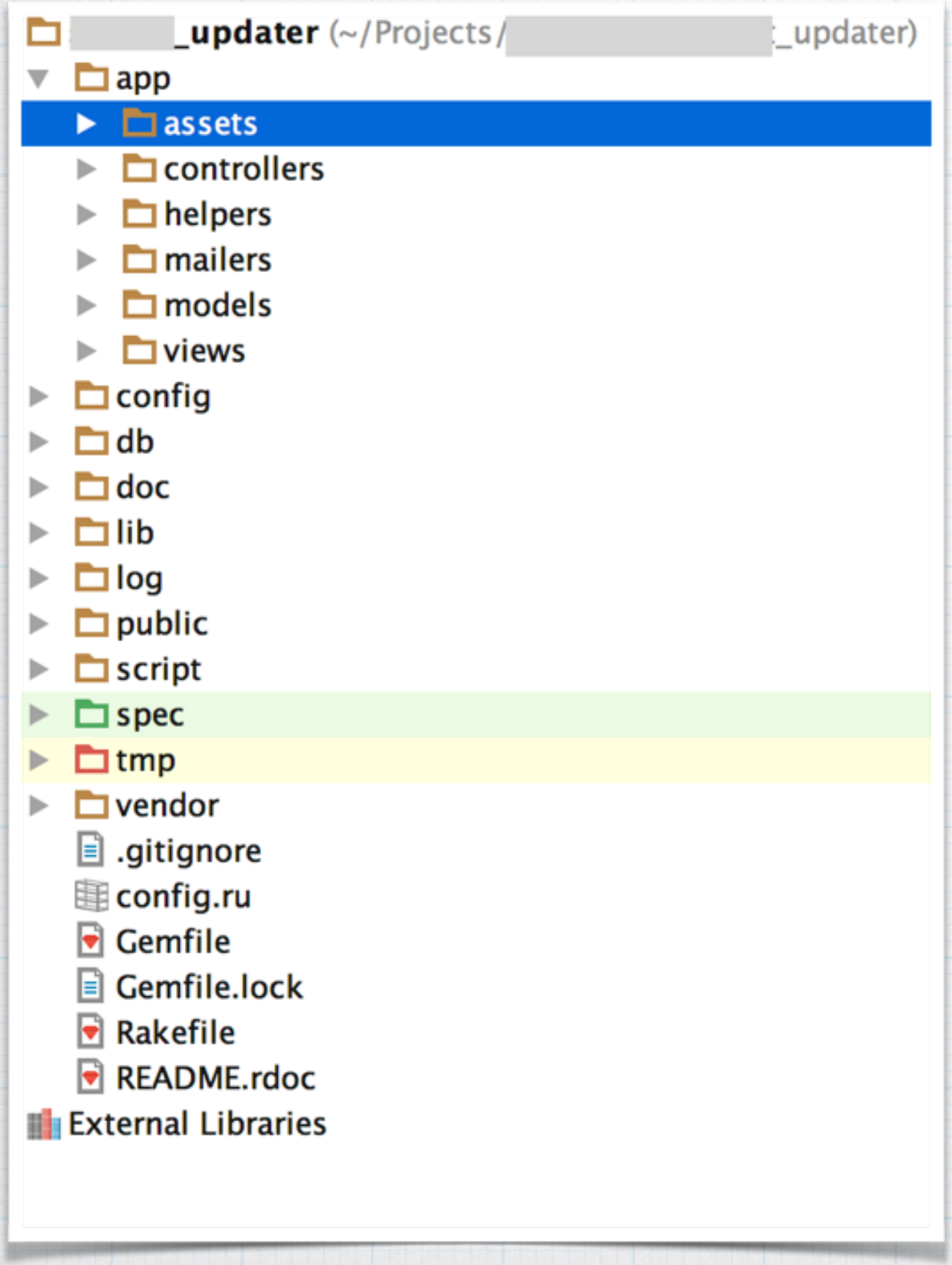
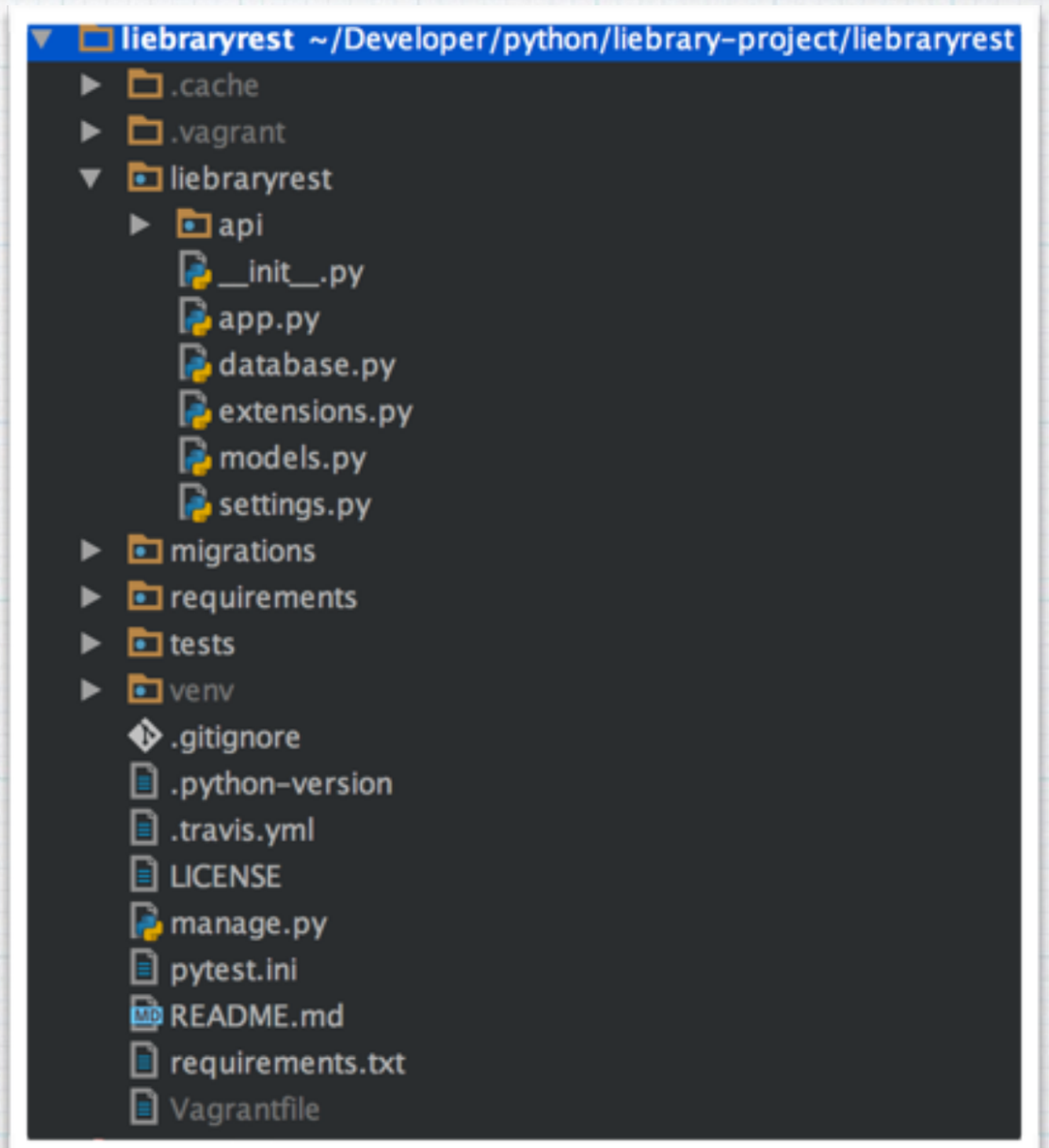
About Architectures

