



Arquitetura Hexagonal

@camposmilaa



Camila Campos

Creditas

Rails Girls São Paulo

Women Dev Summit

@camposmilaa





Plataforma online

Empréstimo com garantia

Juros baixos pra você <3

creditas.com.br

vagas.creditas.com.br

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Incluir mulheres em TI

Workshop de Rails

Inspiração

railsgirls.com.br

fb.com/railsgirls.sp

[@RailsGirlsSP](https://twitter.com/RailsGirlsSP)



Junção de comunidades

Incentivar mulheres em tech

Palestras & Oficinas & Painéis

womendevsummit.com

fb.com/womendevsummit

[@WomenDevSummit](https://twitter.com/WomenDevSummit)



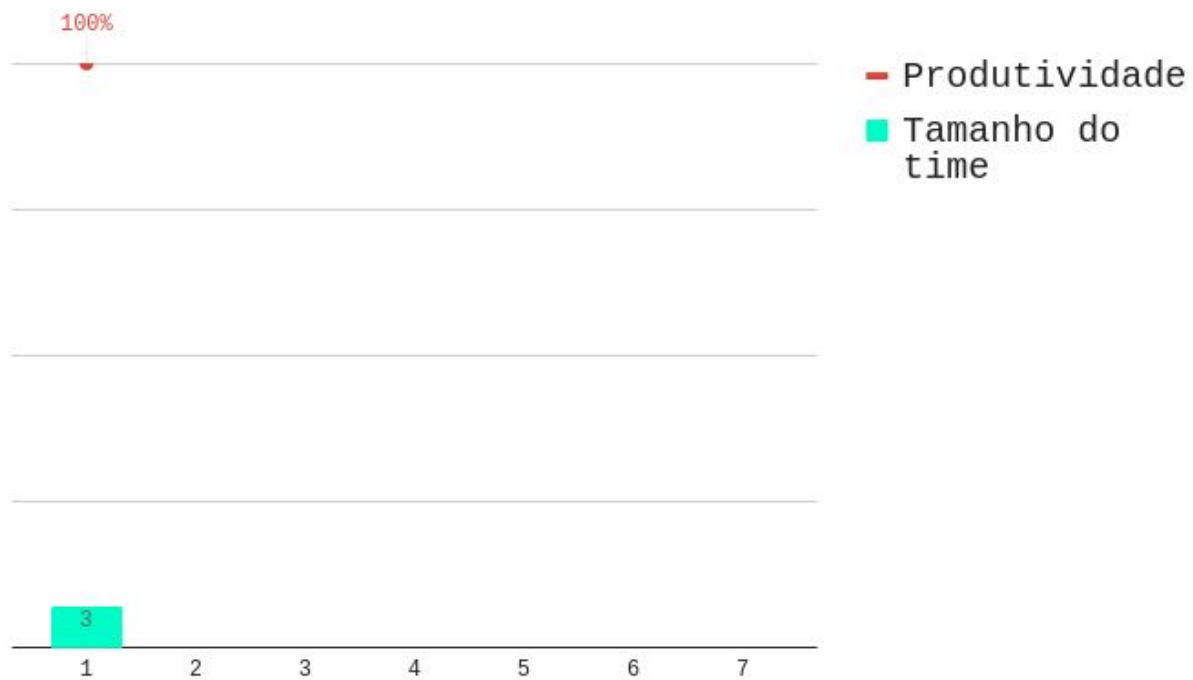
Arquitetura Hexagonal

@camposmilaa

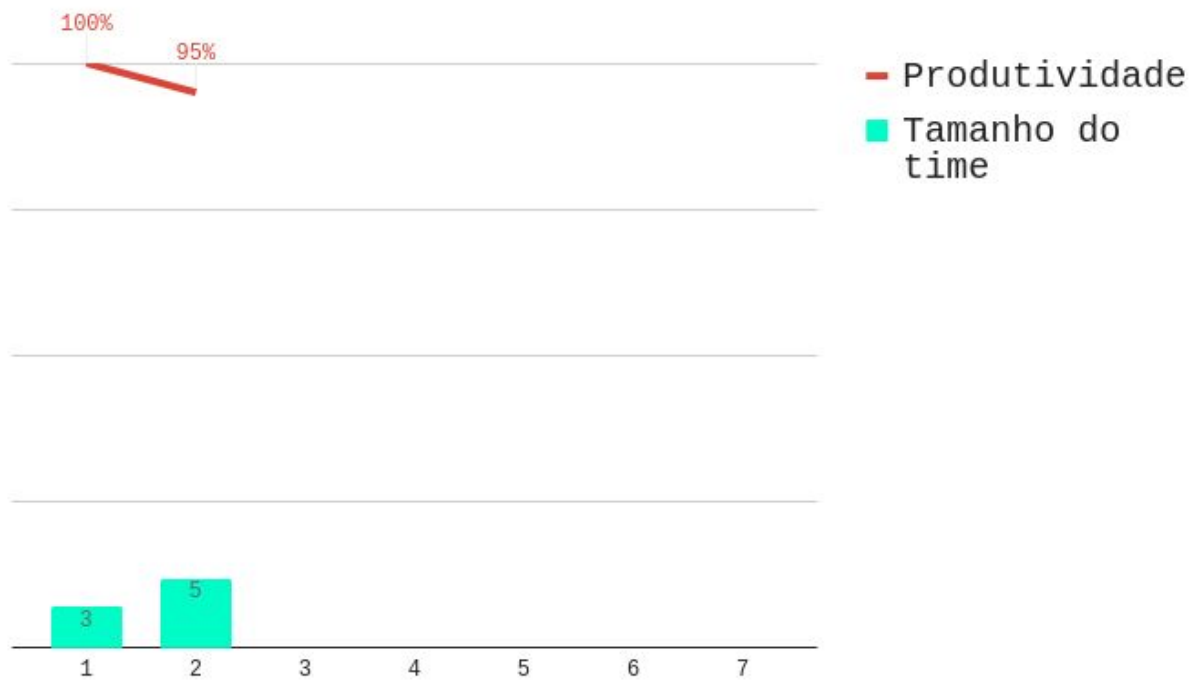




Produtividade

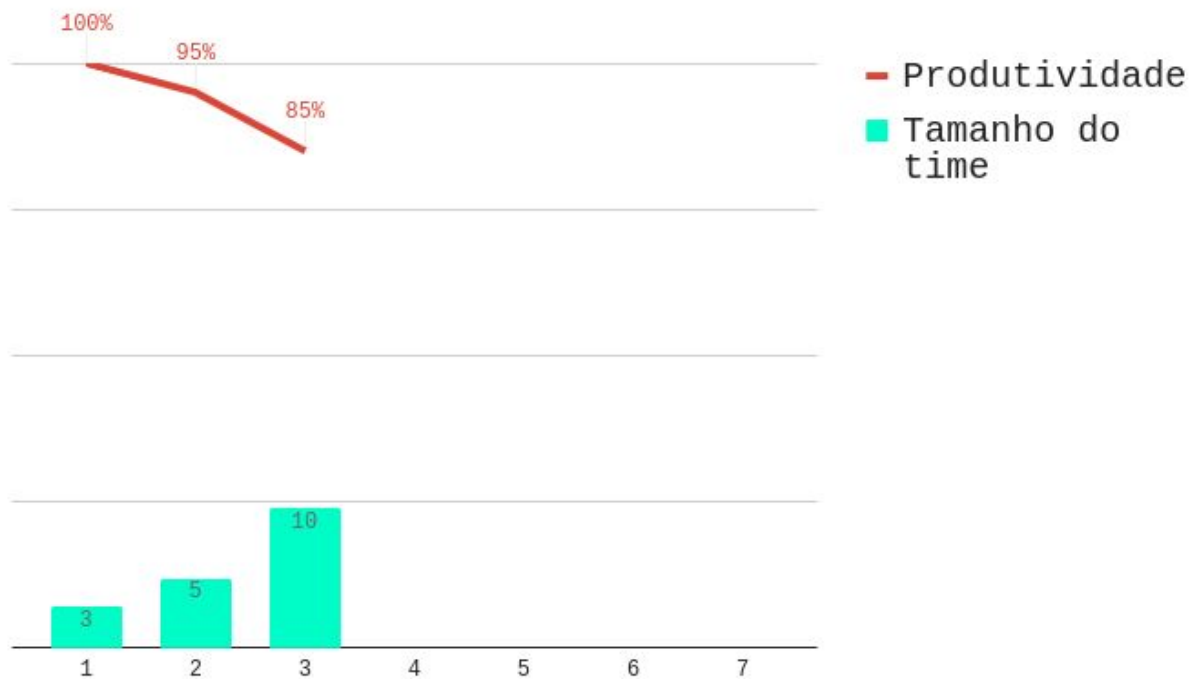


Produtividade



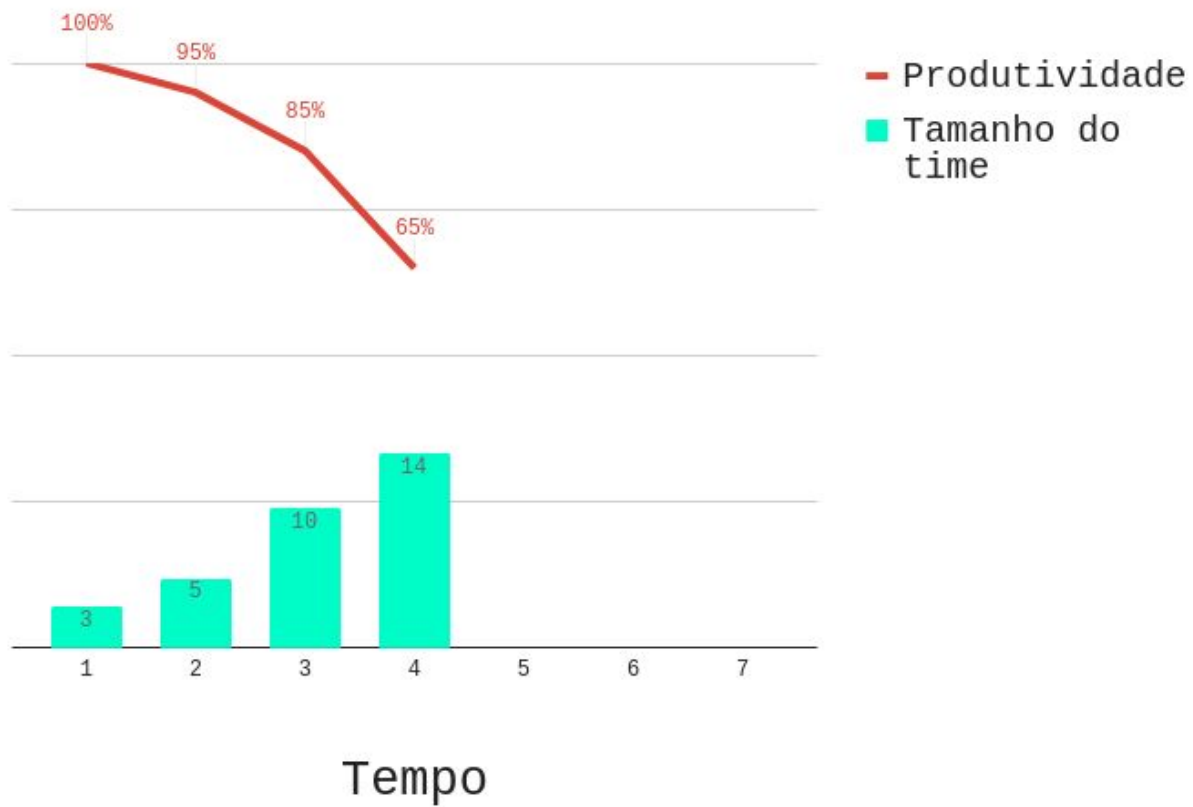
Tempo

Produtividade

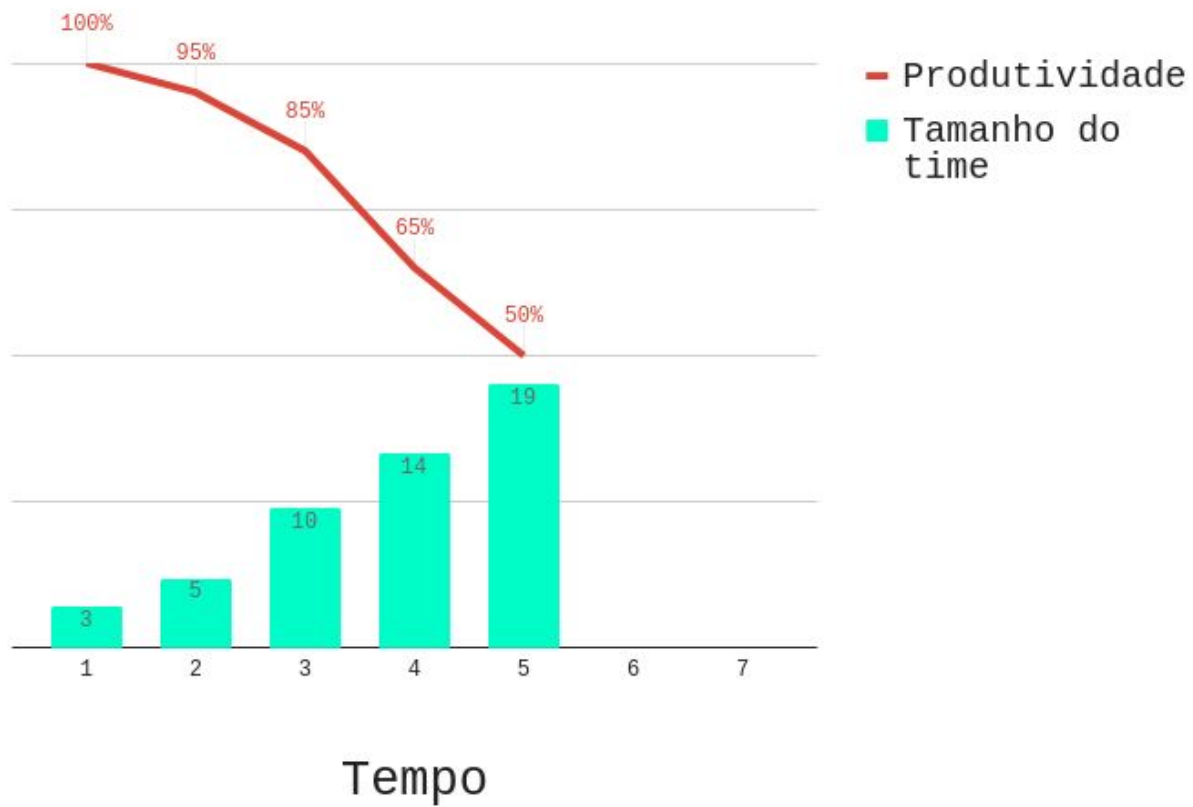


Tempo

