**บทที่ 11 การใช้ Redux ใน React**

**สรุปขั้นตอนการใช้งาน Redux**

**ขั้นตอนที่ 1 กำหนด Reducer**

const initialState = {

data: [

{ id: 1, name: 'Jeerawuth', score: 99},

{ id: 2, name: 'Sombat', score: 84}

]

}

const reducer = (state = initialState, action) => {

return state;

}

export default reducer;

const initialState = {

data: [

{ id: '1', name: 'Jeerawuth', score: 99},

{ id: '2', name: 'Sombat', score: 84}

]

}

const reducer = (state = initialState, action) => {

switch(action.type) {

case 'DEL\_DATA':

     // deleted some data

const deletedState = state;

return deletedState;

case 'ADD\_DATA':

// added new data

const addedState = state;

return addedState;

default:

break;

}

return state;

}

export default reducer;

**ขั้นตอนที่ 2 สร้าง store**

import React from 'react';

import 'bootstrap/dist/css/bootstrap.min.css';

import { createStore } from 'redux';

import reducer from './reducer';

function App() {

const store = createStore(reducer);

return (

<div className="container">

</div>

);

}

export default App;

**ขั้นตอนที่ 3 นำ store มาใช้ ในแอพพลิเคชัน**

import React from 'react';

import { createStore } from 'redux';

import reducer from './reducer';

import { Provider } from 'react-redux';

function App() {

const store = createStore(reducer);

return (

<Provider store={store}>

<div className="container">

</div>

</Provider>

);

}

export default App;

**ขั้นตอนที่ 4 กำหนดให้คอมโปเน้นท์สามารถใช้ข้อมูลจาก store**

import React, { Component } from 'react';

import { connect } from 'react-redux';

class TestRedux extends Component {

render() {

return (

<div>

Hello Test Redux Component

</div>

)

}

}

export default connect()(TestRedux);

**ขั้นตอนที่ 5 แปลงค่า state ให้กลายเป็น props**

import React, { Component } from 'react';

import { connect } from 'react-redux';

class TestRedux extends Component {

render() {

return (

<div>

Hello Test Redux Component

</div>

)

}

}

const mapStateToProps = state => {

return {

stateFromStore : state.data

}

}

export default connect(mapStateToProps)(TestRedux);

**ขั้นตอนที่ 6 แปลงค่า dispatch ให้กลายเป็น props**

import React, { Component } from 'react';

import { connect } from 'react-redux';

class TestRedux extends Component {

render() {

return (

<div>

Hello Test Redux Component

</div>

)

}

}

const mapStateToProps = state => {

return {

stateFromStore : state.data

}

}

const mapDispatchToProps = dispatch => {

return {

dispatchFromStore : () => {

     return dispatch({type:'MY\_ACTION'});

}

}

}

export default connect(mapStateToProps, mapDispatchToProps)(TestRedux);

**ไฟล์ App.js**

import React from 'react';

import { BrowserRouter, Route, Switch } from 'react-router-dom';

import 'bootstrap/dist/css/bootstrap.min.css';

import { createStore } from 'redux';

import reducer from './reducer';

import { Provider } from 'react-redux';

import StudentLists from './Student-lists';

import AddStudent from './Add-student';

import EditStudent from './Edit-student';

import Header from './Header';

import PageNotFound from './Page-not-found';

function App() {

const store = createStore(reducer);

return (

<Provider store={store}>

<div className="container">

<BrowserRouter>

<Header />

<Switch>

<Route exact path="/edit/:id" component={EditStudent} />

<Route exact path="/add" component={AddStudent} />

<Route exact path="/" component={StudentLists} />

<Route component={PageNotFound} />

</Switch>

</BrowserRouter>

</div>

</Provider>

);

}

export default App;

**ไฟล์ reducer.js**

const initialState = {

students: [

{ id: '1', name: 'Jeerawuth', score: 99},

{ id: '2', name: 'Sombat', score: 89},

{ id: '3', name: 'Worrawan', score: 73}

]

