Async in Redux

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Here's the plan

- Why a mock API?
- Mock API setup
- Redux middleware
- Async libraries
- Implement Thunks

Why a Mock API?

- Start before the API exists
- Independence
- Backup plan
- Ultra-fast
- Test slowness
- Aids testing
- Point to the real API later

Demo

Setup Mock API

Redux Middleware

Redux Middleware

Handling async API calls

Logging

Crash reporting

Routing

Custom Logger Middleware

```
// Logs all actions and states after they are dispatched.
const logger = store => next => action => {
  console.group(action.type)
  console.info('dispatching', action)
  let result = next(action)
  console.log('next state', store.getState())
  console.groupEnd()
  return result
}
```

Async in Redux

Redux Async Libraries

redux-thunk	**Return functions from action creators**
redux-promise	**Use promises for async**
redux-observable	**Use RxJS observables**
redux-saga	**Use generators**

Comparison

Thunks	Sagas
Functions	Generators
Clunky to test	Easy to test
Easy to learn	Hard to learn

```
export function deleteAuthor(authorId) {
  return dispatch => {
    return AuthorApi.deleteAuthor(authorId)
    .then(() => {
      dispatch(deletedAuthor(authorId));
    })
    .catch(handleError);
  };
}
```

Thunk

```
export function deleteAuthor(authorId) {
  return (dispatch, getState) => {
    return AuthorApi.deleteAuthor(authorId)
    .then(() => {
      dispatch(deletedAuthor(authorId));
    })
    .catch(handleError);
  };
}
```

Thunk

reduxjs / redux-thunk

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Code | Issues 1 | Pull requests 2 | Insights

Branch: master | redux-thunk / src / index.js | Find file | Copy path

gaearon Add withExtraArgument() 41aefcc on May 10, 2016

2 contributors

15 lines (11 sloc) | 352 Bytes | Raw | Blame | History

```
1  function createThunkMiddleware(extraArgument) {
2    return ({ dispatch, getState }) => next => action => {
3      if (typeof action === 'function') {
4        return action(dispatch, getState, extraArgument);
5      }
6
7      return next(action);
8    };
9  }
10
11 const thunk = createThunkMiddleware();
12 thunk.withExtraArgument = createThunkMiddleware;
13
14 export default thunk;
```

Middleware isn't *required* to support async in Redux.
But you probably want it.

```
export function deleteAuthor(dispatch, authorId) {
  return AuthorApi.deleteAuthor(authorId)
    .then(() => {
      dispatch(deletedAuthor(authorId));
    })
    .catch(handleError);
}
```

Thunk

Why Use Async Middleware?

Consistency

Purity

Easier testing

Demo

Let’s get thunky.

Wrap Up

Why a mock API?

Set up Mock API

- Express and json-server

Redux middleware

Async libraries

- Thunks, Redux-Promise, and Sagas

Naming async actions

- Consider SUCCESS and ERROR

First thunk, complete!

Next up: Async writes