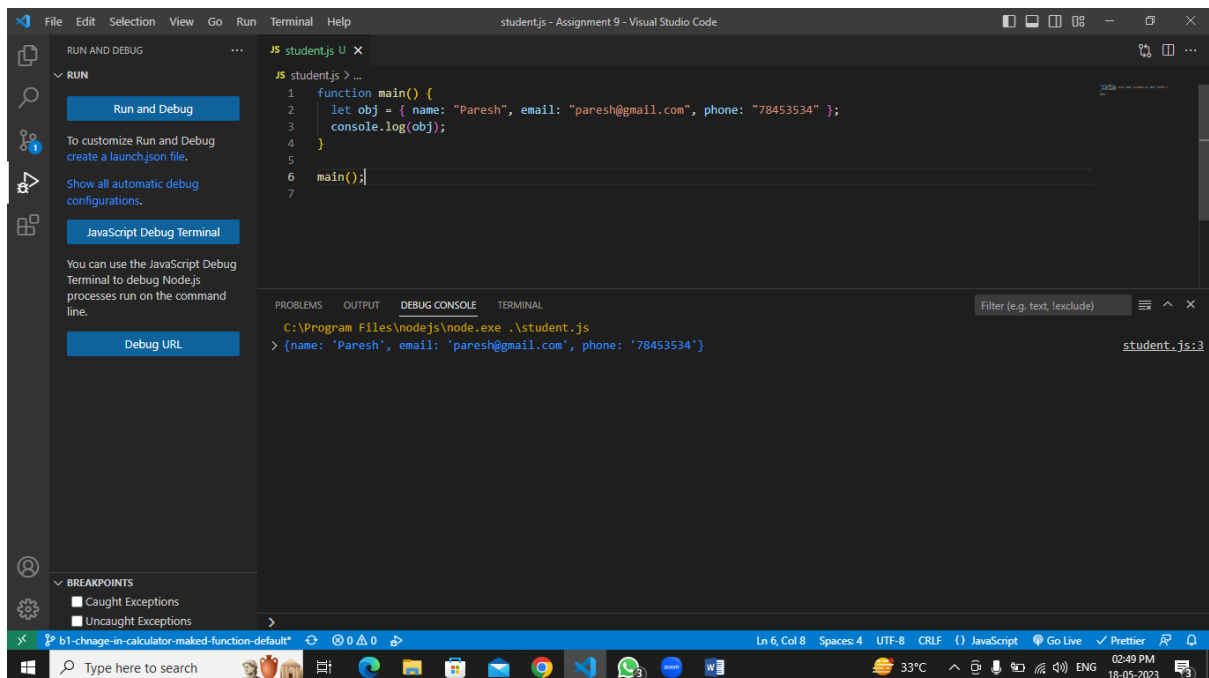


1. Create an Object literal with a student's details – Name & email and phone

Add members Course and Batch to the data and display

Remove the members Phone and Batch and display the data.

