ExpressWebService

WebService always returns data in JSON or XML or Text

2 types of WebService

1. SOAP webservice (Simple Object Access Protocol)
    a. It always returns data in XML format
    b. Writing these webservice is a tedious task.
2. RESTFul WebService (Representational State transfer)
    a. It uses 4 methods, GET,POST,PUT,DELETE
    b. GET→READ POST→Add/create PUT-→Update DELETE--→delete data PATCH--→partial update

3. In RESTful webservice url should be always nouns, i.e names of resources

/products	Read all products	GET
/products/:id	Read one product	GET
/products/:id	Add product which comes via body of the request	POST
/products/:id	Update product which comes via body of the request	PUT
/products/:id	delete product whose id is passed via id path variable	DELETE
/categories	Read all categories	GET
/products/category/:cid	Read all products of the category cid	GET
/category/:cid	Add a new category which comes via body of the request	POST

ReactJs

React is a front end library, It is a client side library.

React is used to design SPA(single page applaication) applications

React application is divided into multiple components and all these components helps us for designing different portions of the page

If we want to design react application, then follow the given steps

1. Download create-react-app, and then create application, react application name should not include capital letter
   npm install create-react-app -g
   create-react-app myapp

2. Create react application without installing create-react-app
   npx create-react-app myapp

   React application is formed by components

In react there are 2type component

1. Function component
    a. These components are simple javascript function, which return JSX(javascript XML) code
    b. The components are also called as stateless component
2. Class component
    a. These components are simple javascript classes, and has render function, which return jsx
    b. The components are also called as stateful component
    c. React lifecycle methods can be used only in class component

JSX will be compiled and converted into javascript code

To check conversion use following link
https://babeljs.io/repl#?browsers=defaults%2C%20not%20ie%2011%2C%20not%20ie_mob%2011&build=&builtIns=false&corejs=3.21&spec=false&loose=false&code_lz=DwEwlgbgfAUABHYALAjFAKksBnOO6rAD0qsCwArgDZkKJVhQDyAdgKbEO3lfoDuAe06N4iItVjFw0IA&debug=false&forceAllTransforms=false&modules=false&shippedProposals=false&evaluate=false&fileSize=false&timeTravel=false&sourceType=module&lineWrap=true&presets=env%2Creact%2Cstage-2&prettier=false&targets=&version=7.26.2&externalPlugins=&assumptions=%7B%7D

Class component	Function component

import React,{component} from 'react';
class MyComponent extends React.Component{
render(){
return(
 	
 Hello world!!
 Welcome to react js
 	
)
}
}
 	
export default MyComponent;
	function Sayhello(){
	return (
	  Hello world!!
	 Welcome to react programming
	)
	}
	
	export default Sayhello;

It is a stateful component, because we can use built in state object in the class	It is a stateless component, because we can not use built in state object in the component, But we can use state indirectly with the help of a hook, useState();
We can use lifecycle methods in the class component	We cannot use lifecycle methods in functional component, but in functional component there is a hook, which behaves like lifecycle methods useEffect()

It has render function which returns JSX	Function component returns JSX

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