Visualising RIBs

Felipe Figueiredo, Software engineer, Safety

What

Why

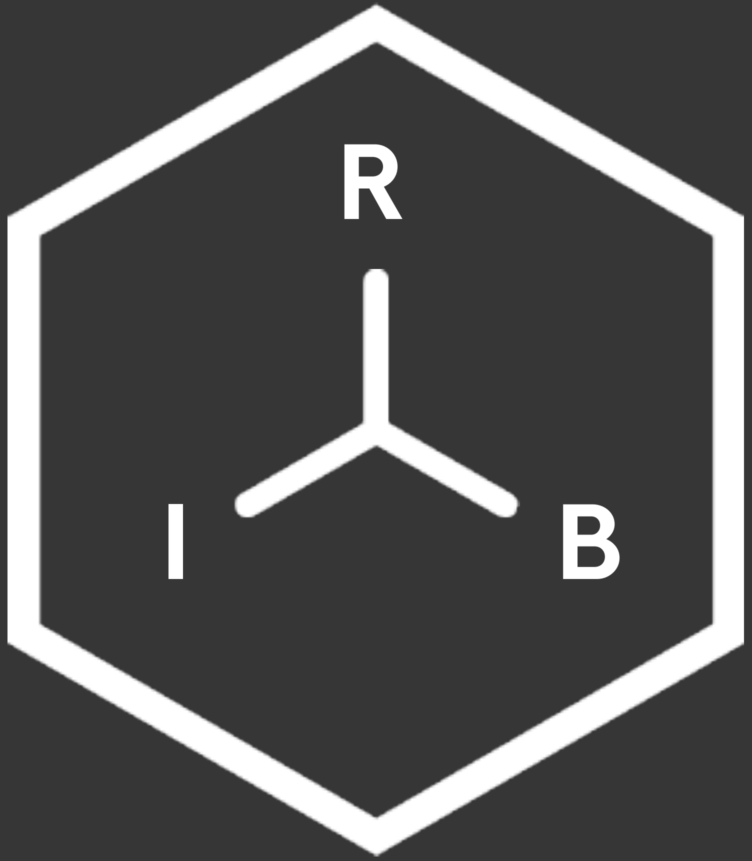
How

What is RIBs?

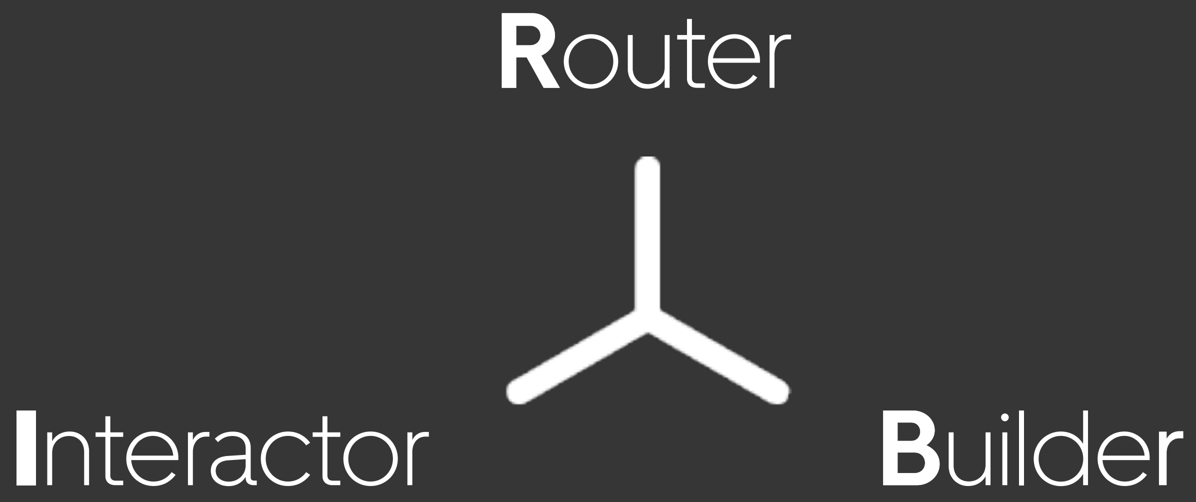
What is Uber RIBs?

CROSS-PLATFORM

MOBILE ARCHITECTURE



What is Uber RIBs?

