Part 5

Fetch Products using Axios

Modify the **Products.js**

```
    import axios from "axios";

2. import { useEffect, useState } from "react";
3. import "./Products.css";
4.
5. function Products() {
    const [products, setProducts] = useState([]);
6.
7.
    useEffect(() => {
8.
      axios.get("/products").then((response) => {
       console.log(response.data);
9.
10.
       setProducts(response.data);
11.
     });
12.
   }, []);
13.
    return (
14. <div className="Products">
15.
       <h1>Products</h1>
16.
       <div className="content">
17.
18.
          <button>Add Product</button>
19.
         </div>
20.
         <div>
21.
          22.
23.
             24.
               ID
25.
               26.
               Name
27.
               Price
28.
               Size
29.
               Action
30.
             31.
            </thead>
32.
            33.
             {products !== undefined ? (
               products.map((product, i) => (
34.
35.
                 36.
                  {product.id}
37.
                  38.
                    <img src={`http://localhost/${product.image}`} />
39.
                  40.
                  {product.name}
41.
                  {product.price}
42.
                  {product.size}
43.
                  >
44.
                    <button>Edit
45.
                    <button>
46.
                     Delete
47.
                    </button>
48.
                  49.
                 ))
50.
51.
             ):(
52.
               No data available
53.
54.
```

Modify **Products.css**

```
1. .products-table {
2. width: 100%;
3.
     border: none;
4. }
5. .products-table thead tr {
font-weight: bold;
     height: 40px;
7.
8. }

    .products-table tr td {
    padding-left: 10px;

11. }
12. .products-table tbody tr:nth-child(odd) {
background-color: lightblue;
14. }
15. .product-thumbnail {
16. width: 120px;
17. height: 120px;
18. overflow: hidden;
19. padding: 0 10px;
20.}
21. .product-thumbnail img {
22. display: block;
23. height: 100px;
24. width: 100px;
25. object-fit: cover;
26.}
```

Create a new folder inside **src** and named it as **Contexts.** Inside of Contexts folder, create a new file for **AuthContext.js** and **ProductContext.js.**

AuthContext.js

```
1. import { createContext, useState } from "react";
2.
3. export const AuthContext = createContext({
accessToken: "",
5.
     authenticate: () => {},
     signOut: () => {},
6.
7.
     isAuthenticated: false,
8. });
9.
10. function AuthContextProvider({ children }) {
11.
     const [accessToken, setAccessToken] = useState();
12.
13.
     function authenticate(token) {
14.
     setAccessToken(token);
15.
16.
17.
     function signOut() {
18.
       setAccessToken(null);
        localStorage.removeItem("accessToken");
19.
20.
21.
22.
     const value = {
23.
       accessToken: accessToken,
       authenticate: authenticate,
24.
25.
        isAuthenticated: !!accessToken,
26.
       signOut: signOut,
27.
     };
28.
29.
     return <AuthContext.Provider value={value}>{children}</AuthContext.Provider>;
30.}
31.
32. export default AuthContextProvider;
```

To use the AuthContext, modify the following files: App.js, Login.js and Main.js

App.js

```
    import "./App.css";
    import { BrowserRouter, Route, Routes, Navigate } from "react-router-dom";
```

```
4. import Login from "./pages/Login/Login";
5. import Register from "./pages/Register/Register";
6. import Main from "./pages/Main/Main";

    import Dashboard from "./pages/Main/Dashboard/Dasboard";
    import Products from "./pages/Main/Products/Products";

9.
10. import { useContext, useEffect, useState } from "react";
11. import AuthContextProvider, { AuthContext } from "./Contexts/AuthContext";
12.
13. function AuthNavigation() {
14. return (
15.
        <Routes>
16.
          <Route exact path="/" element={<Login />} />
          <Route exact path="/register" element={<Register />} />
17.
18.
          <Route path="*" element={<Navigate replace to="/" />} />
        </Routes>
19.
20.);
21. }
22.
23. function AuthenticatedNavigation() {
24. return (
25.
        <Routes>
26.
          <Route path="/main" element={<Main />}>
            <Route exact path="dashboard" element={<Dashboard />} />
27.
            <Route exact path="products" element={<Products />} />
28.
29.
          </Route>
30.
          <Route path="*" element={<Navigate replace to="/main/dashboard" />} />
31.
        </Routes>
32.
     );
33.}
34.
35. function Navigation() {
36. const authCtx = useContext(AuthContext);
     const accessToken = localStorage.getItem("accessToken");
37.
38.
39.
     useEffect(() => {
40.
       if (
41.
          !authCtx.isAuthenticated &&
42.
          (accessToken !== undefined || accessToken !== "" || accessToken !== null)
43.
        ) {
44.
         authCtx.authenticate(accessToken);
45.
        }
46.
     }, []);
47.
48.
     return (
49.
        <BrowserRouter>
50.
          {authCtx.isAuthenticated ? (
51.
            <AuthenticatedNavigation />
52.
          ):(
53.
            <AuthNavigation />
54.
          )}
55.
        </BrowserRouter>
56.
     );
57.}
58.
59. function App() {
60. const handleLogout = () => {
61.
        localStorage.removeItem("accessToken");
62. };
63.
64. return (
```