Largely inspired by Robert C. Martin
"Architecture: The Lost Years"

R. Ciatti
L. Giordani



Application intent not clear



The WEB

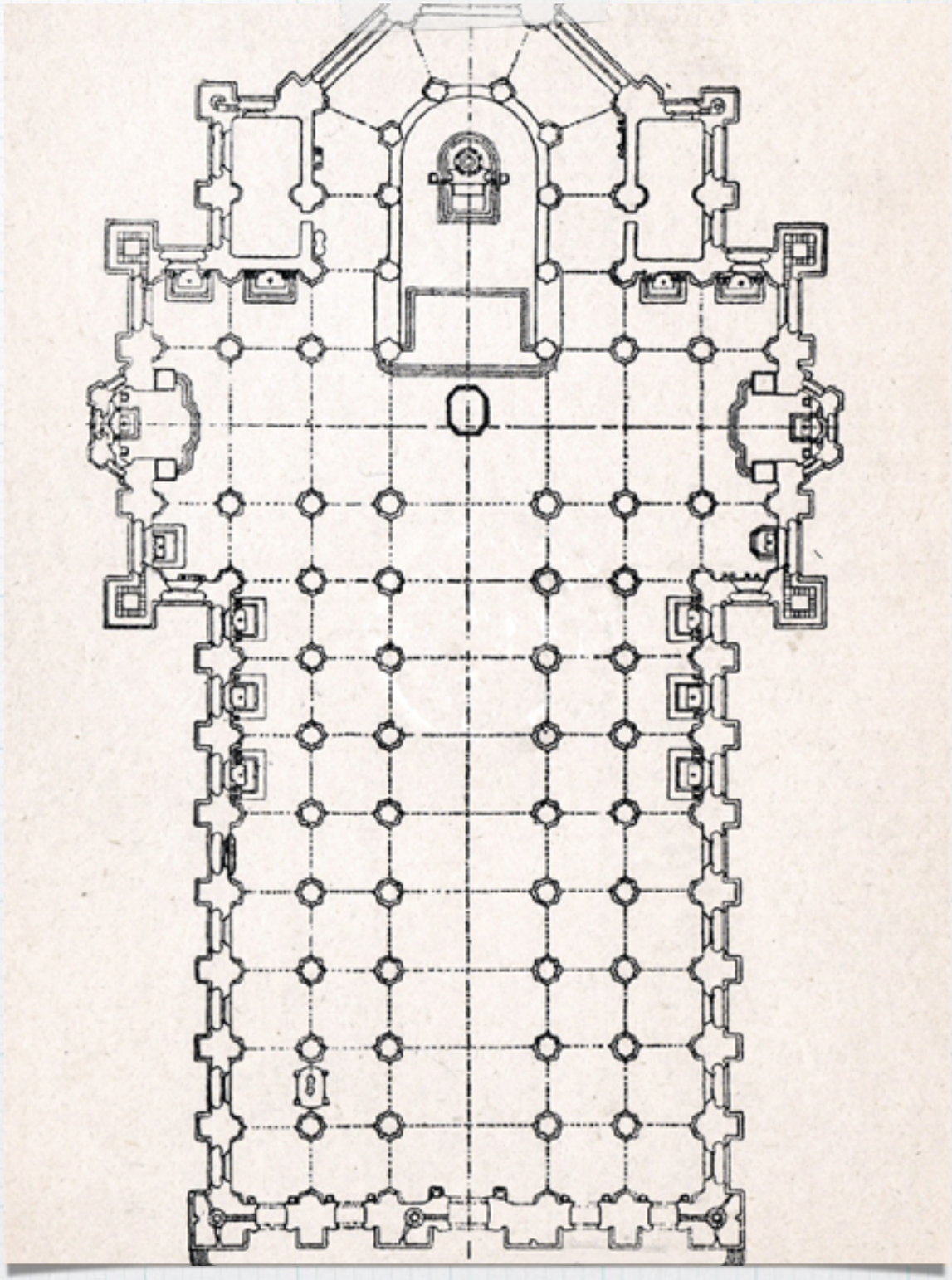
is a delivery mechanism

a common misconception:

"Web App"