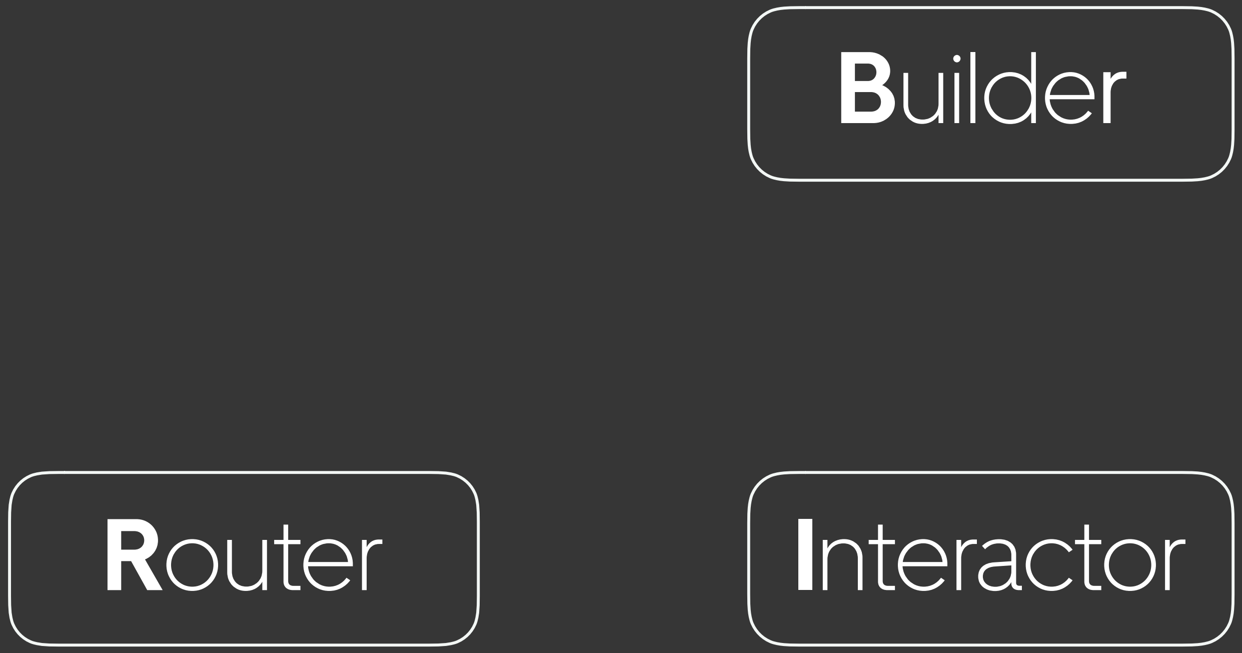


Router

Interactor

Builder

What is Uber RIBs?



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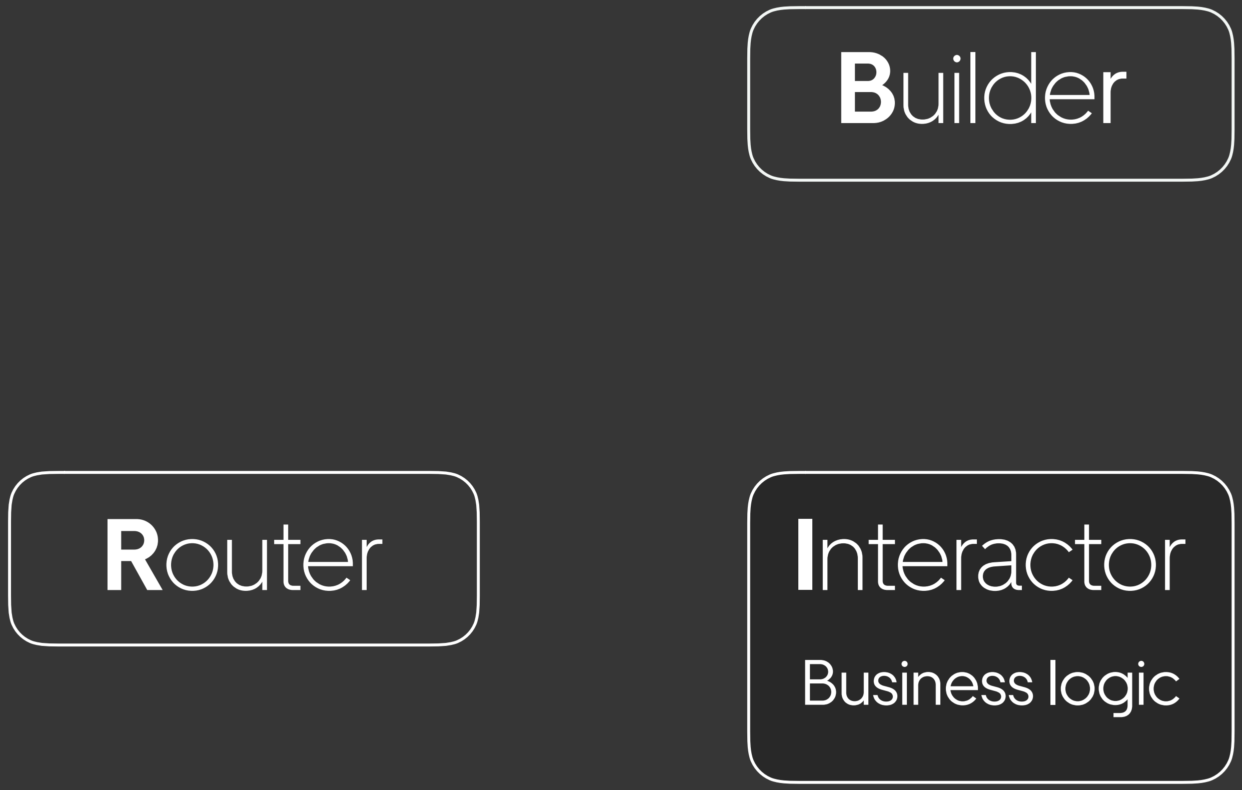