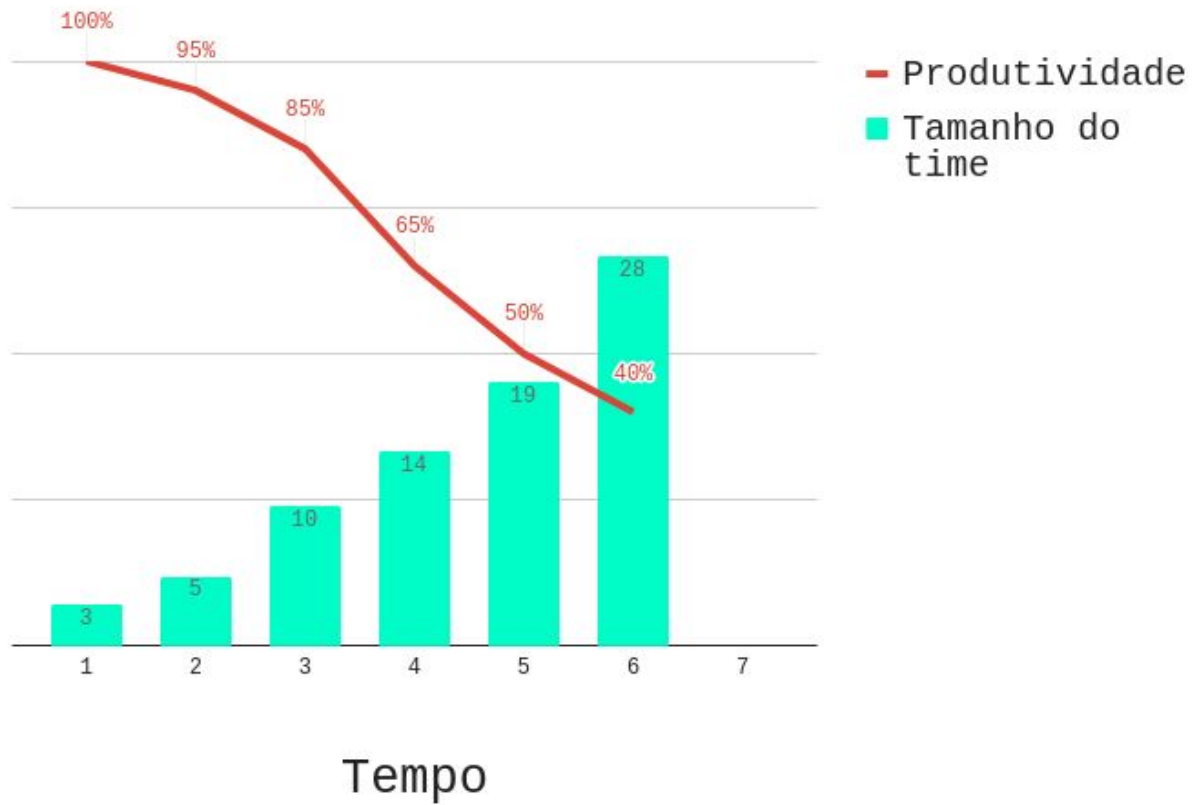
Produtividade



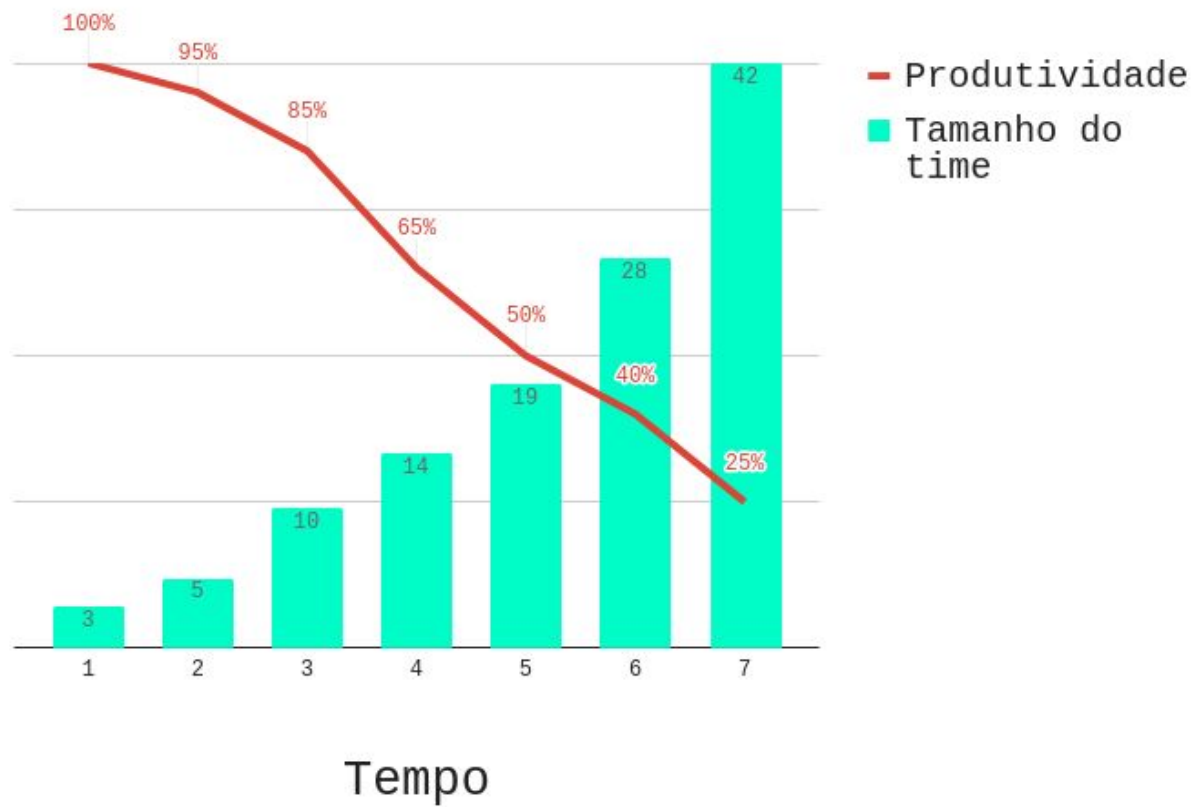
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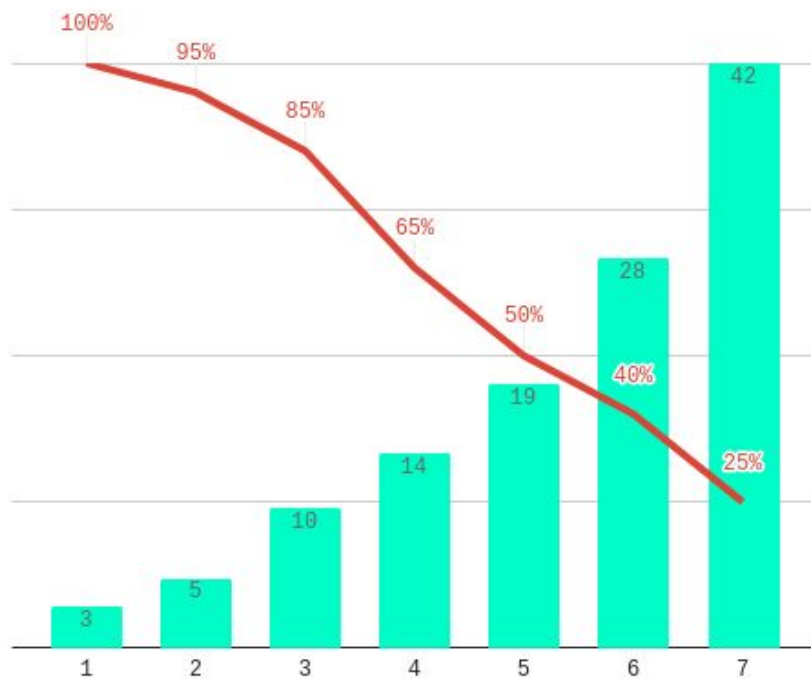
Produtividade



Produtividade



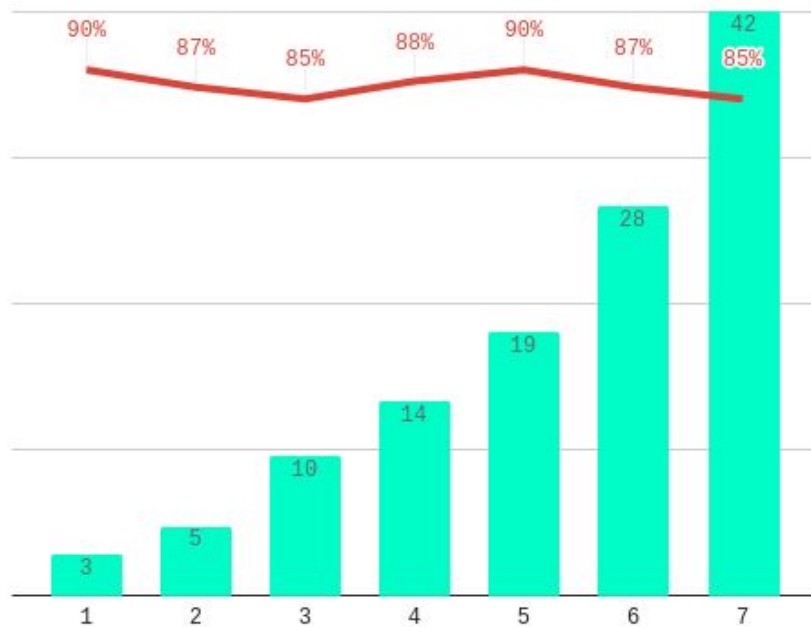
Produtividade



— Produtividade
■ Tamanho do time

por quê?

Produtividade



— Produtividade
■ Tamanho do time

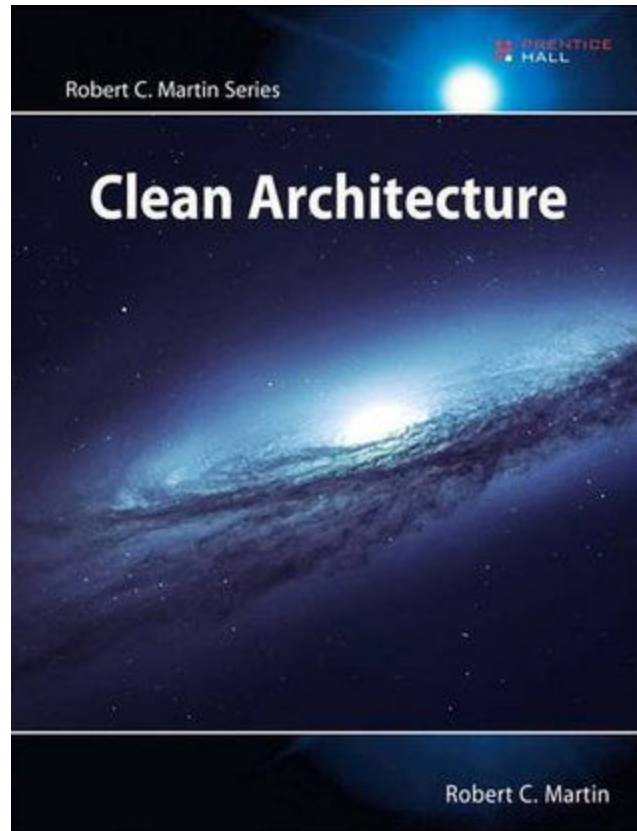
por quê?

**precisamos entregar logo.
vamo assim mesmo!**

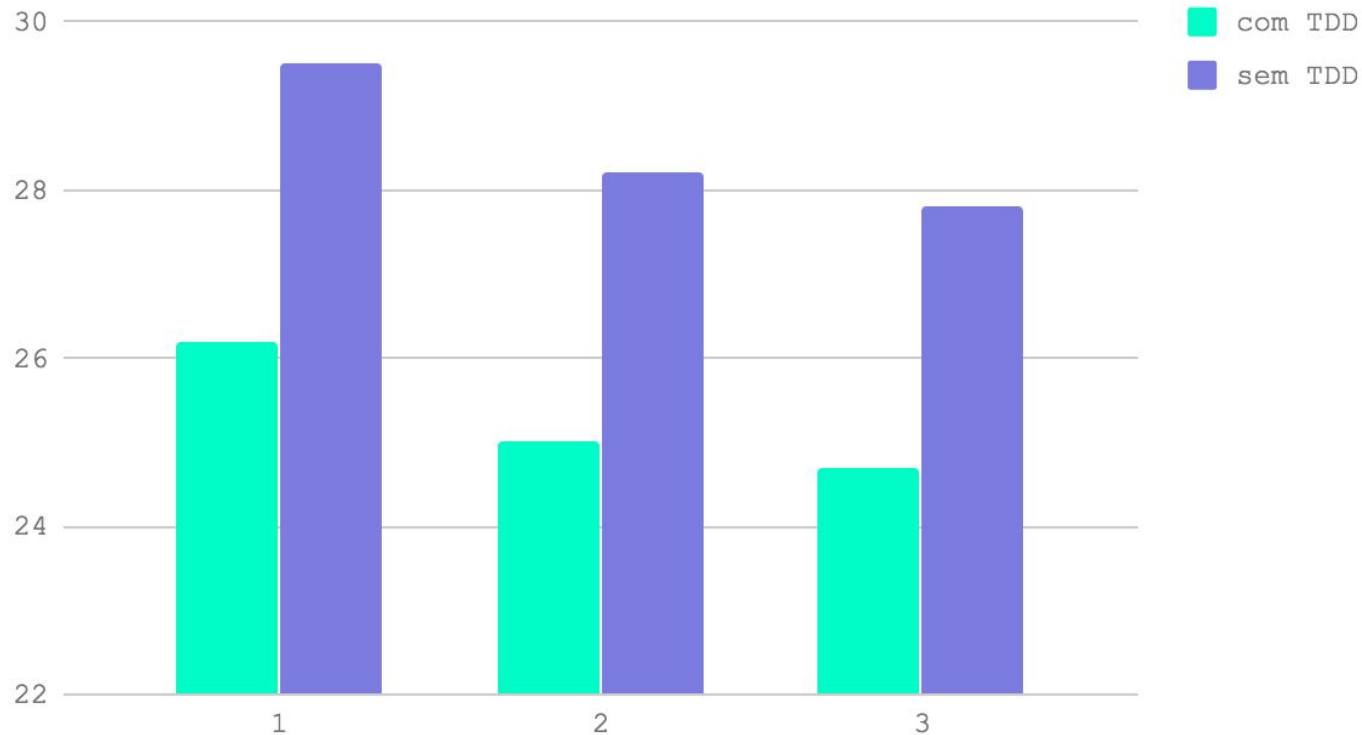
depois a gente volta e arruma 🤪



**big ball
of mud**



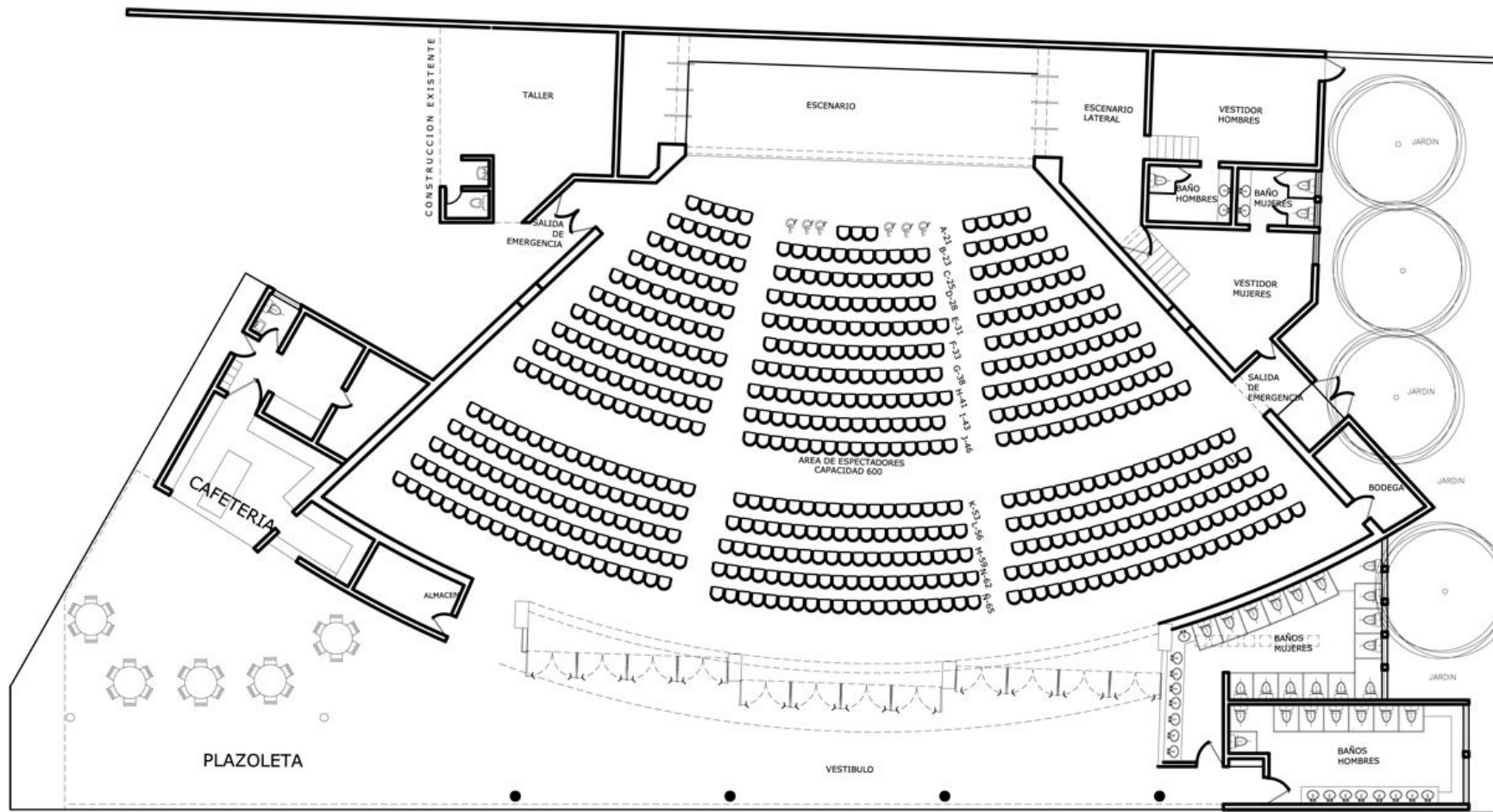
Tempo para resolver um problema

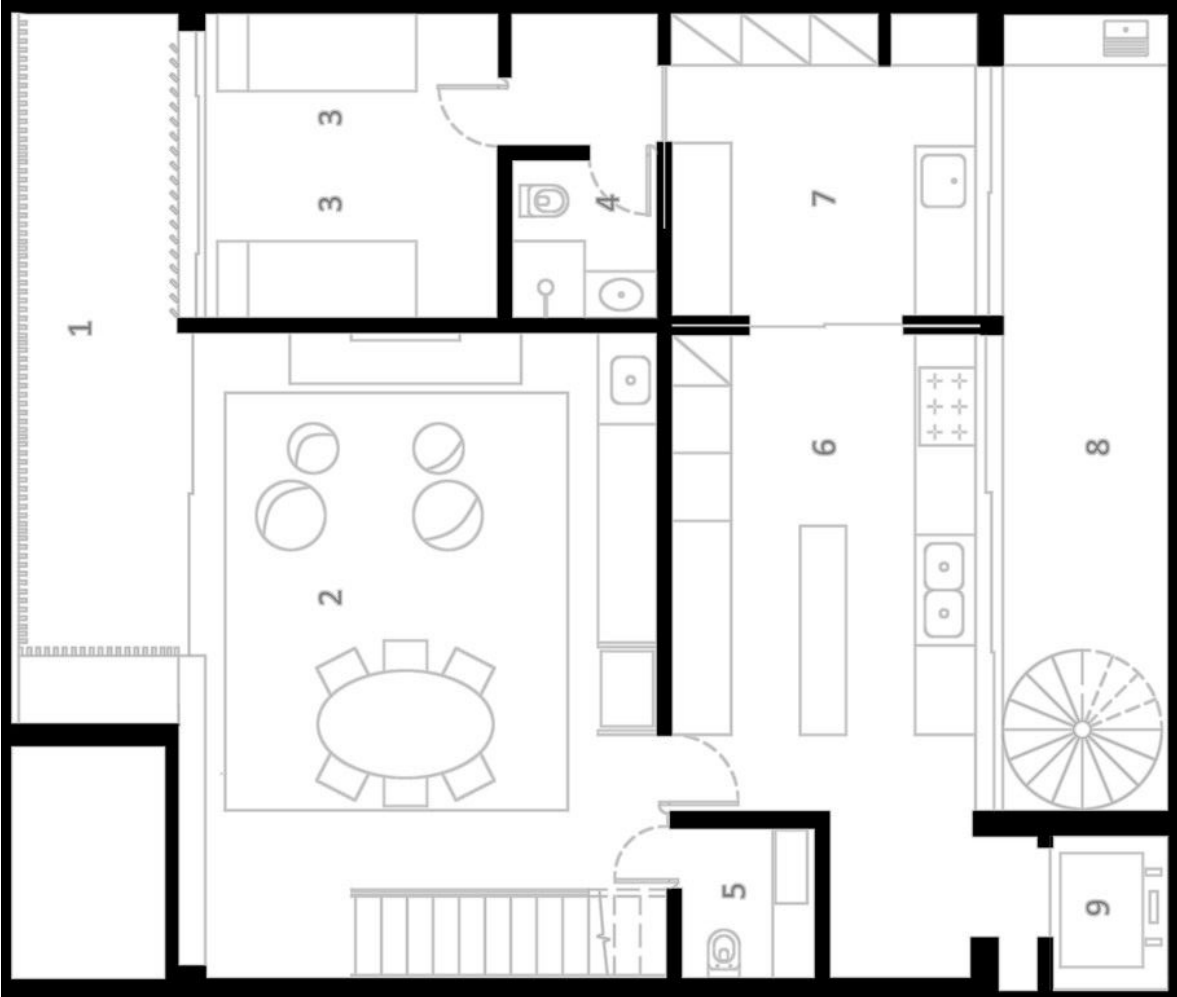


**the fact is that making messes is
always slower than staying clean.**

Uncle Bob
















arquitetura



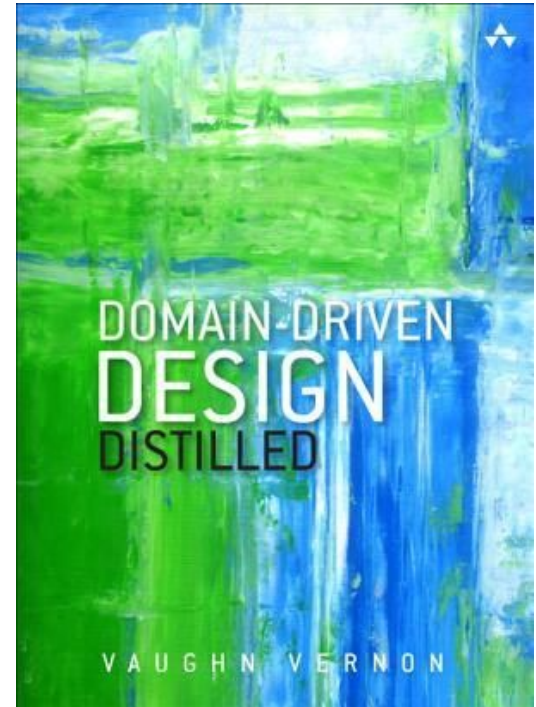
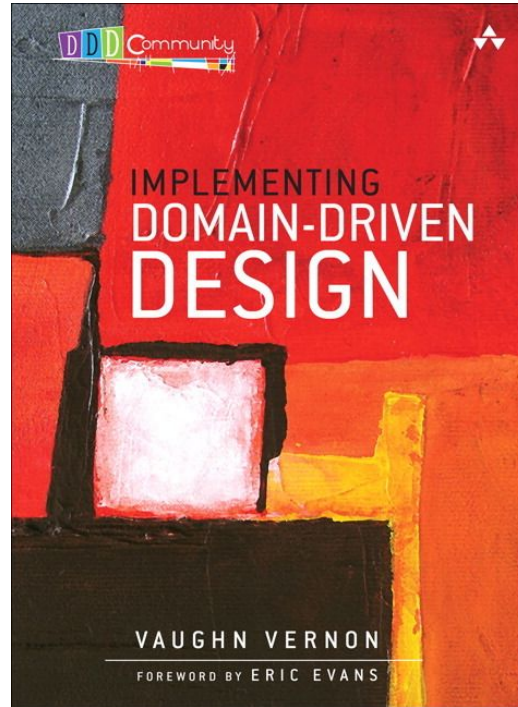
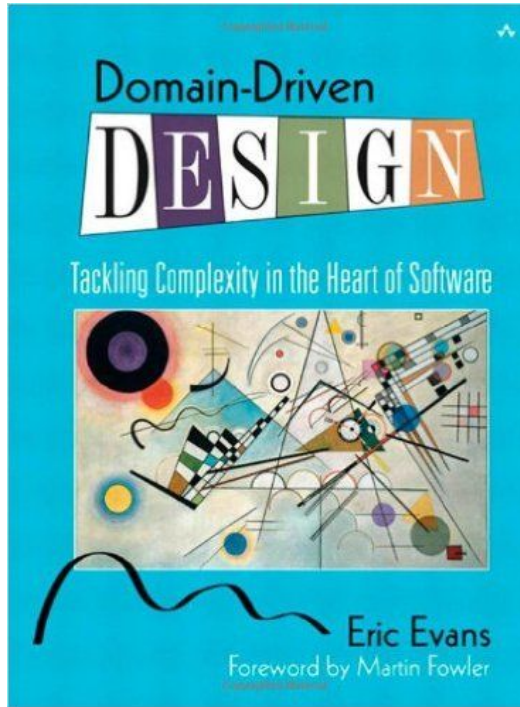