Login.js

```
    import { useForm } from "react-hook-form";
    import "./Login.css";

import axios from "axios";
4. import { useNavigate } from "react-router-dom";
5. import { useContext } from "react";6. import { AuthContext } from "../../Contexts/AuthContext";
7.
8. function Login() {
9.
      const navigate = useNavigate();
10.
     const authCtx = useContext(AuthContext);
11.
      const {
12.
        register,
13.
        handleSubmit,
14.
        formState: { errors },
15.
      } = useForm({
16.
        defaultValues: {
          email: "",
17.
          password: ""
18.
19.
        },
20.
     });
      const onSubmit = async (data) => {
21.
22.
        await axios({
          method: "post",
23.
          url: "user/login",
24.
25.
          data,
          headers: { "Access-Control-Allow-Origin": "*" },
26.
27.
        })
28.
          .then((res) => {
29.
            localStorage.setItem("accessToken", res.data.access_token);
30.
            authCtx.authenticate(res.data.access_token);
31.
            navigate("/main/dashboard");
32.
33.
          .catch((e) => {
34.
            alert(e.response.data.message);
35.
          });
36.
37.
      return (
38.
        <div className="Login">
39.
          <div className="main-container">
40.
            <h3>Login</h3>
41.
            <form onSubmit={handleSubmit(onSubmit)}>
              <div className="form-container">
42.
43.
                 <div>
44.
                   <div className="form-group">
45.
                     <label>E-mail:</label>
46.
                     <input type="text" {...register("email", { required: true })} />
```

```
47.
                   </div>
48.
                   {errors.email && (
49.
                     <span className="errors">This field is required</span>
50.
                   )}
51.
                 </div>
52.
                 <div>
53.
                   <div className="form-group">
54.
                     <label>Password:</label>
55.
                     <input</pre>
56.
                       type="password"
57.
                       {...register("password", { required: true })}
58.
                     />
59.
                   </div>
60.
                   {errors.password && (
61.
                     <span className="errors">This field is required</span>
62.
                   )}
63.
                 </div>
                 <div className="submit-container">
64.
65.
                   <button type="submit">Login</button>
66.
                 </div>
67.
                 <div className="register-container">
68.
                   <a href="/register">
69.
                     <small>Register</small>
70.
                   </a>
                 </div>
71.
72.
               </div>
73.
             </form>
74.
          </div>
75.
        </div>
76.
      );
77.}
78.
79. export default Login;
```

Modify the Main.js

```
1. import { useEffect } from "react";
2. import { Link, Outlet, useNavigate } from "react-router-dom";
3. import "./Main.css";
4. import { useContext } from "react";
5. import { AuthContext } from "../../Contexts/AuthContext";
6.
7. function Main() {
8.
     const authCtx = useContext(AuthContext);
9.
10. const navigate = useNavigate();
11.
     const handleLogout = () => {
12.
       authCtx.signOut();
13.
       navigate("/");
14.
    };
15.
16.
     useEffect(() => {
17.
        if (
18.
         authCtx.accessToken === undefined ||
19.
         authCtx.accessToken === "" ||
20.
         authCtx.accessToken === null
21.
        ) {
22.
         handleLogout();
23.
24. }, [authCtx.accessToken]);
```

```
25.
     return (
26.
       <div className="Main">
27.
         <div className="container">
28.
           <div className="navigation">
29.
            <l
30.
              <
31.
                <Link to="/main/dashboard">Dashboard</Link>
32.
              33.
              34.
                <Link to="/main/products">Products</Link>
35.
36.
              37.
              38.
                <a onClick={handleLogout}>Logout</a>
39.
              40.
            41.
           </div>
           <div className="outlet">
42.
43.
             <Outlet />
44.
           </div>
45.
         </div>
       </div>
46.
47.
     );
48.}
49.
50. export default Main;
```

