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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);
})</script>
```



```
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"="resta
urant"];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:

Get Location Details

127.0.0.1:5500/try/final_Exp2.html

SELECT ANY LOCATION TO GET ALL THE DETAILS



📍 Coordinates: 51.53170485948599, -0.0846262931629416

🌐 Location: Cherbury Court, Cherbury Street, Saint John's Estate, Hoxton, London Borough of Hackney, London, Greater London, England, N1 6TE, United Kingdom

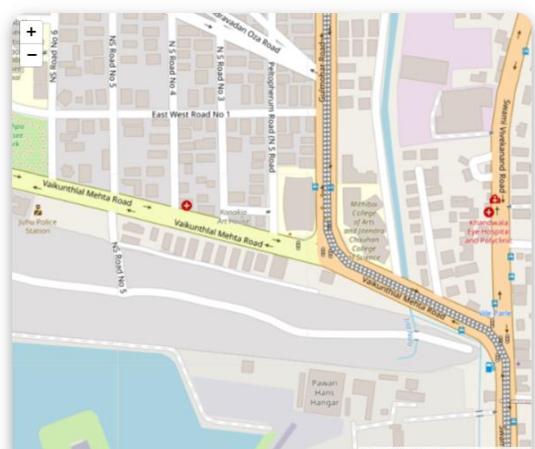
🌡️ Temperature: 11.34°C
Description: overcast clouds

🍔 Nearby Restaurants: Schnitzel Heaven, 8 Hoxton Square, Petit Pois, Open Kitchen, Rapsa, F. Cooke, Dhaanya, Fennec & Parsley, The Barrel Boulangerie, Sushi Box, Sodo Pizza, Crunch

Get Location Details

127.0.0.1:5500/try/final_Exp2.html

SELECT ANY LOCATION TO GET ALL THE DETAILS



📍 Coordinates: 19.102938337881874, 72.83743515142885

🌐 Location: Mithibai College of Arts and Jitendra Chauhan College of Science, Gulmohar Road (NS Road No 1), Kamala Nagar, K/W Ward, शौरी 3, Mumbai, Maharashtra, 400057, India

🌡️ Temperature: 28.99°C
Description: smoke

🍔 Nearby Restaurants: chaibucks