a good architecture
screams intention

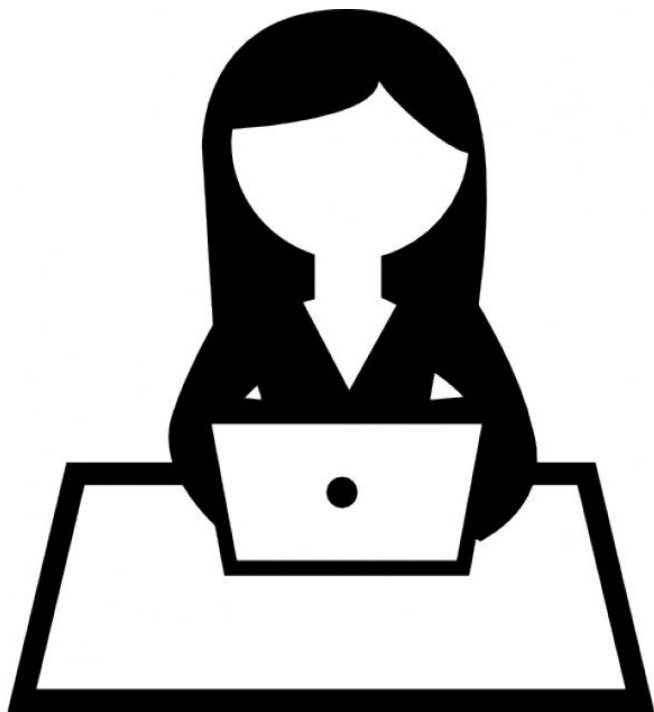
- ▼ app
 - ▶ assets
 - ▶ business
 - ▶ controllers
 - ▶ enumerations
 - ▶ helpers
 - ▶ mailers
 - ▶ models
 - ▶ notifications
 - ▶ presenters
 - ▶ representers
 - ▶ serializers
 - ▶ services
 - ▶ views
 - ▶ workers

- ▼  domain
 - ▶  affiliates
 - ▶  analysis
 - ▶  authentication
 - ▼  auto
 - ▶  financing
 - ▶  refinancing
 - ▶  bacen_authorizations
 - ▶  calculator
 - ▶  closing
 - ▶  data_manager
 - ▶  eligibility
 - ▶  encryption
 - ▼  home
 - ▶  refinancing

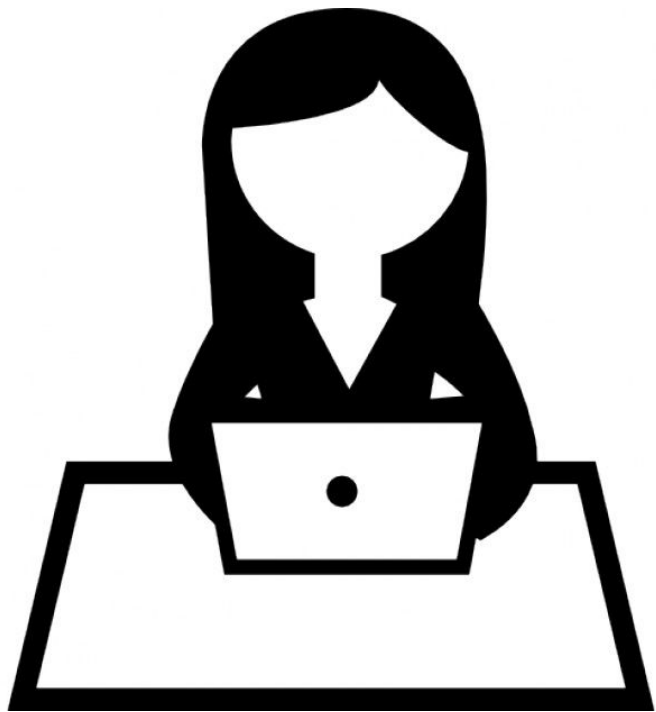
domain driven design (DDD)



