Program 5 :

Develop the application that sends fruit name and price data from client side to Node.js server using Ajax.

//Client side

//index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import App from './App';
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
<React.StrictMode>
<App />
</React.StrictMode>
);
```

//App.js

```
import React, { useState } from "react";
import axios from "axios";
function App() {
const [name, setName] = useState("");
const [price, setPrice] = useState("");
const url = "http://localhost:5000";
const handleSubmit = async (e) => {
e.preventDefault();
try {
await axios.post(`${url}/api/fruits`, { name, price });
console.log("Data sent successfully");
```

```
// Optionally, you can reset the form fields here
} catch (error) {
console.error("Error sending data:", error);
}
};
return (
<div>
<h1>Fruit Data Form</h1>
<form onSubmit={handleSubmit}>
<label>
Fruit Name:
<input
type="text"
value={name}
onChange={(e) => setName(e.target.value)}
/>
</label>
<br />
<label>
Price:
<input
type="text"
value={price}
onChange={(e) => setPrice(e.target.value)}
/>
</label>
<br />
<button type="submit">Submit</button>
</form>
```

```
</div>
);
}
export default App;
```

//server side

```
const express = require("express");
const bodyParser = require("body-parser");
const cors = require("cors");
const app = express();
const PORT = 5000;
app.use(bodyParser.json());
app.use(cors());
```

// Handle POST request to '/api/fruits'

```
app.post("/api/fruits", (req, res) => {
const { name, price } = req.body;
console.log(`Received data from client: Name - ${name}, Price - ${price}`);
res.status(200).send("Data received successfully");
});
app.listen(PORT, () => {
console.log(`Server is running on http://localhost:${PORT}`);
});
```

Note:

To create this program:

First give the following command in the terminal

npx create-react-app fruit-client

cd fruit-client

npm install axios

npm init -y // initialize node js project

npm install express

type all the contents...

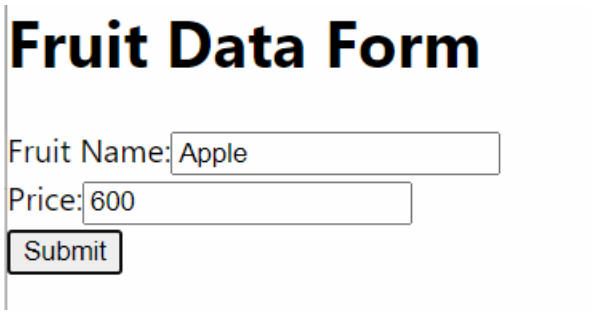
In one terminal give node server.js /// to run the server

```
PS E:\Pgm6> cd fruit-client
PS E:\Pgm6\fruit-client> node server.js
Server is running on http://localhost:5000
```

In another terminal give npm start ////to run the client

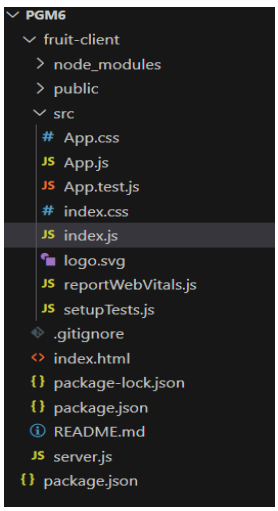
```
PS E:\Pgm6> cd fruit-client
PS E:\Pgm6\fruit-client> npm start

> fruit-client@0.1.0 start
> react-scripts start
```



In browser what data you have selected appears in the server terminal

```
PS E:\Pgm6> cd fruit-client
PS E:\Pgm6\fruit-client> node server.js
Server is running on http://localhost:5000
Received data from client: Name - Apple, Price - 600
```



Experiment no: 6

Develop a React code to build a simple search filter functionality to display a filtered list based on the search query entered by the user.

//index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import App from './App';
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
<React.StrictMode>
<App />
</React.StrictMode>
);
```

//App.js

```
import React from "react";
import SearchFilter from "./SearchFilter";
function App() {
return (
<div>
<SearchFilter />
</div>
);
}
export default App;
```

//SearchFilter.jsx

```
import React, { useState } from "react";
import jsonData from "./data.json"; // Import JSON data
```

```
function SearchFilter() {
  const [searchQuery, setSearchQuery] = useState("");
  const [filteredItems, setFilteredItems] = useState(jsonData); // Initialize with all data

  // Function to handle search input change
  const handleSearchChange = (e) => {
    const query = e.target.value.toLowerCase();
    setSearchQuery(query);

    // Filter the items based on the search query (searching by name in this example)
    const filtered = jsonData.filter((item) =>
      item.name.toLowerCase().includes(query)
    );
    setFilteredItems(filtered);
  };

  return (
    <div>
      <h2>Search Filter</h2>
      <input
        type="text"
        placeholder="Search..."
        value={searchQuery}
        onChange={handleSearchChange}
      />
      <ul>
        {filteredItems.map((item, index) => (
          <li key={index}>
```

```
          {item.name} ({item.category}) {/* Accessing object properties */}
        </li>
      ))}
      {filteredItems.length === 0 && searchQuery && <p>No items found matching your search.</p>}
    </ul>
  </div>
 );
}

export default SearchFilter;
```

data.json

```
[
  { "name": "Apple", "category": "Fruit" },
  { "name": "Banana", "category": "Fruit" },
  { "name": "Carrot", "category": "Vegetable" },
  { "name": "Beans", "category": "Vegetable" },
  { "name": "Brinjal", "category": "Vegetable" }

 ]
```

