

1. TITLE OF THE LAB EXPERIMENT

Implementing AJAX and JSON in Web Development

2. OBJECTIVES

- To gather knowledge of JSON.
- Using JSON to send, store, and receive data from the server.
- With the help of Ajax XMLHttpRequest receiving data from the server on the fly without a page refresh.
- load new JSON data from the server using AJAX technology on-the-fly

3. PROCEDURE

1. **Fetch the data:** Use fetch to get the JSON file.
2. **Limit to 12:** Use slice (0, 12) on the fetched JSON data to select the first 12 records.
3. **Display in table:** Loop through these 12 records and create table rows dynamically.

4. IMPLEMENTATION

```
<script>
  document.getElementById('fetchButton').addEventListener('click', async () => {
    const url = 'https://raw.githubusercontent.com/hitch17/sample-
data/master/presidents.json';
    try {
      const response = await fetch(url);
      if (!response.ok) throw new Error('Failed to fetch data');

      const presidents = await response.json();
      const limitedPresidents = presidents.slice(0, 12);
      const tableBody = document.querySelector('#presidentsTable tbody');
      tableBody.innerHTML = "";

      limitedPresidents.forEach((president, index) => {
        const row = document.createElement('tr');
        row.innerHTML = `
          <td>${index + 1}</td>
          <td>${president.president}</td>
          <td>${president.birth_year}</td>
          <td>${president.death_year || 'N/A'}</td>
          <td>${president.took_office}</td>
          <td>${president.left_office || 'N/A'}</td>
          <td>${president.party}</td>
        `
        tableBody.appendChild(row);
      });
    } catch (error) {
      console.error(error);
    }
  });
</script>
```

```

    `;
    tableBody.appendChild(row);
  });
} catch (error) {
  console.error('Error:', error.message);
}
});
</script>

```

5. TEST RESULT / OUTPUT

Get Details of First 12 American Presidents

No	Name	Birth	Death	Took Office	Left Office	Party
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Fig 01: In initial interface

Get Details of First 12 American Presidents

No	Name	Birth	Death	Took Office	Left Office	Party
1	George Washington	1732	1799	1789-04-30	1797-03-04	No Party
2	John Adams	1735	1826	1797-03-04	1801-03-04	Federalist
3	Thomas Jefferson	1743	1826	1801-03-04	1809-03-04	Democratic-Republican
4	James Madison	1751	1836	1809-03-04	1817-03-04	Democratic-Republican
5	James Monroe	1758	1831	1817-03-04	1825-03-04	Democratic-Republican
6	John Quincy Adams	1767	1848	1825-03-04	1829-03-04	Democratic-Republican
7	Andrew Jackson	1767	1845	1829-03-04	1837-03-04	Democratic
8	Martin Van Buren	1782	1862	1837-03-04	1841-03-04	Democratic
9	William Henry Harrison	1773	1841	1841-03-04	1841-04-04	Whig
10	John Tyler	1790	1862	1841-04-04	1845-03-04	Whig
11	James K. Polk	1795	1849	1845-03-04	1849-03-04	Democratic
12	Zachary Taylor	1784	1850	1849-03-04	1850-07-09	Whig

Fig 02: With fetch data

6. ANALYSIS AND DISCUSSION

- **Fetch Data:** Use the `fetch()` function to retrieve the JSON from the given URL.
- **Limit Data:** Use `slice(0, 12)` to extract the first 12 items from the dataset.
- **Display Data:** Loop through the 12 items, create table rows dynamically, and insert them into the HTML table.