

TUGAS INDIVIDU
Pemrograman Berbasis Framework

Apa itu Redux

Oleh :

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Kelas : TI 3A



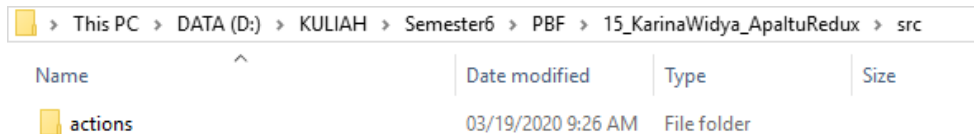
PROGRAM STUDI D-IV TEKNIK INFORMATIKA
JURUSAN TEKNOLOGI INFORMASI
POLITEKNIK NEGERI MALANG

2020

Praktikum

Langkah-Langkah :

1. Install redux, dengan 'npm install redux' di terminal
2. Install react-redux, dengan 'npm install react-redux' di terminal
3. Buat folder dalam src dengan nama 'actions'



4. Kemudian tambahkan file dengan nama actionCreator dengan script sebagai berikut :

```
JS actionCreator.js x
1  import { ADD_TODO, REMOVE_TODO, TOGGLE_TODO, SET_VISIBILITY_FILTER } from './actionsTypes.js'
2
3  let TodoId = 2
4
5  export const addTodo = text => ({
6    type: ADD_TODO,
7    id: TodoId++,
8    text
9  })
10
11 export const deleteTodo = (id) => ({
12   type: REMOVE_TODO,
13   id: id
14 })
15
16 export const toggleTodo = (id) => ({
17   type: TOGGLE_TODO,
18   id: id
19 })
20
21 export const setVisibilityFilter = filter => ({
22   type: SET_VISIBILITY_FILTER,
23   filter
24 })
```

5. Kemudian tambahkan file actionTypes.js dengan script sebagai berikut :

```
JS actionTypes.js x
1  export const ADD_TODO = 'ADD_TODO'
2  export const TOGGLE_TODO = 'TOGGLE_TODO'
3  export const REMOVE_TODO = 'REMOVE_TODO'
4  export const SHOW_ALL = 'SHOW_ALL'
5  export const SHOW_COMPLETED = 'SHOW_COMPLETED'
6  export const SHOW_ACTIVE = 'SHOW_ACTIVE'
7  export const SET_VISIBILITY_FILTER = 'SET_VISIBILITY_FILTER'
```

6. Di dalam folder src buat folder dengan nama containers

File Explorer path: This PC > DATA (D:) > KULIAH > Semester6 > PBF > 15_KarinaWidya_ApaltuRedux > src

Name	Date modified	Type	Size
actions	03/19/2020 9:26 AM	File folder	
containers	03/19/2020 9:28 AM	File folder	

7. Kemudian dalam folder containers buat file dengan nama createTodo

```
JS CreateTodo.js x
1  import React, { Component } from 'react'
2  import { connect } from 'react-redux'
3  import { addTodo } from '../actions/actionCreator'
4  import { bindActionCreators } from 'redux'
5
6  class CreateTodo extends Component {
7    constructor(props) {
8      super(props)
9      this.state = {
10        todotext: '',
11      }
12      this.onChangeTodoText = this.onChangeTodoText.bind(this)
13    }
14
15    onChangeTodoText(e) {
16      this.setState({
17        todotext: e.target.value
18      })
19    }
20
21    render() {
22      return (
23        <div className="form-group row">
24          <div className="col-sm-10">
25            <input onChange={this.onChangeTodoText} value={this.state.todotext} type="text" className="form-control"/>
26            <button type="button" onClick={() => this.setState({ todotext: '' })} style={{ marginTop: "25px", margin: "0 10px" }}>Reset</button>
27            <button type="button" onClick={() => { this.props.addTodo(this.state.todotext); this.setState({ todotext: '' }) }}>Add</button>
28          </div>
29        </div>
30      );
31    }
32  }
```

