

React JS Training

(Intermediate to Advanced)



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Schedule for React JS Training

Day#	Date	Topic
Day-1	16-Apr-2024	State Management : Class Components
Day-2	17-Apr-2024	State Management : Functional Components, Hooks
Day-3	18-Apr-2024	Http Client Programming – AJAX Calls to APIs (Node JS)
Day-4	19-Apr-2024	Working with Forms, Validations, Services
Day-5	22-Apr-2024	Redux – State Management Library
Day-6	23-Apr-2024	Unit Testing React Application
Day-7	24-Apr-2024	Routing – SPA in React JS

Http Client Programming



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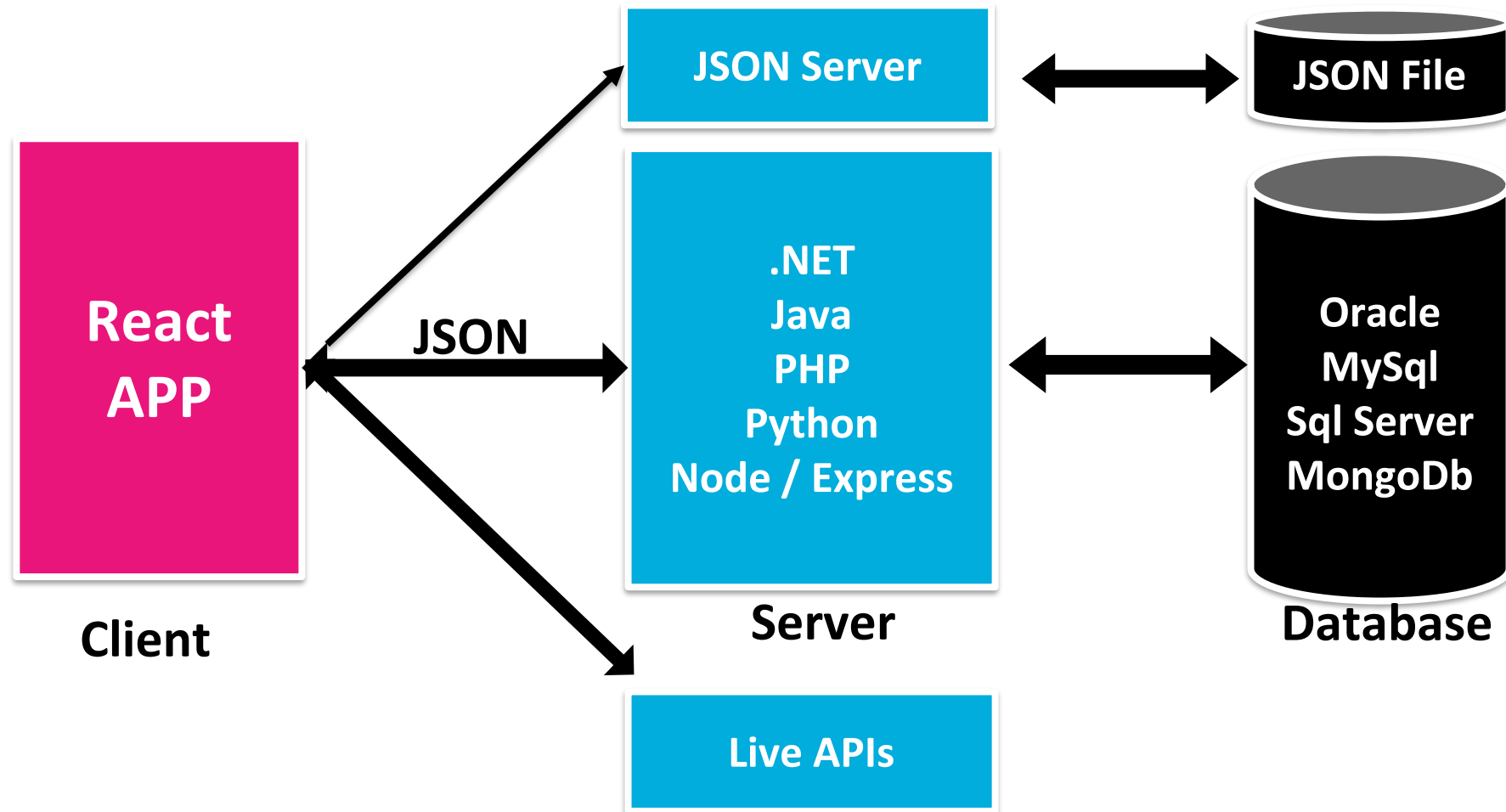
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Index

