



The Concept of Almin



Almin is a State management
library for JavaScript

Almin features

- >> Scalable
 - >> Medium-small(1,000LOC) – Large(100,000LOC)
- >> Testable
 - >> Implement UseCase/Store/Domain as component
- >> Debuggable
 - >> Logger/DevTools/Performance monitoring
- >> Layered Architecture
 - >> DDD/CQRS

*Different team structures imply
different architectural decisions.*

— Clean Architecture Robert C. Martin

The Concept of Almin

- >> Write **Your domain** in **Your code**
- >> Split up **Read stack** and **Write stack**
- >> **Unidirectional** data flow
- >> Prefer **Readable code** to **Writable code**
- >> **Monitor everything**

Write Your domain in Your code

- >> You can control domain layer
 - >> You can write **your domain** with **Pure JavaScript**
 - >> Your domain is **not need** to subclass of Almin things
- >> Almin support application layer
 - >> Application layer use your domain model
- >> If you stop to use almin, you **don't need to rewrite** your domain

Example: UseCase

Almin provide UseCase class that is a part of application layer

```
import { UseCase } from "almin";
import yourDomain from "../your-domain";
export ApplicationUseCase extends UseCase {
  execute(){
    // Application Layer use your domain
    yourDomain.doSomething();
  }
}
```

Split up Read stack and Write stack

>> In Flux/Redux

>> **Store** has **Application logic/state**(M) and **View state**(N)

>> The Complexity: $N \times M$ (multiplication)

>> In Almin

>> **Domain** has **Application logic/state**(M) – Write state

>> **Store** has **View state**(N) – Read state

>> The Complexity: $N + M$ (addition)

Related topic: Command Query Responsibility Segregation(CQRS)

Example: Repository

- >> Almin help to support **Repository** pattern
 - >> You can save your domain(application state) into the repository
- >> **Store** read **application state** from the **repository**
- >> **Store** convert the **application state** to **view state**

