

Node FSD Training



Narasimha

Sr. Corporate Trainer, Mentor

tnrao.trainer@gmail.com

Week-5: Schedule for NodeJS FSD Training

Day#	Date	Topic
Day-21	08-May-2024	HTML & CSS
Day-22	09-May-2024	React 18 : Intro, Env. setup, Components
Day-23	10-May-2024	React 18: Props, State, Event Handling
Day-24	13-May-2024	React 18 : API Calls using AXIOS
Day-25	14-May-2024	React 18

Http Client Programming



Narasimha

Sr. Corporate Trainer, Mentor

tnrao.trainer@gmail.com

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

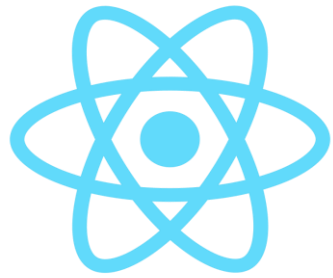
Server Communication

- 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

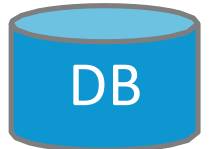
Web server

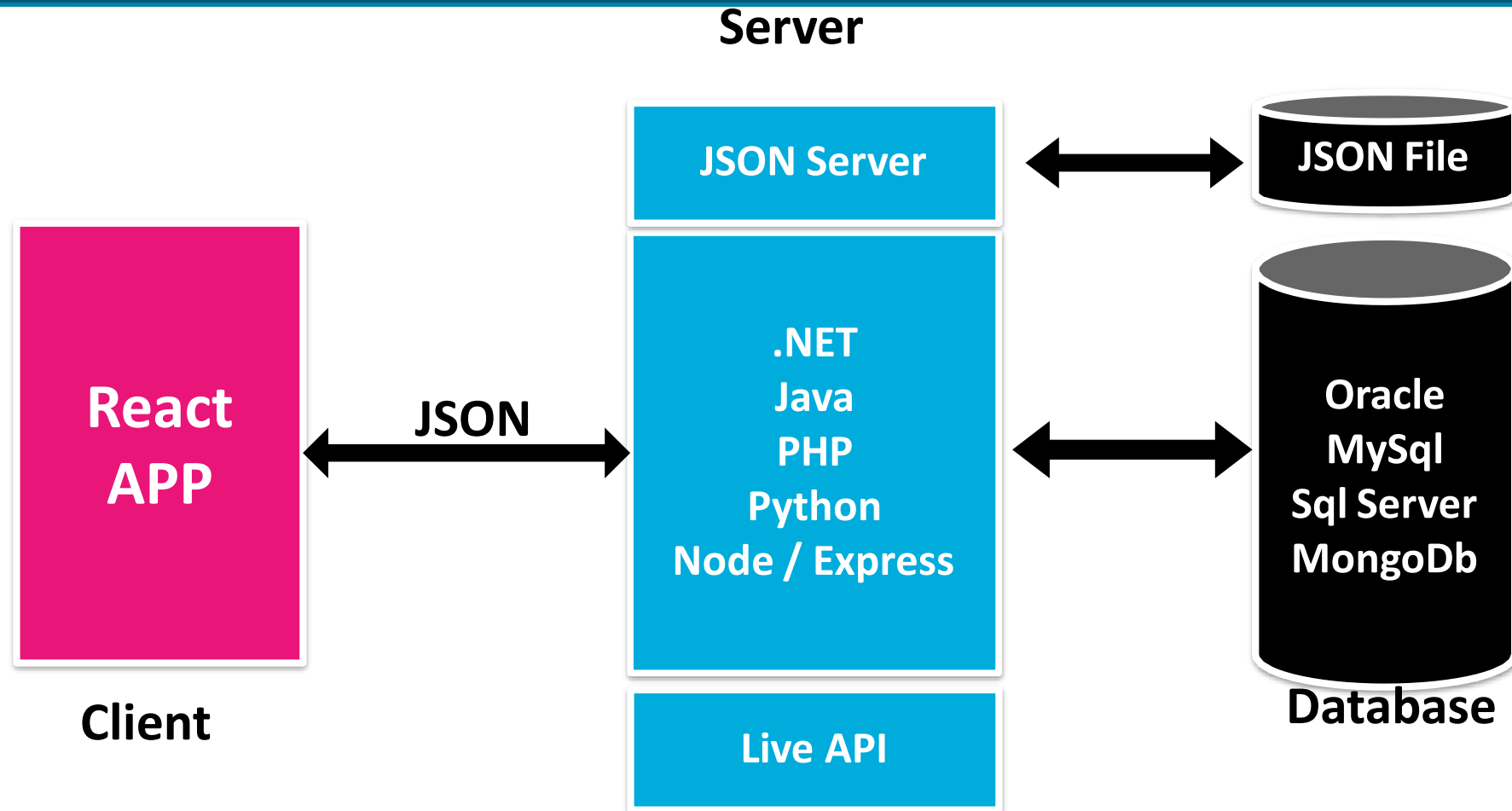


<http://www.abc.com/api/products>

Response (JSON)

Web Service
(API)



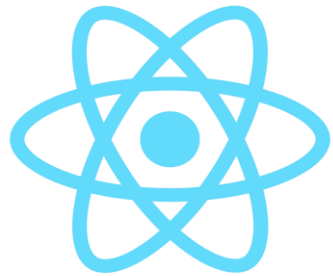


Axios Package - Usage

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

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



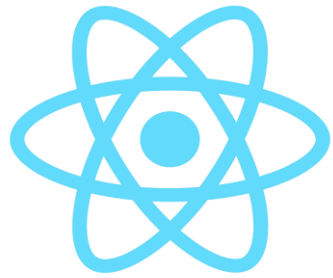


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Demo

