strategy | consulting | digital | technology | operations

REACTJS – MODULE 7

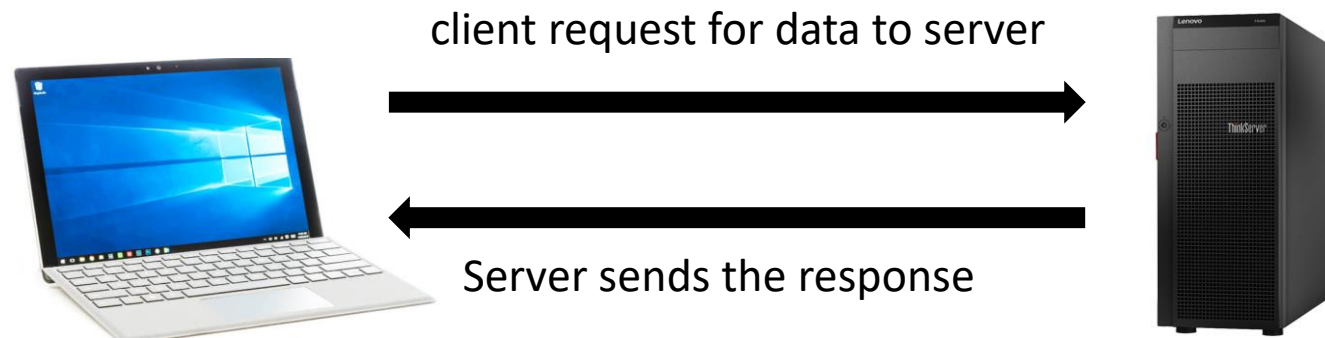# INTRODUCTION TO AXIOS (HTTP CLIENT)

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AGENDA

- What is http client

- Introduction to axios

- Demo

- Activity

Introduction to HTTP

HTTP is a connection oriented data transfer protocol, using this protocol data will be transmitted over the network

Whenever the client require the data it will make a request to server and server will provide the data

client request for data to server

Server sends the response

Introduction to HTTP Client - AXIOS

The request is made by bowser or Http clients to server using some of the methods like get, post, put etc

The most commonly used methods are get and post. Get method is considered as safe because it is used only to retrieve the data

AXIOS is one of the Http client which uses different request methods to make a request to server

In this module we will see how axios can be used to make http request.

Introduction to HTTP Client – AXIOS (cont…)

AXIOS is a http client and it is based on javascript promise concept

Promises are basically used to manage asynchronous requests, promises will be either resolved or rejected

The first step is to install axios using npm

npm install axios - -save-dev

```
C:\reactdemos\axiosexample>npm install axios --save-dev
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.1.2 (node_modules\react-scripts\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.1.2: wanted {"os":"darwin","arch":"any
"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.1.3 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.1.3: wanted {"os":"darwin","arch":"any
"} (current: {"os":"win32","arch":"x64"})

+ axios@0.17.1
added 230 packages and updated 1 package in 76.616s
```

Demo - AXIOS

```javascript
import React, { Component } from 'react';
import axios from 'axios';
class HttpDemo extends Component {
    constructor() {
        super();
        axios.get(" https://jsonplaceholder.typicode.com/posts")
            .then((response) => {
                console.log("Response=" + JSON.stringify(response.data));


            })
            .catch((error) => {
                console.log('There is error')
            })
    }
    render() {
        return (
            <div>
                <h3>AXIOS HTTP Client</h3>
            </div>
        );
    }
}
export default HttpDemo;
```