Convert this Object literal to JSON and display

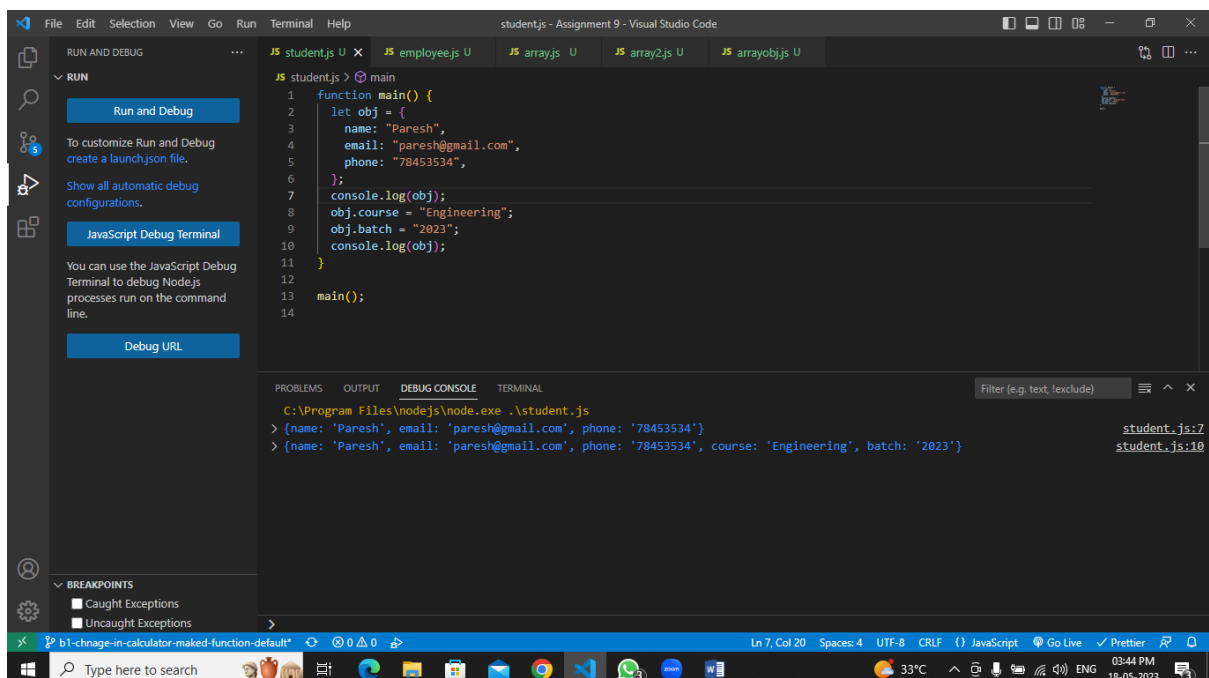


```
1 function main() {
2   let obj = { name: "Paresh", email: "paresh@gmail.com", phone: "78453534" };
3   console.log(obj);
4 }
5
6 main();
7
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

C:\Program Files\nodejs\node.exe .\student.js

> {name: 'Paresh', email: 'paresh@gmail.com', phone: '78453534'} student.js:3



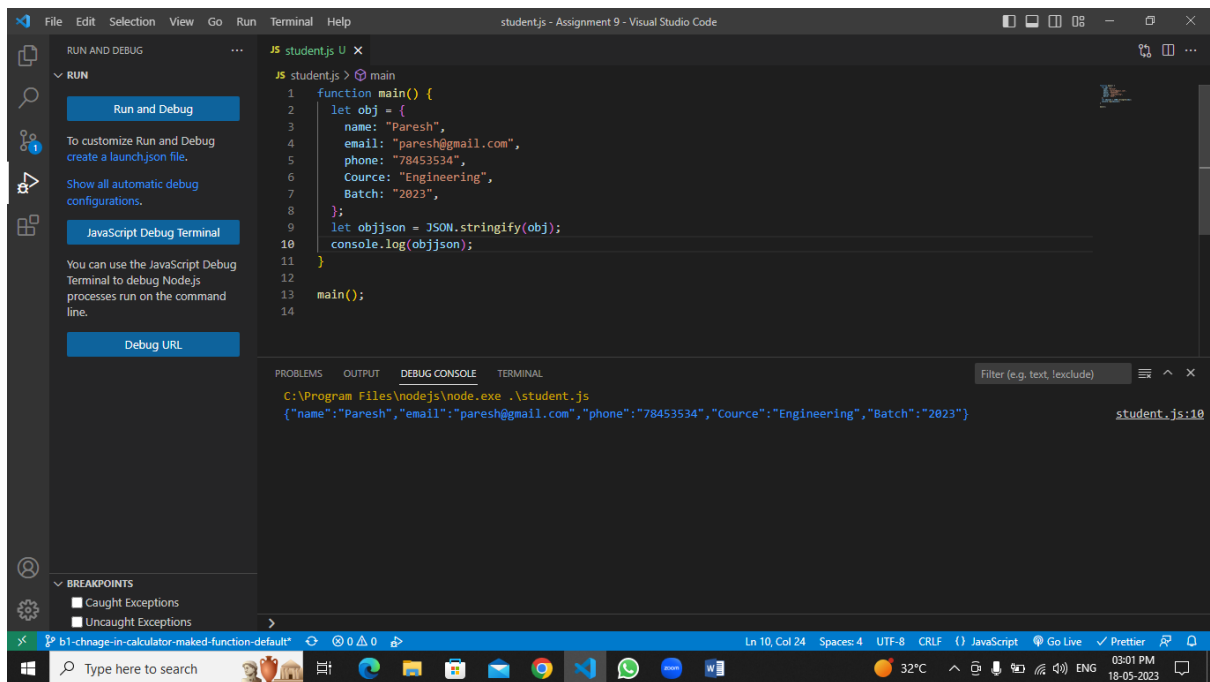
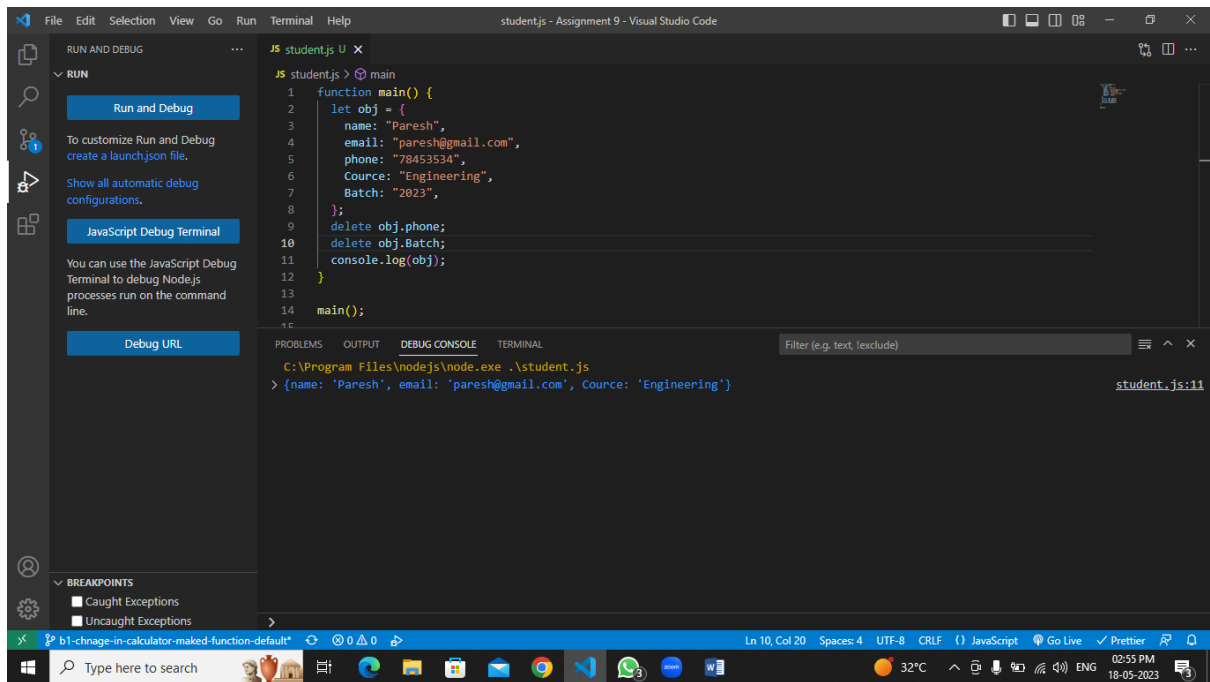
```
1 function main() {
2   let obj = {
3     name: "Paresh",
4     email: "paresh@gmail.com",
5     phone: "78453534",
6   };
7   console.log(obj);
8   obj.course = "Engineering";
9   obj.batch = "2023";
10  console.log(obj);
11 }
12
13 main();
14
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