linguagem ubíqua



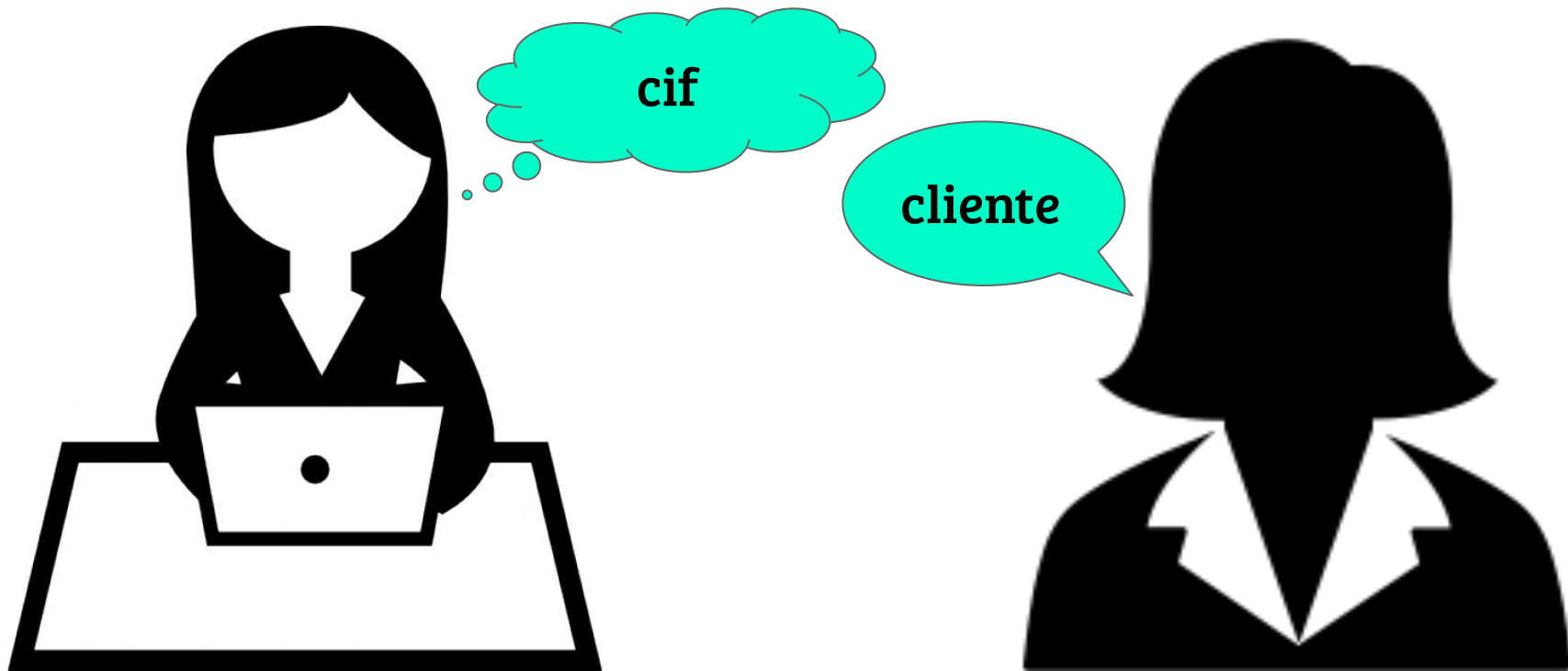
linguagem ubíqua



linguagem ubíqua



linguagem ubíqua



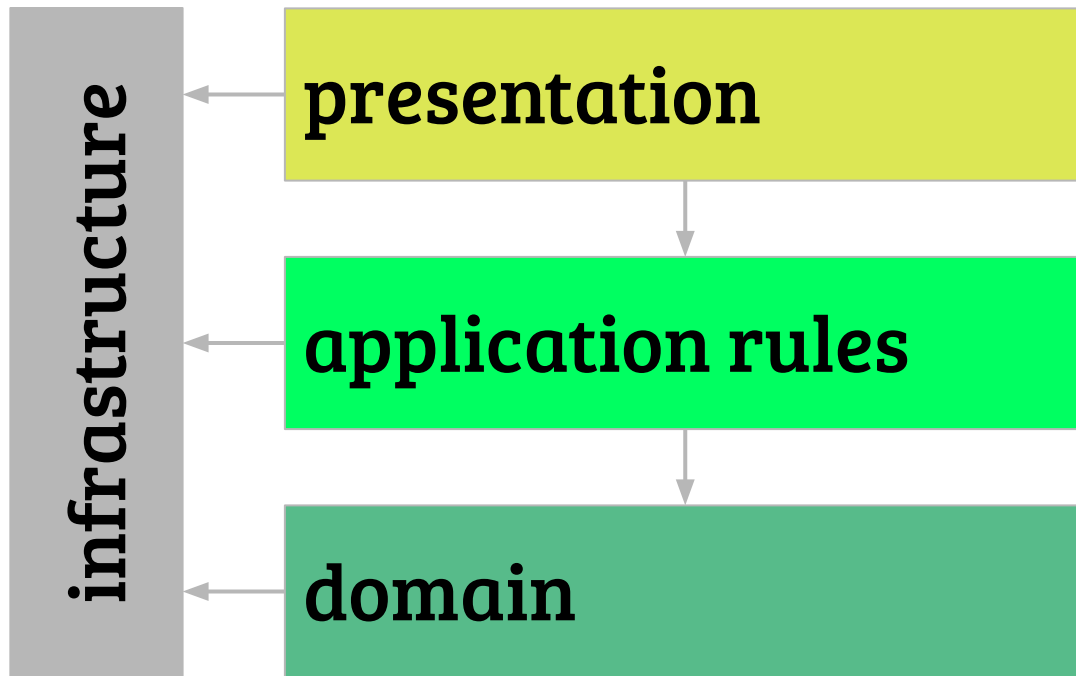
linguagem ubíqua



linguagem ubíqua



arquitetura em camadas



presentation



application rules



domain



infrastructure

presentation



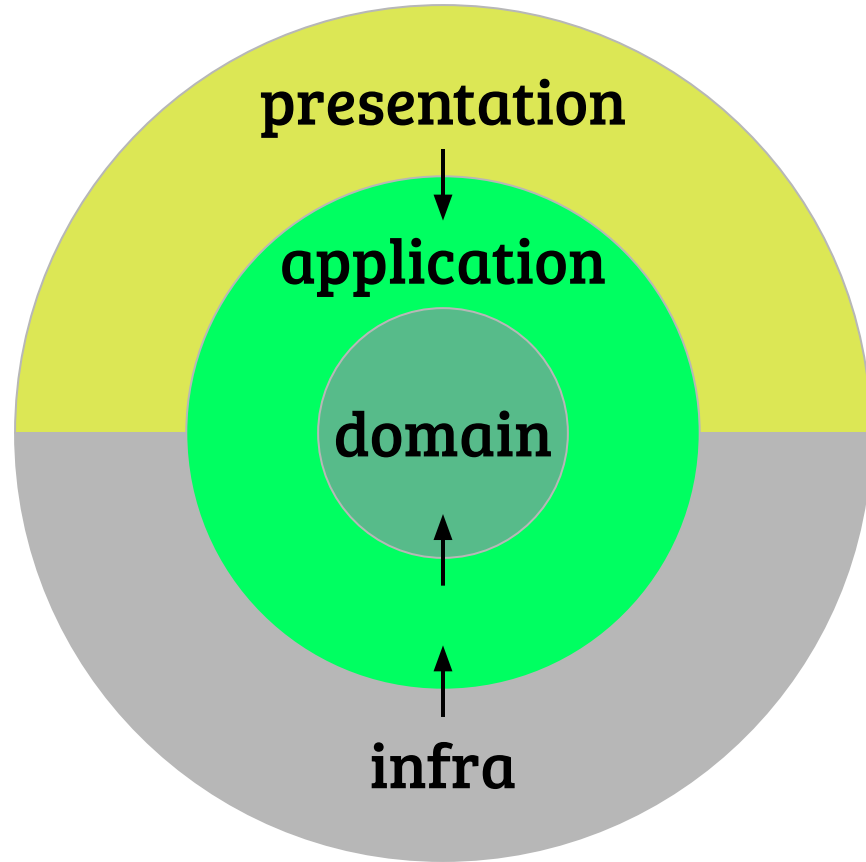
application rules



domain



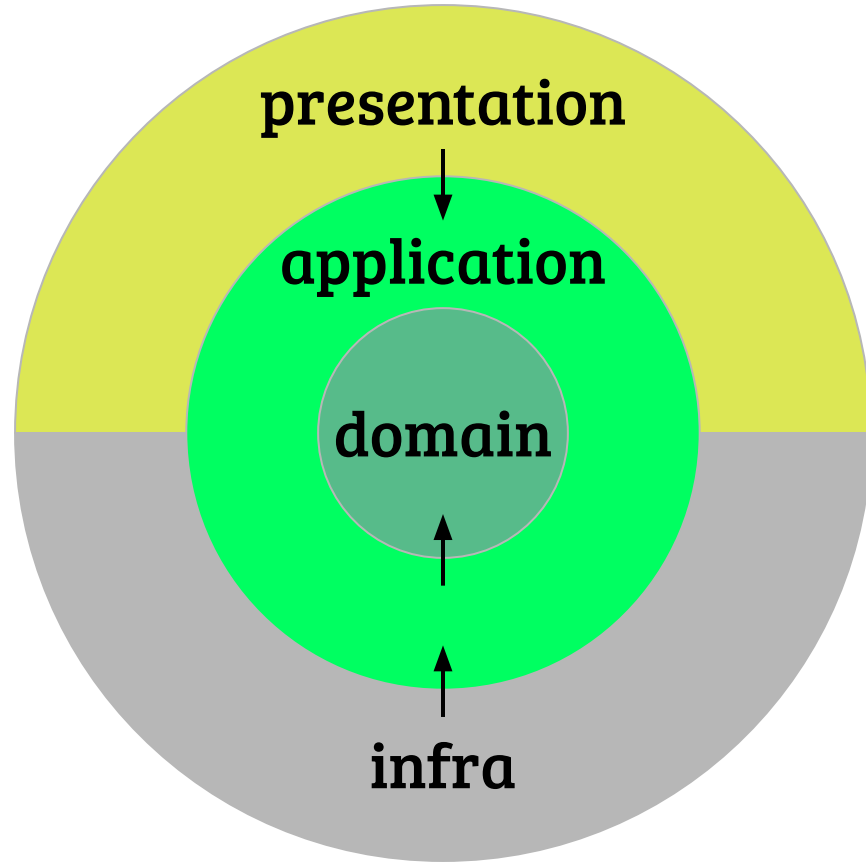
infrastructure



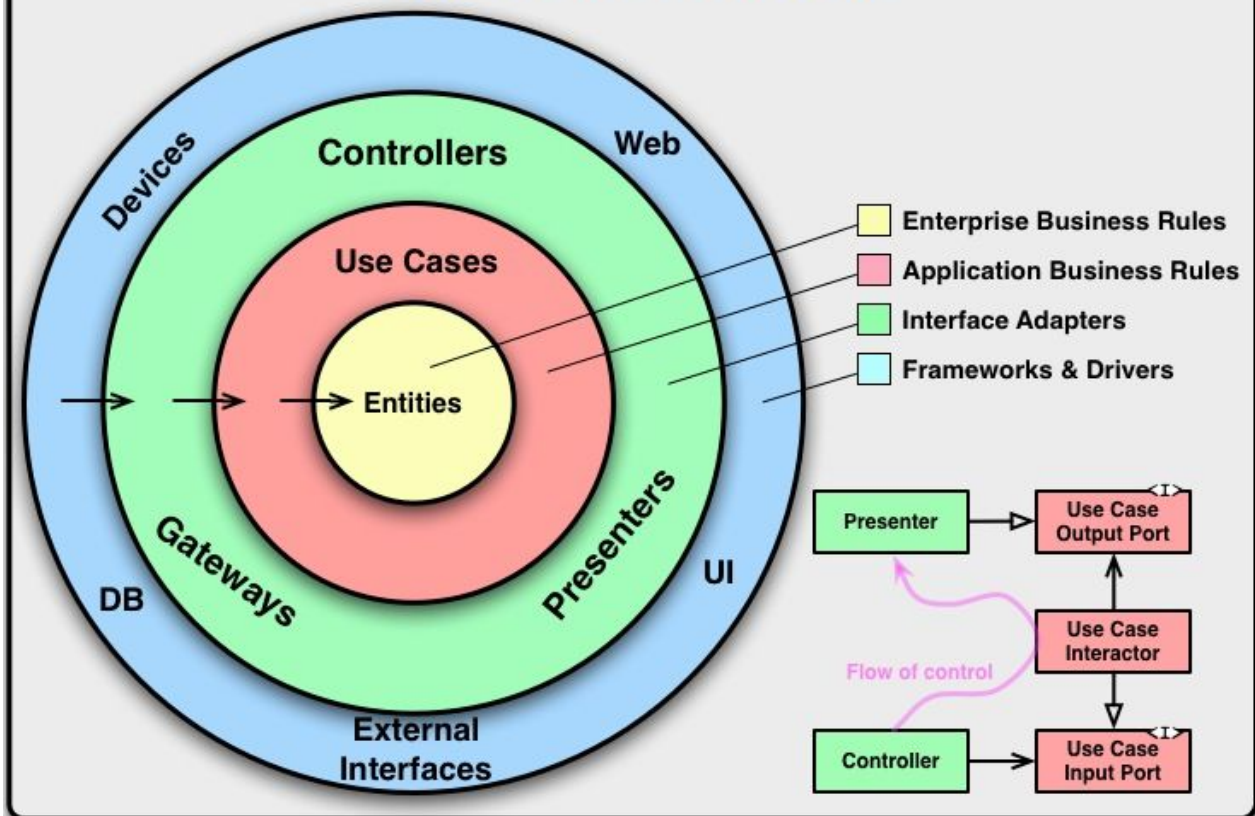
arquitetura clean

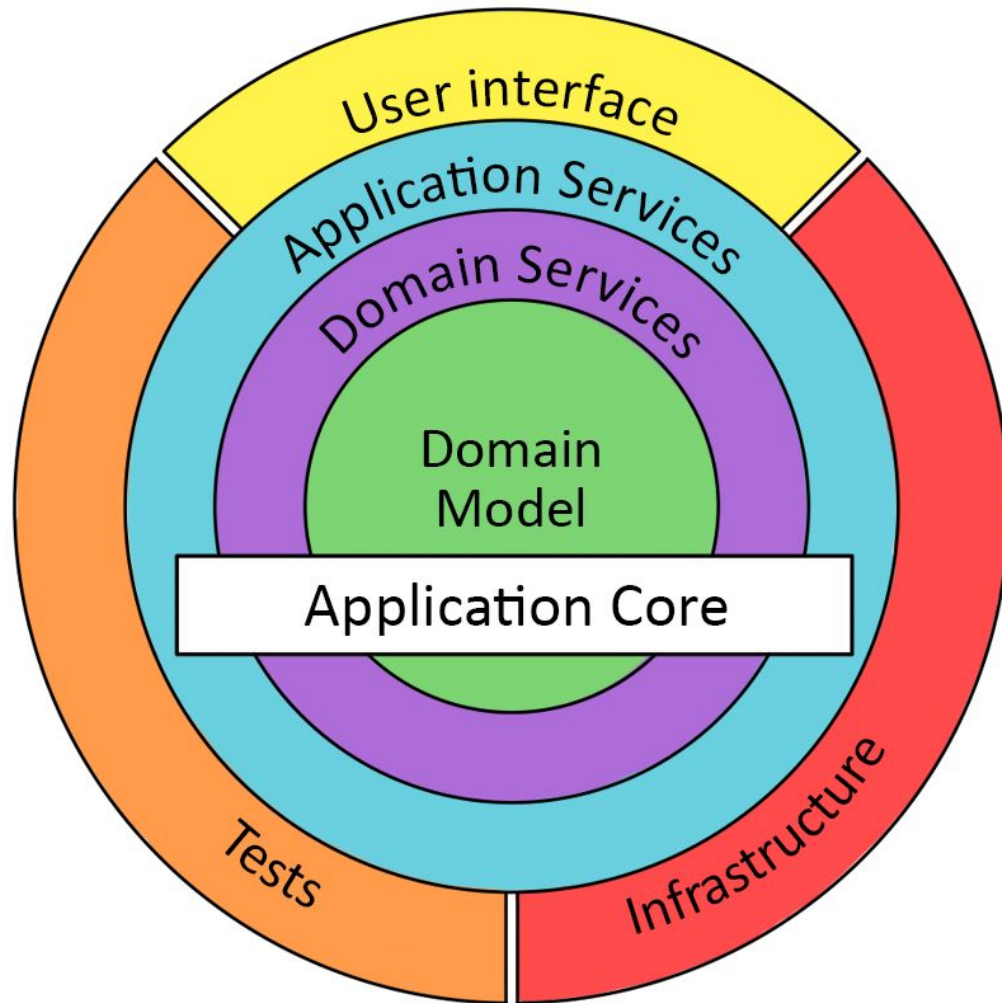
arquitetura onion

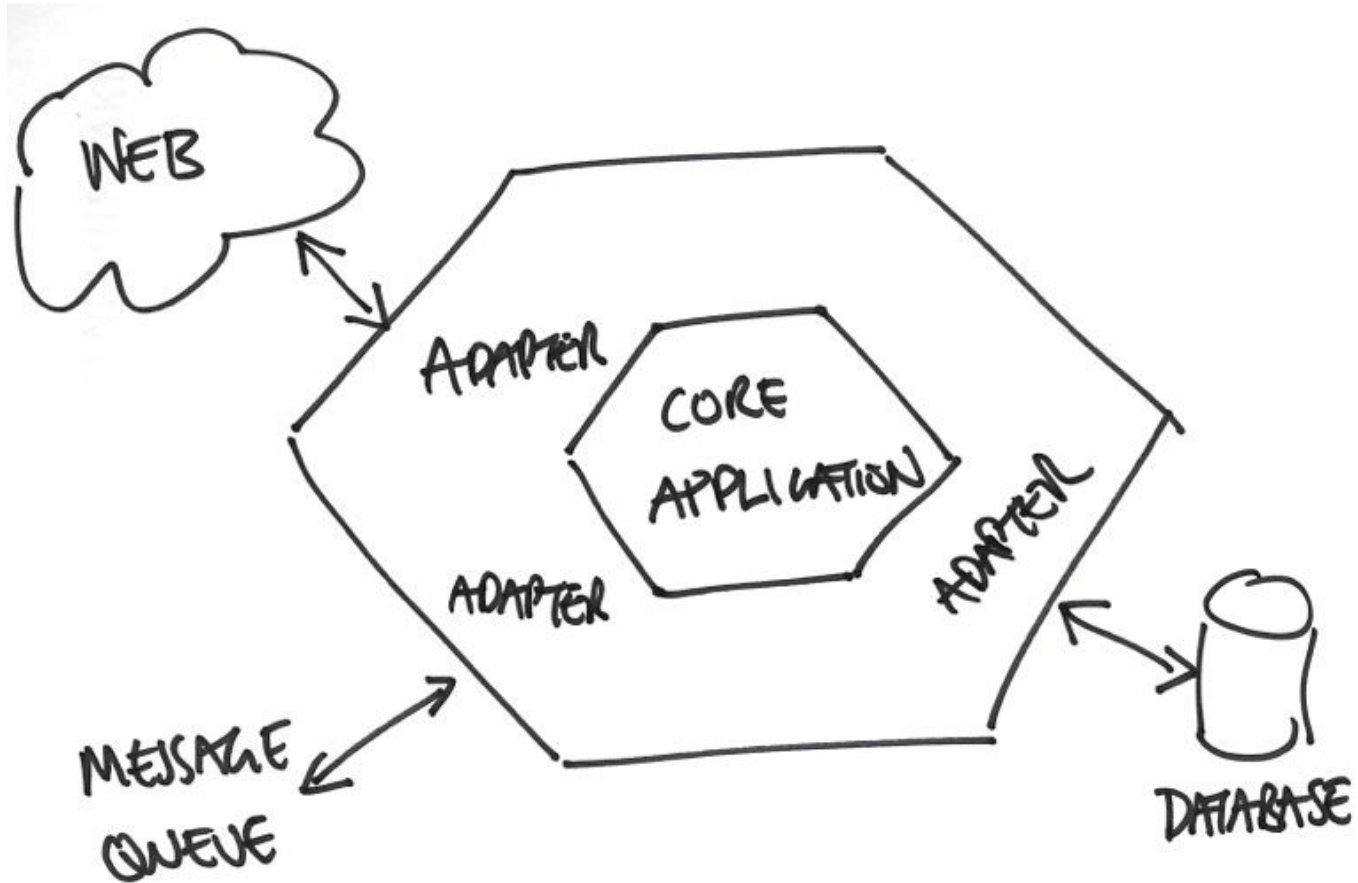
arquitetura hexagonal



The Clean Architecture









é tudo “igual”!

qual a ideia?

independente de frameworks

independente de frameworks
independente de ui

independente de frameworks
independente de ui
independente de banco de dados

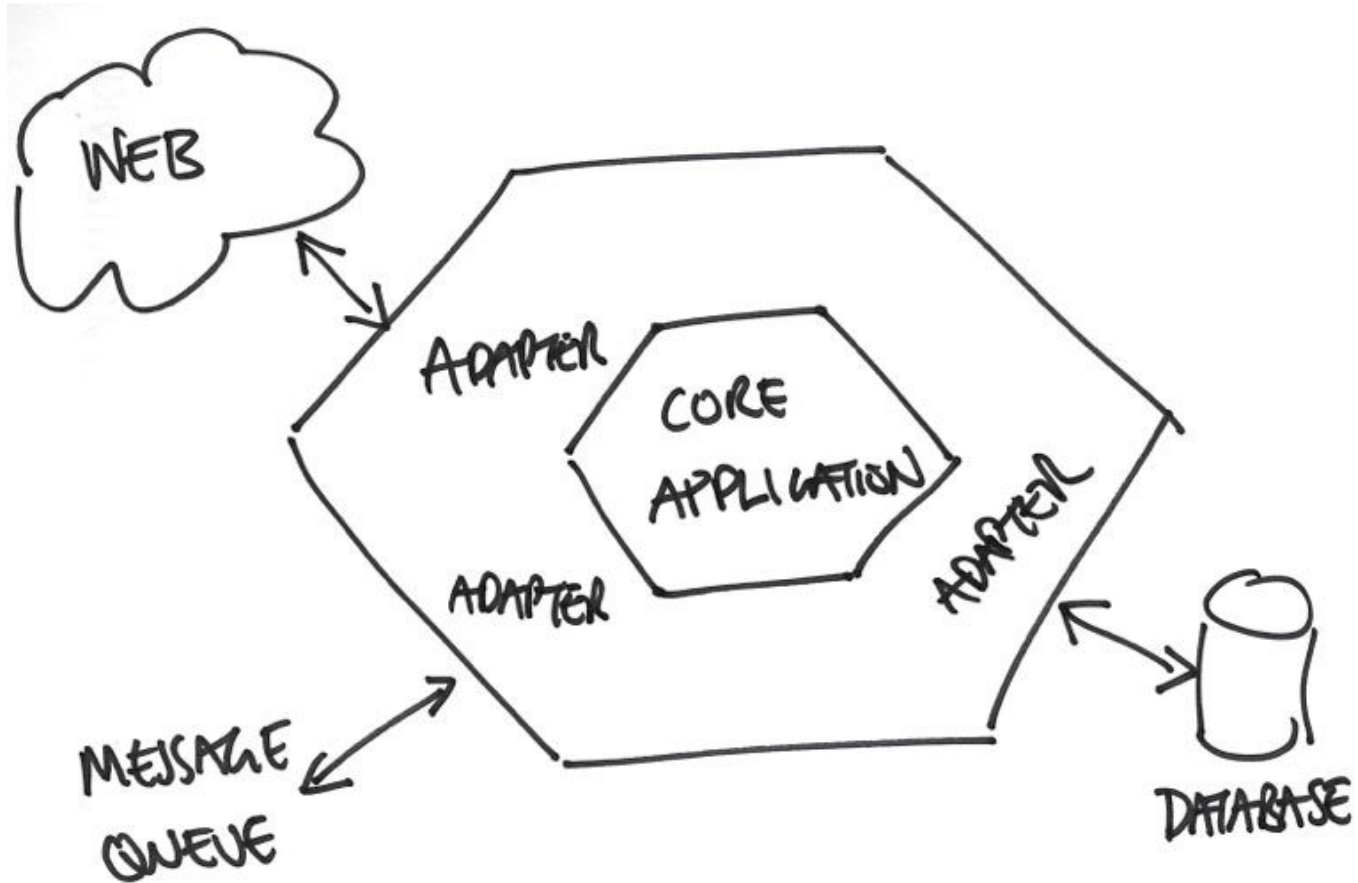
independente de frameworks
independente de ui
independente de banco de dados
independente de agentes externos

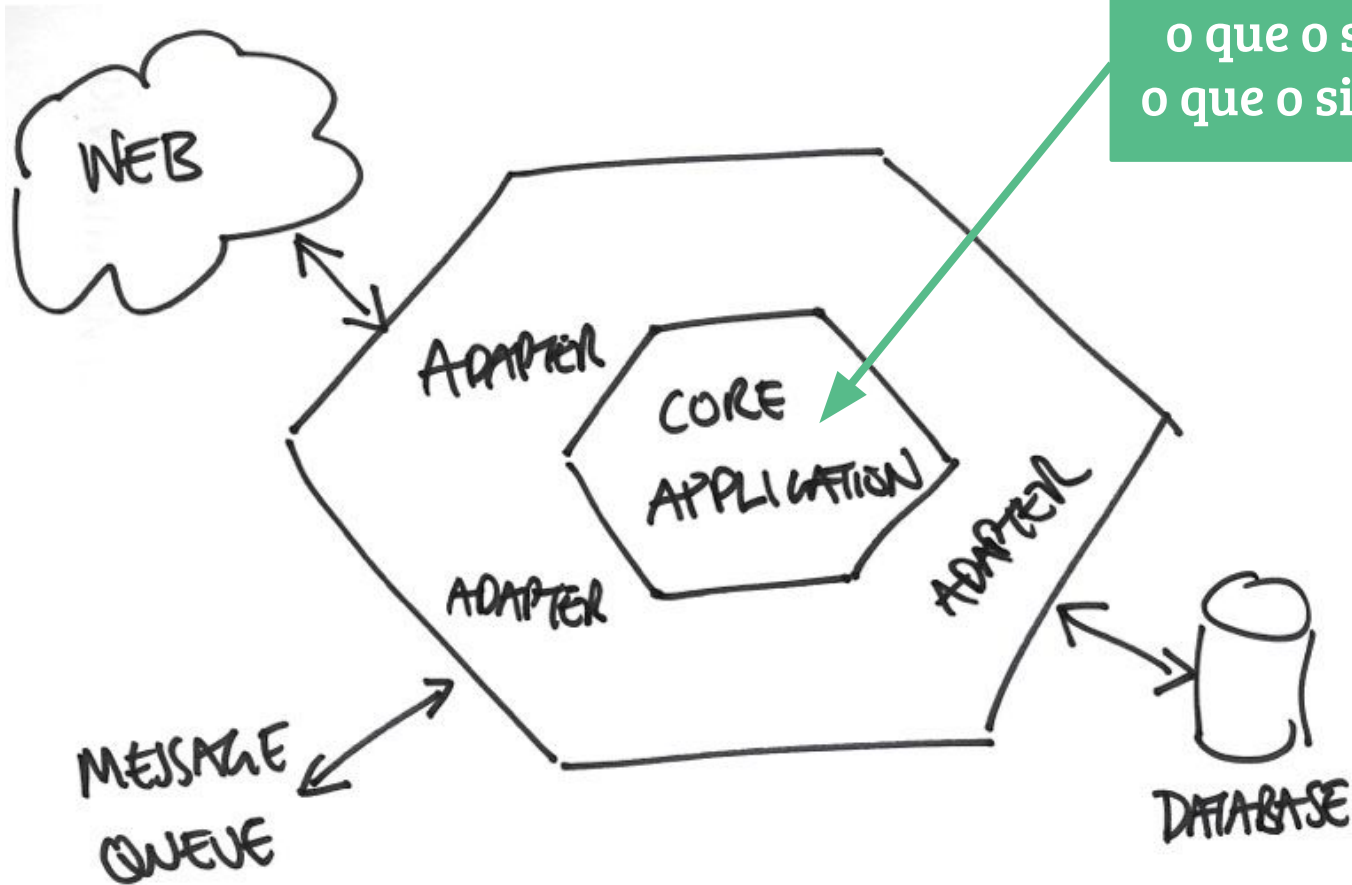
independente de frameworks
independente de ui
independente de banco de dados
independente de agentes externos
facilmente testável

regras do jogo

1.