Architecture has to scream

the intent of the application



Usecases

USECASE

Data

<user_id>, ...

Primary course

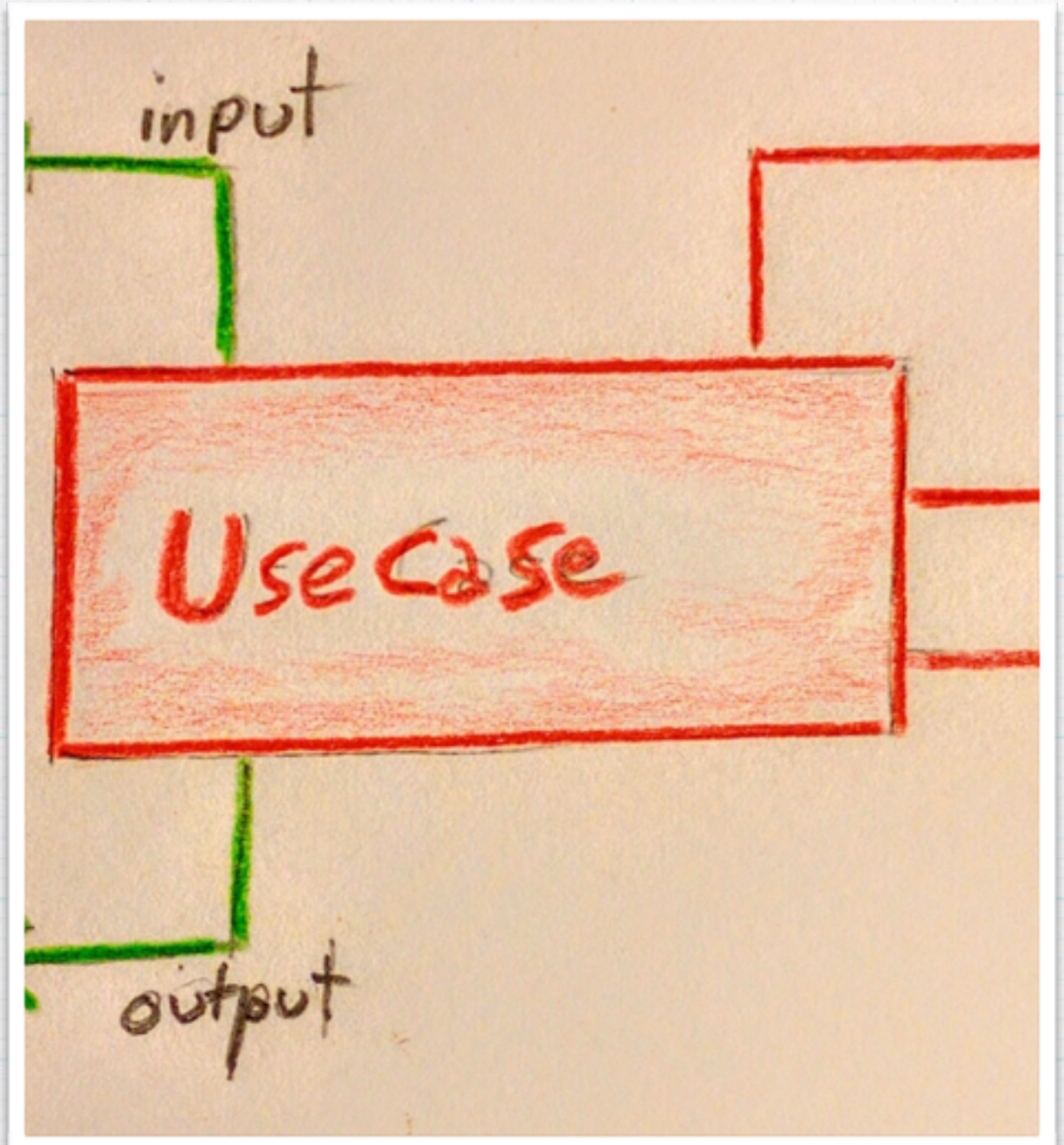
1. user issues create booking command
2. Request data validation
3. System confirm booking