Builder

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Interactor

Business logic

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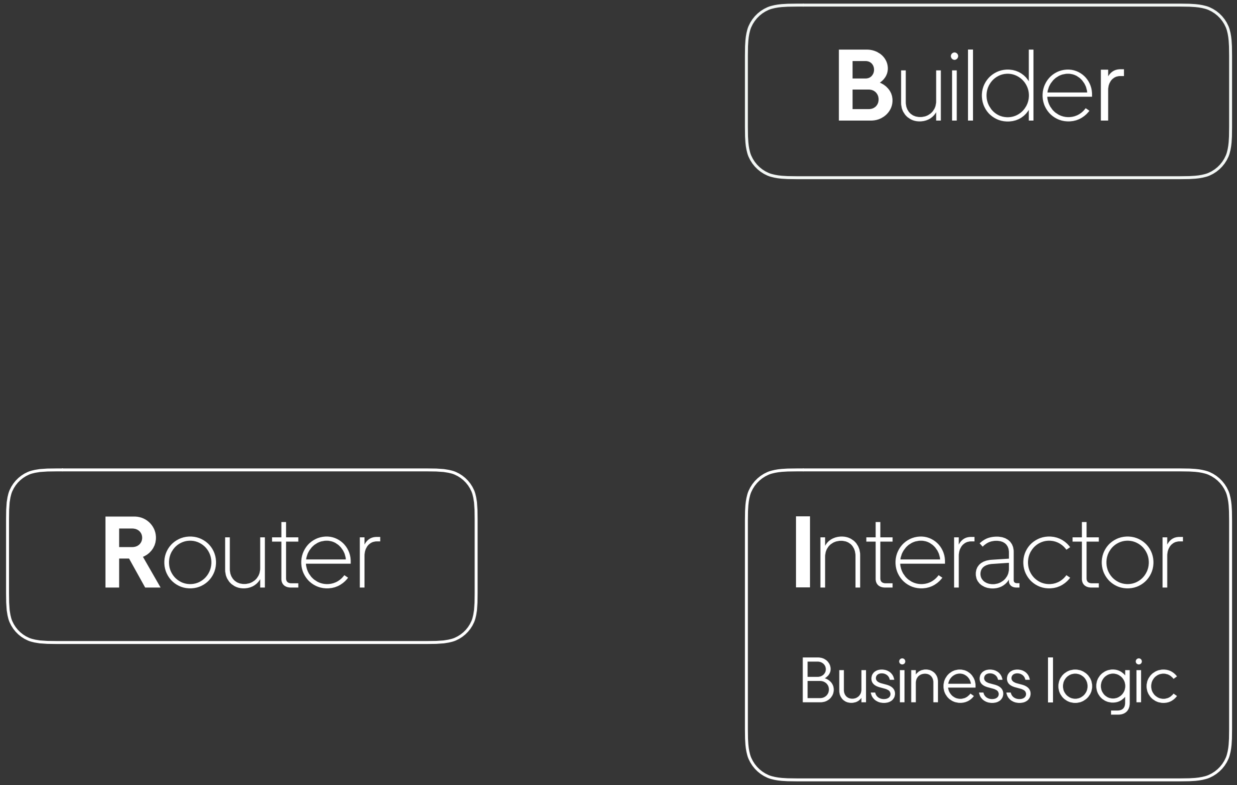