Note:

First give the following command in the terminal

npx create-react-app search_filter

cd search_filter

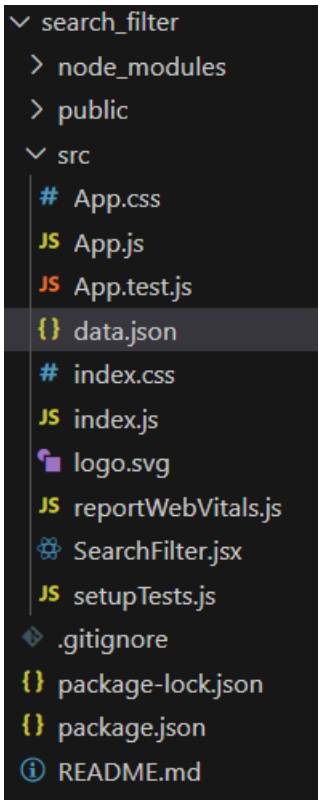
npm install axios

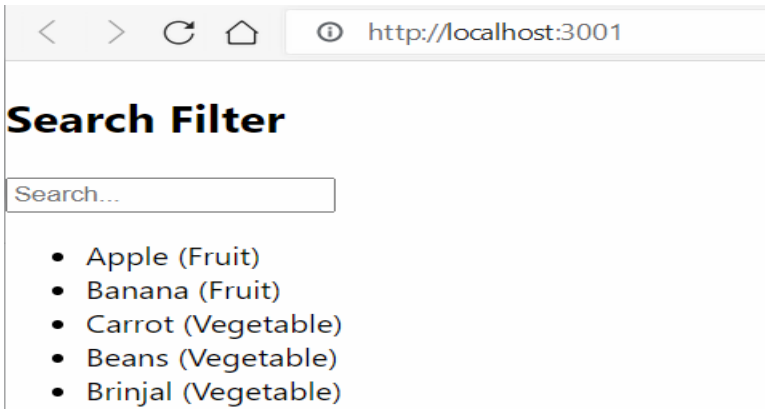
npm init -y // initialize node js project

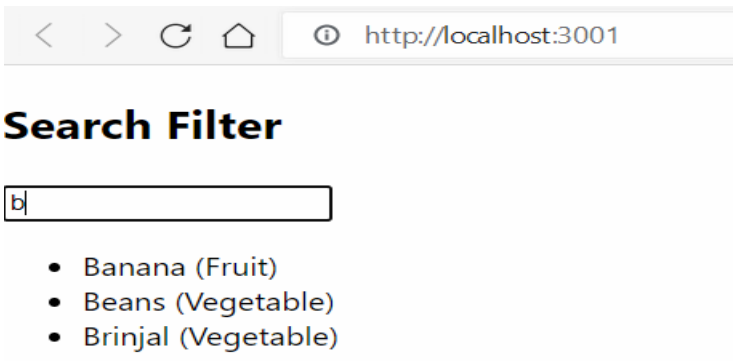
npm install express

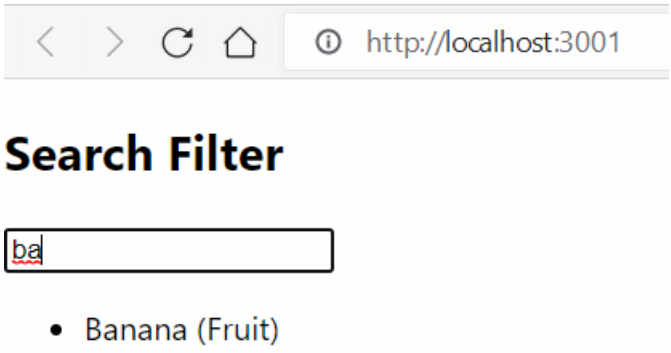
type all the contents…

npm start


search_filter
node_modules
public
src
App.css
App.js
App.test.js
data.json
index.css
index.js
logo.svg
reportWebVitals.js
SearchFilter.jsx
setupTests.js
.gitignore
package-lock.json
package.json
README.md


http://localhost:3001
Search Filter
Search...
Apple (Fruit)
Banana (Fruit)
Carrot (Vegetable)
Beans (Vegetable)
Brinjal (Vegetable)


http://localhost:3001
Search Filter
b
Banana (Fruit)
Beans (Vegetable)
Brinjal (Vegetable)


http://localhost:3001
Search Filter
ba
Banana (Fruit)