ProductContext.js (located inside **Context** folder)

```
    import { createContext, useState } from "react";

2.
3. export const ProductContext = createContext({
4.
      products: [],
      updateProducts: () => {},
5.
6.
      addProduct: () => {},
7.
      deleteProduct: () => {},
8. });
9.
10. function ProductContextProvider({ children }) {
11.
      const [products, setProducts] = useState([]);
12.
13.
      function updateProducts(products) {
14.
        setProducts(products);
15.
      }
16.
      function addProduct(product) {
17.
18.
        let currentProducts = products;
19.
        currentProducts = [...products, product];
20.
        setProducts(currentProducts);
21.
     }
22.
23.
      function deleteProduct(product) {
24.
        //structedClone is javascript function to clone a object
        const newSet = structuredClone(products);
25.
        const index = products.findIndex((data) => data === product);
26.
27.
        //splice is used to remove an element from array
28.
        newSet.splice(index, 1);
29.
        setProducts(newSet);
30. }
31.
```

```
32. const value = {
33.
       products: products,
       updateProducts: updateProducts,
34.
35.
       addProduct: addProduct,
36.
       deleteProduct: deleteProduct,
37.
     };
38.
39.
     return (
       <ProductContext.Provider value={value}>{children}</productContext.Provider>
40.
41.
     );
42.}
43.
44. export default ProductContextProvider;
```

To use the ProductContext, import and put it inside element prop of Route for products.

```
12. import ProductContextProvider from "./Contexts/ProductContext";
```

Modify Products.js

```
    import axios from "axios";

2. import { useEffect, useState } from "react";
3. import "./Products.css";
4. import { useContext } from "react";
5. import { ProductContext } from "../../Contexts/ProductContext";
6.
7. function Products() {
     const [products, setProducts] = useState([]);
8.
9.
     const productCtx = useContext(ProductContext);
10.
11.
     useEffect(() => {
       axios.get("/products").then((response) => {
12.
13.
         productCtx.updateProducts(response.data);
14.
    });
15.
     }, []);
16.
     const handleDeleteProduct = (data) => {
17.
18.
      productCtx.deleteProduct(data);
19.
20.
21. useEffect(() => {
     setProducts(productCtx.products);
22.
23. }, [productCtx.products]);
24. return (
```

```
25.
     <div className="Products">
26.
       <h1>Products</h1>
27.
       <div className="content">
28.
        <div>
29.
          <button>Add Product</button>
30.
        </div>
31.
        <div>
          32.
33.
           <thead>
34.
            35.
              ID
              36.
37.
              Name
38.
              Price
39.
              Size
40.
              Action
41.
            42.
           </thead>
43.
           44.
            {products !== undefined ? (
45.
              products.map((product, i) => (
46.
               47.
                 {product.id}
48.
                 49.
                  <img src={`http://localhost/${product.image}`} />
50.
                 51.
                 {product.name}
52.
                 {product.price}
53.
                 {product.size}
54.
                 55.
                  <button>Edit
56.
                  <button onClick={() => handleDeleteProduct(product)}>
57.
58.
                  </button>
59.
                 60.
               61.
              ))
62.
            ):(
63.
              64.
               No data available
65.
              66.
            )}
67.
           68.
          69.
        </div>
70.
       </div>
71.
     </div>
72. );
73.}
74.
75. export default Products;
```

Inside **Products** folder, create a new folder for **ProductForm**, create also **ProductForm.js** and **ProductForm.css** inside the newly folder.

