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Assignment: Weather App

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Problem Solving Activity 1

1. Program Statement: Real-World Object Dissection

- I want to create a Weather App that shows the current weather using APIs.

2. Algorithm

Step 1: Start the application and display the interface with input and button.

Step 2: User enters a city name and clicks the search button.

Step 3: Fetch the weather data from OpenWeatherMap API using the entered city.

Step 4: Wait for the API to return a response.

Step 5:

If response is valid:

- a) Display the city name, temperature, and condition.
- b) Check the condition:
 - If clear, show sunny background.
 - If clouds, show cloudy background.
 - If rain, show rainy background.
 - If snow, show snowy background.
 - Else, show default background.

Step 6:

If response is not valid:

- Show alert "City not found".

Step 7: End.

3. Pseudocode

START

DISPLAY heading "My Weather App"

DISPLAY input field and search button

ON click of Search button:

 GET city name from input

 CALL OpenWeatherMap API with city name

 WAIT for API response

 IF response is successful THEN

 EXTRACT city name, temperature, and weather condition

 DISPLAY city name, temperature, and condition on screen

 CONVERT condition to lowercase

 IF condition is 'clear' THEN

 SET sunny background image

 ELSE IF condition is 'clouds' THEN

 SET cloudy background image

 ELSE IF condition is 'rain' THEN

 SET rainy background image

 ELSE IF condition is 'snow' THEN

 SET snowy background image

 ELSE

 SET default background image

 ELSE

 SHOW alert "City not found"

END

4. Program Code

4.1:HTML Code

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

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

  <title>WeatherApp</title>

  <link rel="stylesheet" href="weather.css">

</head>

<body>

  <div class="head">My Weather App</div>

  <div class="a">

    <label for="input" class="hey">Search for weather report:</label><br><br>

    <input type="text" placeholder="Enter city name" class="hello" id="input">

    <button id="Search" type="submit"> </button>

    <h1 id="name"></h1>

    <h3 id="temp"></h3>

    <h3 id="desc"></h3>

  </div>

  <script src="weather.js"></script>

</body>

</html>
```

4.2 CSS

```
body {  
    background: url(https://cdn.pixabay.com/photo/2016/03/27/07/32/clouds-1282314_1280.jpg);  
    background-repeat: no-repeat;  
    background-attachment: fixed;  
    background-size: 100%;  
}  
  
.head {  
    background-color: powderblue;  
    color: black;  
    height: 80px;  
    display: flex;  
    align-items: center;  
    justify-content: center;  
    font-size: 45px;  
}  
  
.a {  
    background-color: powderblue;  
    padding: 40px;  
    margin: 150px 400px;  
    border: 8px solid rgb(104, 204, 240);  
    border-radius: 20px;  
    height: 300px;  
    width: 500px;  
}  
  
.a:hover {  
    background-color: rgb(10, 219, 247);  
    transform: scale(1.1);  
}  
  