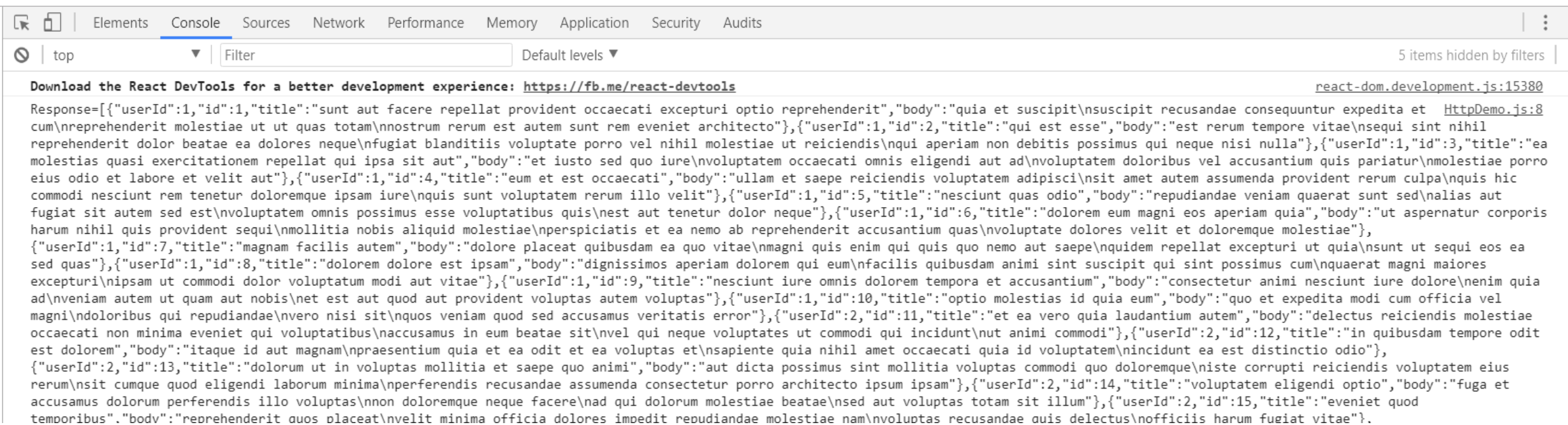# Demo – AXIOS – Explanation

```
import React, { Component } from 'react';
import axios from 'axios';
class HttpDemo extends Component {
    constructor() {
        super();
        axios.get(" https://jsonplaceholder.typicode.com/posts")
            .then((response) => {
                console.log("Response=" + JSON.stringify(response.data));

            })
            .catch((error) => {
                console.log('There is error')
            })
    }
    render() {
        return (
            <div>
                <h3>AXIOS HTTP Client</h3>
            </div>
        );
    }
}
export default HttpDemo;
```

As axios is already installed, it has to be imported in the code to utilize its functionalities

Get method is invoked using axios(Http client). Get method require url . In this example we are using JSONPlaceholder which is fake REST API for testing and prototyping only.

This API holds data in json format which will be requested by axios

Demo – AXIOS – Explanation(Cont...)

```
import React, { Component } from 'react';
import axios from 'axios';
class HttpDemo extends Component {
    constructor() {
        super();
        axios.get(" https://jsonplaceholder.typicode.com/posts")
            .then((response) => {
                console.log("Response=" + JSON.stringify(response.data));

            })
            .catch((error) => {
                console.log('There is error')
            })
    }
    render() {
        return (
            <div>
                <h3>AXIOS HTTP Client</h3>
            </div>
        );
    }
}
export default HttpDemo;
```

As mentioned Axios is promise based Http client, which will be resolved on successful completion of the request, otherwise the request will be rejected

"then" section will be executed on successful completion of the request. The response will be properly formatted in json and displayed on the console