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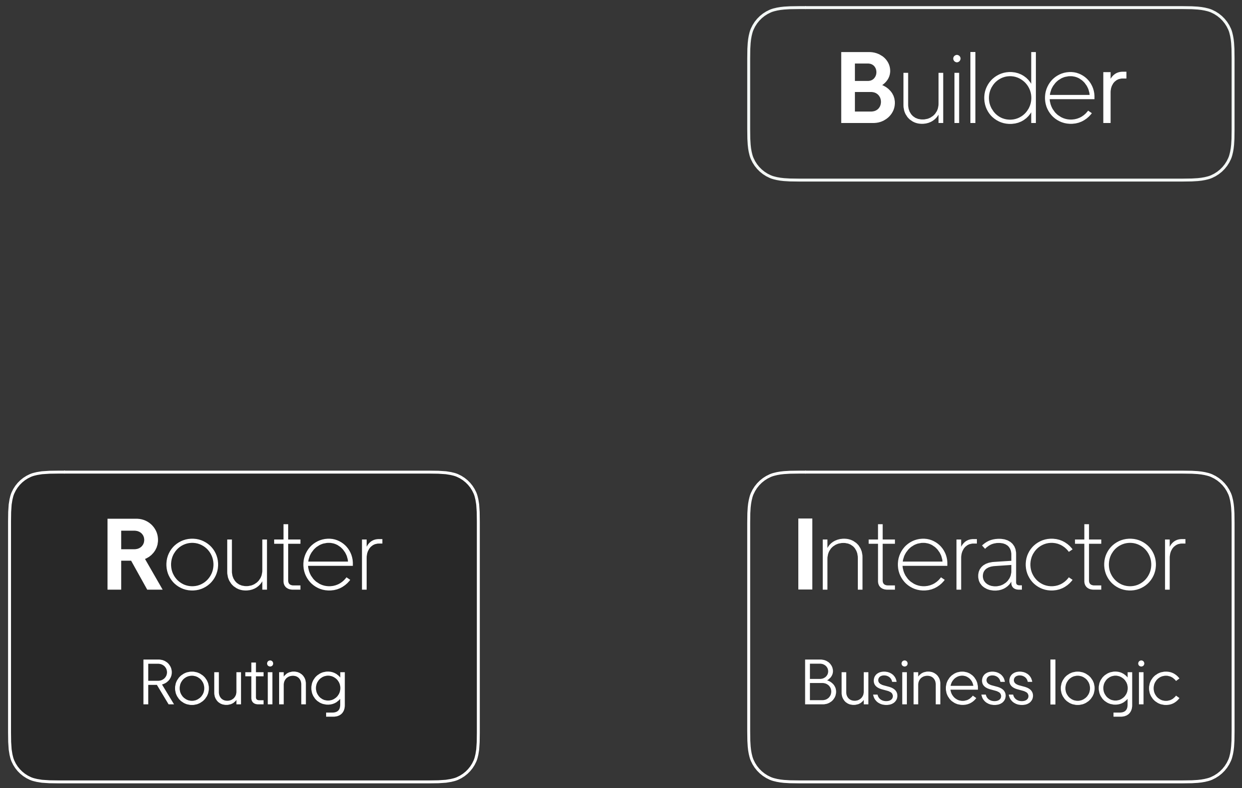

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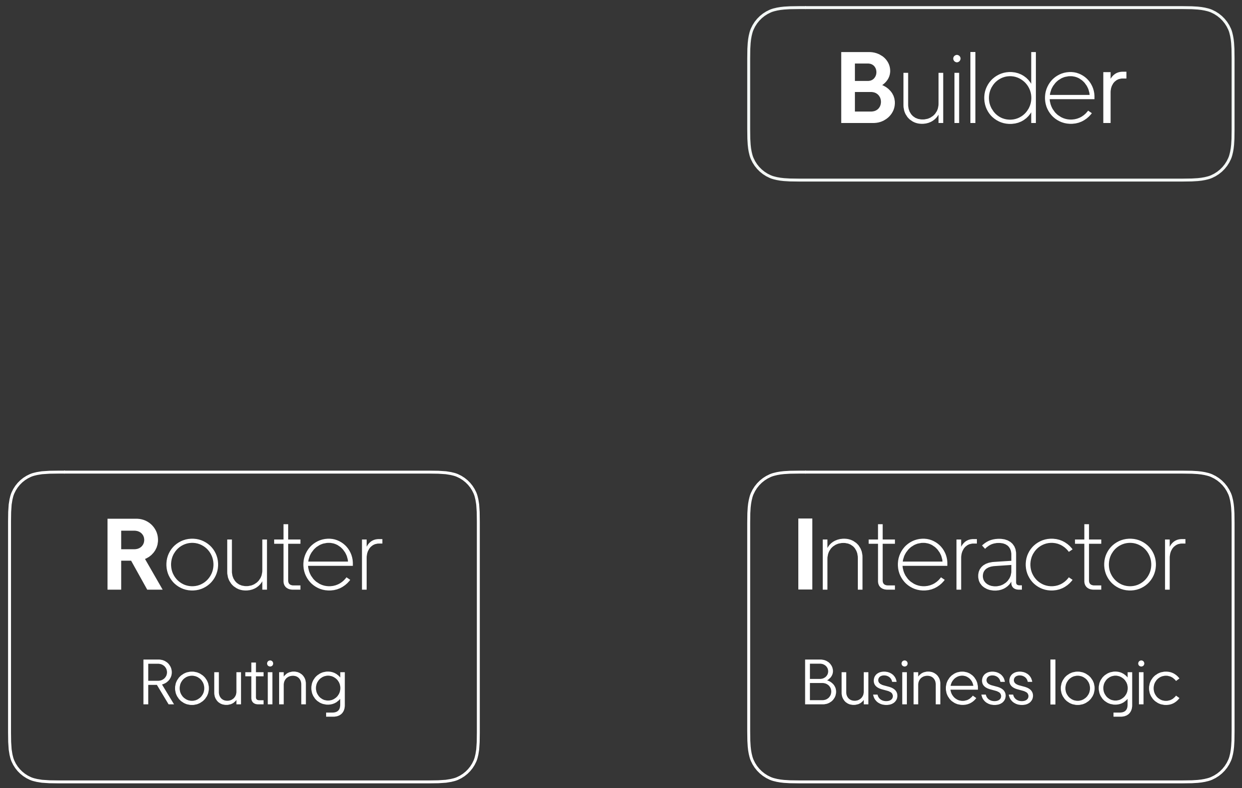