Live API communication



CRUD Operations using AXIOS Package

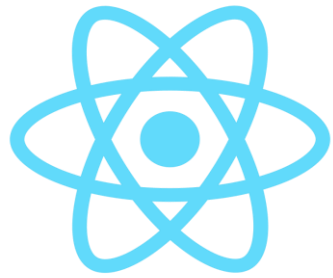
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Axios Methods for CRUD

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





Configure JSON Server

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Configure JSON Server

1. `npm i -g json-server@0.17.4`
2. Create a `db_depts.json` file in a directory

```
{  
  "depts": [  
    { "Deptno": 10, "Dname": "Accounts", "Loc": "Hyd"},  
    { "Deptno": 20, "Dname": "Sales", "Loc": "Pune"}  
  ]  
}
```

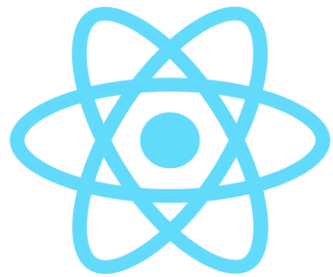
3. Command to start json-server

```
json-server --watch db_depts.json
```

```
json-server --watch --id deptno --port 3500 db_depts.json
```

4. `http://localhost:3500/depts`





Perform AJAX Operations using Data Services

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React Application

Component

Data Service
Methods – CRUD

1. getAllDepartment,
2. getDepartmentById,
3. addDepartment,
4. updateDepartment,
5. deleteDepartment