1. Http Client Programming using React
2. Using Axios Package
3. Live API communication
4. Get, Post, Put, Delete Requests
5. CURD Operations using Node-Server (Express-MongoDb)

Server Communication

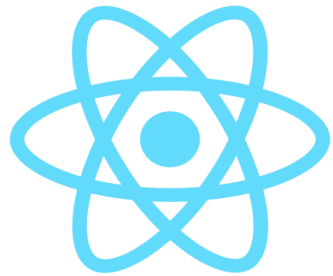
- AJAX
- JSON
- XmlHttpRequest / Fetch / \$.http / axios / HttpClient
- Server Side Code : Web API
- JSON Server



Server Calls - AJAX

- AJAX is client side programming technique to exchange data between client and server
- We can implement AJAX calls in React in the following ways:
 - **window.fetch() method**
 - **axios library**





Using Axios Package

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Axios Package

- Axios is a lightweight HTTP client based library
- It helps us to communicate with server.
- Installation:
- **`npm install axios --save`**





Web browser

Web server

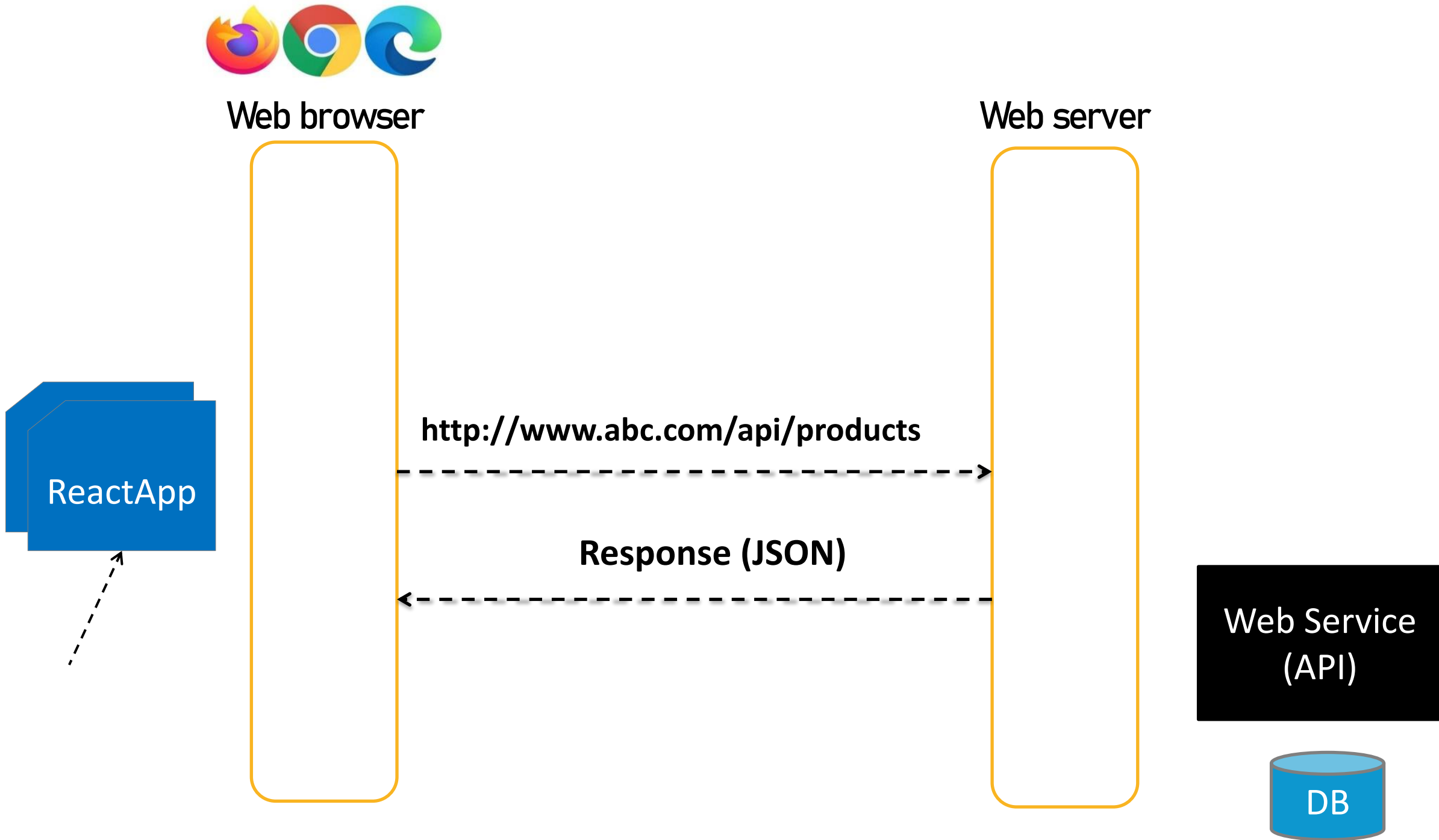


`http://www.abc.com/api/products`

Response (JSON)

Web Service
(API)

DB

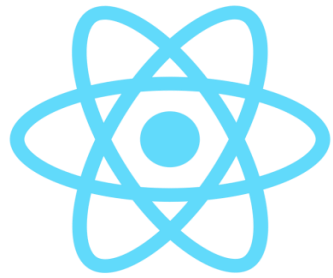


Axios Package - Usage

```
import axios from 'axios';
```

```
    axios.get(url).then(resData =>  
        {  
            // process the resData  
        });
```



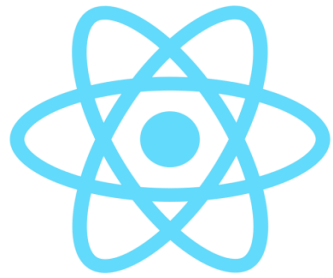


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Demo

Live API communication



CRUD Operations using AXIOS Package

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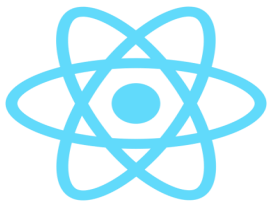
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Axios Methods for CRUD

```
CREATE    :    axios.post(url, data).then();  
READ     :    axios.get(url).then();  
UPDATE   :    axios.put(url, data).then();  
DELETE   :    axios.delete(url).then();
```



CURD Operations using Node-Server



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Node Server

- **Node** : Node.js is an open-source, cross-platform JavaScript runtime environment. We can create server side applications using node.
- **Express JS**: Web Application framework that works on top of the node js application. It makes web applications and api development easily under node environment.