C:\Program Files\nodejs\node.exe .\student.js

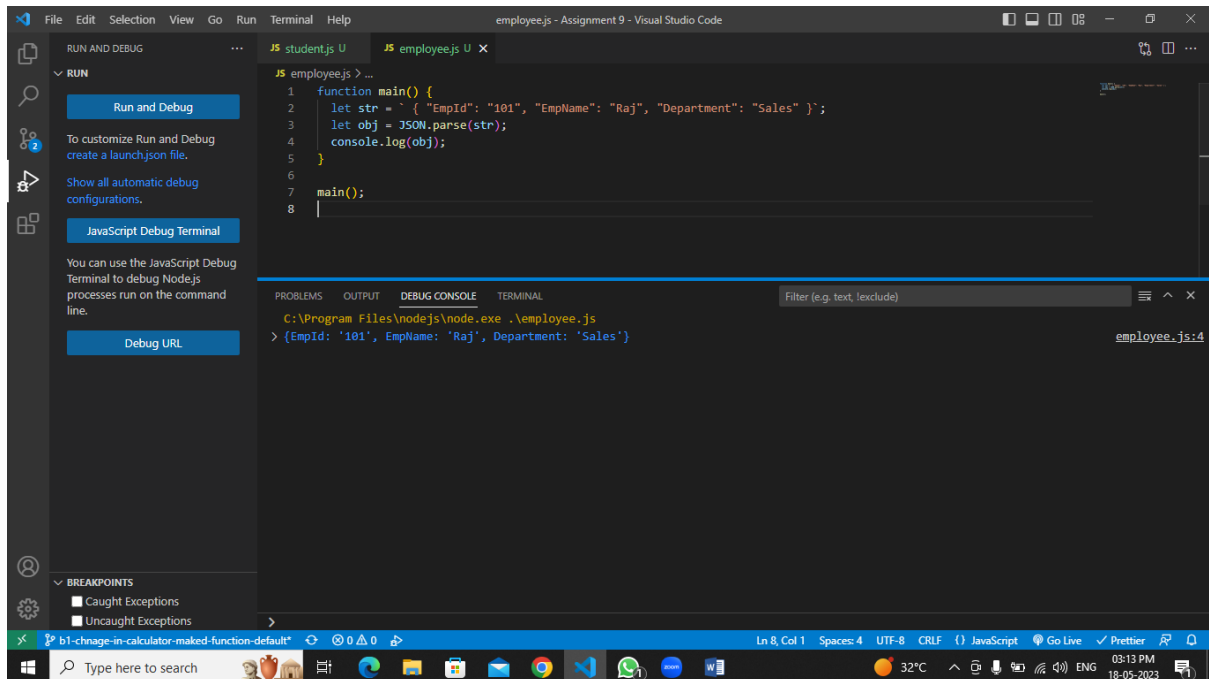
> {name: 'Paresh', email: 'paresh@gmail.com', phone: '78453534'} student.js:7

