Exercise (Instructions): Redux Thunk

Objectives and Outcomes

Redux Thunk middleware allows you to write action creators that return a function instead of an action. In this exercise you will see the use of redux thunk to return a function. At the end of this exercise you will be able to:

- Use Redux Thunk middleware to return a function instead of an action
- Use a logger to print a log of actions initiated on the Redux store.

Installing Redux Thunk and Logger

- Install Redux Thunk and Logger as shown below:

```
yarn add redux-thunk@2.2.0
yarn add redux-logger@3.0.6
```

- Then open *configureStore.js* and update it to use the Thunk and Logger as follows:

```
import {createStore, combineReducers, applyMiddleware } from 'redux';

. . .

import thunk from 'redux-thunk';
import logger from 'redux-logger';

. . .

        combineReducers({
            dishes: Dishes,
            comments: Comments,
            promotions: Promotions,
            leaders: Leaders
        }),
        applyMiddleware(thunk, logger)

. . .
```

- Next, open *ActionTypes.js* and add new action types as follows:

```
. . .

export const DISHES_LOADING = 'DISHES_LOADING';
export const DISHES_FAILED = 'DISHES_FAILED';
export const ADD_DISHES = 'ADD_DISHES';
```

- Then open ActionCreators.js and add new actions:

```
. . .

import { DISHES } from '../shared/dishes';

. . .


export const fetchDishes = () => (dispatch) => {

    dispatch(dishesLoading(true));

    setTimeout(() => {
        dispatch(addDishes(DISHES));
    }, 2000);
}

export const dishesLoading = () => ({
    type: ActionTypes.DISHES_LOADING
});

export const dishesFailed = (errmess) => ({
    type: ActionTypes.DISHES_FAILED,
    payload: errmess
});

export const addDishes = (dishes) => ({
    type: ActionTypes.ADD_DISHES,
    payload: dishes
});
```

- Next, open dishes.js and add the code to respond to actions as follows:

```
import * as ActionTypes from './ActionTypes';

export const Dishes = (state = { isLoading: true,
    errMess: null,
    dishes:[]}, action) => {
    switch (action.type) {
        case ActionTypes.ADD_DISHES:
            return {...state, isLoading: false, errMess: null, dishes: action
              .payload};

        case ActionTypes.DISHES_LOADING:
            return {...state, isLoading: true, errMess: null, dishes: []}

        case ActionTypes.DISHES_FAILED:
            return {...state, isLoading: false, errMess: action.payload};

        default:
            return state;
    }
};
```

- Add a new component named *LoadingComponent.js* to display a loading message as follows:

```
import React from 'react';

export const Loading = () => {
    return(
        <div className="col-12">
            <span className="fa fa-spinner fa-pulse fa-3x fa-fw text-primary"></span>
            <p>Loading . . .</p>
        </div>
    );
};
```

- Now we will update the remaining components to use the actions. First, open *MainComponent.js* and update it as follows:

```
. . .

import { addComment, fetchDishes } from '../redux/ActionCreators';

. . .

  fetchDishes: () => { dispatch(fetchDishes())}

. . .

  componentDidMount() {
    this.props.fetchDishes();
  }

. . .

    const HomePage = () => {
      return(
          <Home
              dish={this.props.dishes.dishes.filter((dish) => dish.featured)[0]}
              dishesLoading={this.props.dishes.isLoading}
              dishesErrMess={this.props.dishes.errMess}
              promotion={this.props.promotions.filter((promo) => promo.featured)[0]}
              leader={this.props.leaders.filter((leader) => leader.featured)[0]}
          />
      );
    }

    const DishWithId = ({match}) => {
      return(
          <DishDetail dish={this.props.dishes.dishes.filter((dish) => dish.id === parseInt(match.params.dishId,10))[0]}
            isLoading={this.props.dishes.isLoading}
            errMess={this.props.dishes.errMess}
            comments={this.props.comments.filter((comment) => comment.dishId === parseInt(match.params.dishId,10))}
            addComment={this.props.addComment}
          />
      );
    };

. . .
```

- Open *DishdetailComponent.js* and update it as follows:

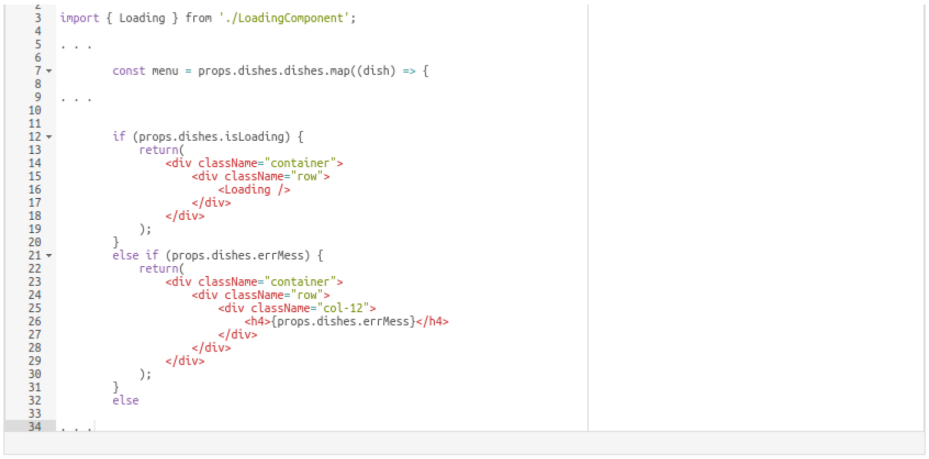
```
. . .

import { Loading } from './LoadingComponent';

. . .


        if (props.isLoading) {
            return(
                <div className="container">
                    <div className="row">
                        <Loading />
                    </div>
                </div>
            );
        }
        else if (props.errMess) {
            return(
                <div className="container">
                    <div className="row">
                        <h4>{props.errMess}</h4>
                    </div>
                </div>
            );
        }
        else if (props.dish != null)

. . .
```

- Open *HomeComponent.js* and update it as follows:

```
. . .

import { Loading } from './LoadingComponent';

. . .


function RenderCard({item, isLoading, errMess}) {

    if (isLoading) {
        return(
                <Loading />
        );
    }
    else if (errMess) {
        return(
                <h4>{errMess}</h4>
        );
    }
    else
        return(
            <Card>
                <CardImg src={item.image} alt={item.name} />
                <CardBody>
                <CardTitle>{item.name}</CardTitle>
                {item.designation ? <CardSubtitle>{item.designation}</CardSubtitle> : null }
                <CardText>{item.description}</CardText>
                </CardBody>
            </Card>
        );

}

. . .

                    <RenderCard item={props.dish} isLoading={props.dishesLoading} errMess={props.dishesErrMess}  />

. . .
```

- Finally, update *MenuComponent.js* as follows:

```
. . .
```



```
import { Loading } from './LoadingComponent';

. . .

        const menu = props.dishes.dishes.map((dish) => {

. . .


        if (props.dishes.isLoading) {
            return(
                <div className="container">
                    <div className="row">
                        <Loading />
                    </div>
                </div>
            );
        }
        else if (props.dishes.errMess) {
            return(
                <div className="container">
                    <div className="row">
                        <div className="col-12">
                            <h4>{props.dishes.errMess}</h4>
                        </div>
                    </div>
                </div>
            );
        }
        else

. . .
```

- Save all the changes and do a Git commit with the message "Redux Thunk".

Conclusions

In this exercise we saw the use of Redux Thunk and the Logger.

✓ Complete   Go to next item