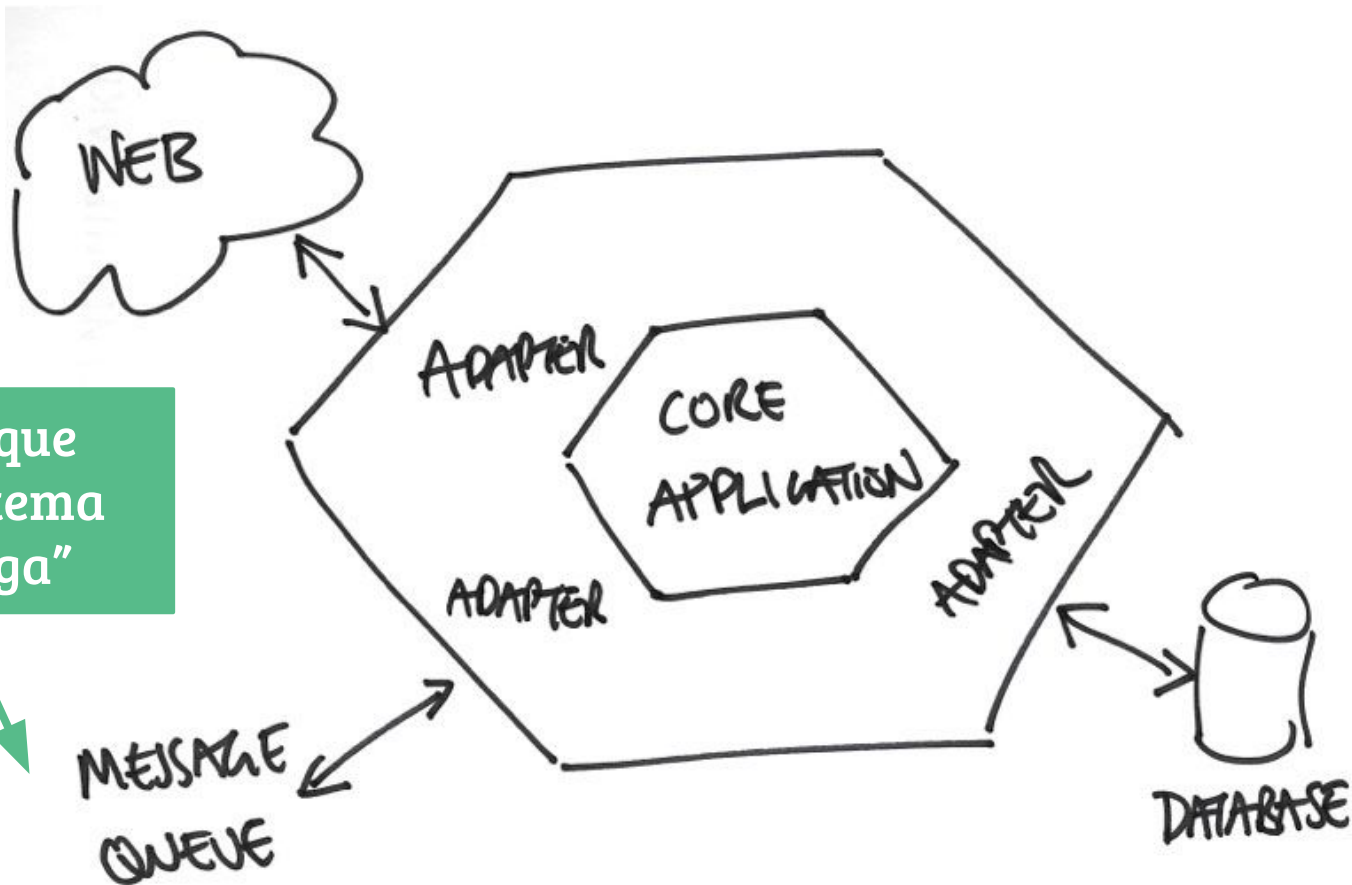
respeita as camadas

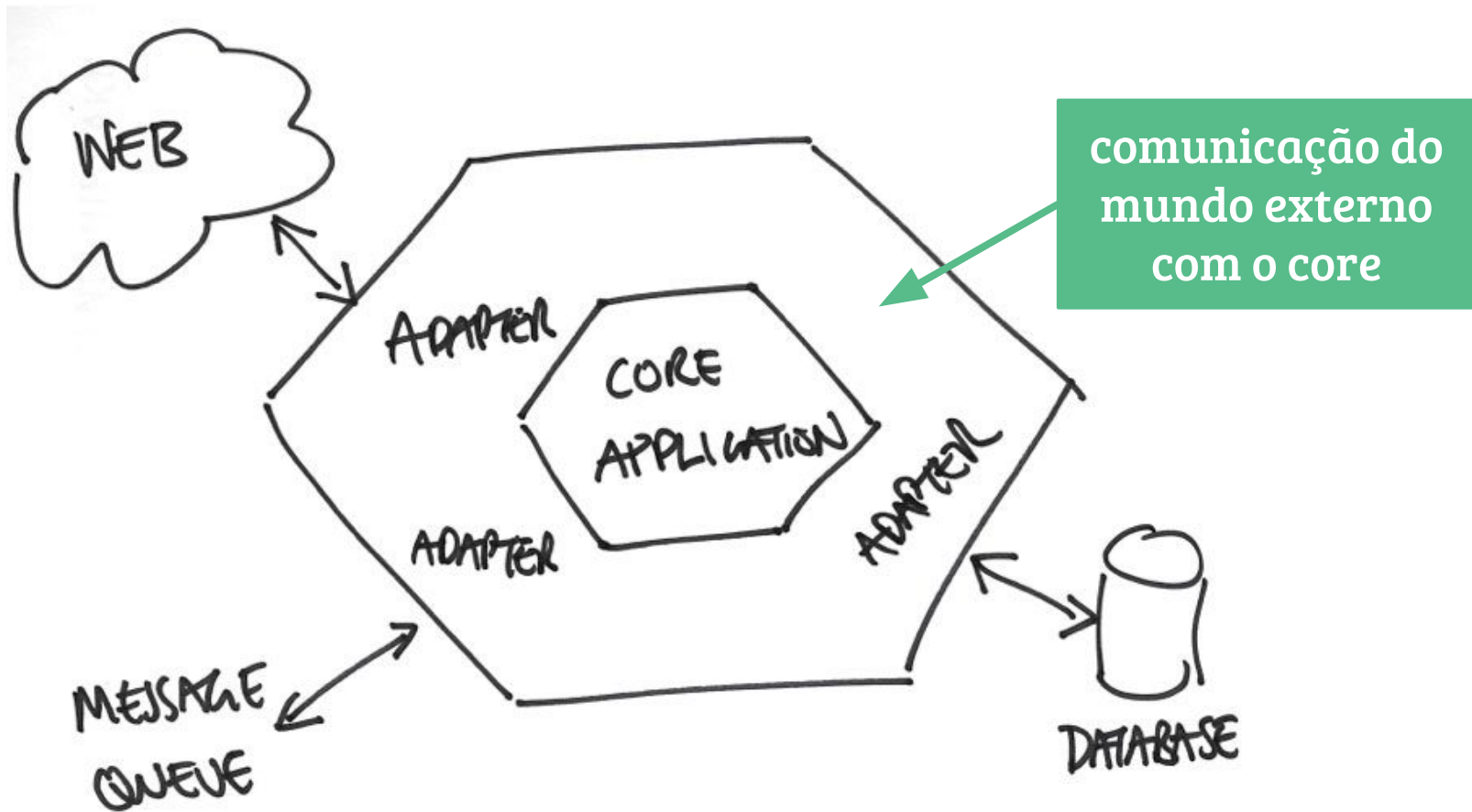




o que o sistema é
o que o sistema faz

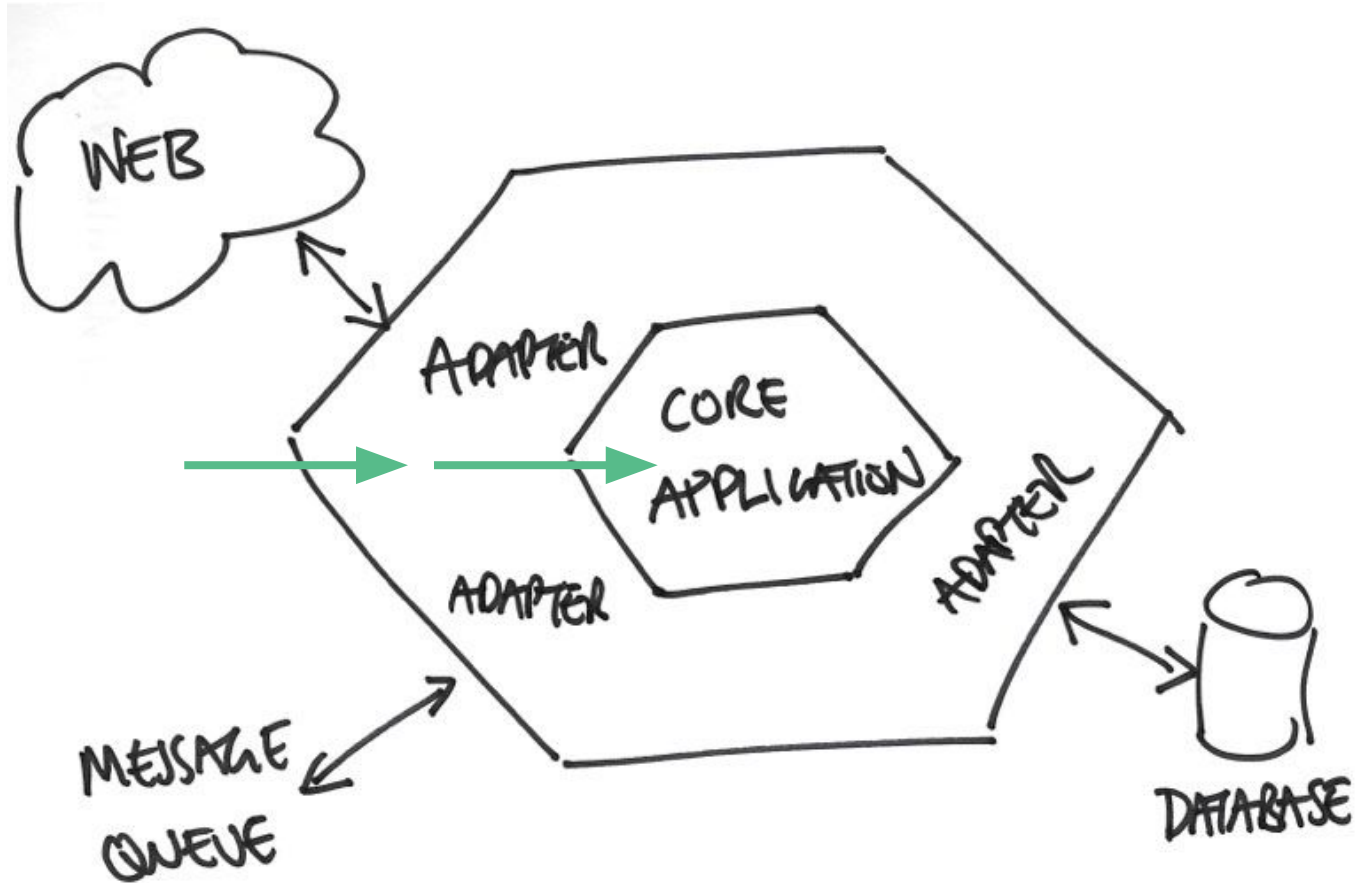
coisas que
meu sistema
"não liga"

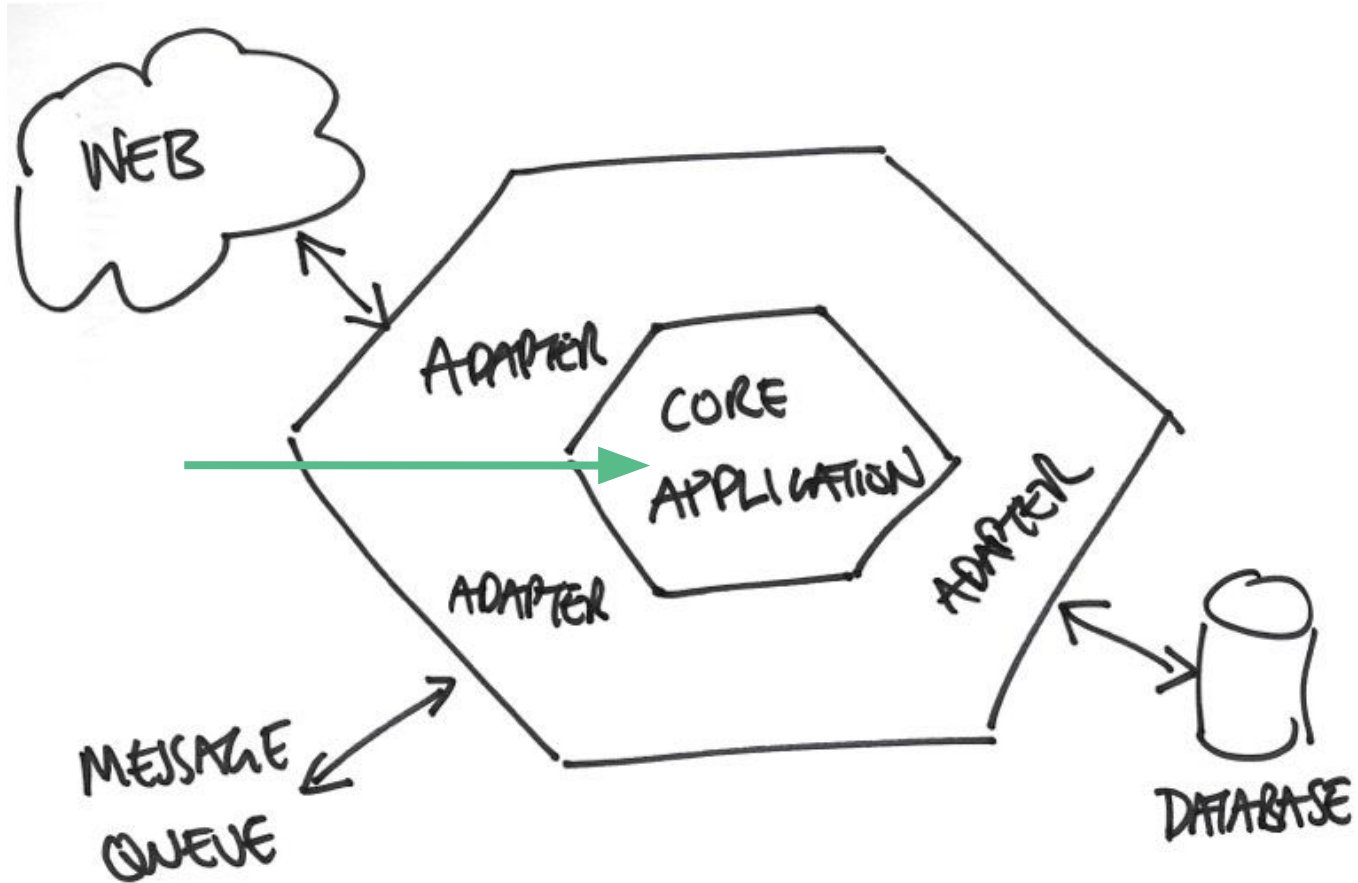


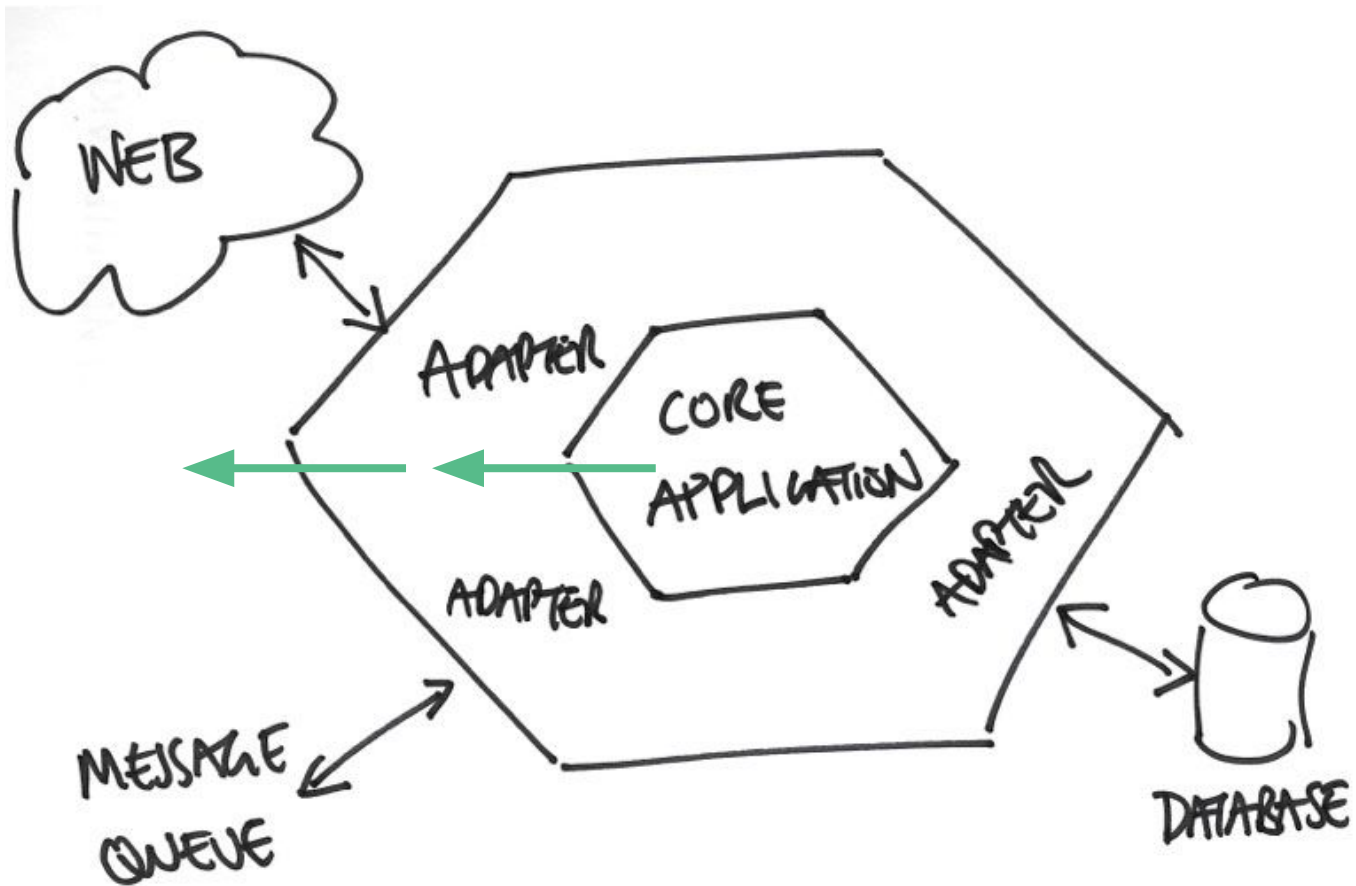


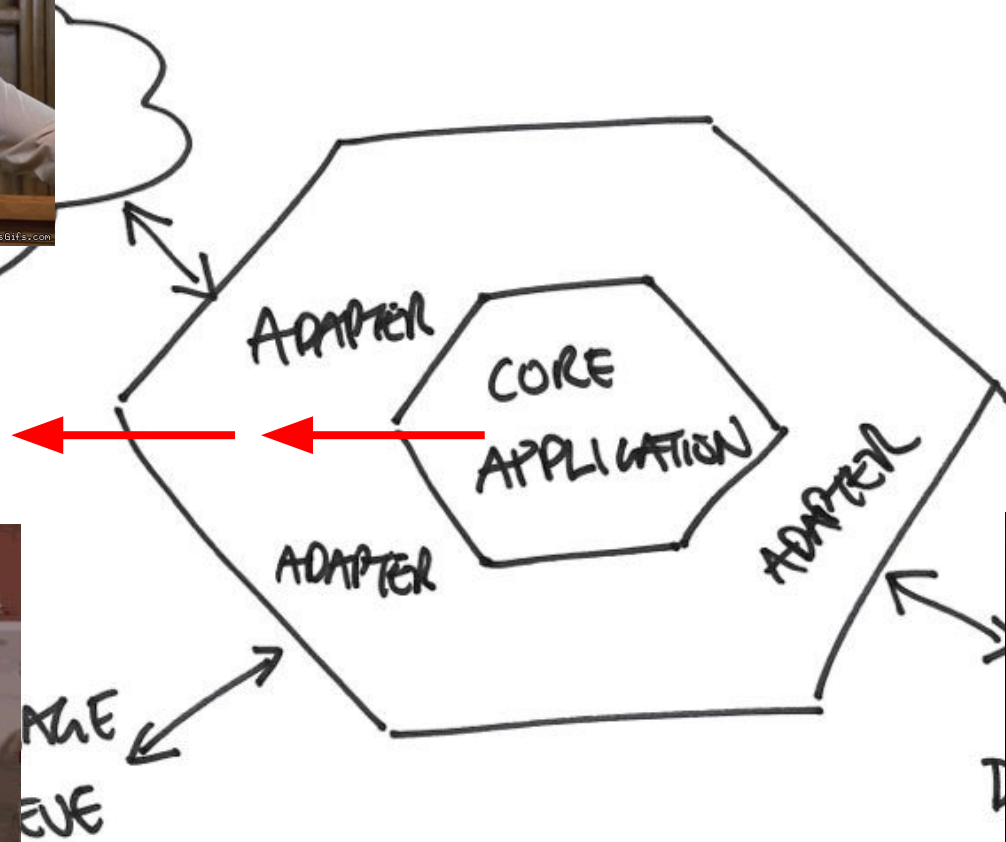
2.