Component

Component

Get

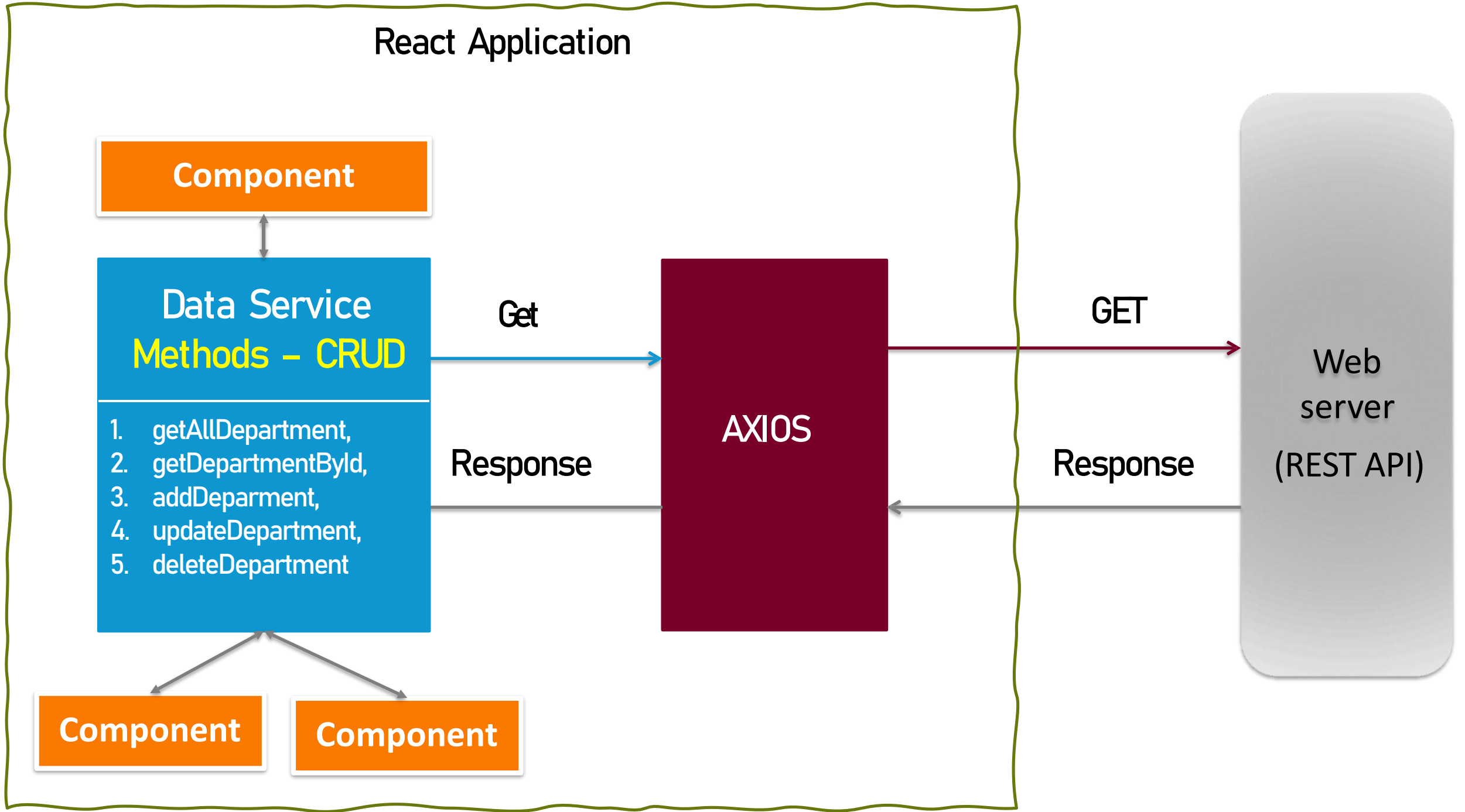
Response

AXIOS

GET

Response

Web
server
(REST API)





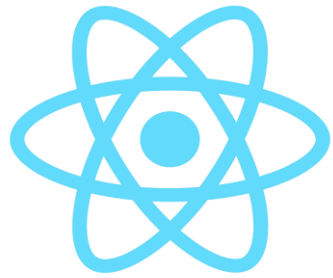
Hands-On Implementation

Practice Hands-Ons

Narasimha

Sr. Corporate Trainer, Mentor

9030005961, tnrao.trainer@gmail.com



Working with class component in React

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Class components in React JS

```
import React from 'react';

class ClassDemo1 extends React.Component {
  constructor(props) {
    super(props);
    this.state = { result : "Welcome Guest User" };
    this.getDataButton_click = this.getDataButton_click.bind(this);
  }

  getDataButton_click() {
    this.setState({ result : "Welcome Admin User" });
  }
}
```



Class components in React JS

```
render(){  
  return (<>  
    <h3>Working with class components in React </h3>  
    <p> {this.props.message} </p>  
    <input type="button" onClick={this.getDataButton_click} value="Get Data" />  
    {this.state.result}  
  </>);  
}  
}  
  
export default ClassDemo1;
```





Narasimha

Sr. Corporate Trainer, Mentor

9030005961, tnrao.trainer@gmail.com