

```
1 import React, { useEffect, useState } from "react";
2
3 function App() {
4   // the data response from the API - initially empty array
5   const [data, setData] = useState([]);
6   // a flag to indicate the data is loading - initially false
7   const [loading, setLoading] = useState(false);
8   // a flag to indicate an error, if any - initially null.
9   const [error, setError] = useState(null);
10
11   //useEffect is a React Hook
12   // lets you synchronize a component with an external system.
13   useEffect(() => {
14     // This is just a static JSON file - so not a 'real' API
15     const URL =
16       "https://raw.githubusercontent.com/petermooney/cs385/main/flights/times.json";
17
18     async function fetchData() {
19       try {
20         const response = await fetch(URL);
21         const json = await response.json(); // wait for the JSON response
22         setLoading(true);
23         // IMPORTANT - look at the JSON response - look at the structure
24         setData(json.flightTimes); // IMPORTANT - the JSON response is
25         // assigned to 'data' as an array of JSON objects
26       } catch (error) {
27         setError(error); // take the error message from the system
28         setLoading(false);
29       } // end try-catch block
30     } // end of fetchData
31
32     fetchData(); // invoke fetchData in useEffect
33   }, []); // end of useEffect
34   // notice the empty square brackets here?
35   // This means that the useEffect hook does not depend
36   // on any other variable. Therefore, here it will only
37   // happen once.
38
39   if (error) {
40     return <h1>Oops! An error has occurred here: {error.toString()}</h1>;
41   } else if (loading === false) {
42     return <h1>Loading Data..... ... please wait!</h1>;
43   } else {
44     return (
45       // send the data to the ResultsComponent for render
46       <>
47         <ResultsComponent APIData={data} />
48       </>
49     );
50   } // end else
51 } // end App() function or component
52
53 // This is our Results Component
```

```
54 // This component will display the contents
55 // the response of the API call from above.
56
57 function ResultsComponent(props) {
58   // Creating a basic filter for times
59   // for our purposes we can use very simple time comparison.
60   // We assume all flights are TODAY
61
62   function flightTimeFilter() {
63     return function (flightObject) {
64       // The arrival property of the data is HH:MM
65       const timeParts = flightObject.arrival.split(":");
66       let h = timeParts[0]; // extract the hour
67       let m = timeParts[1]; // extract the minute
68       // create a Javascript Date Object
69       let flightDate = new Date();
70       flightDate.setHours(h);
71       flightDate.setMinutes(m);
72
73       return flightDate >= new Date();
74     };
75   }
76
77   // A standard search for a string within the
78   // departure or destination property values
79   function flightDeptDestFilter(searchTerm) {
80     return function (flightObject) {
81       let dept = flightObject.dept.toLowerCase();
82       let dest = flightObject.dest.toLowerCase();
83
84       return (
85         searchTerm !== "" &&
86         (dept.includes(searchTerm.toLowerCase()) ||
87          dest.includes(searchTerm.toLowerCase()))
88       );
89     };
90   }
91
92   // here we apply the filter(s) directly to the API response
93   let localAPIData =
94     props.APIData.filter(flightDeptDestFilter("Sofia")).filter(flightTimeFilter());
95   return (
96     <>
97     <h1>Number of flights returned: {localAPIData.length}</h1>
98     <table border="1">
99       <thead>
100         <tr>
101           <th>Pilot</th>
102           <th>Flight No.</th>
103           <th>Dept.</th>
104           <th>Dest</th>
105           <th>Arrival</th>
106         </tr>
```

```
107         </thead>
108         <tbody>
109             {localAPIData.map((p, index) => (
110                 <tr key={index}>
111                     <td>
112                         <i>{p.aircraft.captain}</i>
113                     </td>
114                     <td>
115                         <b>{p.id}</b>
116                     </td>
117                     <td>
118                         <b>{p.dept}</b>
119                     </td>
120                     <td>
121                         <b>{p.dest}</b>
122                     </td>
123                     <td>{p.arrival}</td>
124                 </tr>
125             )})
126         </tbody>
127     </table>
128 </>
129 );
130 }
131 export default App;
132
```