}

const reducer = (state = initialState, action) => {

const allStudents = [...state.students];

switch(action.type) {

case 'DEL\_STUDENT':

const newState = {

...state,

students: state.students.filter(item => item.id !== action.playload)

}

return newState;

case 'ADD\_STUDENT':

const addedState = {

...state,

students: [action.playload, ...state.students]

}

return addedState;

case 'EDIT\_STUDENT':

const indexForEdit = allStudents.findIndex((item) => {

return item.id === action.playload.id;

});

allStudents[indexForEdit] = {

id: action.playload.id,

name: action.playload.name,

score: action.playload.score

}

const editedState = {

...state,

students: allStudents

}

return editedState;

default:

break;

}

return state;

}

export default reducer;

**ไฟล์ Header.js**

import React, { Component } from 'react'

import { Link } from 'react-router-dom';

class Header extends Component {

state = {

collapse: false

}

render() {

return (

<nav className="navbar navbar-expand-lg navbar-light bg-light mx-auto text-center">

<Link className="navbar-brand" to="/">Home</Link>

<button className="navbar-toggler"

type="button" data-toggle="collapse"

data-target="#navbarNav" aria-controls="navbarNav"

aria-expanded="true" aria-label="Toggle navigation">

<span className="navbar-toggler-icon"

onClick={() => {

this.setState({ collapse: !this.state.collapse} );

console.log(this.state.collapse);

console.log('OK click');

}}

></span>

</button>

<div className={

this.state.collapse?

'collapse navbar-collapse show text-center pt-3':

'collapse navbar-collapse'

}>

<ul className="navbar-nav">

<li className="nav-item active">

<Link className="nav-link" to="/">All Students</Link>

</li>

<li className="nav-item">

<Link className="nav-link" to="/add">Add Student</Link>

</li>

</ul>

</div>

</nav>

)

}

}

export default Header;

**ไฟล์ Student.js**

import React, { Component } from 'react';

import { connect } from 'react-redux';

import { Link } from 'react-router-dom'

class Student extends Component {

render() {

const delFn = this.props.deleteStudentAtStore;

return (

<div className="card">

<div className="card-header">

name: {this.props.data.name}

<button

className="btn btn-outline-danger btn-sm float-right ml-1"

onClick={delFn.bind(this, this.props.data.id)}

>ลบ</button>

<Link to={`/edit/${this.props.data.id}`}>

<button

className="btn btn-success btn-sm float-right"

>แก้ไข</button>

</Link>

</div>

<div className="card-body">

score: {this.props.data.score}

</div>

</div>

)

}

}

const mapDispatchToProps = dispatch => {

return {

deleteStudentAtStore : (id) => {

return dispatch({type: 'DEL\_STUDENT', playload: id})

}

}

}

export default connect(null, mapDispatchToProps)(Student);

**ไฟล์ Student-lists.js**

import React, { Component } from 'react';

import Student from './Student';

import { connect } from 'react-redux';

class StudentLists extends Component {

render() {

const allStudents = this.props.studentsFromStore;

return (

<div className="row">

{

allStudents.map(item =>

(

<div className="col-12 col-sm-6 col-lg-4 mt-3" key={item.id}>

<Student data={item} />

</div>

)

)

}

</div>

)

}

}

const mapStateToProps = state => {

return {

studentsFromStore : state.students

}

}

export default connect(mapStateToProps, null)(StudentLists);

Note

export default connect(mapStateToProps, null)(StudentLists);

export default connect(mapStateToProps)(StudentLists);

**ไฟล์ Add-student.js**

import React, { Component } from 'react';

import { connect } from 'react-redux';

class AddStudent extends Component {

state = {

name: '',

score: ''

}

onChangeData = (event) => {

this.setState(

{

[event.target.name] : event.target.value

}

)

}

onSubmitStudentForm = (data, event) => {

event.preventDefault();

const newData = {

id: new Date().getTime().toString(),

name: data.name,

score: data.score

}

this.props.addStudentAtStore(newData);

this.props.history.push('/');

