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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;
            }
        }
    </style>
```



```
#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"="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));
    }
}
```



```
        })
        .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

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

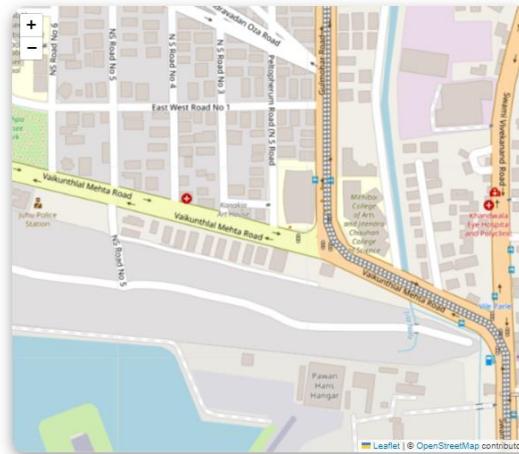
TEMPERATURE Temperature: 11.34°C
Description: overcast clouds

HAMBURGER 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

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

TEMPERATURE Temperature: 28.99°C
Description: smoke

HAMBURGER Nearby Restaurants: chaibucks