MERN Stack



MongoDB



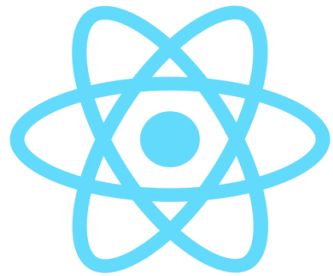
Express JS



React JS



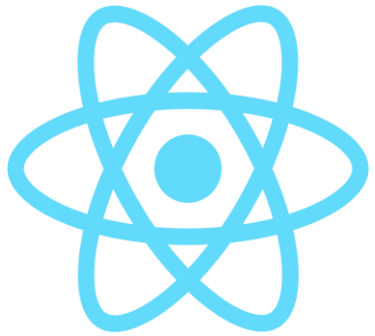
Node JS



Perform AJAX Operations using Data Services

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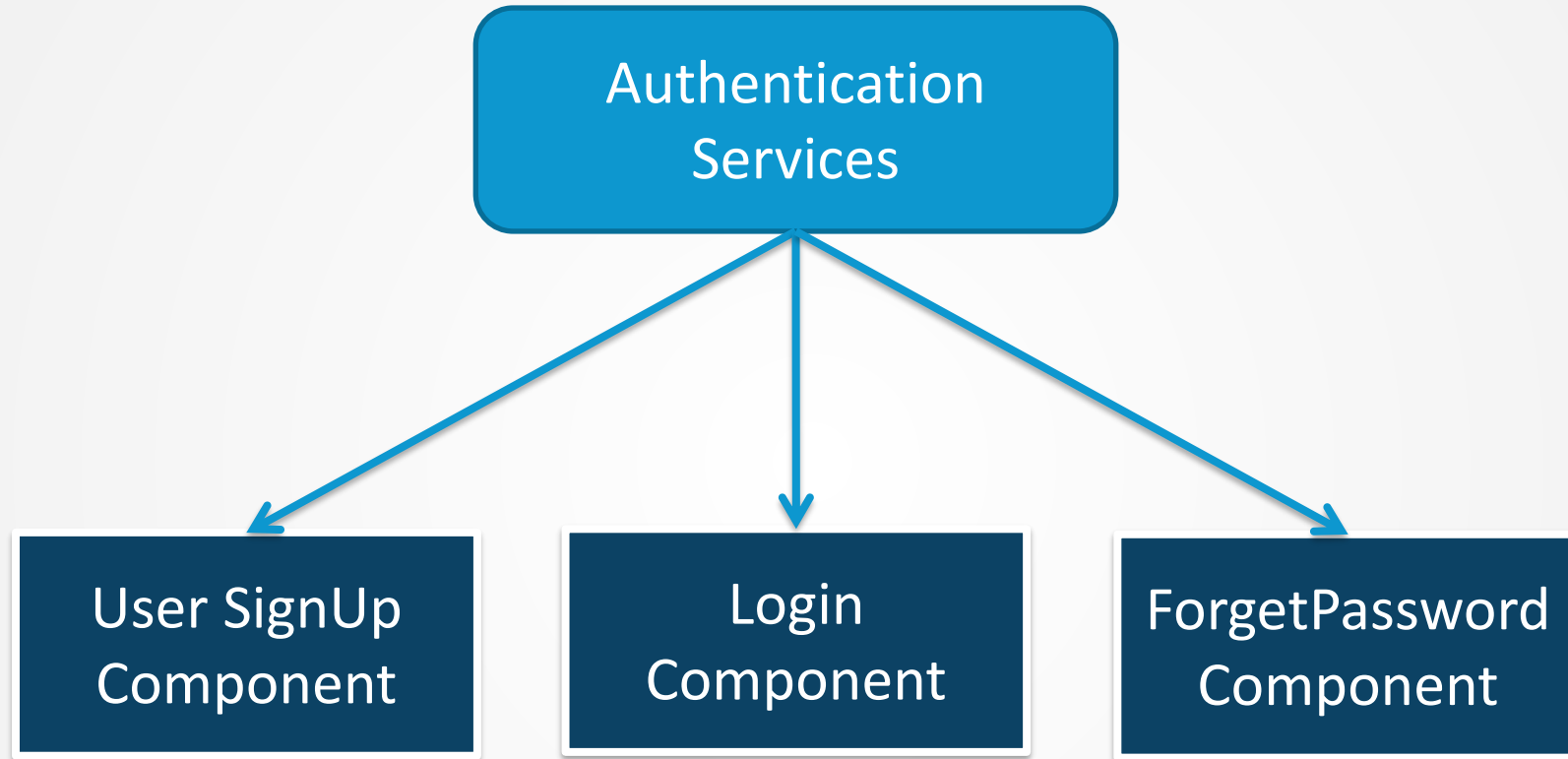