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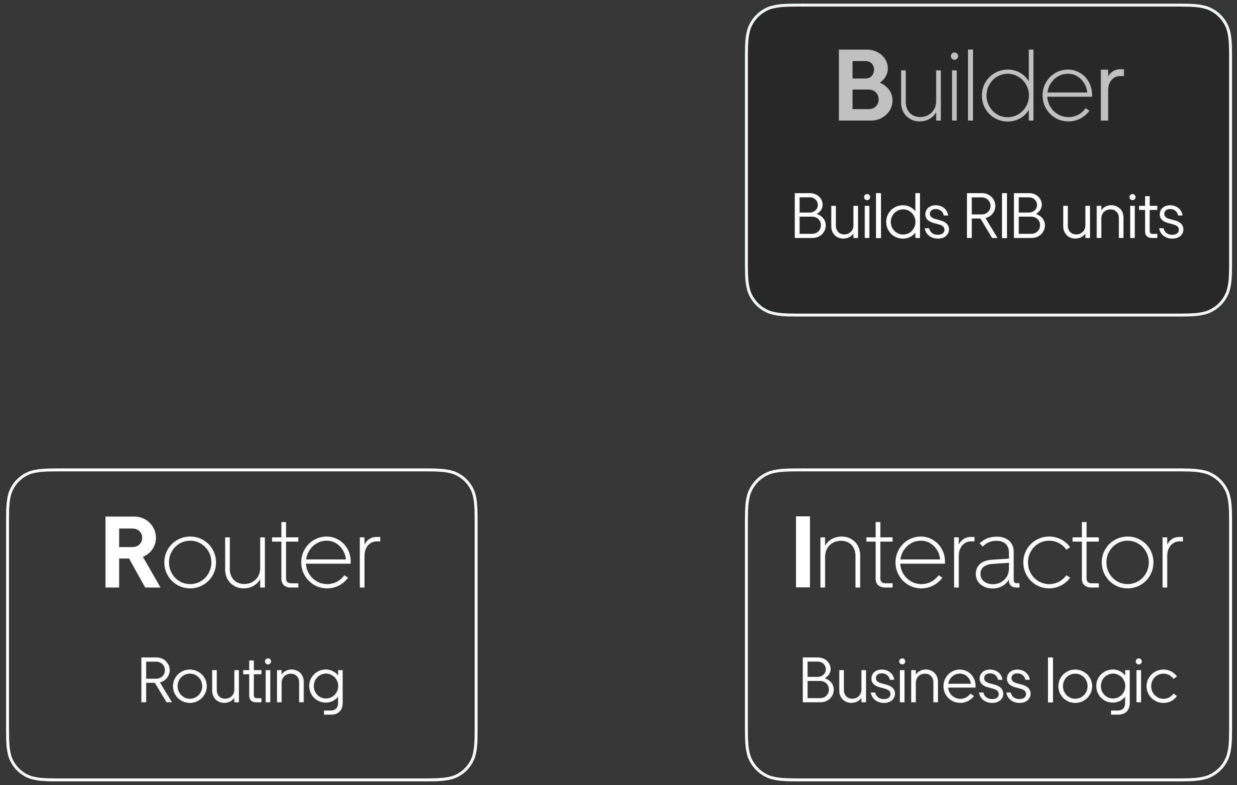

