

挑戰 40 分鐘 實作簡易版 Redux 佐設計模式

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挑戰 40 分鐘

實作簡易版 Redux 佐設計模式

Introduction

About Redux / Data Flow / Use Redux / Objective

Implementation

Design Patterns in Redux / Phase 1-6

Summary

How I Read Redux Source Code

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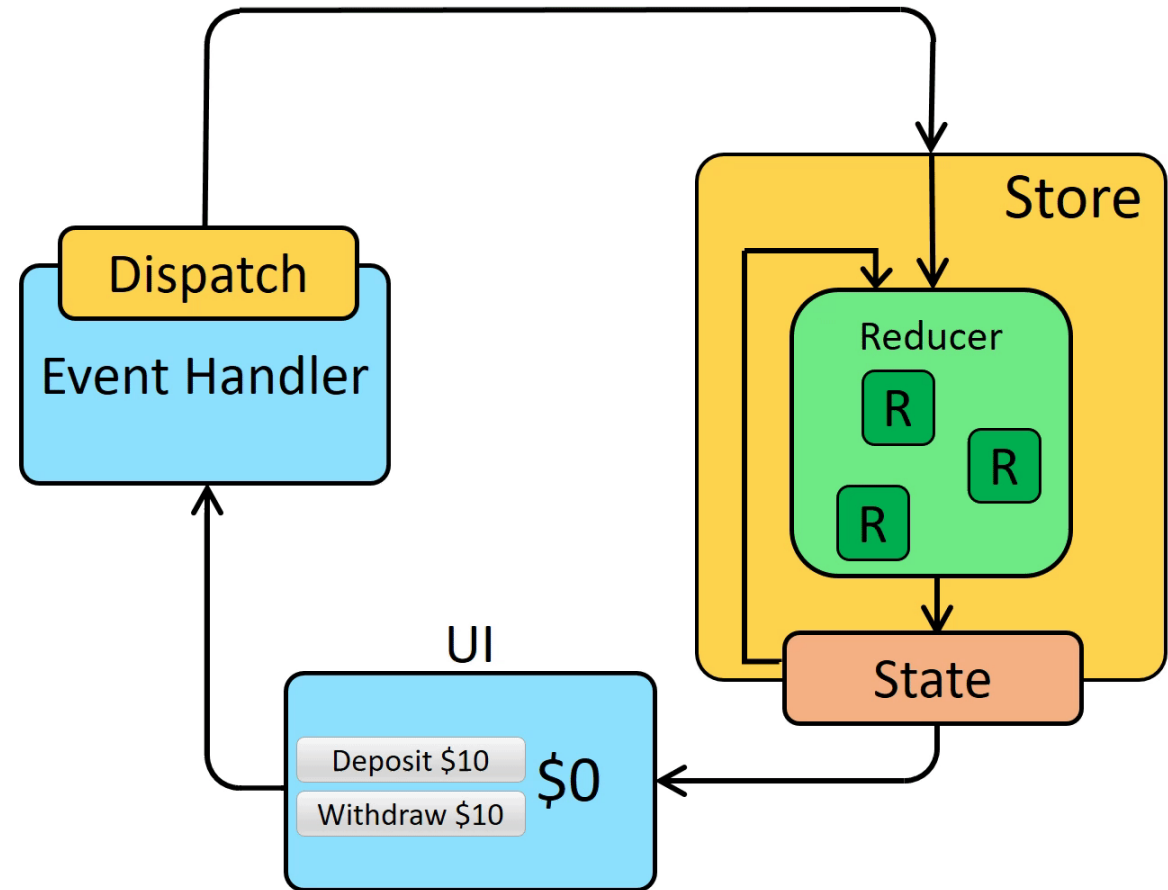
About Redux

A Predictable State Container for JS App

- Single Source of Truth
 - Usually we have only one "store"
- Separate of Concern
 - Action, reducer, selector, middleware, ...
- Immutability
 - Easy & cheap to detect data change

Data Flow

1. User triggers event
2. Event handler dispatches action
3. Reducer returns next state
4. Listener updates UI



Use Redux

Objective

- Replace `/dist/redux.js` with our `redux.js`

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Design Patterns in Redux

Module Pattern

- Encapsulates logic
- Exports public interface
- Allows creation on-the-fly

Observer(Listener) Pattern

- Maintains a list of listeners
- Notifies "all" listeners
when state changed

Design Patterns in Redux

Module Pattern

- Encapsulates logic
- Exports public interface
- Allows creation on-the-fly

Observer(Listener) Pattern

- Maintains a list of listeners
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Implementation Phase 0

- Replace `/dist/redux.js` with our `redux.js`

Implementation Phase 1

- Define "createStore" function
 - Return "store" object
- Store API
 - getState
 - dispatch
 - subscribe

Implementation Phase 2

- Implement "dispatch" function
 - Call reducer to calculate the next state

Implementation Phase 3

- Implement "subscribe" function
 - Handle unsubscription
- Call listeners one by one after calling reducer

Implementation Phase 4

- When calling reducer, prevent calling
 - getState
 - subscribe
 - unsubscribe
 - dispatch

Implementation Phase 5

- Allow calling subscribe when executing listeners
 - ensureCanMutateNextListeners

Implementation Phase 6

- Dispatch an "INIT" action for reducer to return initial state

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- <https://github.com/reduxjs/redux/blob/master/src/createStore.ts>
- <https://www.typescriptlang.org/play>
- <https://github.com/max80713/redux-modern-web-2021>



Thank you.

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