Reusable Services objects in React

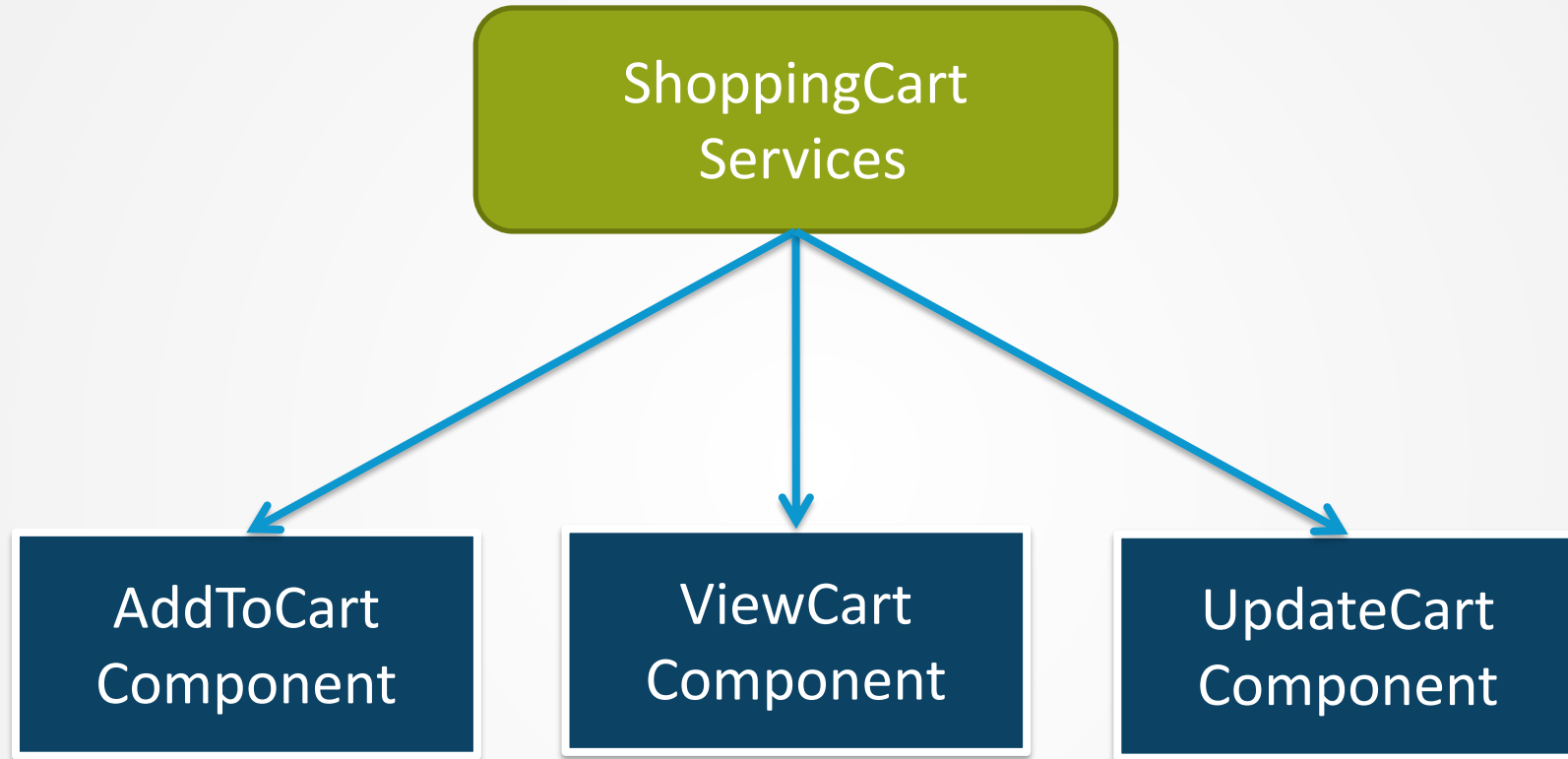
Services in React JS

- Service is just a group of helper functions that handle some operations particularly and can be reused across application.
- Eg:
 - Data Service that includes getData, updateData, deleteData, createData.....
 - Authentication Service that includes signing in, signing out, getting user info ...

