

[BACKEND - server.js]

```
-----  
  
// Importing necessary modules  
const express = require('express');  
const cors = require('cors');  
const newsRoutes = require('./routes/newsRoutes');  
const app = express();  
const PORT = process.env.PORT || 5000;  
  
// Middleware to handle CORS and JSON parsing  
app.use(cors());  
app.use(express.json());  
  
// Routes  
app.use('/api/news', newsRoutes);  
  
// Root endpoint  
app.get('/', (req, res) => {  
    res.send('Welcome to News Orbit API!');  
});  
  
// Global error handler  
app.use((err, req, res, next) => {  
    console.error(err.stack);  
    res.status(500).send('Something broke!');  
});  
  
// Start the server
```

```
app.listen(PORT, () => {  
    console.log(`Server is running on  
http://localhost:${PORT}`);  
});
```

```
[BACKEND - routes/newsRoutes.js]
```

```
-----
```

```
const express = require('express');  
const { getAllNews, searchNews } =  
require('../controllers/newsController');  
const router = express.Router();
```

```
// Route to get all news  
router.get('/', getAllNews);
```

```
// Route to search news  
router.get('/search', searchNews);
```

```
module.exports = router;
```

```
[BACKEND - controllers/newsController.js]
```

```
-----
```

```
const newsData = require('../data/newsData');
```

```
// Controller to get all news
```

```
const getAllNews = (req, res) => {  
    try {  
        res.status(200).json(newsData);  
    } catch (error) {  
        res.status(500).json({ message: "Failed to
```

```

fetch news", error: error.message }));
    }
};

// Controller to search news
const searchNews = (req, res) => {
    const keyword = req.query.q?.toLowerCase() || '';
    const filteredNews = newsData.filter(article =>
        article.title.toLowerCase().includes(keyword)
        ||
        article.description.toLowerCase().includes(keyword)
    );
    res.status(200).json(filteredNews);
};

module.exports = { getAllNews, searchNews };

[BACKEND - data/newsData.js]
-----

// Array of 30+ sample news articles
const news = [...Array(30).keys()].map(i => ({
    id: i + 1,
    title: `Breaking News Headline #${i + 1}`,
    description: `Detailed description for breaking
news headline number ${i + 1}. Stay informed with News
Orbit.`,
    url: "https://example.com",
    imageUrl: "https://via.placeholder.com/300x200"

```

```
}});
```

```
module.exports = news;
```

```
[FRONTEND - index.html]
```

```
-----  
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<title>News Orbit</title>
```

```
<link rel="stylesheet" href="styles.css">
```

```
</head>
```

```
<body>
```

```
<!-- Navigation Bar -->
```

```
<nav class="navbar">
```

```
    <div class="container">
```

```
        <h1>News Orbit</h1>
```

```
    </div>
```

```
</nav>
```

```
<!-- Search Bar -->
```

```
<div class="container">
```

```
    <input type="text" id="search-input"  
placeholder="Search news..." />
```

```
</div>
```

```
<!-- Loader -->
```

```
<div id="loader" class="loader hidden"></div>
```

```
<!-- News Articles Container -->
<main class="container" id="news-container"></main>

<!-- Footer -->
<footer class="footer">
    <div class="container">
        <p>(c) 2025 News Orbit. All rights
reserved.</p>
    </div>
</footer>

<script src="app.js"></script>
</body>
</html>
```

[FRONTEND - styles.css]

```
-----

/* Basic Reset */
* {
    margin: 0;
    padding: 0;
    box-sizing: border-box;
}

body {
    font-family: 'Segoe UI', sans-serif;
    background: #eef2f5;
    color: #333;
}
```

```
.container {  
    width: 90%;  
    margin: auto;  
    padding: 20px 0;  
}
```

```
.navbar {  
    background: #212121;  
    color: #fff;  
    padding: 20px 0;  
    text-align: center;  
}
```

```
#search-input {  
    width: 100%;  
    padding: 10px;  
    margin-top: 20px;  
    margin-bottom: 20px;  
    font-size: 1rem;  
    border: 1px solid #ccc;  
    border-radius: 5px;  
}
```

```
#news-container {  
    display: grid;  
    grid-template-columns: repeat(auto-fit,  
minmax(280px, 1fr));  
    gap: 20px;
```

```
}
```

```
.news-card {  
    background: #fff;  
    border-radius: 8px;  
    overflow: hidden;  
    box-shadow: 0 4px 8px rgba(0,0,0,0.1);  
    transition: transform 0.3s ease;  
}
```

```
.news-card:hover {  
    transform: translateY(-10px);  
}
```

```
.news-card img {  
    width: 100%;  
    height: 180px;  
    object-fit: cover;  
}
```

```
.news-card-content {  
    padding: 15px;  
}
```

```
.news-card-content h2 {  
    font-size: 1.2rem;  
    margin-bottom: 10px;  
}
```

```
.news-card-content p {  
    font-size: 0.95rem;  
    color: #666;  
}
```

```
.news-card-content a {  
    display: inline-block;  
    margin-top: 10px;  
    color: #007bff;  
    text-decoration: none;  
}
```

```
.news-card-content a:hover {  
    text-decoration: underline;  
}
```

```
.footer {  
    background: #212121;  
    color: #fff;  
    text-align: center;  
    padding: 15px 0;  
    margin-top: 30px;  
}
```

```
.loader {  
    border: 6px solid #f3f3f3;  
    border-top: 6px solid #3498db;  
    border-radius: 50%;
```



```
width: 40px;
height: 40px;
animation: spin 1s linear infinite;
margin: 30px auto;
}
```

```
.hidden {
  display: none;
}
```

```
@keyframes spin {
  0% { transform: rotate(0deg); }
  100% { transform: rotate(360deg); }
}
```

```
[FRONTEND - app.js]
```

```
-----
// Fetch elements
```

```
const newsContainer =
document.getElementById('news-container');
const loader = document.getElementById('loader');
const searchInput =
document.getElementById('search-input');
```

```
// Fetch news from server
```

```
async function fetchNews(query = '') {
  loader.classList.remove('hidden');
  try {
    const url = query ?
```

```

`http://localhost:5000/api/news/search?q=${query}`      :
`http://localhost:5000/api/news`;

    const response = await fetch(url);
    if (!response.ok) {
        throw new Error('Network response was not
ok');
    }
    const news = await response.json();
    displayNews(news);
} catch (error) {
    console.error('Error fetching news:', error);
    displayError("Unable to fetch news.");
} finally {
    loader.classList.add('hidden');
}
}

// Display news on the page
function displayNews(newsList) {
    if (newsList.length === 0) {
        newsContainer.innerHTML = '<p>No news articles
found.</p>';
        return;
    }
    newsContainer.innerHTML = '';
    newsList.forEach(article => {
        const card = document.createElement('div');
        card.className = 'news-card';

```

```

        card.innerHTML = `
            

            <div class="news-card-content">
                <h2>\${article.title}</h2>
                <p>\${article.description}</p>
                <a href="\${article.url}"
target="_blank" rel="noopener noreferrer">Read more</a>
            </div>
        `;

        newsContainer.appendChild(card);
    });
}

// Display error message
function displayError(message) {
    newsContainer.innerHTML = `<p style="color:red;
text-align:center;">\${message}</p>`;
}

// Event listener for search
searchInput.addEventListener('input', (e) => {
    fetchNews(e.target.value);
});

// Initial fetch
fetchNews();

```