ProductForm.js

```
    import "./ProductForm.css";

2. import { useNavigate, useParams } from "react-router-dom";
3. import { useEffect, useState } from "react";
4. import { useForm } from "react-hook-form";5. import axios from "axios";
6. import { useContext } from "react";
7. import { AuthContext } from "../../../Contexts/AuthContext";
8.
9. function ProductForm() {
10. const authCtx = useContext(AuthContext);
11.
12.
      const [selectedFile, setSelectedFile] = useState(undefined);
13.
      const [preview, setPreview] = useState(undefined);
14.
15.
      const navigate = useNavigate();
16.
17.
      let { id } = useParams();
18.
      const {
19.
        register,
20.
        handleSubmit,
21.
         formState: { errors },
22.
        setValue,
23.
      } = useForm({
24.
        defaultValues: {
25.
           name: "",
           description: "",
26.
27.
           size: ""
           price: ""
28.
29.
           file: undefined,
30.
        },
31.
      });
32.
33.
      useEffect(() => {
34.
      if (id !== undefined) {
           axios.get(`/products/${id}`).then((res) => {
35.
             setValue("name", res.data.name);
setValue("description", res.data.description);
setValue("size", res.data.size);
setValue("price", res.data.price);
setValue("is_available", res.data.is_available ? 1 : 0);
36.
37.
38.
39.
40.
41.
             setPreview(`http://localhost/php-rest-api-git/${res.data.image}`);
42.
           });
43.
44.
      }, []);
45.
      const handleFileSelect = (event) => {
46.
47.
         const file = event.target.files[0];
48.
        setSelectedFile(file);
49.
50.
        const reader = new FileReader();
51.
         const url = reader.readAsDataURL(file);
52.
53.
         reader.onloadend = () => {
54.
          setPreview(reader.result);
55.
```

```
56. };
57.
58.
     const onSubmit = async (data) => {
59.
        if (id === undefined) {
60.
          //create new product
61.
          const formData = new FormData();
          formData.append("name", data.name);
62.
          formData.append("description", data.description);
63.
          formData.append("size", data.size);
64.
          formData.append("price", data.price);
65.
          formData.append("file", selectedFile);
66.
          formData.append("is_available", data.is_available);
67.
68.
69.
          axios
70.
            .post("/products", formData, {
              headers: {
71.
72.
                "Content-Type": "multipart/form-data",
                Authorization: `Bearer ${authCtx.accessToken}`,
73.
74.
75.
            })
76.
            .then((res) => {
77.
              if (res) {
78.
                alert("Product successfully saved.");
79.
                navigate("/main/products");
80.
              }
81.
            })
82.
            .catch((error) => {
83.
              alert(error.response.data.message);
84.
            });
85.
        } else {
          //update existing product
86.
87.
88.
            .patch(`/products/${id}`, data, {
89.
              headers: {
90.
                Authorization: `Bearer ${authCtx.accessToken}`,
91.
              },
92.
            })
93.
            .then((res) => {
94.
              if (res) {
95.
                alert("Product successfully updated.");
96.
                navigate("/main/products");
97.
              }
98.
            })
99.
            .catch((error) => {
100.
                     alert(error.response.data.message);
101.
                   });
102.
               }
103.
             };
104.
             return (
105.
               <div className="ProductForm">
106.
                 <h1>Product Form</h1>
107.
                 <div className="content">
108.
                   <form onSubmit={handleSubmit(onSubmit)}>
109.
                     <div className="form-container">
110.
                        <div className="form-group">
111.
                          <label>Name:</label>
                          <input type="text" {...register("name", { required: true })} />
112.
113.
                        </div>
114.
                          <span className="errors">This field is required</span>
115.
116.
```

```
117.
                        <div className="form-group">
118.
                          <label>Description:</label>
119.
                          <textarea
120.
                            rows={10}
                            {...register("description", { required: true })}
121.
                         />
122.
                        </div>
123.
124.
                        {errors.description && (
125.
                          <span className="errors">This field is required</span>
126.
                        )}
127.
                        <div className="form-group">
128.
                         <label>Size:</label>
129.
                          ≺input
                            type="number"
130.
131.
                            {...register("size", {
132.
                              required: true,
133.
                              valueAsNumber: true,
                              pattern: {
134.
                                value: /^[0-9]+$/,
135.
                                message: "Please enter a number",
136.
137.
138.
                            })}
                          />
139.
                        </div>
140.
                        {errors.size && errors.size.type === "required" && (
141.
142.
                         <span className="errors">This field is required</span>
143.
144.
                        {errors.size && errors.size.type === "valueAsNumber" && (
145.
                          <span className="errors">This field accepts numbers only</span>
146.
                        )}
147.
                        <div className="form-group">
148.
                         <label>Price:</label>
149.
                          <input
150.
                            type="number"
                            {...register("price", {
151.
152.
                              required: true,
153.
                              valueAsNumber: true,
154.
                              pattern: {
155.
                                value: /^[0-9]+$/,
156.
                              },
157.
                            })}
158.
                         />
159.
                        </div>
160.
                        {errors.price && errors.price.type === "required" && (
161.
                         <span className="errors">This field is required</span>
162.
163.
                        {errors.price && errors.price.type === "valueAsNumber" && (
164.
                         <span className="errors">This field accepts numbers only</span>
165.
                        )}
166.
                        <div className="form-group">
167.
                          <label>Availability:</label>
168.
                          <select {...register("is available")}>
169.
                            <option value="0">Unavailable</option>
170.
                            <option value="1">Available</option>
171.
                          </select>
172.
                        </div>
173.
                        {!id ? (
174.
                          <input
175.
                            type="file"
                            {...register("file")}
176.
177.
                            onChange={handleFileSelect}
```

```
178.
                        />
179.
                        ) : null}
180.
                        {(selectedFile || preview) && (
181.
                          <img className="product-preview" src={preview} />
182.
183.
184.
                        <div className="submit-container">
185.
                          <button type="submit">Submit</button>
186.
                        </div>
187.
                      </div>
188.
                    </form>
                  </div>
189.
190.
               </div>
191.
              );
192.
193.
           export default ProductForm;
```

