaflet.js"></script>

<script>

var map = L.map('map').setView([51.505, -0.09], 13);

L.tileLayer('https://{s}.tile.openstreetmap.org/{z}/{x}/{y}.png', {

attribution: '&copy; <a href="https://www.openstreetmap.org/copyright">OpenStreetMap</a> contributors'

}).addTo(map);

map.on('click', function (e) {

var coordinates = e.latlng;

document.getElementById('coordinates').innerHTML = 'Coordinates: ' + coordinates.lat + ', ' + coordinates.lng;

getLocationName(coordinates.lat, coordinates.lng);

getWeatherInfo(coordinates.lat, coordinates.lng);

getNearbyRestaurants(coordinates.lat, coordinates.lng);

});

function getNearbyRestaurants(latitude, longitude) {

var overpassUrl = `https://overpass-api.de/api/interpreter?data=[out:json];node(around:500,${latitude},${longitude})["amenity"="restaurant"];out;`;

fetch(overpassUrl)

.then(response => response.json())

.then(data => {

var nearbyRestaurants = data.elements.map(restaurant => restaurant.tags.name).join(', ');

document.getElementById('restaurant-info').innerHTML = 'Nearby Restaurants: ' + nearbyRestaurants;

})

.catch(error => console.error('Error:', error));

}

function getLocationName(latitude, longitude) {

var nominatimUrl = `https://nominatim.openstreetmap.org/reverse?lat=${latitude}&lon=${longitude}&format=json`;

fetch(nominatimUrl)

.then(response => response.json())

.then(data => {

var locationName = data.display\_name;

document.getElementById('location-name').innerHTML = 'Location: ' + locationName;

})

.catch(error => console.error('Error:', error));

}

function getWeatherInfo(latitude, longitude) {

var apiKey = '8dbd751ea53270dbdb075f054850d8ca';

var weatherUrl = `https://api.openweathermap.org/data/2.5/weather?lat=${latitude}&lon=${longitude}&units=metric&appid=${apiKey}`;

fetch(weatherUrl)

.then(response => response.json())

.then(data => {

var temperature = data.main.temp;

var description = data.weather[0].description;

var weatherInfo = `Temperature: ${temperature}°C<br>

Description: ${description}`;

document.getElementById('weather-info').innerHTML = weatherInfo;

})

.catch(error => console.error('Error:', error));

}

</script>

</body>

</html>

**OUTPUT:**