dependências só de fora pra dentro









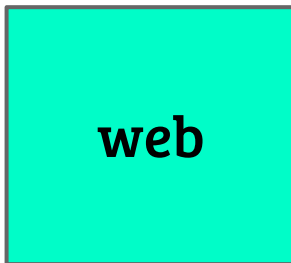
mundo externo

mundo externo

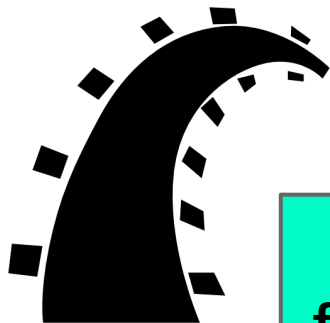


**banco de
dados**

mundo externo

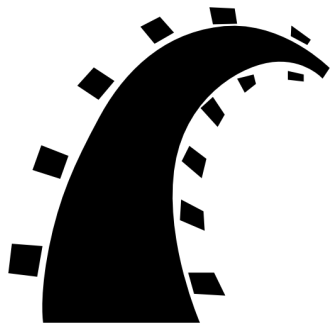


mundo externo



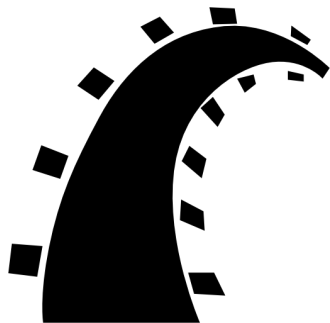
frameworks

mundo externo

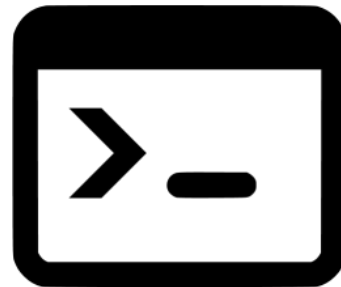


**jobs
agendados**

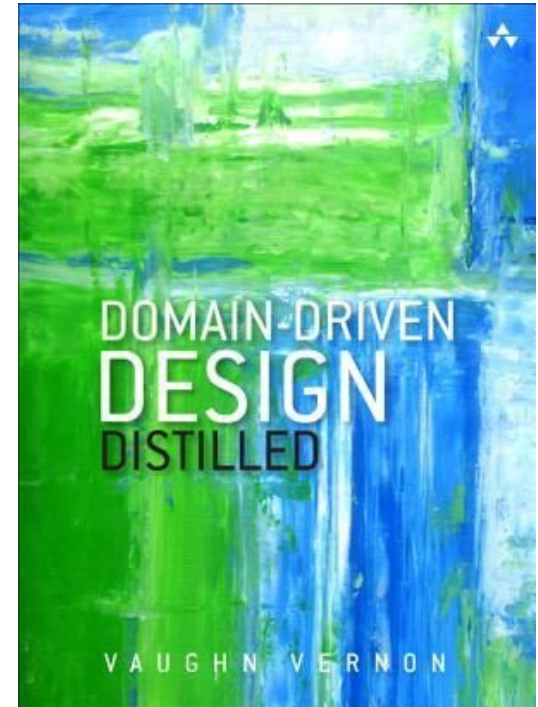
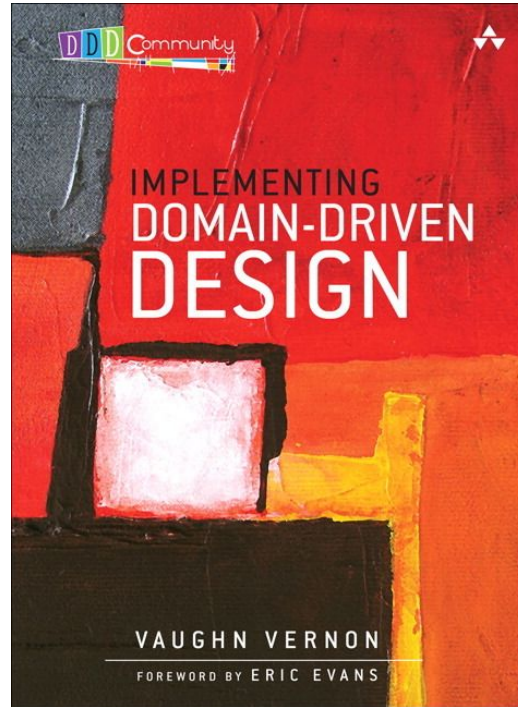
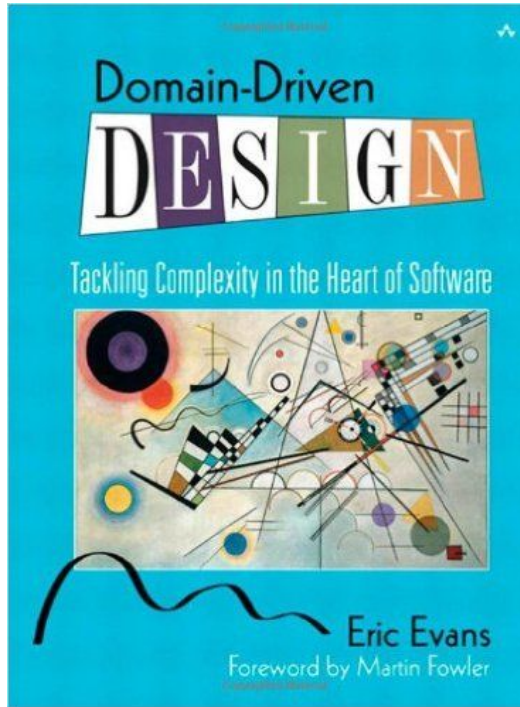
mundo externo



terminal



core application





**core
application**





o que o sistema é (entidades)



CLIENTE

- cpf
- nome
- data de nascimento

o que o sistema é (entidades)



IMÓVEL
- rua
- número
- bairro

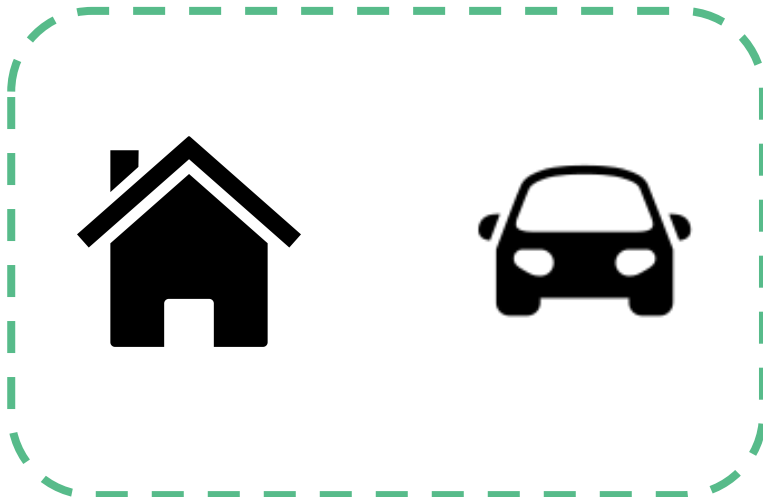
o que o sistema é (entidades)



AUTOMÓVEL

- placa
- modelo
- marca

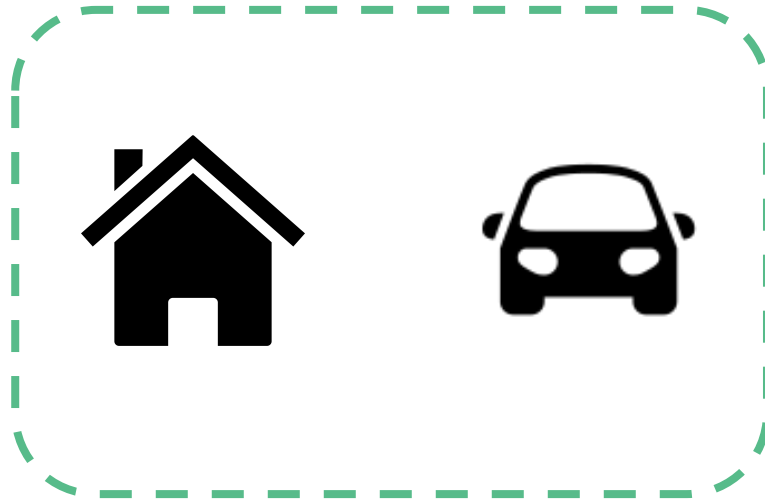
o que o sistema é (entidades)



GARANTIA

- valor
- dívidas

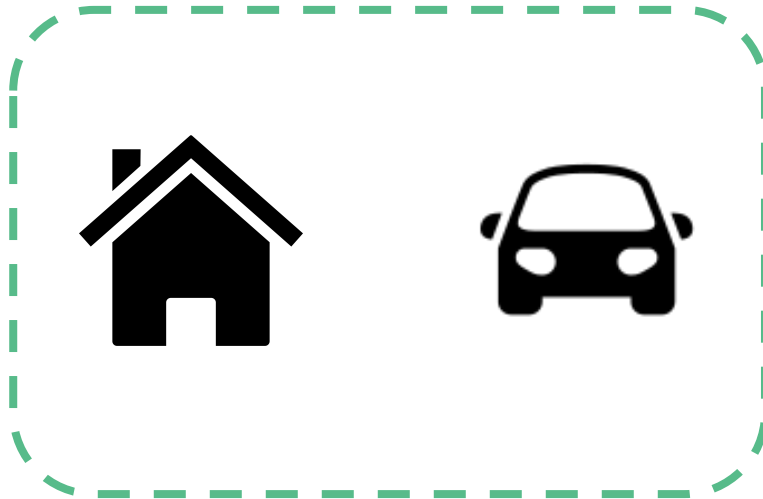
o que o sistema é (entidades)



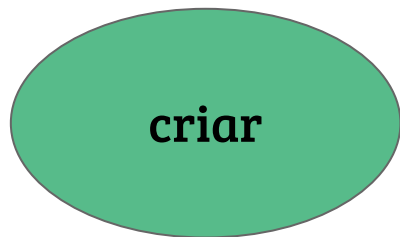
ANÁLISE DE RISCO

- data
- resultado

o que o sistema é (entidades)



o que o sistema faz (use cases)



o que o sistema faz (use cases)

criar



**analisar
risco**

o que o sistema faz (use cases)

criar

descartar



**analisar
risco**

o que o sistema faz (use cases)

criar

**conceder
crédito**

descartar

**analisar
risco**



criar solicitação



DADOS DE ENTRADA

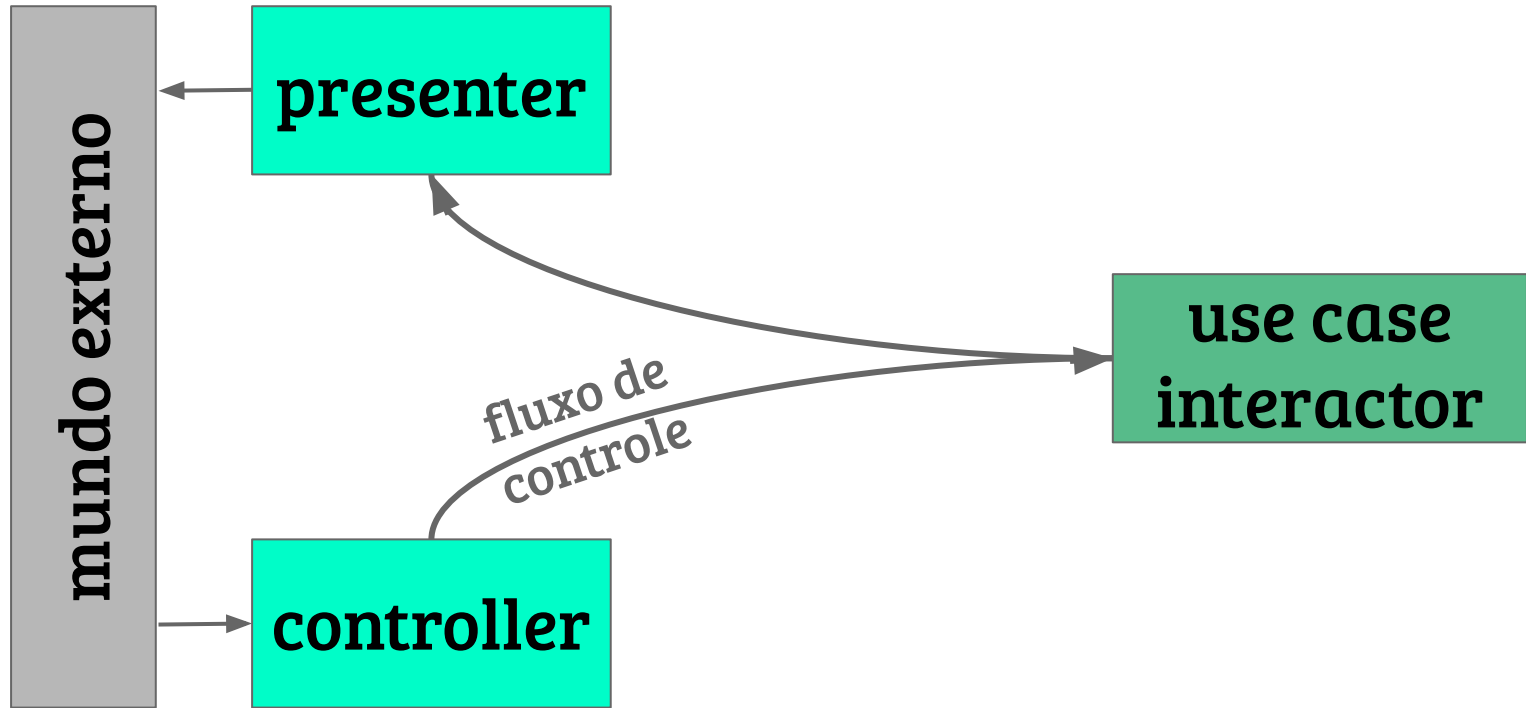
- dados do cliente
- dados da garantia (casa ou carro)
- dados da solicitação (valores)

FLUXO

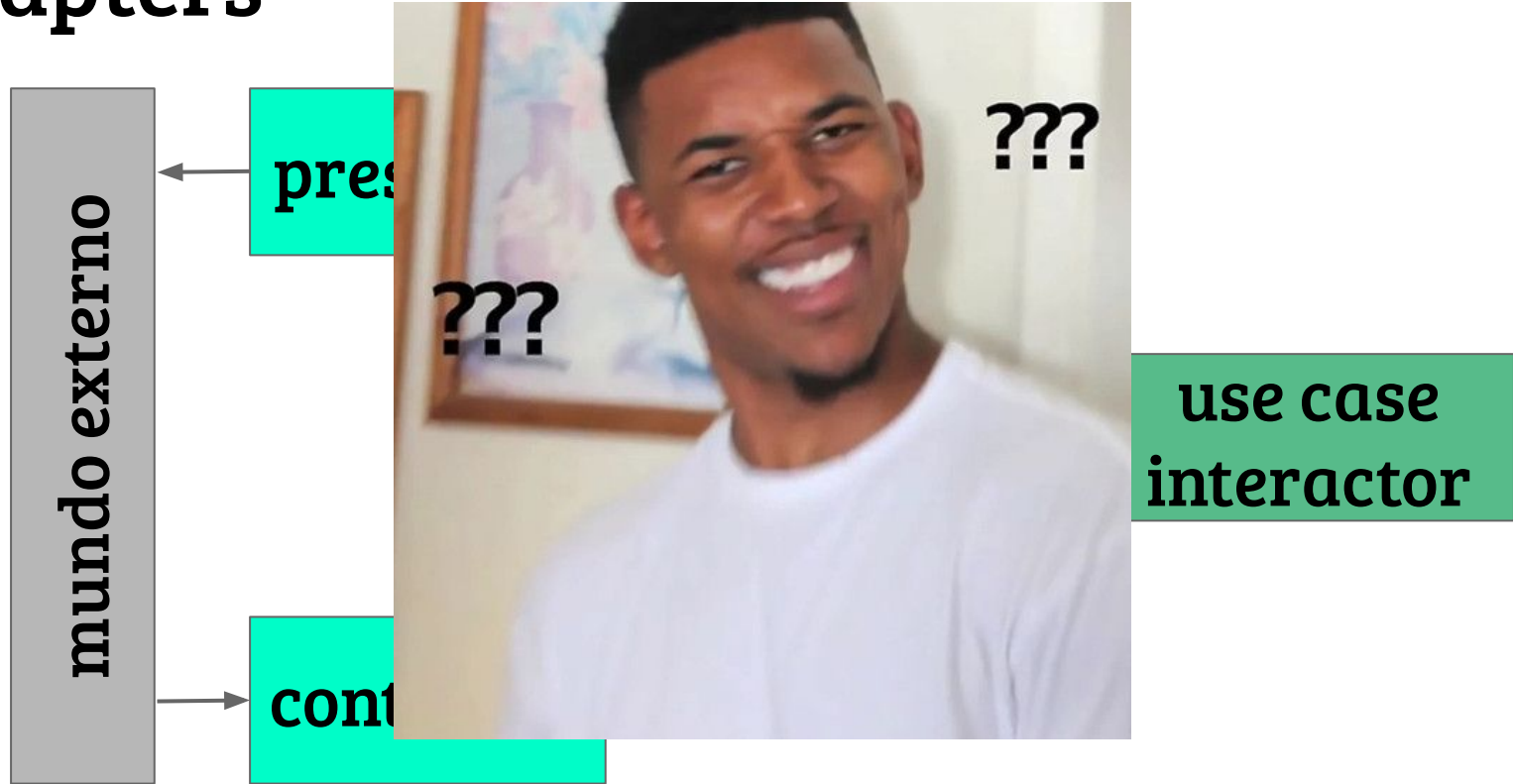
1. cliente pede um empréstimo com os dados acima
2. sistema valida os dados
3. sistema cria uma solicitação
4. sistema envia um email ao cliente com dados da solicitação

adapters

adapters



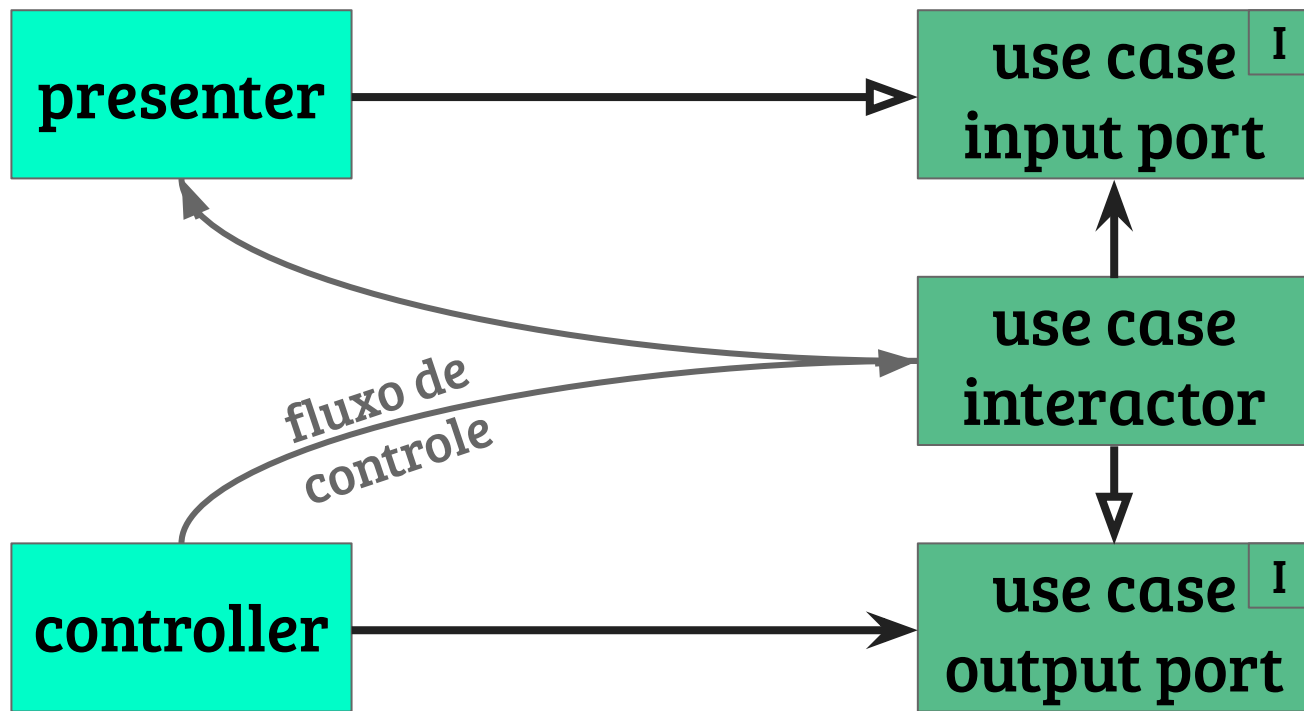
adapters



**e a regra da ordem das
dependências?**



princípio da inversão de dependência



princípio da inversão de dependência

```
class AccountController
  def create(params)
    CreateAccount.new.create(
      email: params[:email],
      cpf: params[:cpf])
  end
end
```

```
class AccountRepository
  def create(account)
    # Persiste 'account'
  end
end
```