> {name: 'Paresh', email: 'paresh@gmail.com', phone: '78453534', course: 'Engineering', batch: '2023'} student.js:10



2. Create a variable with JSON data of an employees data like employ Id, emp name and department.

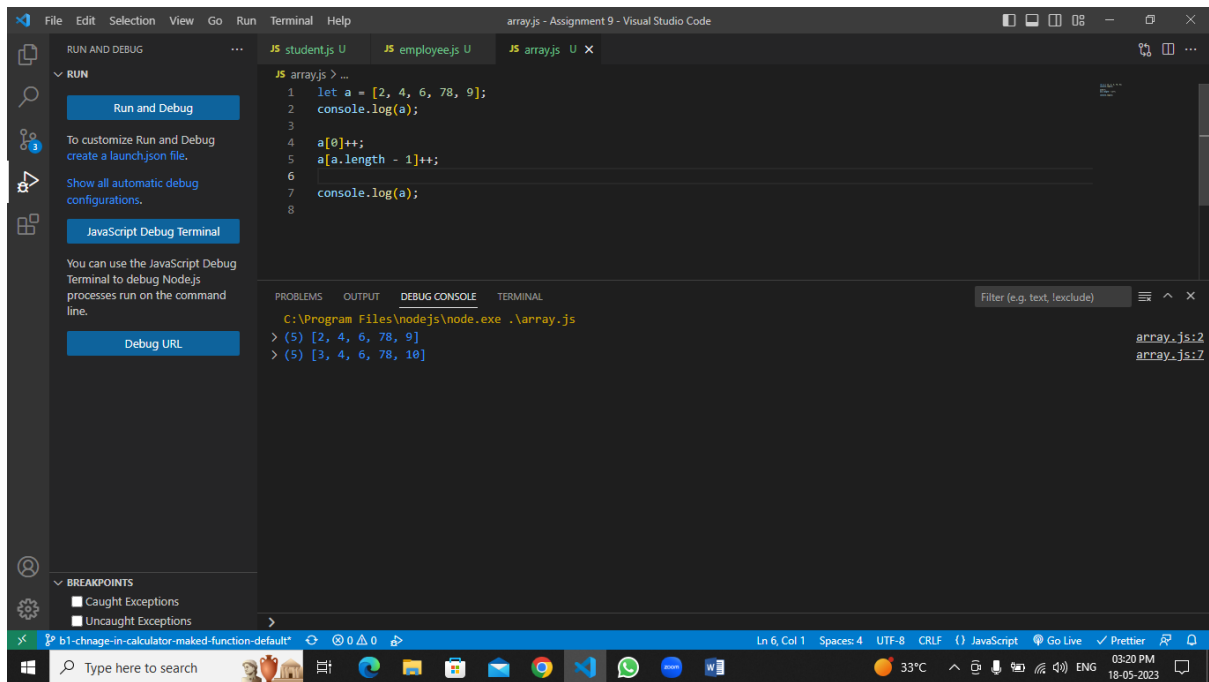
Convert this json data to an object literal and display.



3. Create an array of numbers and display the elements.

Increment the first and last elements of the array and then display all the elements

```
let a = [2, 4, 6, 78, 9];  
console.log(a);  
  
a[0]++;  
a[a.length - 1]++;  
  
console.log(a);
```