.hey {  
    font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
```

```
font-size: 30px;
}
.hello {
  height: 30px;
  width: 340px;
}
.b {
  height: 35px;
}
```

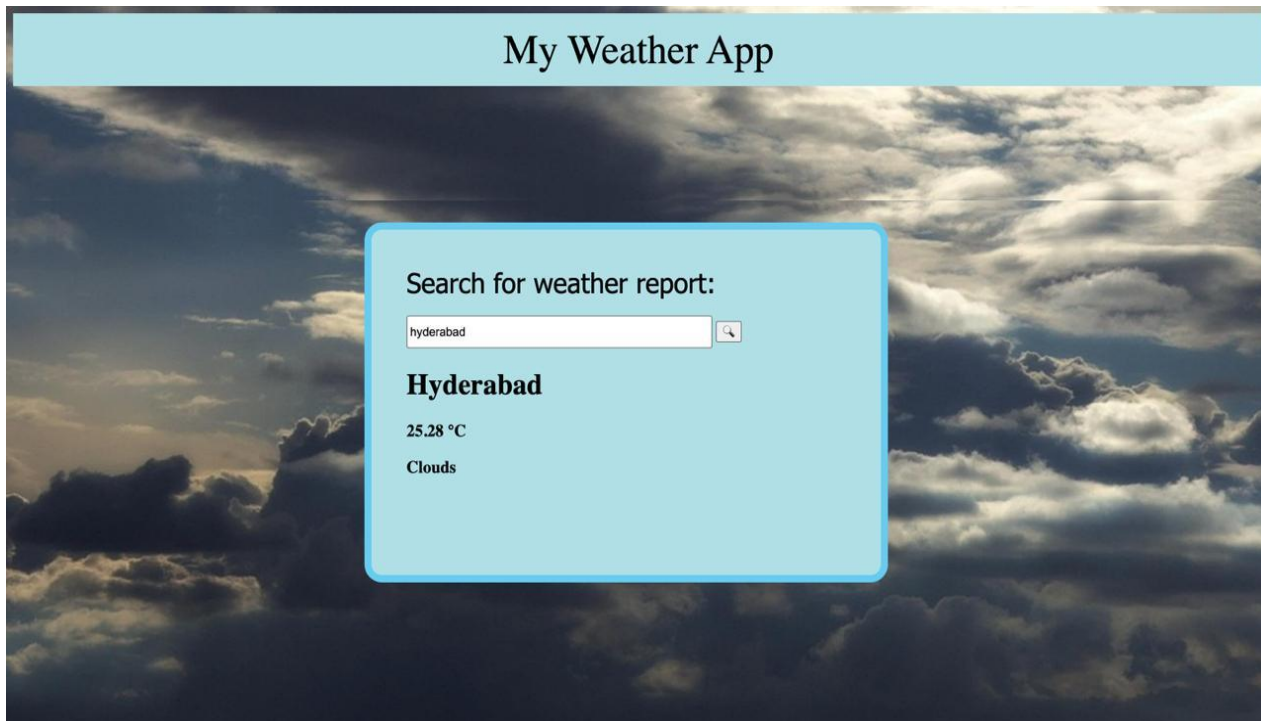
4.3 JavaScript

```
const getweather = async() => {
  const city = document.getElementById('input').value;
  const name = document.getElementById('name');
  const temp = document.getElementById('temp');
  const desc = document.getElementById('desc');
  try {
    const response = await
fetch('https://api.openweathermap.org/data/2.5/weather?q=${city}&units=metric&appid=eed41d8474d6f49e645f8159b68cdf49');
    const data = await response.json();
    if (response.ok) {
      name.innerText = data.name;
      temp.innerText = data.main.temp + " °C";
      desc.innerText = data.weather[0].main;
      Background(data.weather[0].main);
    } else {
      throw new Error("City not found");
    }
  } catch (error) {
```

```
    alert("City not found");
  }
};

document.getElementById('Search').addEventListener('click', getweather);
function Background(Condition) {
  let backgroundImage;
  const cond = Condition.toLowerCase();
  if (cond === 'clear') {
    backgroundImage = 'url("https://cdn.pixabay.com/photo/2012/06/08/06/19/clouds-49520_1280.jpg")';
  } else if (cond === 'clouds') {
    backgroundImage = 'url("https://cdn.pixabay.com/photo/2015/12/25/13/03/sky-1107579_1280.jpg")';
  } else if (cond === 'rain') {
    backgroundImage = 'url("https://cdn.pixabay.com/photo/2018/03/11/12/14/raindrops-3216607_1280.jpg")';
  } else if (cond === 'snow') {
    backgroundImage = 'url("https://cdn.pixabay.com/photo/2022/12/10/11/05/snow-7646952_1280.jpg")';
  } else {
    backgroundImage = 'url("https://cdn.pixabay.com/photo/2016/03/27/07/32/clouds-1282314_1280.jpg")';
  }
  document.body.style.backgroundImage = backgroundImage;
  document.body.style.backgroundSize = 'cover';
  document.body.style.backgroundRepeat = 'no-repeat';
  document.body.style.backgroundAttachment = 'fixed';
}
```

5. Result:



My Weather App

Search for weather report:

sikkim 

State of Sikkim

3.19 °C

Rain