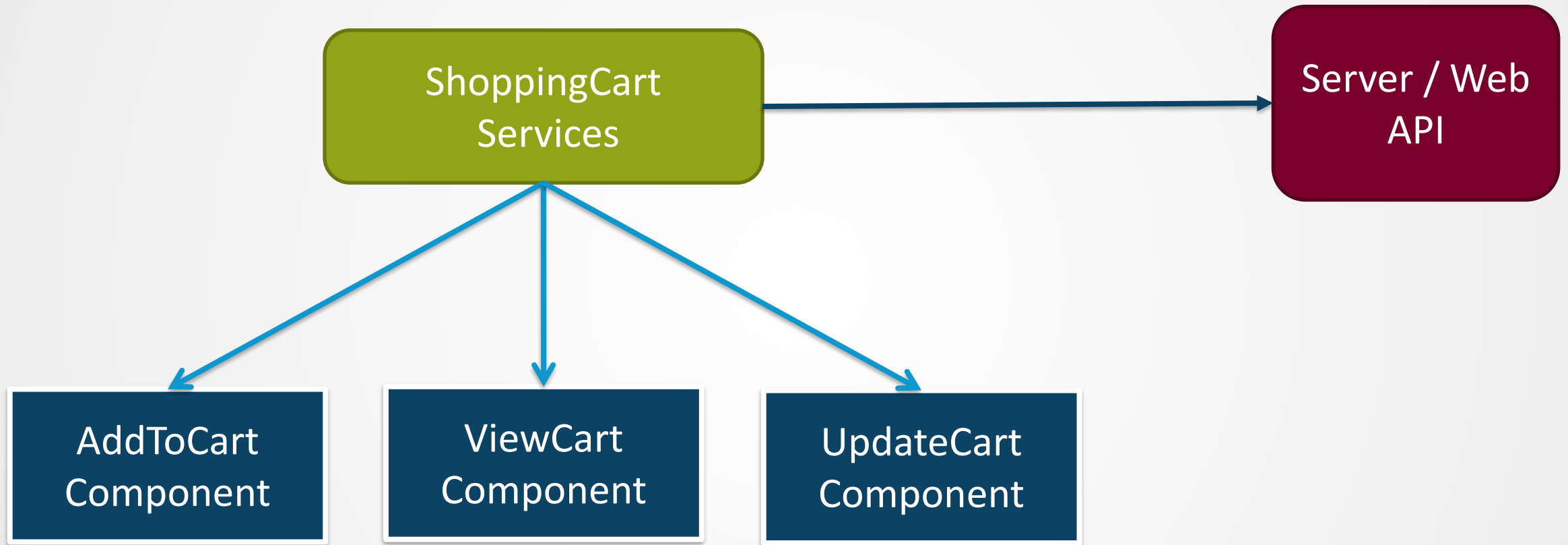
Services in React JS



Services in React JS



Services in React JS



React Application

Component

Dept Service
Methods - CRUD

Get

AXIOS Lib.