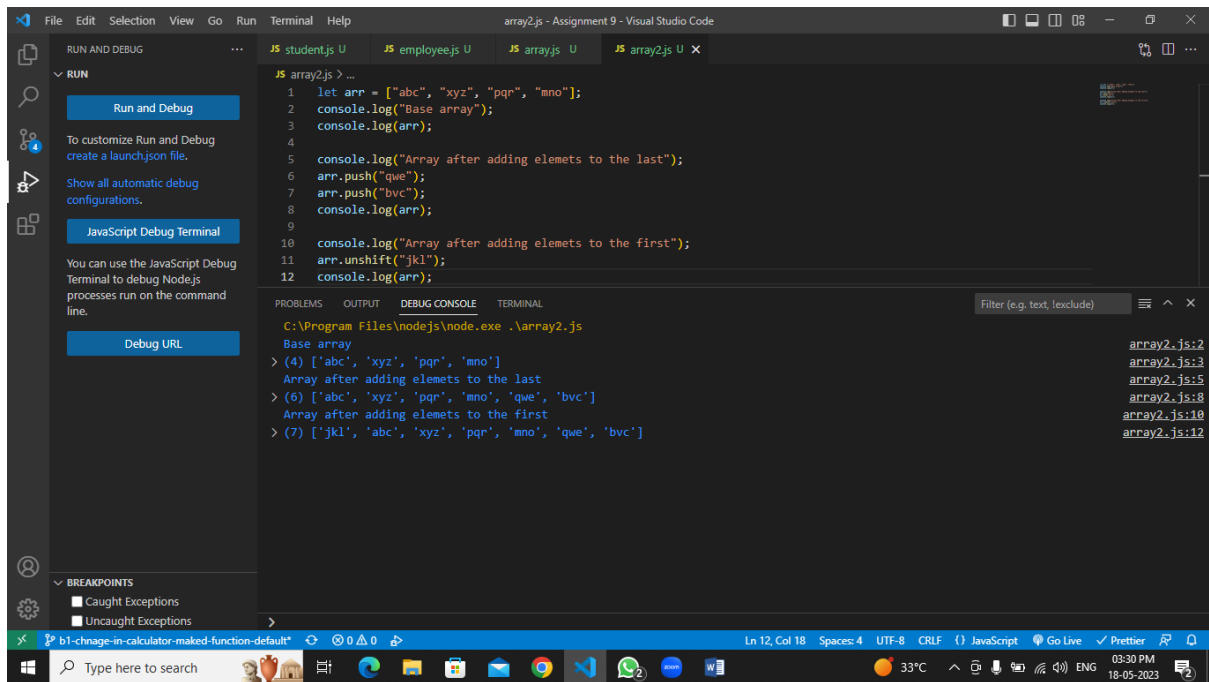
4. Create an array of strings. Add 2 elements to the end of the array and display the array

Add 1 element to the beginning of the array and display the array

```
let arr = ["abc", "xyz", "pqr", "mno"];
console.log("Base array");
console.log(arr);

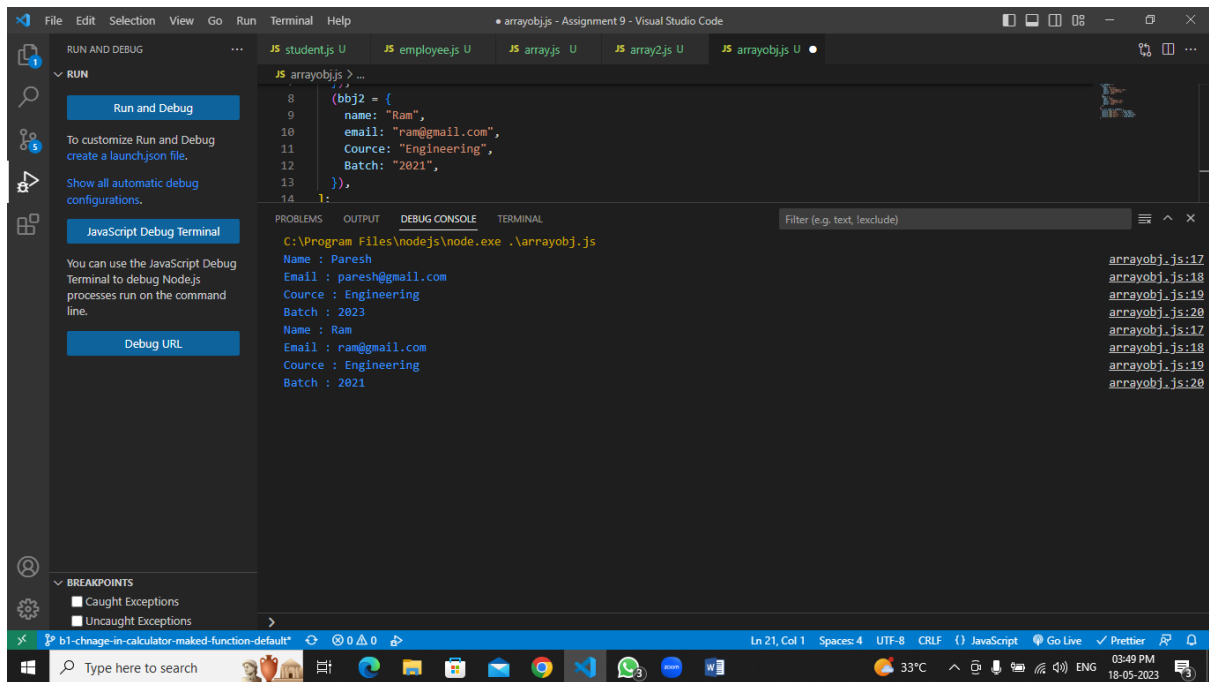
console.log("Array after adding elements to the last");
arr.push("qwe");
arr.push("bvc");
console.log(arr);

console.log("Array after adding elements to the first");
arr.unshift("jkl");
console.log(arr);
```