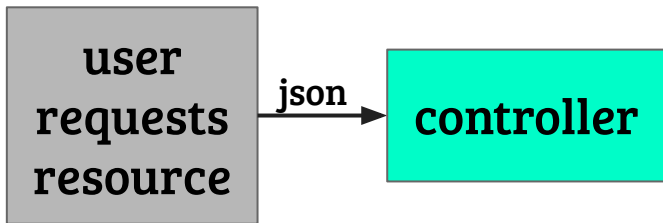
```
# Use Case
class CreateAccount
  def initialize(repository: AccountsRepository.new)
    @repository = repository
  end

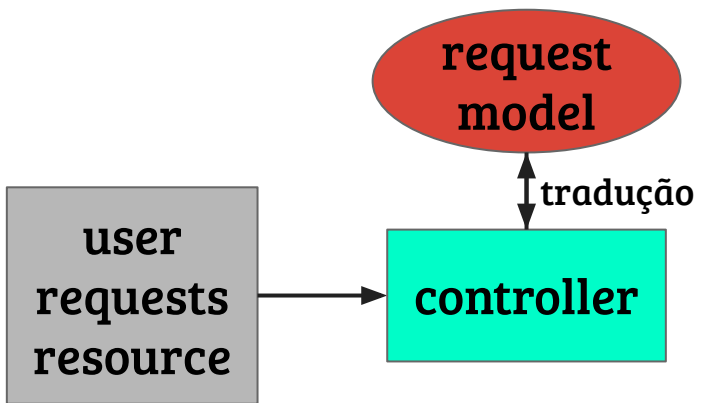
  def create(email:, cpf:)
    account = build_account(email, cpf)
    @repository.create(account)
  end

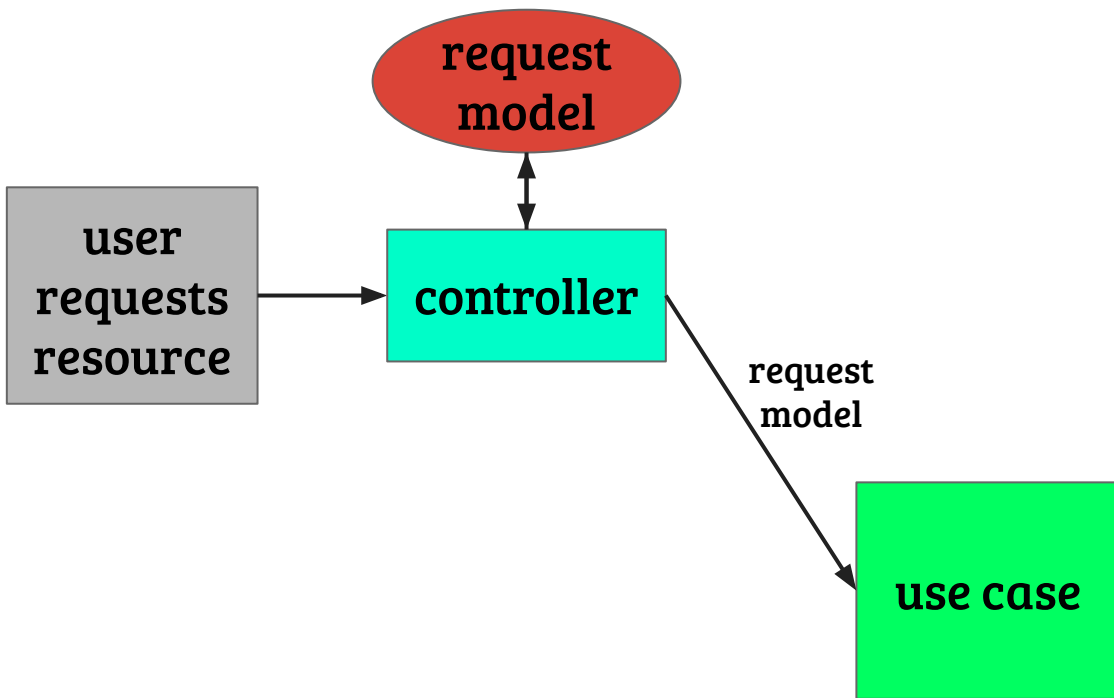
  def build_account(email, cpf) # ...
  end
end
```

