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3rd Year Section B (B1)

Practical 10 (JavaScript)

1.task

```
ben chatbot > {} data.json > ...
1  {
2    { "id": 1, "name": "Alice", "marks": 85 },
3    { "id": 2, "name": "Bob", "marks": 92 },
4    { "id": 3, "name": "Charlie", "marks": 78 }
5  }

ben chatbot > {} index.html > ...
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4    <meta charset="UTF-8">
5    <title>JSON Handling with fetch and jquery</title>
6    <script src="https://code.jquery.com/jquery-3.7.1.min.js"></script>
7  </head>
8  <body>
9    <h2>Student Records (using Fetch and jquery AJAX)</h2>
10
11    <h3>Data from Fetch()</h3>
12    <table id="fetchTable" border="1" cellpadding="5"></table>
13
14    <h3>Data from $.getJSON()</h3>
15    <table id="jqueryTable" border="1" cellpadding="5"></table>
16
17    <script src="script.js"></script>
18  </body>
19  </html>

ben chatbot > {} script.js > ...
1  // ----- Fetch API Example -----
2  fetch('data.json')
3    .then(response => response.json())
4    .then(data => {
5      let table = document.getElementById('fetchTable');
6      table.innerHTML = "<tr><th>ID</th><th>Name</th><th>Marks</th></tr>";
7      data.forEach(student => {
8        table.innerHTML += "<tr>";
9        <td>${student.id}</td>
10       <td>${student.name}</td>
11       <td>${student.marks}</td>
12     </tr>";
13   });
14 });
15 .catch(error => console.error('Fetch Error:', error));
16
17 // ----- JQuery AJAX Example -----
18 $.getJSON('data.json', function(data) {
19   let table = $('#jqueryTable');
20   table.append("<tr><th>ID</th><th>Name</th><th>Marks</th></tr>");
21   $.each(data, function(index, student) {
22     table.append("<tr>");
23     <td>${student.id}</td>
24     <td>${student.name}</td>
25     <td>${student.marks}</td>
26   </tr>");
27 });
28 });
29 .fail(function() {
30   console.log("Error loading JSON data with JQuery.");
31 });
```

127.0.0.1:5500/ibm%20chatbot/index.html

Student Records (Using Fetch and jQuery AJAX)

Data from Fetch()

ID	Name	Marks
1	Alice	95
2	Bob	92
3	Charlie	78

Data from \$.getJSON()

ID	Name	Marks
1	Alice	95
2	Bob	92
3	Charlie	78

2 Add a new key "grade" (values: A, B, or C) for each student in the JSON file and display it in the table.

3 Highlight the rows where marks are greater than 90 by applying a background color.

4 Modify the `fetch()` function to include a simulated delay using `setTimeout()` to demonstrate asynchronous data loading.

```
1  [
2    { "id": 1, "name": "mukund", "marks": 95, "grade": "A" },
3    { "id": 2, "name": "rushii", "marks": 88, "grade": "B" },
4    { "id": 3, "name": "shivansh", "marks": 76, "grade": "C" },
5    { "id": 4, "name": "akash", "marks": 91, "grade": "A" },
6    { "id": 5, "name": "Karan", "marks": 67, "grade": "C" }
7  ]
```

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <meta charset="UTF-8">
5  <title>JSON Handling with Fetch and jQuery</title>
6  <script src="https://code.jquery.com/jquery-3.7.1.min.js"></script>
7  </head>
8  <body>
9  <h2>Student Records (Using Fetch and jQuery AJAX)</h2>
10
11 <h3>Data from Fetch()</h3>
12 <p><em>Loading data... please wait 2 seconds.</em></p>
13 <table id="fetchTable" border="1" cellpadding="5"></table>
14
15 <h3>Data from $.getJSON()</h3>
16 <table id="jqueryTable" border="1" cellpadding="5"></table>
17
18 <script src="script.js"></script>
19 </body>
20 </html>
```

```

1 // ===== Fetch API Example =====
2 fetch('/data.json')
3   .then(response => response.json())
4   .then(data => {
5     // Simulate delay (2 seconds)
6     setTimeout(() => {
7       let table = document.getElementById('fetchTable');
8       table.innerHTML = `<tr><th>ID</th><th>Name</th><th>Marks</th><th>Grade</th></tr>`;
9
10      data.forEach(student => {
11        let row = document.createElement('tr');
12        row.innerHTML = `
13          <td>${student.id}</td>
14          <td>${student.name}</td>
15          <td>${student.marks}</td>
16          <td>${student.grade}</td>
17        `;
18        // Highlight students with marks > 80
19        if (student.marks > 80) {
20          row.style.backgroundColor = '#E2F9C2'; // light green
21        }
22        table.appendChild(row);
23      });
24    }, 2000); // 2-second delay
25  })
26  .catch(error => console.error('Fetch error:', error));
27
28 // ===== jQuery AJAX Example =====
29 $.getJSON('/data.json', function(data) {
30   let table = $('#jqueryTable');
31   table.append('<tr><th>ID</th><th>Name</th><th>Marks</th><th>Grade</th></tr>');
32
33   $.each(data, function(index, student) {
34     let row = '<tr>';
35     row += `
36       <td>${student.id}</td>
37       <td>${student.name}</td>
38       <td>${student.marks}</td>
39       <td>${student.grade}</td>
40     `;
41     row += '</tr>';
42     // Highlight students with marks > 80
43     if (student.marks > 80) {
44       row.css('background-color', '#E2F9C2');
45     }
46     table.append(row);
47   });
48 }).fail(function() {
49   console.log('Error loading JSON data with jQuery');
50 });
51

```

Student Records (Using Fetch and jQuery AJAX)

Data from Fetch()

Loading data... please wait 2 seconds.

ID	Name	Marks	Grade
1	mukulund	95	A
2	rushi	88	B
3	shivansh	76	C
4	adish	91	A
5	Karan	67	C

Data from \$.getJSON()

ID	Name	Marks	Grade
1	mukulund	95	A
2	rushi	88	B
3	shivansh	76	C
4	adish	91	A
5	Karan	67	C