Exception course

1. system show error message ...

Architecture of an application is **driven by use cases**

Ivar Jacobson
"Object Oriented Software Engineering"
(1992)



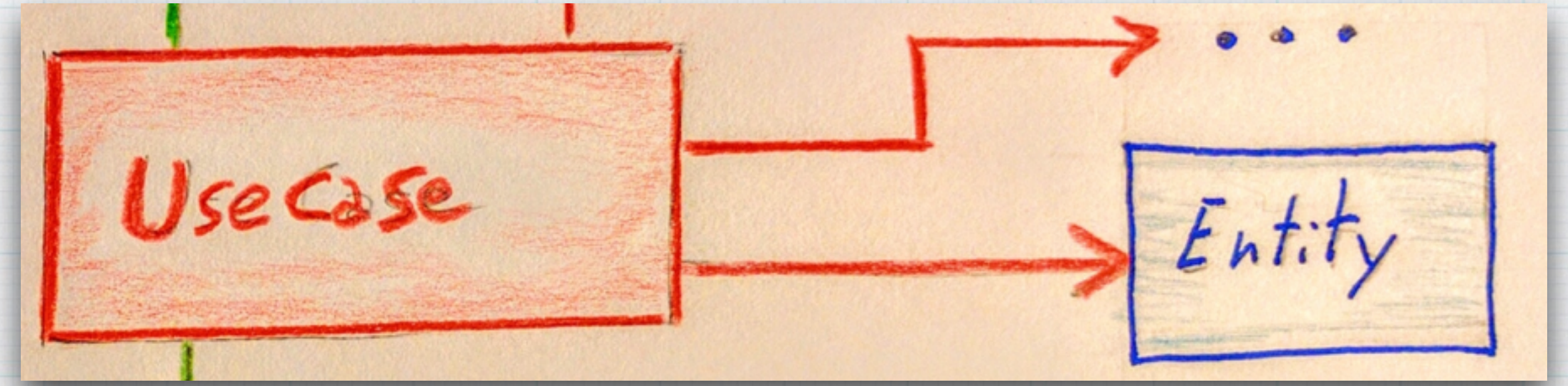
Usecase

Application specific
business rules