5. Create an array of student object literal and iterate displaying of elements.

```
let student = [
  (obj1 = {
    name: "Paresh",
    email: "paresh@gmail.com",
    Course: "Engineering",
    Batch: "2023",
  }),
  (obj2 = {
    name: "Ram",
    email: "ram@gmail.com",
    Course: "Engineering",
    Batch: "2021",
  }),
];
for (let item of student) {
  console.log("Name : " + item.name);
  console.log("Email : " + item.email);
  console.log("Course : " + item.Course);
  console.log("Batch : " + item.Batch);
}
```



6. Make an AJAX request to the weather api

`https://api.openweathermap.org/data/2.5/weather?appid=${appid}&units=metric&q=${city}`

and display the output with

i) fetch command

Weather.html

```

<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <script src="./weather.js"></script>
    <link
      href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha3/dist/css/bootstrap.min.css"
      rel="stylesheet"
      integrity="sha384-KK94CHFLLe+nY2dmCWGMq91rCGa5gtU4mk92HdvYe+M/SXH301p5ILy+dN9+nJOZ"
      crossorigin="anonymous"
    />
    <title>Weather</title>
  </head>
  <body>
    <input

```

```

        type="text"
        class="form-control m-4"
        list="datalistOptions"
        placeholder=" Enter City "
        id="city"
    />
    <datalist id="datalistOptions">
        <option value="Mumbai"></option>
        <option value="Pune"></option>
        <option value="Bangalore"></option>
        <option value="Hyderabad"></option>
        <option value="Nagpur"></option>
    </datalist>

    <input
        type="button"
        class="btn btn-outline-dark d-grid gap-2 col-6 mx-auto mb-3"
        value="Get Weather"
        onclick="GEtweather()"
    />
    <div id="display">
        <div
            class="card text-bg-info mb-5 w"
            style="width: 500px; margin-left: 450px"
        >
            <div class="card-header"><h2>City</h2></div>
            <div class="card-header"><h4>Current Temprature</h4></div>
            <div class="card-body"><h5>LON : and LAT :</h5></div>
            <div class="card-body"><h5>MIN-Temp: and MAX-Temp:</h5></div>
        </div>
    </div>
</body>
</html>

```

Weather.js

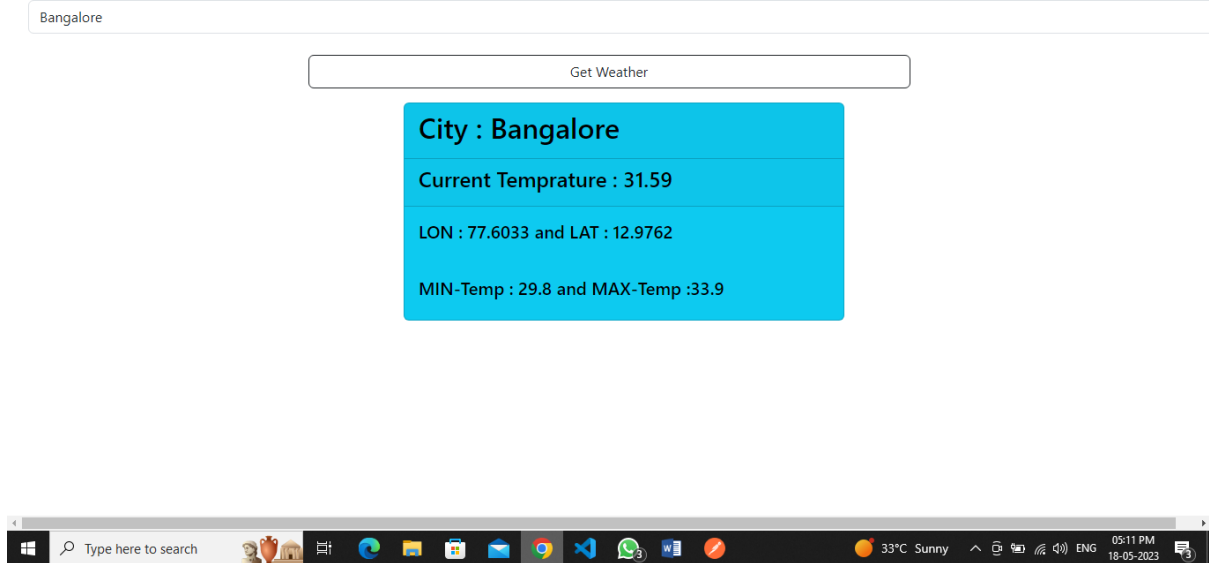
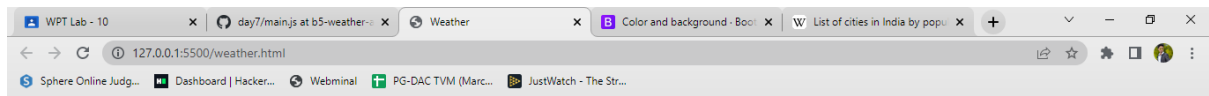
```

async function GEtweather() {
    let apikey = "7023923dd26a725da995c75b65864de5";
    let city = document.querySelector("#city");
    let cityTag = city.value;

    let url =
`https://api.openweathermap.org/data/2.5/weather?appid=${apikey}&units=metric&q=${cityTag}`;

    let response = await fetch(url);
    let data = await response.json();
}