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Demo – AXIOS – Explanation(Cont…)

```jsx
import React, { Component } from 'react';
import axios from 'axios';
class HttpDemo extends Component {
    constructor() {
        super();
        axios.get(" https://jsonplaceholder.typicode.com/posts")
            .then((response) => {
                console.log("Response=" + JSON.stringify(response.data));

            })
            .catch((error) => {
                console.log('There is error')
            })
    }
    render() {
        return (
            <div>
                <h3>AXIOS HTTP Client</h3>
            </div>
        );
    }
}
export default HttpDemo;
```
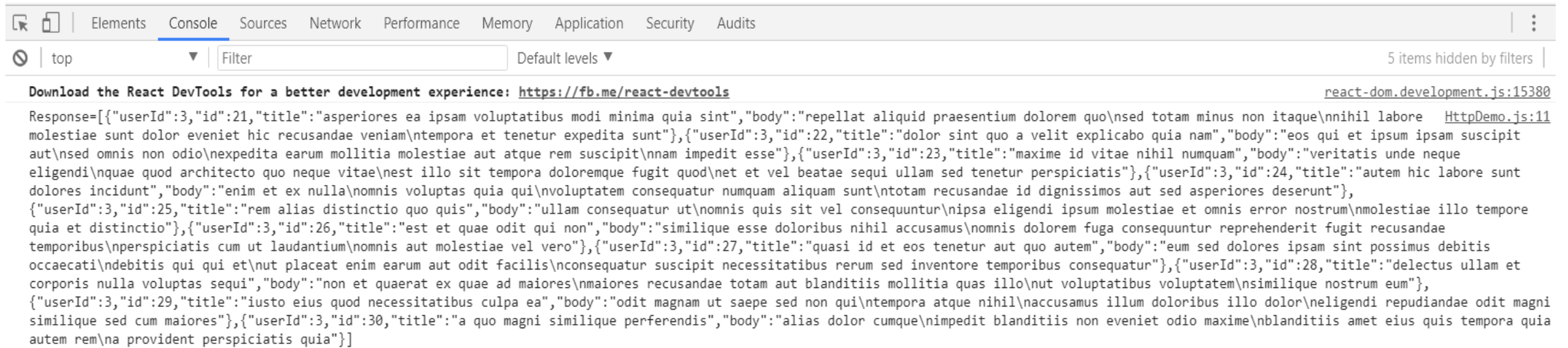
"catch" section will be executed if the request is rejected and error message is displayed on the console

Demo – AXIOS – Explanation(Cont…)

Output on browser console

Passing parameter in Get request

While requesting data from REST API , it is also possible that client may need only specific data instead of complete data

This can be achieved by passing parameter in the get request

Parameter can be passed either directly in the url or by defining it as "params" within get request

Demo - Passing parameter in Get request

Modify existing component(HttpDemo.js)

```jsx
import React, { Component } from 'react';
import axios from 'axios';
class HttpDemo extends Component {
    constructor() {
        super();
        axios.get(" https://jsonplaceholder.typicode.com/posts",{
            params:{
                userId:3
            }
        }).then((response) => {
            console.log("Response=" + JSON.stringify(response.data));

        }).catch((error) => {
            console.log('There is error')
        })
    }
    render() {
        return (
            <div>
                <h3>AXIOS HTTP Client</h3>
            </div>
        );
    }
}
export default HttpDemo;
```

Demo - Passing parameter in Get request - Explanation

```jsx
import React, { Component } from 'react';
import axios from 'axios';
class HttpDemo extends Component {
    constructor() {
        super();
        axios.get(" https://jsonplaceholder.typicode.com/posts",{
            params:{
                userId:3
            }
        }).then((response) => {
            console.log("Response=" + JSON.stringify(response.data));

        }).catch((error) => {
            console.log('There is error')
        })
    }
    render() {
        return (
            <div>
                <h3>AXIOS HTTP Client</h3>
            </div>
        );
    }
}
export default HttpDemo;
```

Only the data specific to userID=3 is displayed

Demo - Passing parameter in Get request

Output on browser console

Activity

1. Create new project in firebase

2. Create titles.json file in the localdrive

3. Import titles.json file into firebase project

4. Create a component which will fetch data from titles.json and display the details in console.

MODULE SUMMARY

- Basics of Http

- Http methods and when to use which method

- How axios helps to communicate http

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THANK YOU

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