}

render() {

return (

<div className="row mt-3 mb-5 ml-5 mr-5">

<div className="card col-12 col-sm-8 col-lg-6 mx-auto">

<div className="card-body">

<form onSubmit={this.onSubmitStudentForm.bind(this, this.state)}>

<div className="block-4 text-center">

<img

className="img img-thumbnail mt-5 mb-3"

src="http://lorempixel.com/150/150/sports/" alt="โลโก้"

/>

</div>

<div className="form-group">

<label>Name</label>

<input

type="text"

className="form-control"

name="name"

value={this.state.name}

onChange={this.onChangeData} />

</div>

<div className="form-group">

<label>Score</label>

<input

type="text"

className="form-control"

name="score"

value={this.state.score}

onChange={this.onChangeData} />

</div>

<div className="form-group text-center pt-3">

<button

onClick={() => this.props.history.push('/')}

className="btn btn-outline-success btn-sm mr-1">ยกเลิก</button>

<button

type="submit"

className="btn btn-sm btn-primary ml-1">เพิ่ม</button>

</div>

</form>

</div>

</div>

</div>

)

}

}

const mapDispatchToProps = dispatch => {

return {

addStudentAtStore : (newStudentData) => {

return dispatch({type: 'ADD\_STUDENT', playload: newStudentData})

}

}

}

export default connect(null, mapDispatchToProps)(AddStudent);

**ไฟล์ Edit-student.js**

import React, { Component } from 'react';

import { connect } from 'react-redux';

class EditStudent extends Component {

state = {

id: '',

name: '',

score: ''

}

onChangeData = (event) => {

this.setState(

{

[event.target.name]: event.target.value

}

)

}

componentWillMount() {

const userId = this.props.match.params.id;

const student = this.getCurrentStudent(userId);

if(student) {

this.setState({

id: student.id,

name: student.name,

score: student.score

})

} else {

this.props.history.push('/');

}

}

getCurrentStudent(id) {

const allStudents = this.props.studentsFromStore;

const [student] = allStudents.filter((item) => {

return item.id === id;

});

return student;

}

onSubmitStudentForm = (data, event) => {

event.preventDefault();

const newData = {

id: data.id,

name: data.name,

score: data.score

}

this.props.editStudentAtStore(newData);

this.props.history.push('/');

}

render() {

return (

<div className="row mt-3 mb-5 ml-5 mr-5">

<div className="card col-12 col-sm-8 col-lg-6 mx-auto">

<div className="card-body">

<form onSubmit={this.onSubmitStudentForm.bind(this, this.state)}>

<div className="form-group">

<label>Name</label>

<input

type="text"

className="form-control"

name="name"

value={this.state.name}

onChange={this.onChangeData} />

</div>

<div className="form-group">

<label>Score</label>

<input

type="text"

className="form-control"

name="score"

value={this.state.score}

onChange={this.onChangeData} />

</div>

<div className="form-group text-center pt-3">

<button

onClick={() => this.props.history.push('/')}

className="btn btn-outline-success mr-1">ยกเลิก</button>

<button

type="submit"

className="btn btn-primary ml-1">แก้ไข</button>

</div>

</form>

</div>

</div>

</div>

)

}

}

const mapStateToProps = state => {

return {

studentsFromStore : state.students

}

}

const mapDispatchToProps = dispatch => {

return {

editStudentAtStore : (id) => {

return dispatch({type: 'EDIT\_STUDENT', playload: id})

}

}

}

export default connect(mapStateToProps, mapDispatchToProps)(EditStudent);

**ไฟล์ Page-not-found.js**

import React, { Component } from 'react'

class PageNotFound extends Component {

render() {

return (

<div className="row mt-5 mb-5">

<div className="col-10 text-center p-5 mx-auto">

<h1 className="display-4 mb-4 pb-3">

<span className="text-danger">ERROR 404</span> Page Not Found!!

</h1>

<p className="lead">ขออภัยในความไม่สะดวก</p>

</div>

</div>

)

}

}

export default PageNotFound;