e.g.:
the booking process for
your particular application

Entity

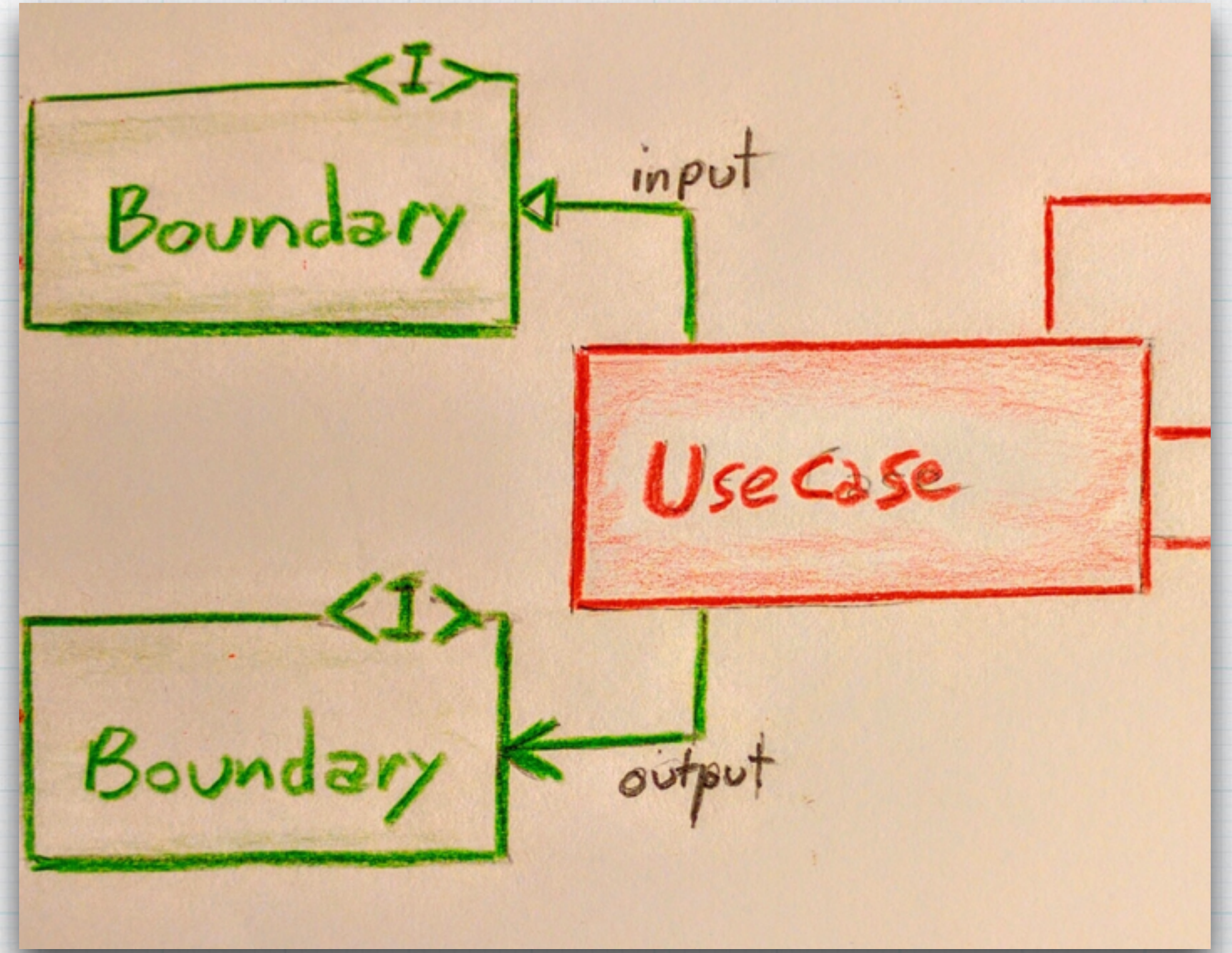
Application independent business rules



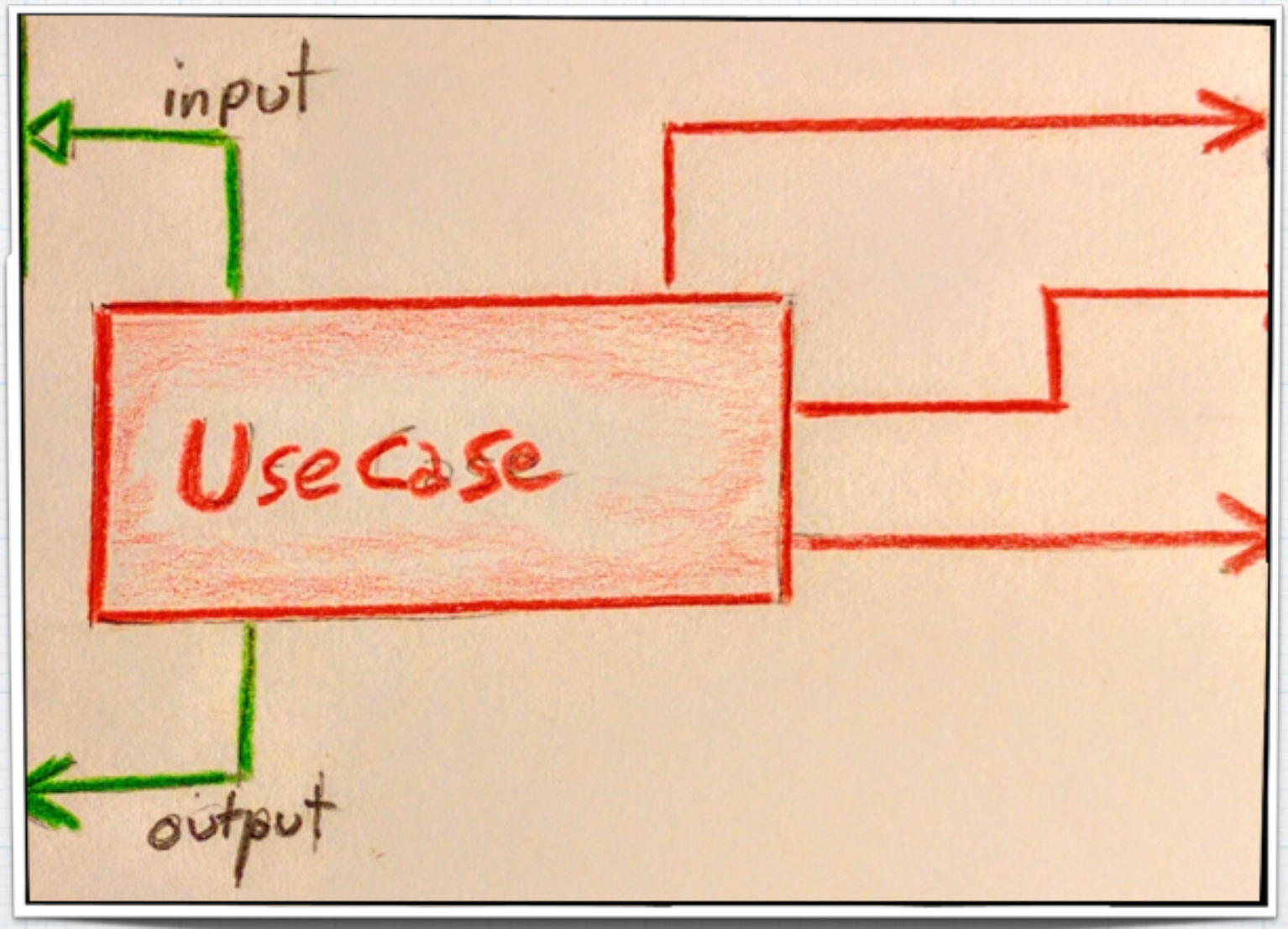
e.g.:
the user entity composed by unique nickname etc...