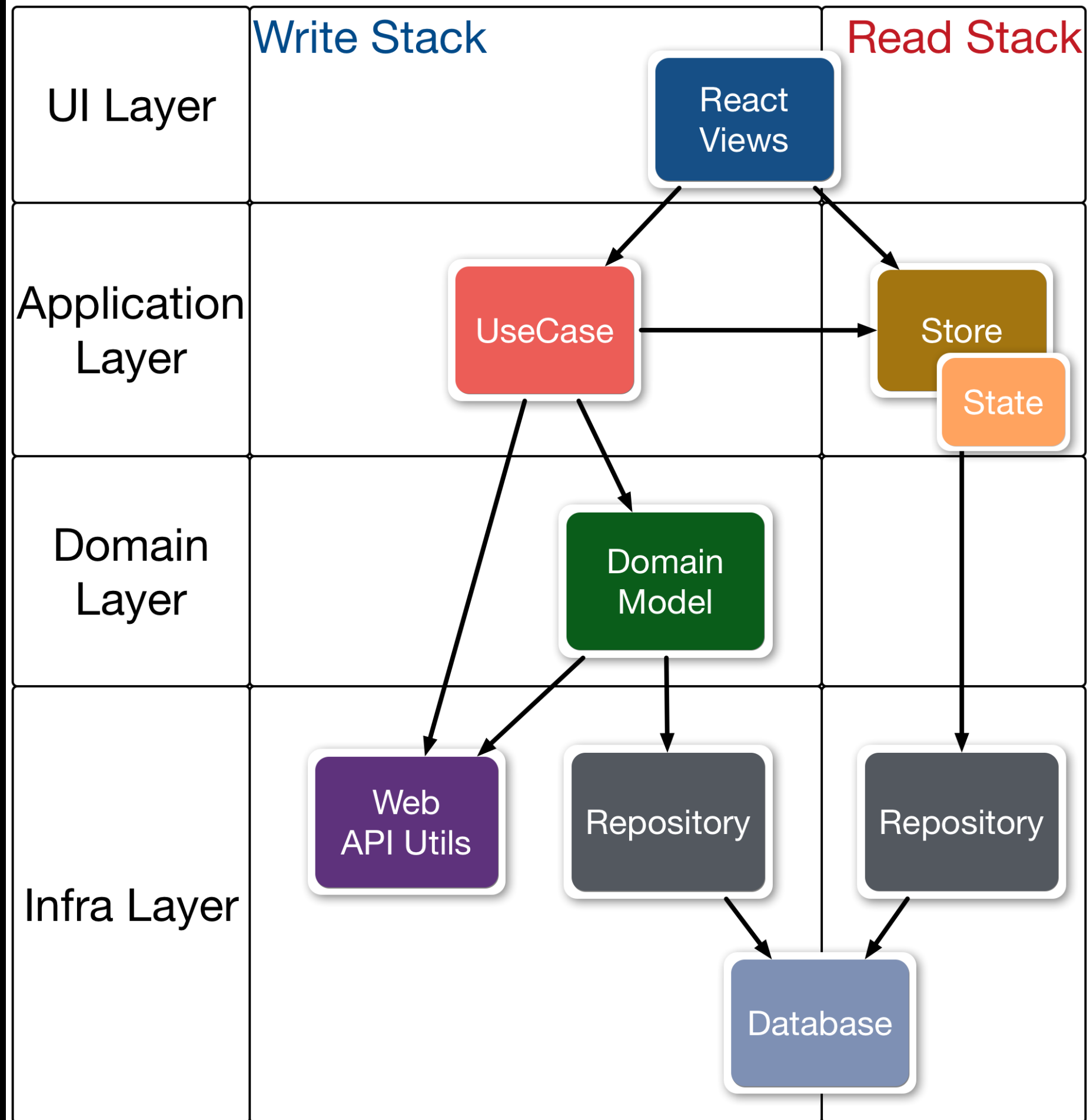
Realted topic: Model View ViewModel(MVVM), ViewModel

Unidirectional data flow

View -> UseCase -> Store ... -> View -> UseCase -> Store

- >> **UseCase** only report **success or failure** that is **Promise<void>**
- >> **UseCase** can write to **Store**, But can not read from Store
- >> **Store** doesn't know any **UseCase**
- >> **View** can not write state to **Store** directly
- >> **View** can execute any **UseCase**
- >> **View** can observe the change of **Store**

Related topic: Flux



Prefer Readable code to Writable code

- >> Almin prefer **Explicit/Readable** code to **Implicit/Writable** code
- >> Almin support **TypeScript** language and Almin is **type-safe**
- >> Pros
 - >> No magic code
 - >> Just write and Just work
- >> Cons
 - >> Redundancy

Monitor everything

- >> You can observe life-cycle events of almin
- >> logging events that are changing of state etc..
- >> Integrate almin into DevTools
- >> Profiling performance of almin with other library
- >> Illustrate your UseCase diagram

SearchQueryAndOpenStreamUseCase [UserCase#execute]

SearchQueryAndOpenStreamUseCa

StoreGroup [...Group#write] St...d]

A...

AppMe

GitH...ad]

App

0.26 ms GitHubSearchStreamStore [Store#receivePayload]

IncrementalCounterUseCase

+00:05.03

UseCase:IncrementalCounterUseCase

+00:00.01

DecrementalCounterUseCase

Jump

Skip

UseCase:DecrementalCounterUseCase

+00:00.00

Tree





Raw

▼ counterState (pin)

count (pin): 1 => 0



Conclusion

- >>  Repo: [almin/almin](https://github.com/almin/almin)
- >>  Document: <https://almin.js.org>
- >>  Examples: [almin/examples](https://almin.js.org/examples)
- >>  Work with [React](#), [Vue](#) etc...

Almin

Almin is for thinking code