Builder

Builds RIB units

Router

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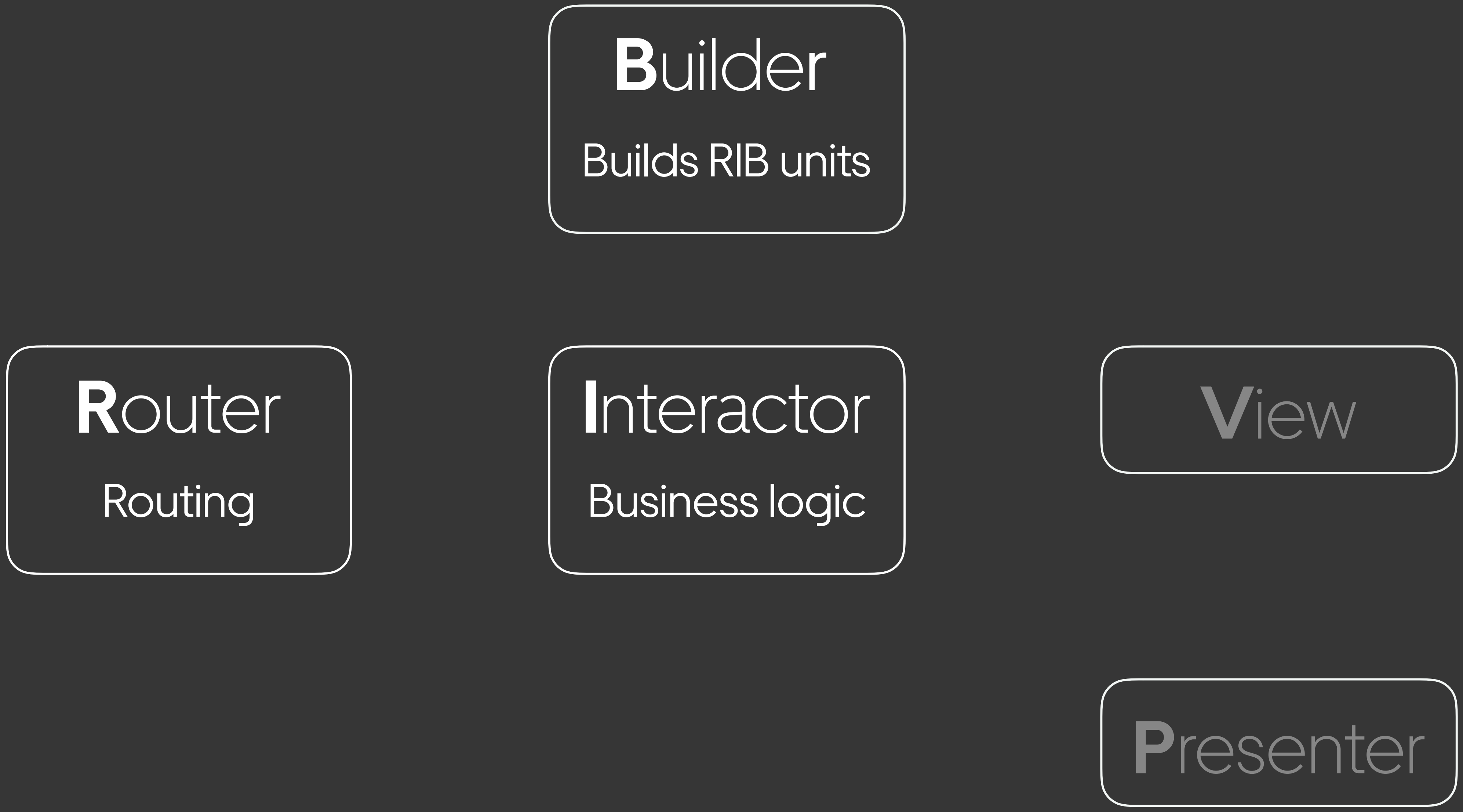