8. Kemudian buat file dengan nama Table.js

```
JS Table.js x
1 import React, { Component } from "react";
2 import { connect } from "react-redux";
3 import {
4   deleteTodo,
5   toggleTodo,
6   setVisibilityFilter
7 } from "../actions/actionCreator";
8 import { SHOW_ALL, SHOW_COMPLETED, SHOW_ACTIVE } from "../actions/actionTypes.js";
9 import { bindActionCreators } from "redux";
10
11 class Table extends Component {
12   render() {
13     return (
14       <div className="col-lg-10 offset-lg-1 col-md-10 col-sm-12 col-xs-12">
15         <nav style={{ marginTop: "60px" }}>
16           <ol className="breadcrumb">
17             <li
18               className={"breadcrumb-item " + (this.props.visibilityFilter === SHOW_ALL ? 'active' : '') }
19               onClick={() => this.props.setVisibilityFilter(SHOW_ALL)}
20             >
21               All
22             </li>
23             <li
24               className={"breadcrumb-item " + (this.props.visibilityFilter === SHOW_COMPLETED ? 'active' : '') }
25               onClick={() => this.props.setVisibilityFilter(SHOW_COMPLETED)}
26             >
27               Completed
28             </li>
29             <li
30               className={"breadcrumb-item " + (this.props.visibilityFilter === SHOW_ACTIVE ? 'active' : '') }
31               onClick={() => this.props.setVisibilityFilter(SHOW_ACTIVE)}
32             >
33               Active
34             </li>
35           </ol>
36         </nav>
37         {this.props.todos.length !== 0 ? (
38           <table
39             style={{ marginTop: "60px" }}
40             className="table table-hover table-dark"
41           >
42             <thead>
43               <tr>
44                 <th scope="col">Todos</th>
45                 <th scope="col">Actions</th>
46               </tr>
47             </thead>
48             <tbody>
49               {this.props.todos.map(todo => (
50                 <tr key={todo.id}>
51                   <td
52                     style={{
53                       textDecoration: todo.completed ? "line-through" : "none"
54                     }}
55                   >
56                     {todo.text} {todo.completed === true ? "(completed)" : ""}
57                   </td>
58                   <td>
```

```

59         <span
60             className="fas fa-minus-circle"
61             onClick={() => this.props.deleteTodo(todo.id)}
62             style={{
63                 color: "white",
64                 fontSize: "20pt",
65                 marginRight: "20px"
66             }}
67         />
68         <span
69             className="fas fa-check-circle"
70             onClick={() => this.props.toggleTodo(todo.id)}
71             style={{ color: "white", fontSize: "20pt" }}
72         />
73     </td>
74 </tr>
75 )}}
76 </tbody>
77
78     ) : (
79         <div
80             style={{ marginTop: "50px" }}
81             className="col-lg-10 col-md-10 col-xs-12 col-sm-12 offset-lg-1"
82         >
83             <div className="alert alert-danger" role="alert">
84                 Todo List is empty or Filter results show no results
85             </div>
86         </div>
87     )}{" "}
88 </div>
89 );
90 }
91 }
92
93 const getVisibleTodos = (todos, filter) => {
94     switch (filter) {
95         case SHOW_ALL:
96             return todos;
97         case SHOW_COMPLETED:
98             return todos.filter(t => t.completed);
99         case SHOW_ACTIVE:
100             return todos.filter(t => !t.completed);
101         default:
102             throw new Error("Unknown filter: " + filter);
103     }
104 };

```

```

105
106 const mapStateToProps = state => {
107   return { todos: getVisibleTodos(state.todos, state.visibilityFilter),
108     visibilityFilter: state.visibilityFilter
109   };
110 };
111
112 const mapDispatchToProps = dispatch => {
113   return bindActionCreators(
114     {
115       deleteTodo,
116       toggleTodo,
117       setVisibilityFilter
118     },
119     dispatch
120   );
121 };
122
123 export default connect(mapStateToProps, mapDispatchToProps)(Table);

```

9. Kemudian edit index.js dengan source code sebagai berikut ini :

```

JS index.js x
1 import React from 'react';
2 import ReactDOM from 'react-dom';
3 import { Provider } from 'react-redux'
4 import { createStore, compose } from 'redux'
5 import MainReducer from '../reducers/MainReducer'
6 import App from './App';
7 import * as serviceWorker from './serviceWorker';
8
9 const store = compose(window.devToolsExtension ? window.devToolsExtension() : f => f)(createStore)(MainReducer)
10
11 ReactDOM.render(<Provider store={store}>
12   <App />
13 </Provider>
14 , document.getElementById('root'));
15 serviceWorker.register();

```

10. Buat folder src dengan nama reducers

📁 > This PC > DATA (D:) > KULIAH > Semester6 > PBF > 15_KarinaWidya_ApaltuRedux > src

Name	Date modified	Type	Size
📁 actions	03/19/2020 9:26 AM	File folder	
📁 containers	03/19/2020 9:28 AM	File folder	
📁 reducers	03/19/2020 9:31 AM	File folder	

11. Kemudian buat file dengan nama FilterReducer.js

```
JS FilterReducer.js ✕
1 import {
2   SHOW_ALL,
3   SET_VISIBILITY_FILTER
4 } from "../actions/actionTypes";
5
6 const visibilityFilter = (state = SHOW_ALL, action) => {
7   switch (action.type) {
8     case SET_VISIBILITY_FILTER:
9       return action.filter;
10    default:
11      return state;
12  }
13 };
14
15 export default visibilityFilter;
```

