

AJAX AND XML

AIM :

To create an XML file containing news articles, each with a title, author, publication date, and summary. Use AJAX to fetch and display the articles, and allow users to filter the news articles by date or author.

PROCEDURE:

1. Initialize the Web Page

- Load the index.html file in the browser.
- Include styles.css for styling.
- Link script.js for functionality.

2. Load News Articles

- When the page loads, loadNews() fetches the news.xml file.
- The XML file contains structured news data.

3. Display News Articles

- Parse the XML and extract title, author, date, and summary.
- Display each article inside newsContainer.

4. Filter News Articles

- User enters author name or selects a date.
- filterNews() checks for matching articles and hides non-matching ones.

5. Reset Filters

- resetFilters() clears the input fields.
- Reloads all articles by calling loadNews().

6. Toggle Dark Mode

- Clicking darkModeToggle adds/removes the .dark-mode class.

- Changes background and text color.

CODE :

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>News Feed</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <button id="darkModeToggle">🌙 Dark Mode</button>
  <h1>📰 Latest News</h1>
  <div class="filters">
    <label>Filter by Author:</label>
    <input type="text" id="authorFilter" placeholder="Enter author name">
    <label>Filter by Date:</label>
    <input type="date" id="dateFilter">
    <button onclick="filterNews()">Filter</button>
    <button onclick="resetFilters()">Reset</button>
    <button onclick="loadNews()">⟳ Refresh News</button>
  </div>

  <div id="newsContainer"></div>
  <script src="script.js"></script>
</body>
```

```
</html>
```

news.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<news>
    <article>
        <title>New AI Breakthrough</title>
        <author>John Doe</author>
        <date>2025-03-21</date>
        <summary>A new AI model has been developed that can learn 10x faster than before.</summary>
    </article>
    <article>
        <title>Economic Boom in 2025</title>
        <author>Jane Smith</author>
        <date>2025-03-20</date>
        <summary>Stock markets are soaring as global economies recover.</summary>
    </article>
    <article>
        <title>Football World Cup Finals</title>
        <author>Mike Johnson</author>
        <date>2025-03-19</date>
        <summary>The championship game was one of the best in history.</summary>
    </article>
    <article>
        <title>SpaceX's New Mission</title>
        <author>Elon Musk</author>
        <date>2025-03-18</date>
        <summary>SpaceX plans to send humans to Mars by 2030.</summary>
    </article>
</news>
```

```

</article>
</news>

script.js

document.addEventListener("DOMContentLoaded", function () {
    loadNews();
    document.getElementById("darkModeToggle").addEventListener("click", toggleDarkMode);
});

function loadNews() {
    let xhr = new XMLHttpRequest();
    xhr.open("GET", "news.xml", true);
    xhr.onreadystatechange = function () {
        if (xhr.readyState == 4 && xhr.status == 200) {
            displayNews(xhr.responseXML);
        }
    };
    xhr.send();
}

function displayNews(xml) {
    let articles = xml.getElementsByTagName("article");
    let container = document.getElementById("newsContainer");
    container.innerHTML = "";
    for (let i = 0; i < articles.length; i++) {
        let title = articles[i].getElementsByTagName("title")[0].textContent;
        let author = articles[i].getElementsByTagName("author")[0].textContent;
        let date = articles[i].getElementsByTagName("date")[0].textContent;
        let summary = articles[i].getElementsByTagName("summary")[0].textContent;
        let articleHTML = `


```

```

<div class="article">
    <h2>${title}</h2>
    <p><strong>Author:</strong> ${author}</p>
    <p><strong>Date:</strong> ${date}</p>
    <p>${summary}</p>
</div>
';
container.innerHTML += articleHTML;
}

function filterNews() {
    let authorFilter = document.getElementById("authorFilter").value.toLowerCase();
    let dateFilter = document.getElementById("dateFilter").value;
    let articles = document.querySelectorAll(".article");
    articles.forEach(article => {
        let author = article.querySelector("p:nth-child(2)").textContent.toLowerCase();
        let date = article.querySelector("p:nth-child(3)").textContent;

        if ((authorFilter && !author.includes(authorFilter)) || (dateFilter && date !== dateFilter)) {
            article.style.display = "none";
        } else {
            article.style.display = "block";
        }
    });
}

function resetFilters() {
    document.getElementById("authorFilter").value = "";
}

```

```
document.getElementById("dateFilter").value = "";
loadNews();
}

function toggleDarkMode() {
    document.body.classList.toggle("dark-mode");
}
```

style.css

```
body {
    font-family: Arial, sans-serif;
    text-align: center;
    background-color: #f4f4f4;
    color: #333;
}
```

```
h1 {
    margin-top: 20px;
}
```

```
.filters {
    margin: 20px;
}
```

```
.filters input {
    padding: 8px;
    margin: 5px;
}
```

```
.filters button {
    padding: 8px 12px;
    background-color: blue;
    color: white;
    border: none;
```

```
cursor: pointer;  
}  
.filters button:hover {  
    background-color: darkblue;  
}  
#newsContainer {  
    max-width: 800px;  
    margin: 0 auto;  
}  
.article {  

```

```
padding: 8px;  
border: none;  
cursor: pointer;  
}
```

OUTPUT :

127.0.0.1:5500/index.html

Dark Mode

Latest News

Filter by Author: Enter author name Filter by Date: dd-mm-yyyy Filter Reset Refresh News

New AI Breakthrough
Author: John Doe
Date: 2025-03-21
A new AI model has been developed that can learn 10x faster than before.

Economic Boom in 2025
Author: Jane Smith
Date: 2025-03-20
Stock markets are soaring as global economies recover.

Football World Cup Finals
Author: Mike Johnson
Date: 2025-03-19
The championship game was one of the best in history.

127.0.0.1:5500/index.html

Dark Mode

Latest News

Filter by Author: jane smith Filter by Date: dd-mm-yyyy Filter Reset Refresh News

Economic Boom in 2025
Author: Jane Smith
Date: 2025-03-20
Stock markets are soaring as global economies recover.

RUBRICES	MARKS
OBSERVATION(20)	

RECORD (5)	
TOTAL (25)	
INITIAL	

RESULT :

Thus, an XML file containing news articles, each with a title, author, publication date, and summary. Use AJAX to fetch and display the articles, and allow users to filter the news articles by date or author are created successfully.