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View

Presenter

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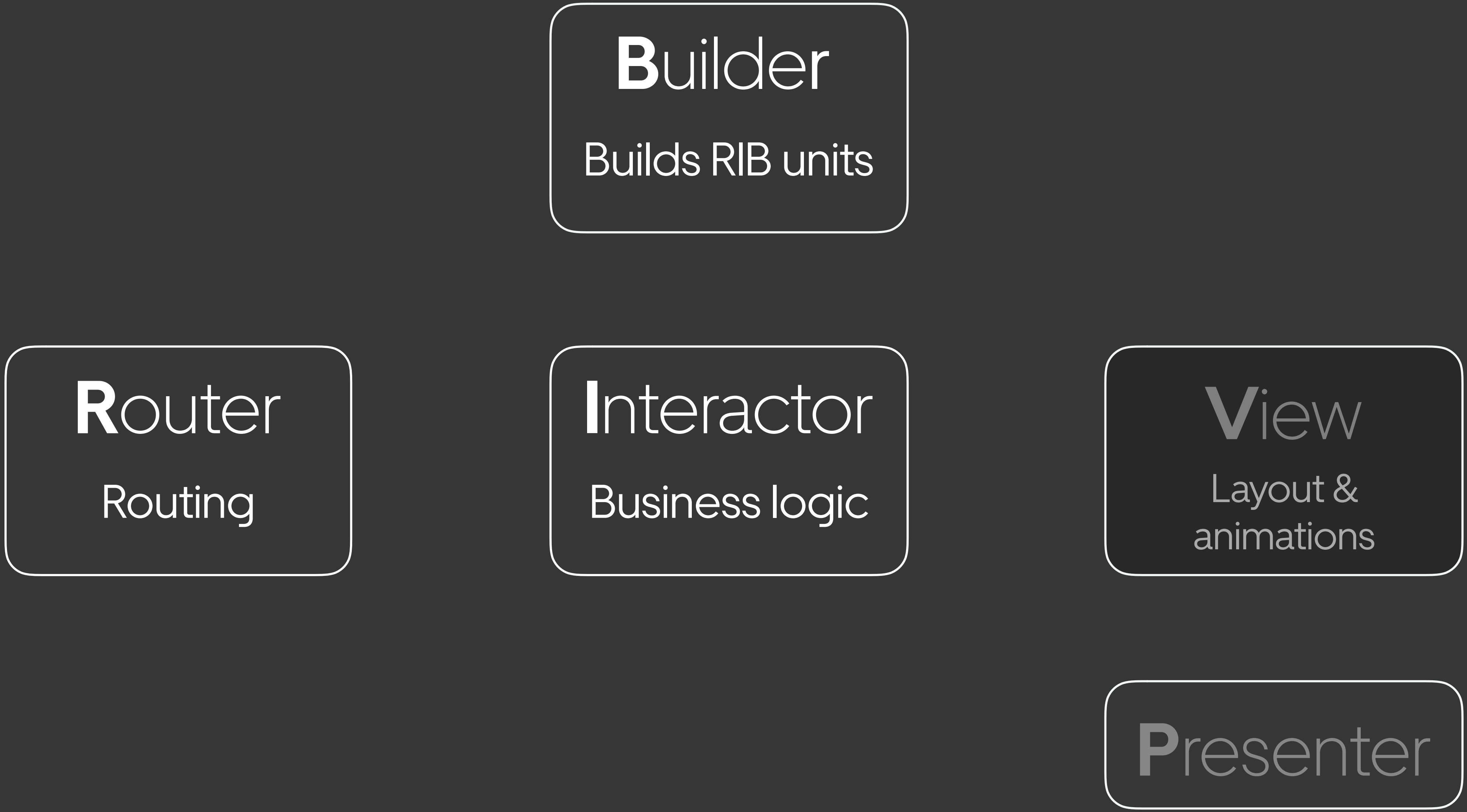

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Layout & animations

Presenter

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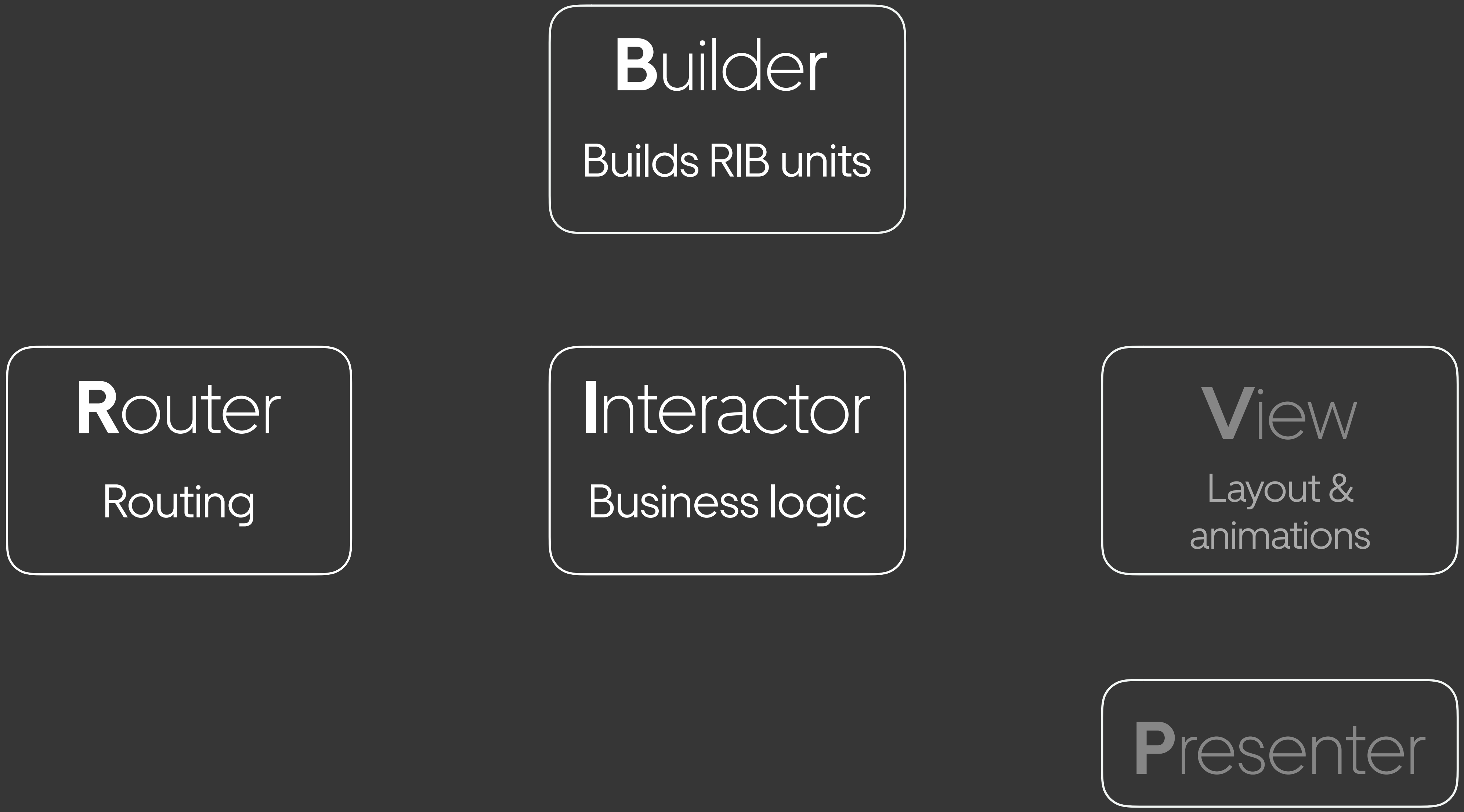