```

ii) XMLHttpRequest

WeatherXML.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <script src="./weaheXML.js"></script>
    <link
      href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-
alpha3/dist/css/bootstrap.min.css"
      rel="stylesheet"
      integrity="sha384-
KK94CHFLLe+nY2dmCWGMq91rCGa5gtU4mk92HdvYe+M/SXH301p5ILy+dN9+nJOZ"
      crossorigin="anonymous"
    />
    <title>Weather</title>
  </head>
  <body>
    <input
      type="text"
      class="form-control m-4"
      list="datalistOptions"
      placeholder=" Enter City "
      id="city"
    />
    <datalist id="datalistOptions">
      <option value="Mumbai"></option>
```

```

        <option value="Pune"></option>
        <option value="Bangalore"></option>
        <option value="Hyderabad"></option>
        <option value="Nagpur"></option>
    </datalist>

    <input
        type="button"
        class="btn btn-outline-dark d-grid gap-2 col-6 mx-auto mb-3"
        value="Get Weather"
        onclick="GEtweather()"
    />
    <div id="display">
        <div
            class="card text-bg-info mb-5 w"
            style="width: 500px; margin-left: 450px"
        >
            <div class="card-header"><h2>City</h2></div>
            <div class="card-header"><h4>Current Temprature</h4></div>
            <div class="card-body"><h5>LON : and LAT :</h5></div>
            <div class="card-body"><h5>MIN-Temp: and MAX-Temp:</h5></div>
        </div>
    </div>
</body>
</html>

```

WeatherXML.js

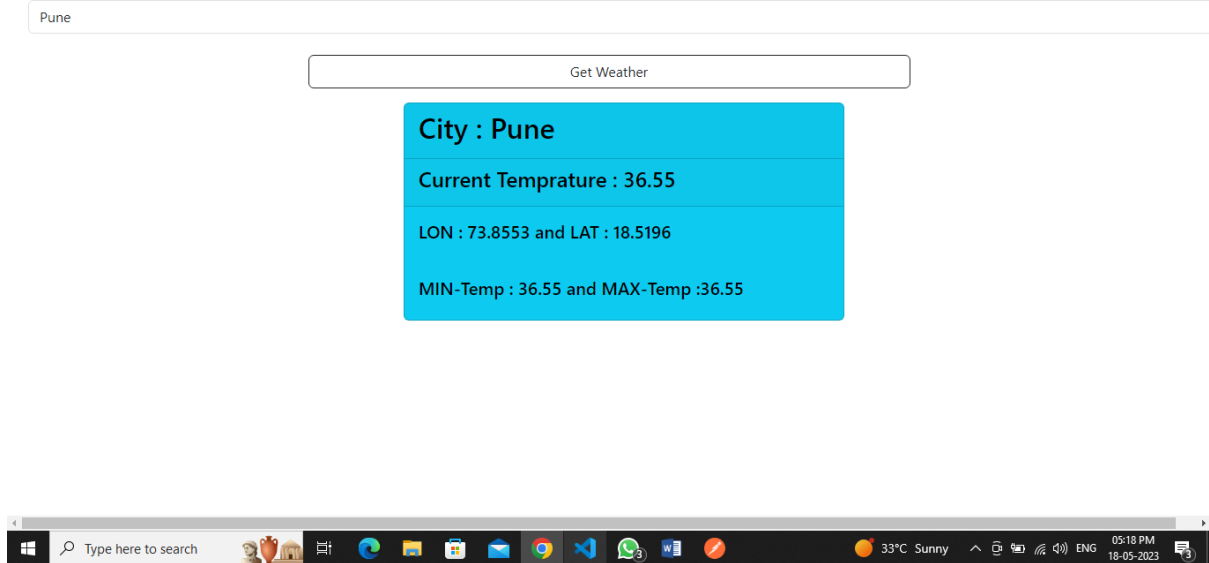
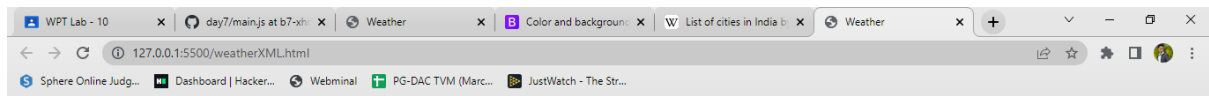
```