Boundaries

- input
- output

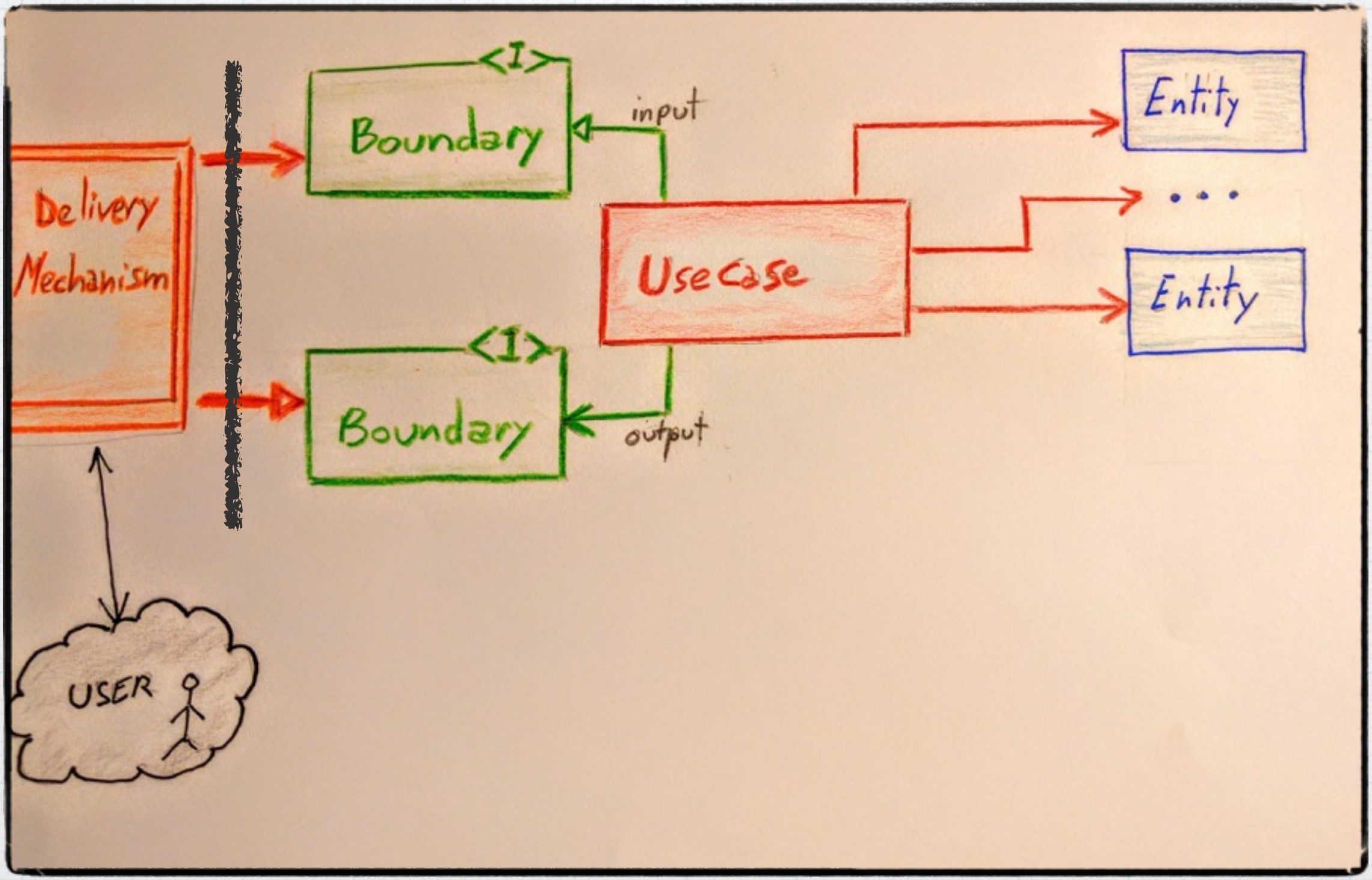


Arrows

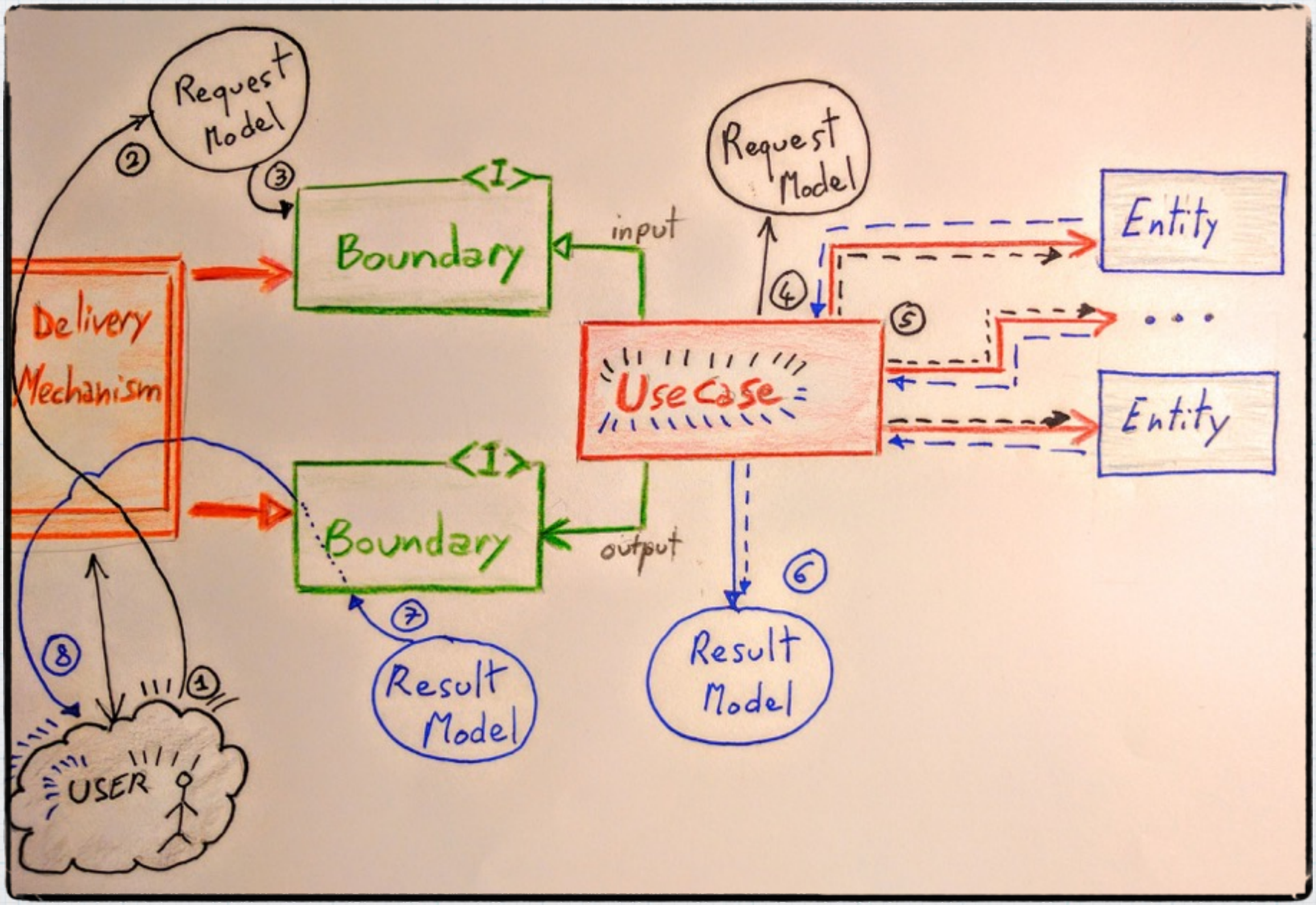


they point away from the usecase

the big picture



the flow


Request Model
2
3
<I>
Boundary
input
Request Model
Entity
Delivery Mechanism
4
5
UseCase
Entity
<1>
Boundary
output
6
7
Result Model
Result Model
8
1
USER