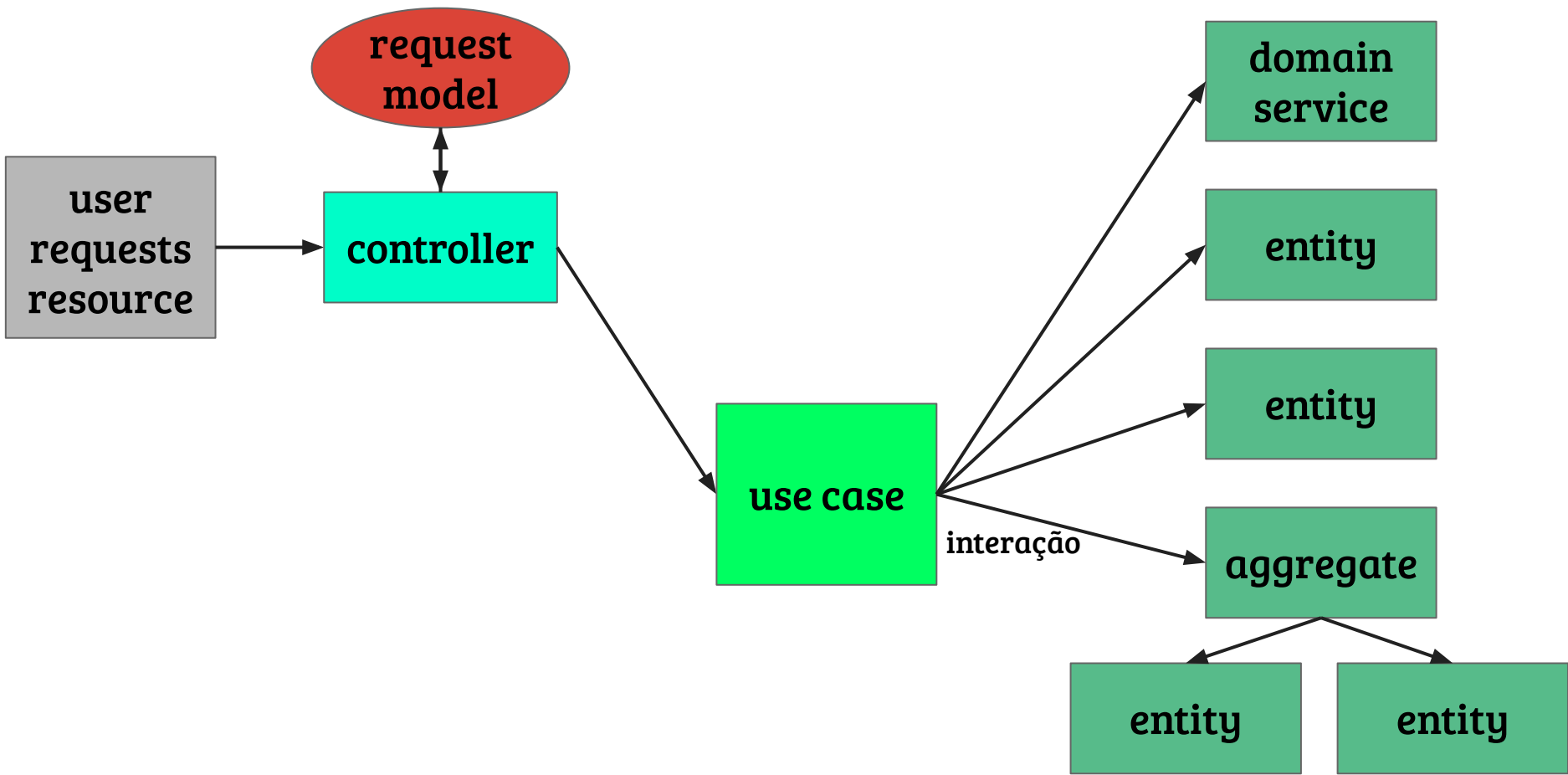
juntando tudo

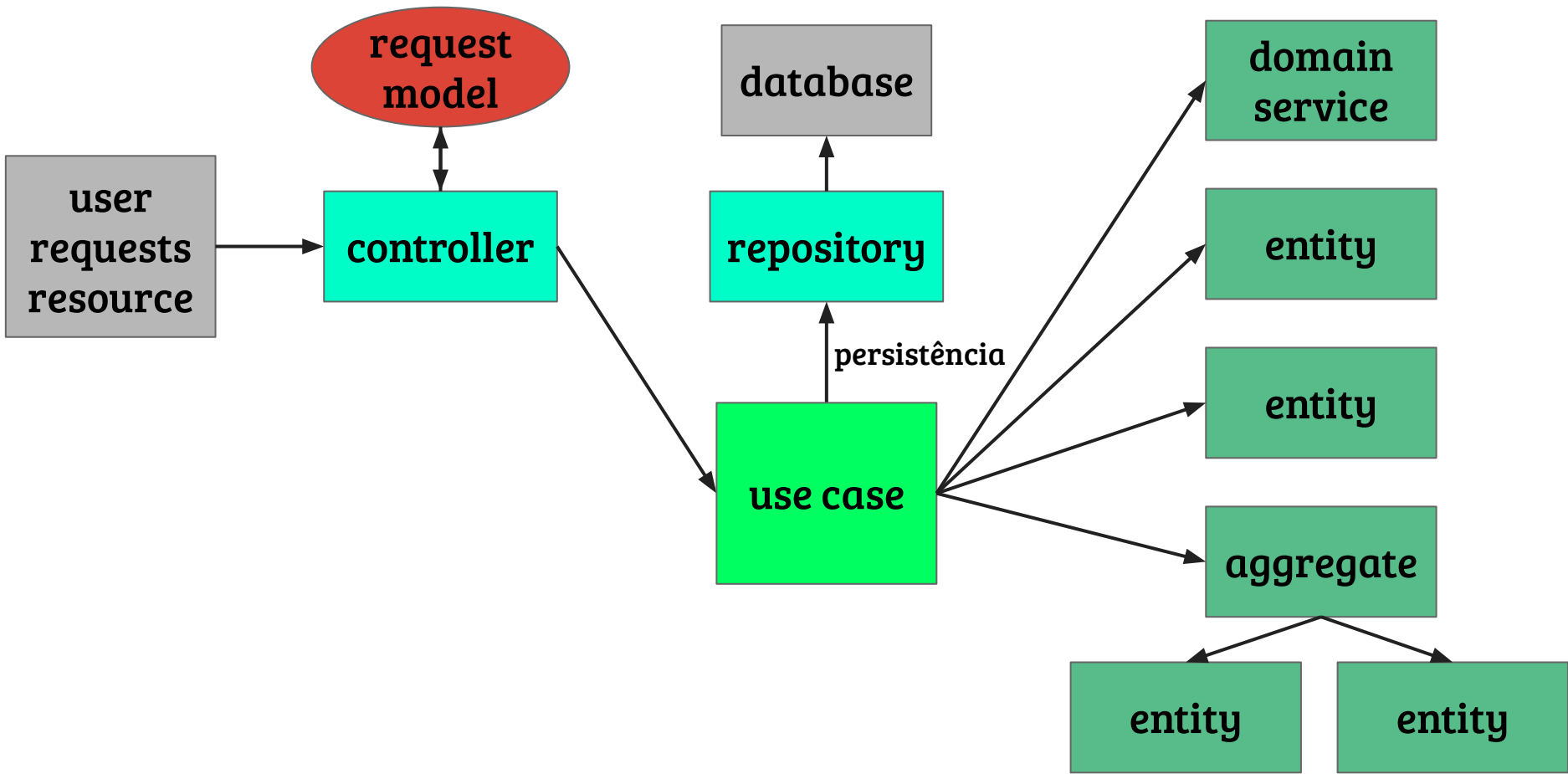
**user
requests
resource**

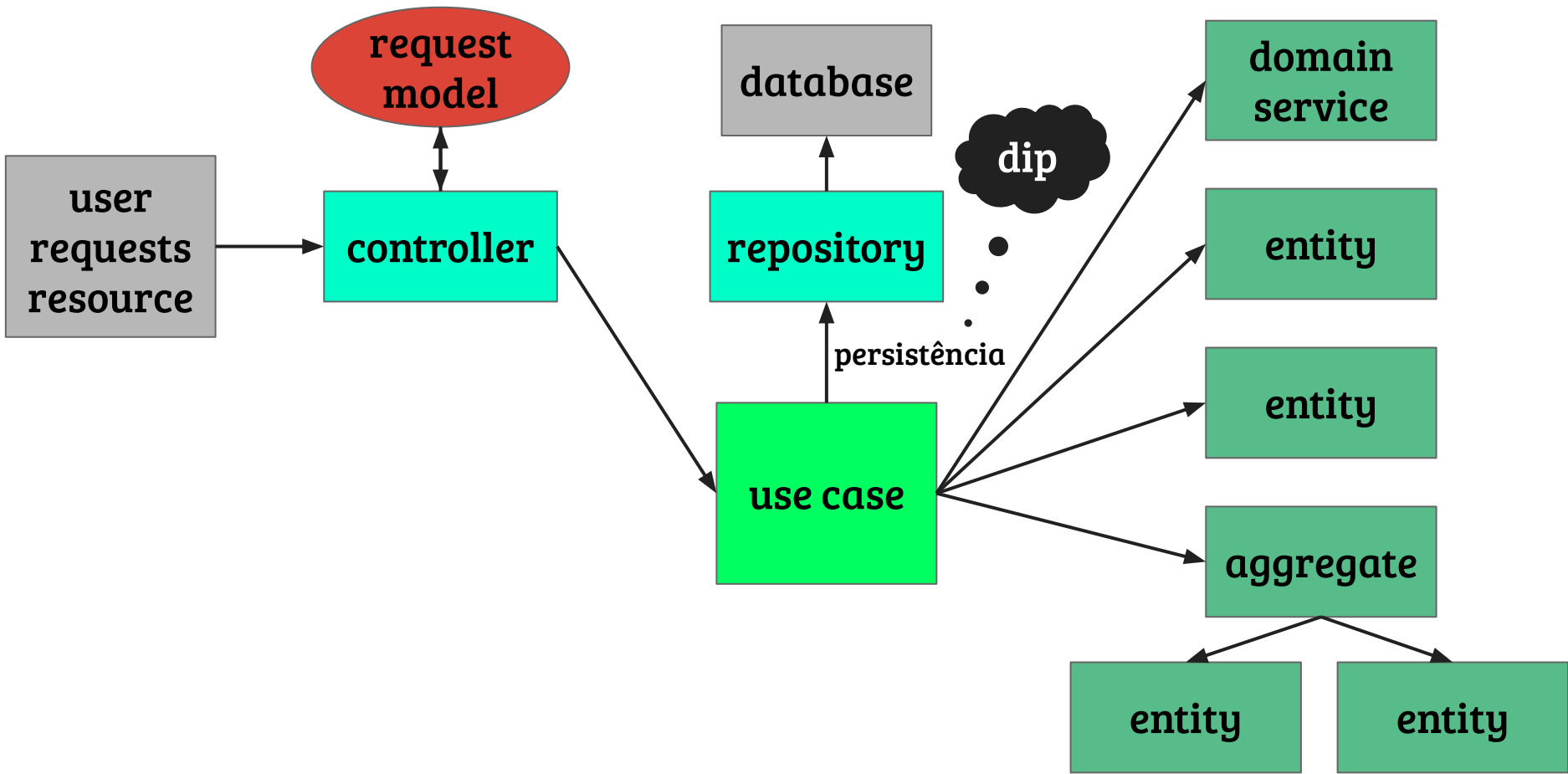


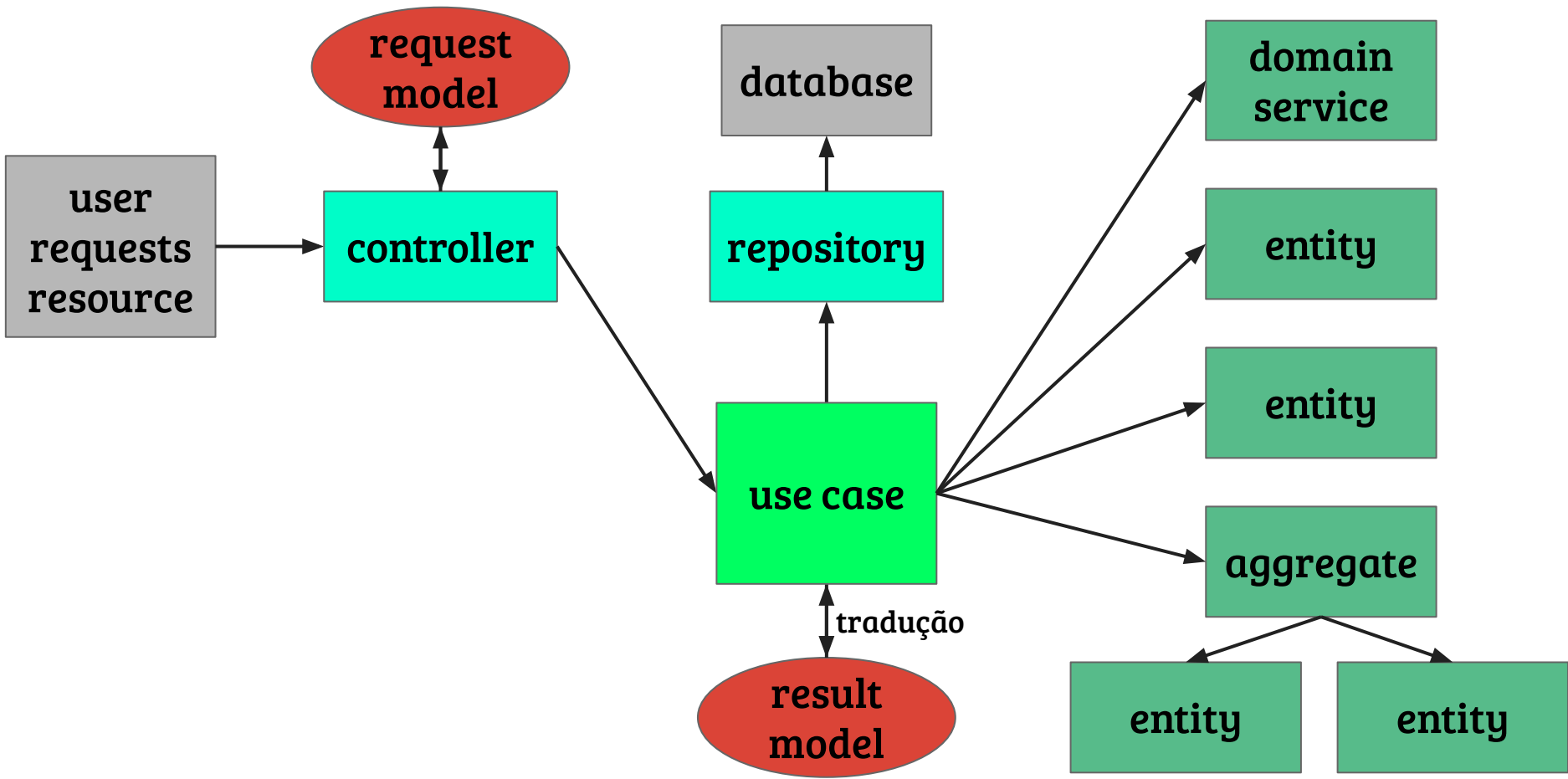


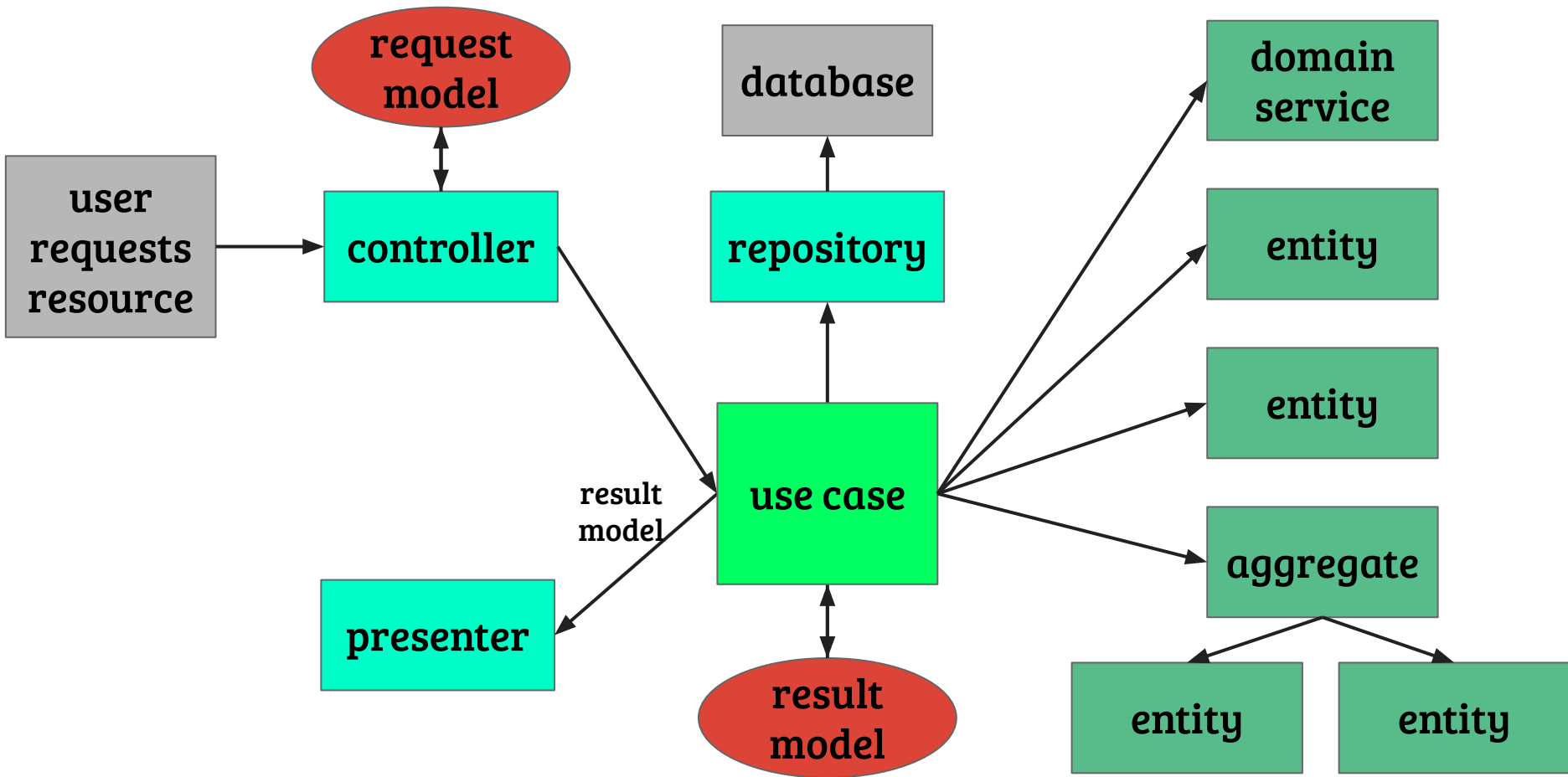


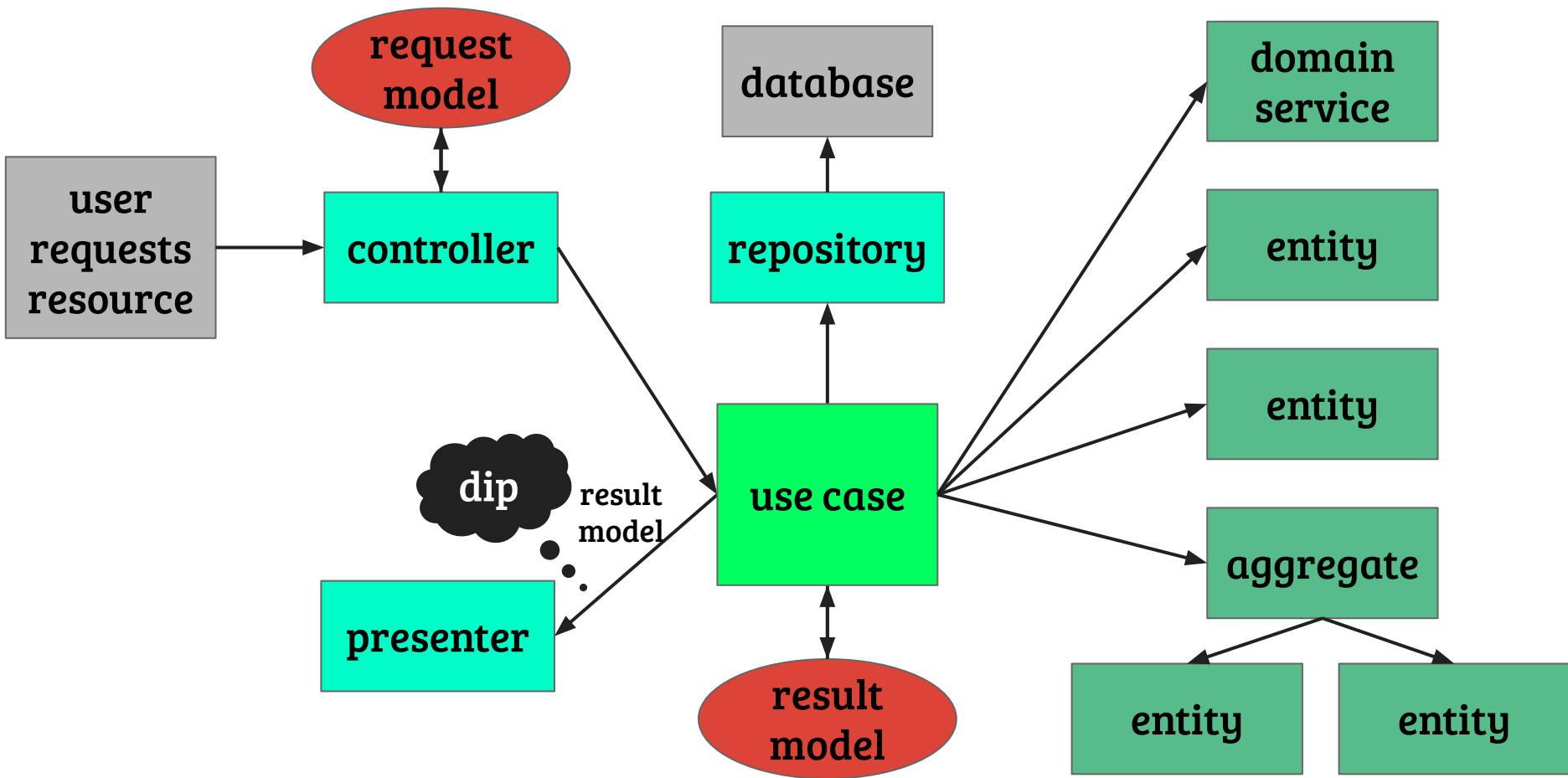


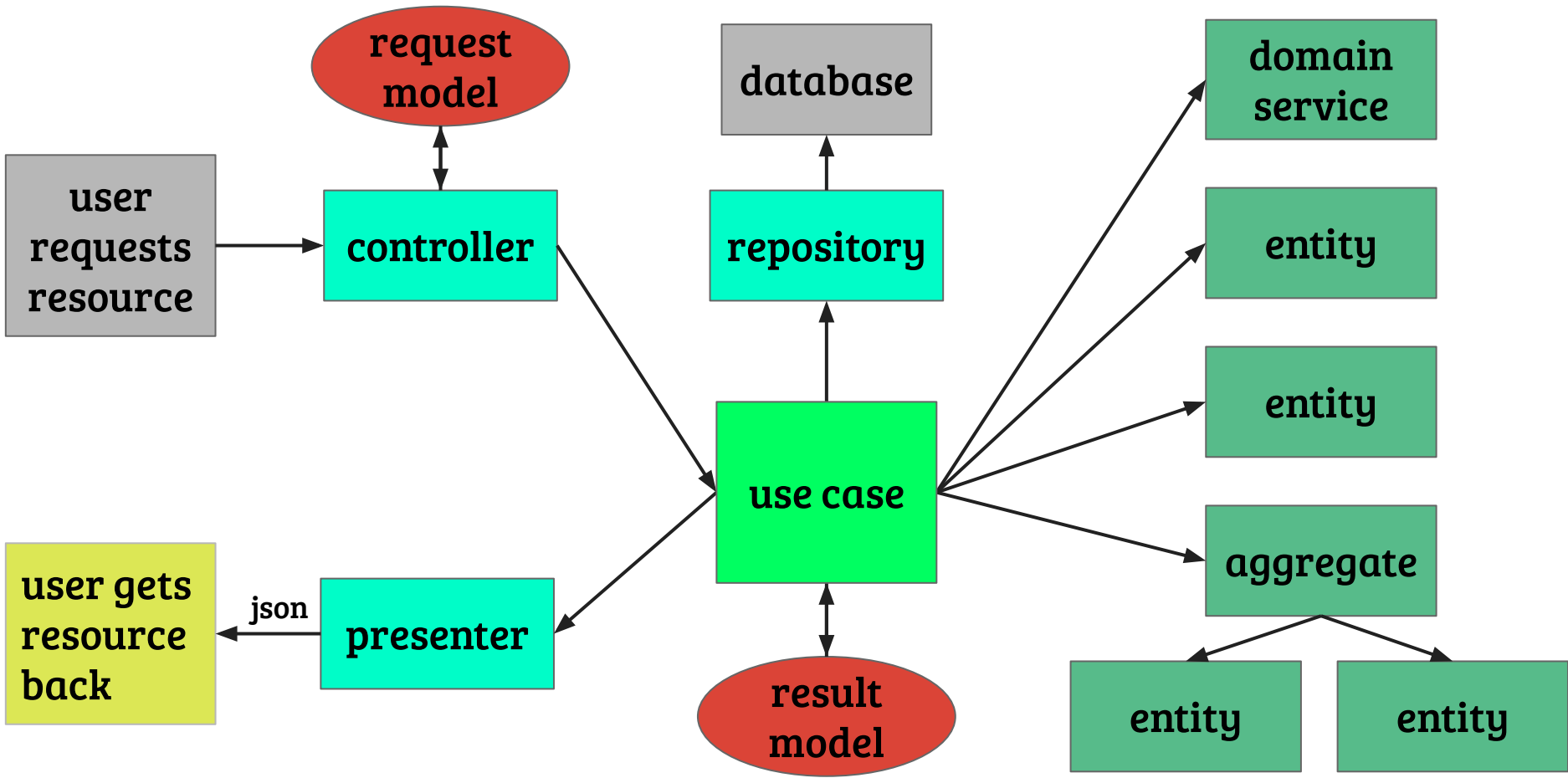












por que isso é importante?

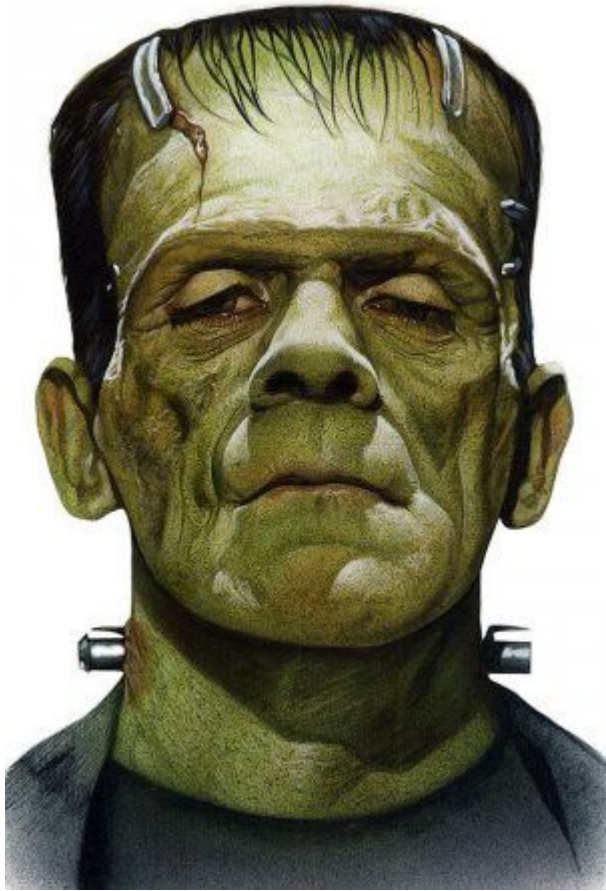


Camila Campos 🏳️‍🌈

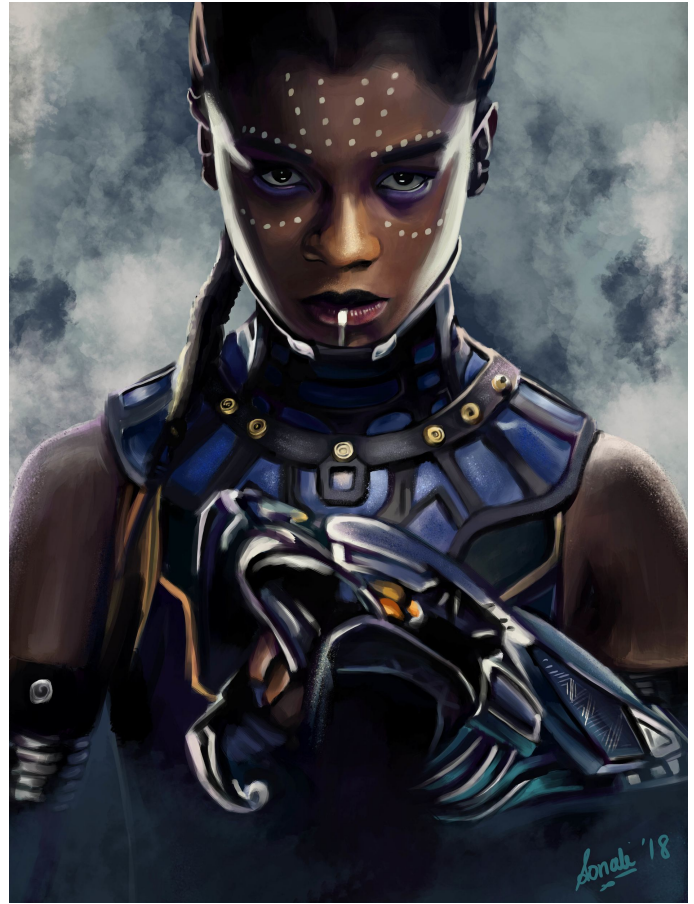
@camposmilaa

O que vocês usariam como argumento pra alguém de negócio/produto para convencer essa pessoa de que Clean Code/Clean Architecture é importante?

<http://bit.ly/importancia-clean-arq>



@camposmilaa



@cynthiazanoni



@camposmilaa

@juuh42dias

 credits

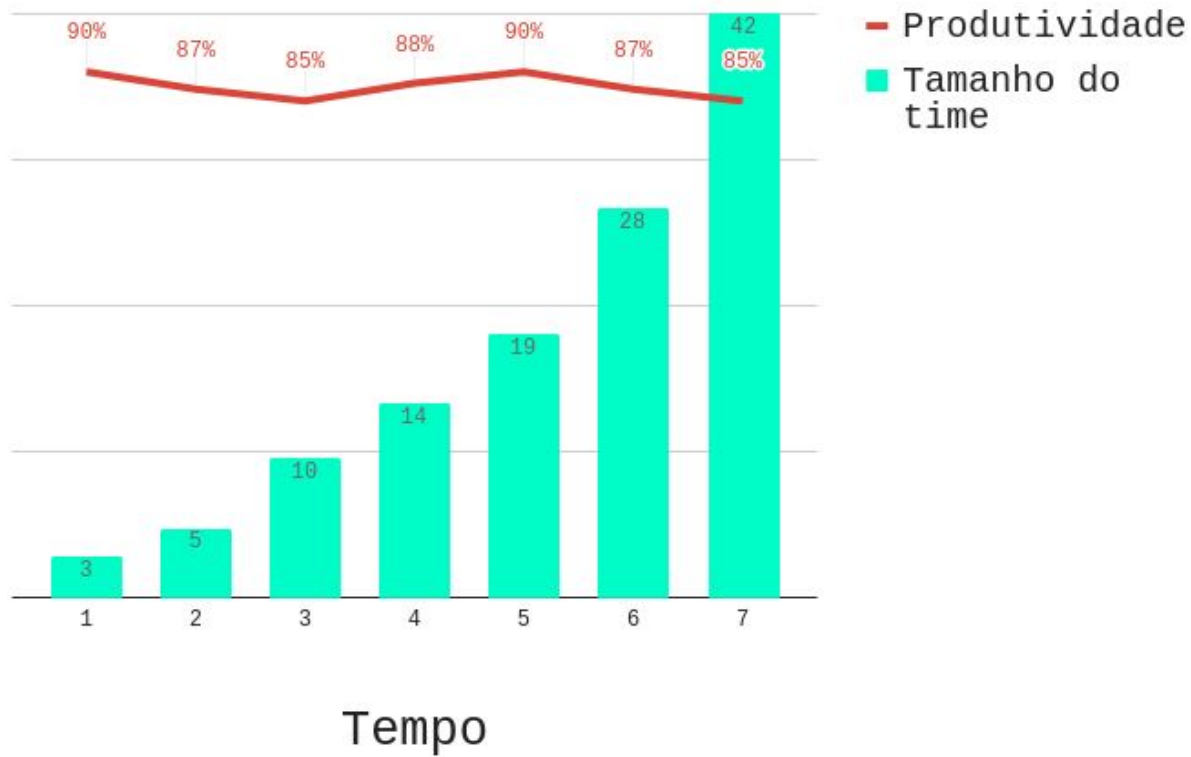


@camposmilaa

@juuh42dias

 credits

Produtividade



foco em entregar a coisa certa

**foco em entregar a coisa certa
devs entendendo o business**

foco em entregar a coisa certa
devs entendendo o business
manutenabilidade








foco em entregar a coisa certa
devs entendendo o business
manutenabilidade
felicidade das devs









**talk is cheap
show me the code**

Linus Torvalds



- ▼  api
 - ▼  customer
 - /* v1.rb
- ▼  application
 - ▼  use_case
 - /* create_customer.rb
- ▼  domain
 - /* customer.rb
- ▼  infra
 - ▼  persistence
 - /* customer_repository.rb

- ▼  adapters
 - ▼  api
 - ▼  customer
 - /* v1.rb
 - ▼  persistence
 - /* customer_repository.rb
- ▼  domain
 - /* customer.rb
- ▼  use_case
 - /* create_customer.rb

frases impactantes

para finalizar com chave de ouro

arquitetura [hexagonal/clean/etc]
não é bala de prata

the only way to go fast, is to go well.

Uncle Bob

any fool can write code that a computer can understand.

good programmers write code
that humans can understand.

Martin Fowler

Agradecida!

bit.ly/webnar-hexagonal

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Links legais (além dos livros citados)

Clean Architecture - Uncle Bob

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

Screaming Architecture - Uncle Bob

<https://8thlight.com/blog/uncle-bob/2011/09/30/Screaming-Architecture.html>

Hexagonal Architecture - Alistair Cockburn <http://alistair.cockburn.us/Hexagonal+architecture>

Hexagonal Rails - Matt Wynne

<http://blog.mattwynne.net/2012/05/31/hexagonal-rails-objects-values-and-hexagons/>

Domain Driven Rails - Yan Pritzker <https://vimeo.com/106759024>

Clean Architecture - Uncle Bob <https://www.youtube.com/watch?v=Nltqi7ODZTM>

Clean Architecture and Design - Uncle Bob <https://www.youtube.com/watch?v=Nsjsiz2A9mg>

Hexagonal Rails - Matt Wynne <https://www.youtube.com/watch?v=CGN4RFkhH2M>