ProductForm.css

```
1. .ProductForm .form-group label {
width: 100px;
3.
     margin-right: 8px;
4.
     text-align: left;
5. }
6.
7. .ProductForm .form-container {
8. border: 0:
9.
     border-radius: 0:
10. max-width: 50%;
11. align-items: flex-start;
12.}
13.
14. .ProductForm .form-container .form-group input,
15. .ProductForm .form-container .form-group textarea {
16. width: 500px;
17. }
18.
19. .ProductForm .product-preview {
20. width: 200px;
21. }
```

Add the ProductForm to Route of App.js

```
1. import "./App.css";
2.
3. import { BrowserRouter, Route, Routes, Navigate } from "react-router-dom";
4. import Login from "./pages/Login/Login";
5. import Register from "./pages/Register/Register";
6. import Main from "./pages/Main/Main";
7. import Dashboard from "./pages/Main/Dashboard/Dasboard";
8. import Products from "./pages/Main/Products/Products";
9.
10. import { useContext, useEffect, useState } from "react";
11. import AuthContextProvider, { AuthContext } from "./Contexts/AuthContext";
12. import ProductContextProvider from "./Contexts/ProductContext";
13. import ProductForm from "./pages/Main/Products/ProductForm/ProductForm";
14.
15. function AuthNavigation() {
16. return (
```

```
17.
        <Routes>
          <Route exact path="/" element={<Login />} />
18.
          <Route exact path="/register" element={<Register />} />
19.
20.
          {/*} <Route path="*" element={<Navigate replace to="/" />} /> */}
21.
        </Routes>
22.
     );
23. }
24.
25. function AuthenticatedNavigation() {
26. return (
27.
        <Routes>
          <Route path="/main" element={<Main />}>
28.
29.
            <Route exact path="dashboard" element={<Dashboard />} />
30.
            <Route
31.
              path="products"
32.
              element={
33.
                <ProductContextProvider>
34.
                  <Products />
35.
                </ProductContextProvider>
36.
              }
37.
            ></Route>
38.
            <Route
39.
              path="products/form/:id?"
40.
              element={
                <ProductContextProvider>
41.
42.
                  <ProductForm />
                </ProductContextProvider>
43.
              }
44.
            ></Route>
45.
46.
          </Route>
47.
          <Route path="/" element={<Navigate replace to="/main/dashboard" />} />
48.
       </Routes>
49.
      );
50.}
51.
52. function Navigation() {
53.
      const authCtx = useContext(AuthContext);
54. const accessToken = localStorage.getItem("accessToken");
55.
56. useEffect(() => {
57.
58.
          !authCtx.isAuthenticated &&
          (accessToken !== undefined || accessToken !== "" || accessToken !== null)
59.
60.
       ) {
61.
          authCtx.authenticate(accessToken);
62.
       }
63.
     }, []);
64. return (
65.
        <BrowserRouter>
          {authCtx.isAuthenticated ? (
66.
67.
            <AuthenticatedNavigation />
68.
          ):(
69.
            <AuthNavigation />
70.
          )}
71.
        </BrowserRouter>
     );
72.
73.}
74.
75. function App() {
76. const handleLogout = () => {
77.
        localStorage.removeItem("accessToken");
```

```
78. };
79.
80.
     return (
81.
        <div className="App">
82.
          <AuthContextProvider>
83.
            <Navigation />
84.
          </AuthContextProvider>
85.
        </div>
86. );
87.}
88.
89. export default App;
```