12. Kemudian tambahkan file dengan nama TodoReducer.js

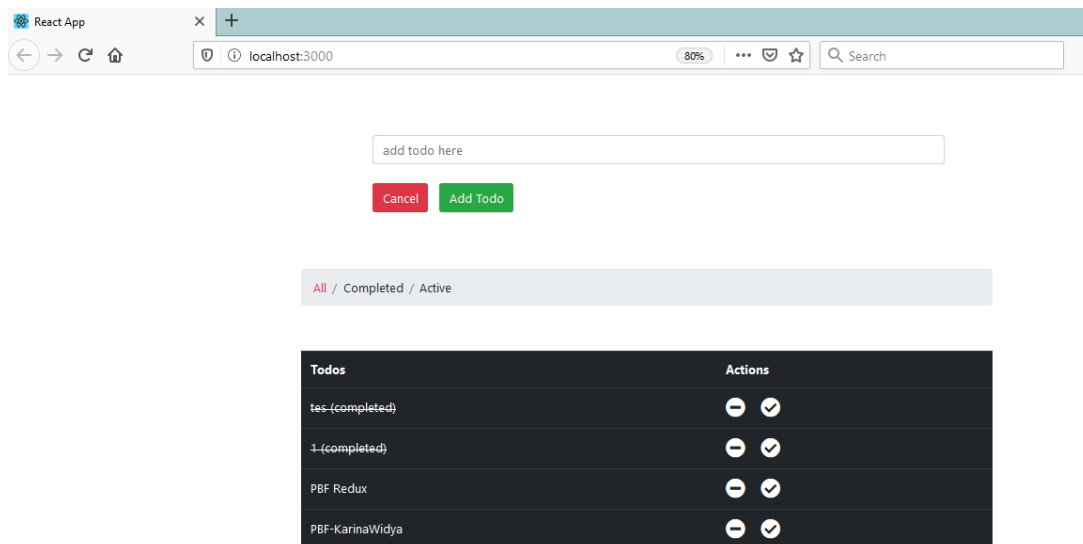
```
JS TodoReducer.js ✕
1 import { ADD_TODO, REMOVE_TODO, TOGGLE_TODO } from '../actions/actionTypes'
2
3 const INITIAL_DATA = []
4
5 const TodoReducer = (state=INITIAL_DATA, action) => {
6   switch (action.type){
7     case ADD_TODO:
8       return [
9         ...state,{
10           id: action.id,
11           text: action.text,
12           completed: false,
13         }
14       ]
15     case TOGGLE_TODO:
16       return state.map(todo =>
17         (todo.id === action.id)
18         ? {...todo, completed: !todo.completed}
19         : todo
20       )
21     case REMOVE_TODO:
22       const numIndex = parseInt(action.id)
23       return state.filter(todo => todo.id !== numIndex);
24     default:
25       return state
26   }
27 }
28
29 export default TodoReducer
```

13. Buat file dengan nama MainReducer.js

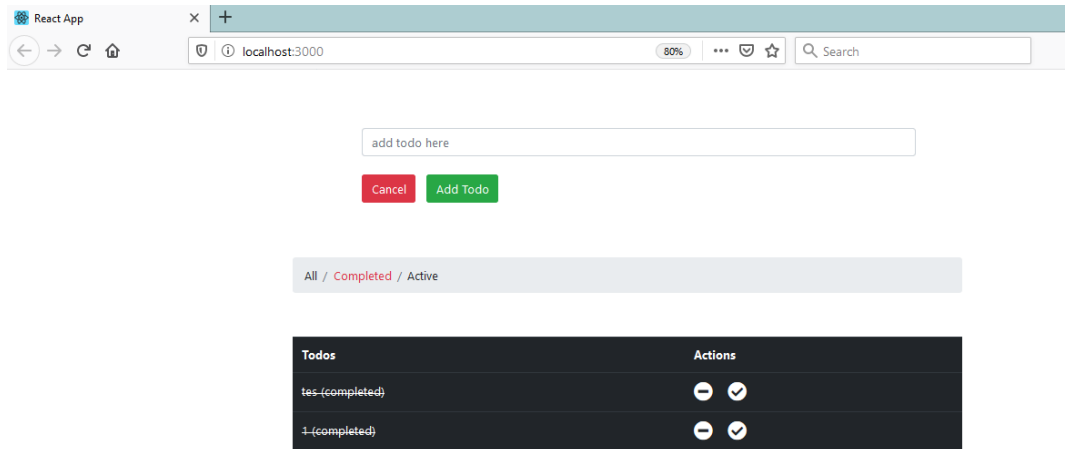
```
JS MainReducer.js x
1 import { combineReducers } from 'redux'
2 import todos from './TodoReducer'
3 import visibilityFilter from './FilterReducer'
4
5 export default combineReducers({
6   todos,
7   visibilityFilter
8 })
```

Hasil running :

- Tampilan pada menu All



- Tampilan pada menu completed, yaitu todo list yang sudah diklik action centang



- Tampilan pada menu active, yang ada di menu all yang belum diberi actions centang ataupun minus