Response

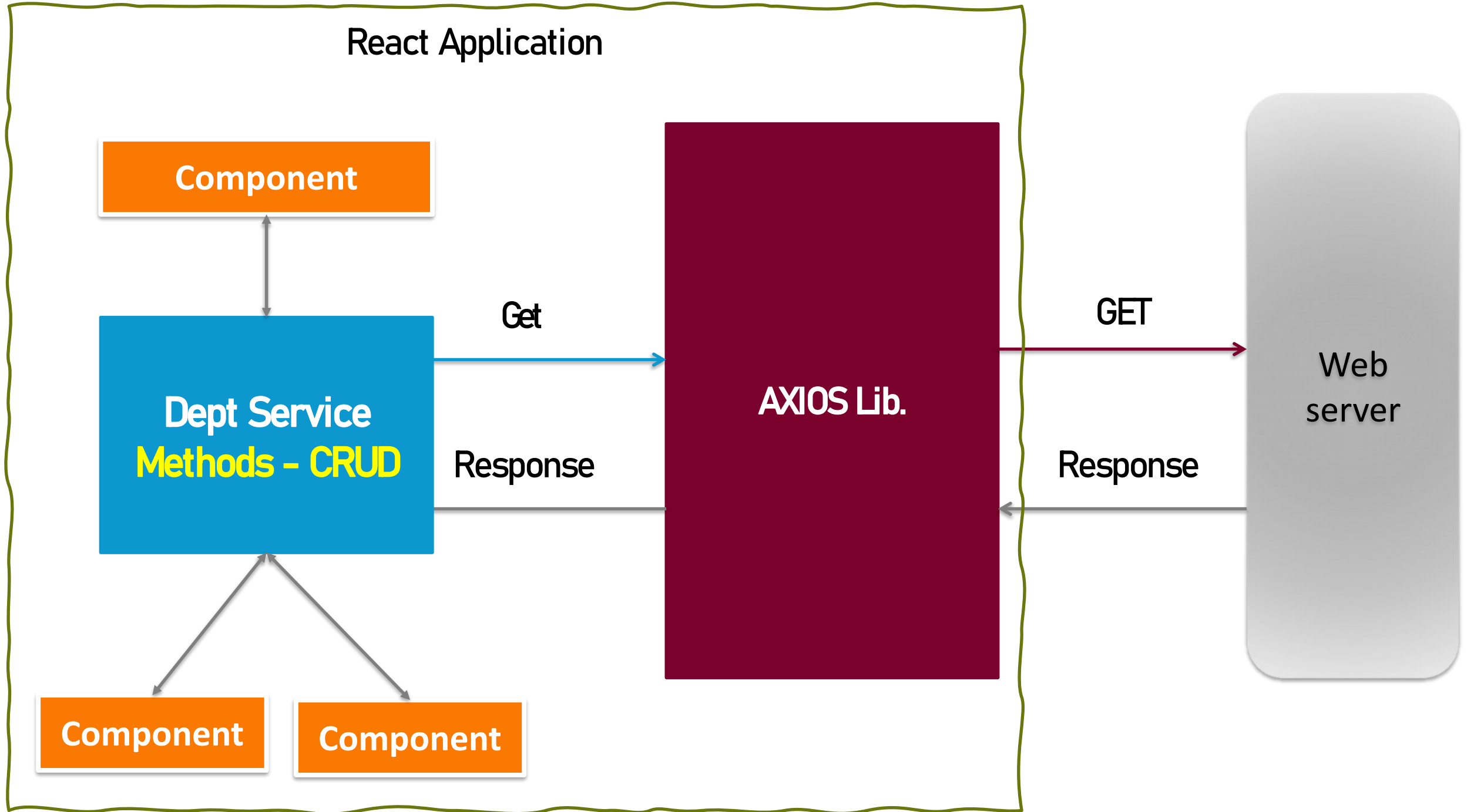
GET

Web
server

Response

Component

Component



Services in React JS

```
let dataSericeObj = {};
```

DataService.js

```
dataSericeObj.getAllDepts = function()  
{  
    // code to perform the operation  
};  
  
....  
export default dataSericeObj;
```

App.js

```
import dataSericeObj from "../DataService";  
  
function App() {  
    dataSericeObj .getAllDepts();  
    ....  
}  
  
export default App;
```

Practice Hands-On : CRUD on JSON-Server

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Hands-On Implementation

Practice Hands-Ons

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