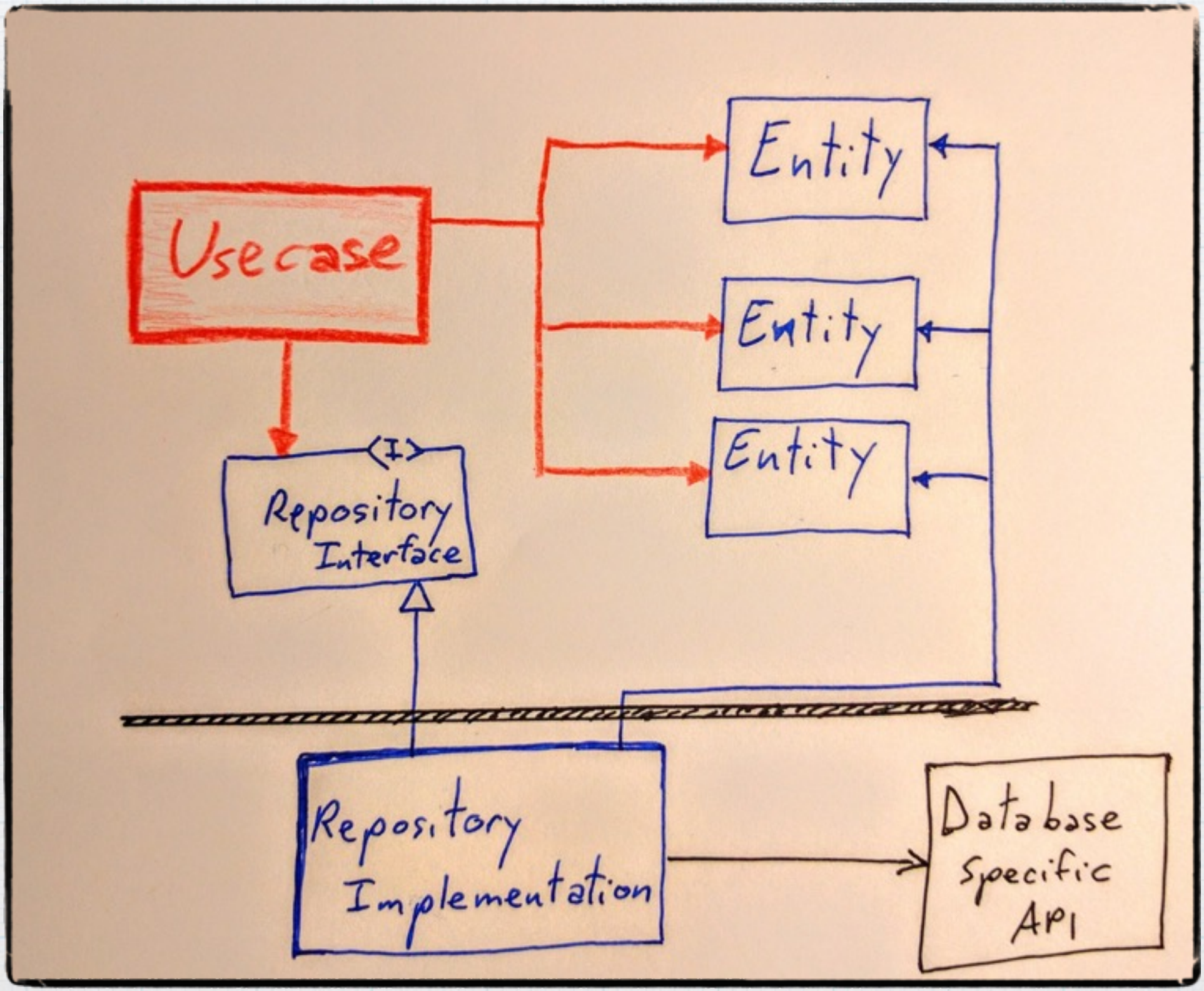
Application reuse

* Application:
  * agnostic about delivery mechanism
  * can be used with different "communication channels"

Testability

* Test in isolation without delivery mech.
* Usecase business logic testable using Req and Res models

the database



Design good architectures to maximize the number of deferred decisions

Bibliography & Links

https://blog.8thlight.com/uncle-bob/2012/08/13/the-clean-architecture.html

http://www.taimila.com/blog/ddd-and-testing-strategy

Robert C. Martin videos

- Hakka Labs: Robert "Uncle Bob" Martin - Architecture: The Lost Years
  https://www.youtube.com/watch?v=HhNIttd87xs
- Ruby Midwest 2011: Architecture the Lost Years by Robert Martin
  https://www.youtube.com/watch?v=WpkDN78P884

Thanks!