<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="UTF-8" />
        <meta http-equiv="X-UA-Compatible" content="IE=edge" />
        <meta name="viewport" content="width=device-width, initial-scale=1.0" />
        <script src="./weaheerXML.js"></script>
        <link
            href="https://cdn.jsdelivrivr.net/npm/bootstrap@5.3.0-
alpha3/dist/css/bootstrap.min.css"
            rel="stylesheet"
            integrity="sha384-
KK94CHFLLe+nY2dmCWGMq91rCGa5gtU4mk92HdvYe+M/SXH301p5ILy+dN9+nJOZ"
            crossorigin="anonymous"
        />
        <title>Weather</title>
    </head>
    <body>
        <input

```

```
        type="text"
        class="form-control m-4"
        list="datalistOptions"
        placeholder=" Enter City "
        id="city"
    />
    <datalist id="datalistOptions">
        <option value="Mumbai"></option>
        <option value="Pune"></option>
        <option value="Bangalore"></option>
        <option value="Hyderabad"></option>
        <option value="Nagpur"></option>
    </datalist>

    <input
        type="button"
        class="btn btn-outline-dark d-grid gap-2 col-6 mx-auto mb-3"
        value="Get Weather"
        onclick="GEtweather()"
    />
    <div id="display">
        <div
            class="card text-bg-info mb-5 w"
            style="width: 500px; margin-left: 450px"
        >
            <div class="card-header"><h2>City</h2></div>
            <div class="card-header"><h4>Current Temprature</h4></div>
            <div class="card-body"><h5>LON : and LAT :</h5></div>
            <div class="card-body"><h5>MIN-Temp: and MAX-Temp:</h5></div>
        </div>
    </div>
</body>
</html>
```



iii) jQuery and AJAX

WeatherJquery.HTML

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <script src="./weatherJquery.js"></script>
    <script src="http://code.jquery.com/jquery-1.11.3.min.js"></script>
    <link
      href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-
alpha3/dist/css/bootstrap.min.css"
      rel="stylesheet"
      integrity="sha384-
KK94CHFLLe+nY2dmCWGMq91rCGa5gtU4mk92HdvYe+M/SXH301p5ILy+dN9+nJOZ"
      crossorigin="anonymous"
    />
    <title>Weather</title>
  </head>
  <body>
    <input
      type="text"
      class="form-control m-4"
      list="datalistOptions"
      placeholder=" Enter City "
      id="city"
    />
    <datalist id="datalistOptions">
```

```

    <option value="Mumbai"></option>
    <option value="Pune"></option>
    <option value="Bangalore"></option>
    <option value="Hyderabad"></option>
    <option value="Nagpur"></option>
  </datalist>

  <input
    type="button"
    class="btn btn-outline-dark d-grid gap-2 col-6 mx-auto mb-3"
    value="Get Weather"
    onclick="GEtweather()"
  />
  <div id="display">
    <div
      class="card text-bg-info mb-5 w"
      style="width: 500px; margin-left: 450px"
    >
      <div class="card-header"><h2>City</h2></div>
      <div class="card-header"><h4>Current Temprature</h4></div>
      <div class="card-body"><h5>LON : and LAT :</h5></div>
      <div class="card-body"><h5>MIN-Temp: and MAX-Temp:</h5></div>
    </div>
  </div>
</body>
</html>

```

WeatherJquery.js

```

async function GEtweather() {
  let apikey = "7023923dd26a725da995c75b65864de5";
  let city = document.querySelector("#city");
  let cityTag = city.value;

  let url =
`https://api.openweathermap.org/data/2.5/weather?appid=${apikey}&units=metric&q=${cityTag}`;

  let jqXHR = jQuery.get(url);

  jqXHR.done((data) => {
    let lon = data.coord.lon;
    let lat = data.coord.lat;

    let mintemp = data.main.temp_min;
    let maxtemp = data.main.temp_max;

```

```

let currentTemp = data.main.temp;

let dis = document.querySelector("#display");
let newval = `<div class="card text-bg-info mb-3" style="width: 500px
;margin-left: 450px">
  <div class="card-header">
    <h2>City : ${cityTag}</h2>
  </div>
  <div class="card-header">
    <h4>Current Tempature : ${currentTemp}</h4>
  </div>
  <div class="card-body">
    <h5>
      LON : ${lon} and LAT : ${lat}
    </h5>
  </div>
  <div class="card-body">
    <h5>
      MIN-Temp : ${mintemp} and MAX-Temp :${maxtemp}
    </h5>
  </div>
</div>
`;

dis.innerHTML = newval;
});
}

```