Modify Products.js for create, edit and delete functionality of Product.

```
    import axios from "axios";

2. import { useEffect, useState } from "react";
3. import "./Products.css";
4. import { useContext } from "react";
5. import { ProductContext } from "../../Contexts/ProductContext";
6. import { Link } from "react-router-dom";
7. import { AuthContext } from "../../Contexts/AuthContext";
8.
9. function Products() {
10. const [products, setProducts] = useState([]);
     const productCtx = useContext(ProductContext);
11.
12.
     const authCtx = useContext(AuthContext);
13.
14.
     useEffect(() => {
       axios.get("/products").then((response) => {
15.
16.
         productCtx.updateProducts(response.data);
       });
17.
18.
     }, []);
19.
     const handleDeleteProduct = (data) => {
20.
21.
       axios
22.
          .delete(`/products/${data.id}`, {
23.
           headers: {
             Authorization: `Bearer ${authCtx.accessToken}`,
24.
25.
           },
         })
26.
27.
         .then((res) => {
28.
           alert(res.data.message);
29.
           productCtx.deleteProduct(data);
30.
         })
31.
          .catch((error) => {
32.
           alert(error.response.data.message);
33.
         });
34. };
35.
36.
     useEffect(() => {
       setProducts(productCtx.products);
37.
38.
     }, [productCtx.products]);
39.
40.
       <div className="Products">
41.
         <h1>Products</h1>
42.
         <div className="content">
43.
44.
             <Link to="/main/products/form">
45.
                <button>Add Product</putton>
```

```
46.
         </Link>
47.
        </div>
48.
        <div>
49.
         50.
           <thead>
51.
            52.
              ID
53.
              54.
              Name
55.
              Price
56.
              Size
57.
              Action
58.
            59.
           </thead>
60.
           {products !== undefined ? (
61.
62.
              products.map((product, i) => (
63.
               64.
                 {product.id}
65.
                 66.
67.
                    src={`http://localhost/php-rest-api-git/${product.image}`}
68.
                  />
69.
                 70.
                 {product.name}
71.
                 {product.price}
72.
                 {product.size}
73.
                 >
                  <Link to={\ \main/products/form/\${product.id}\ \}>
74.
75.
                    <button>Edit
76.
77.
                  <button onClick={() => handleDeleteProduct(product)}>
78.
                   Delete
79.
                  </button>
80.
                 81.
               82.
              ))
83.
            ):(
84.
              85.
               No data available
86.
              87.
            )}
88.
           89.
          90.
        </div>
91.
       </div>
92.
     </div>
93.
    );
94.}
95.
96. export default Products;
```

PHP Back-end Code

https://github.com/lemuelrfrancisco/php-rest-api/tree/part3

Sample user:

Email: test@mail.com

Password: password

ReactJS Front-end Admin Code

https://github.com/lemuelrfrancisco/app-admin/tree/part5

ReactJS Front-end Online shop Code

https://github.com/lemuelrfrancisco/online-shop-sample

For ReactJS Projects

You need to run the 'npm install' to download the dependencies and libraries used on project.