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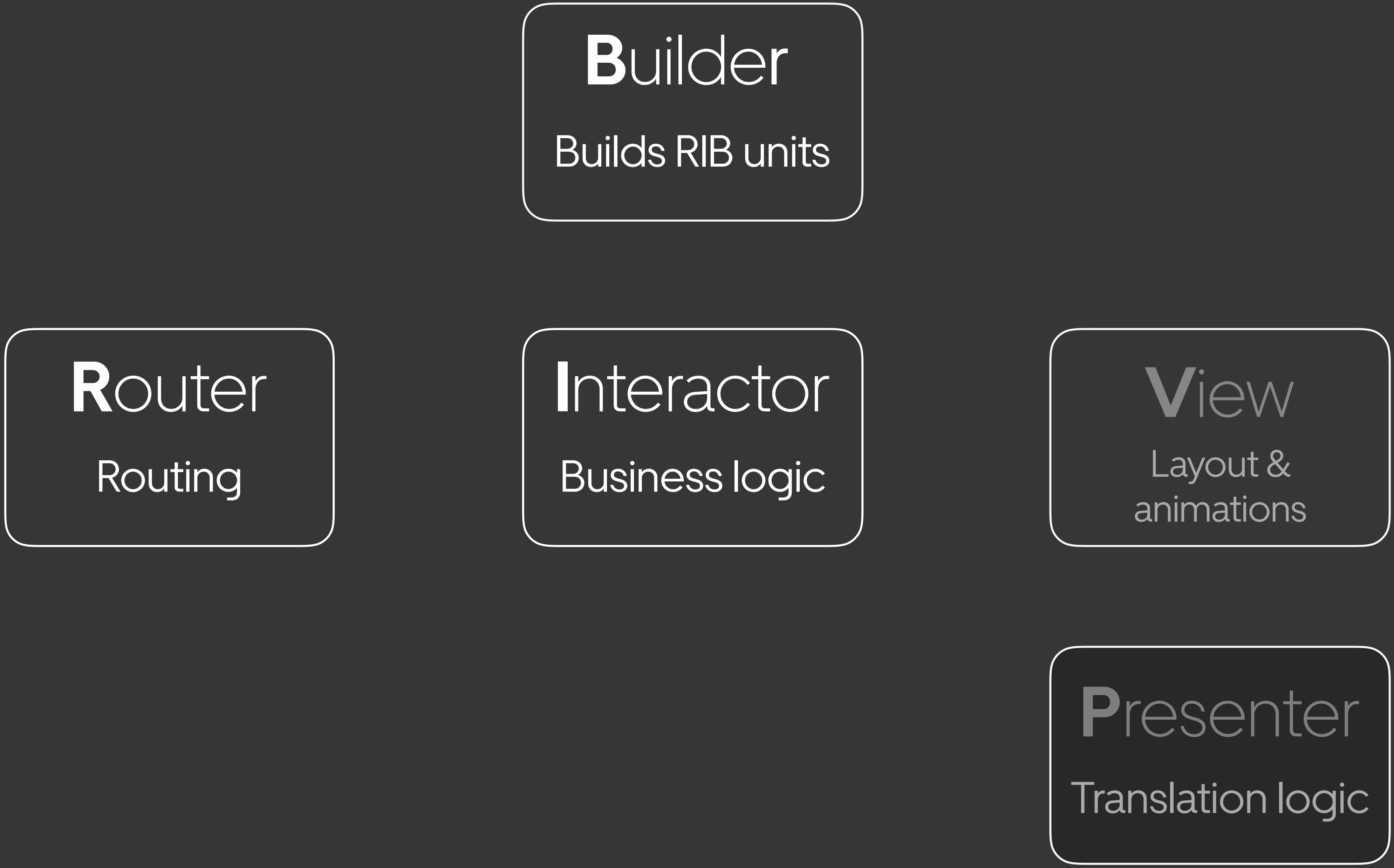

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Translation logic

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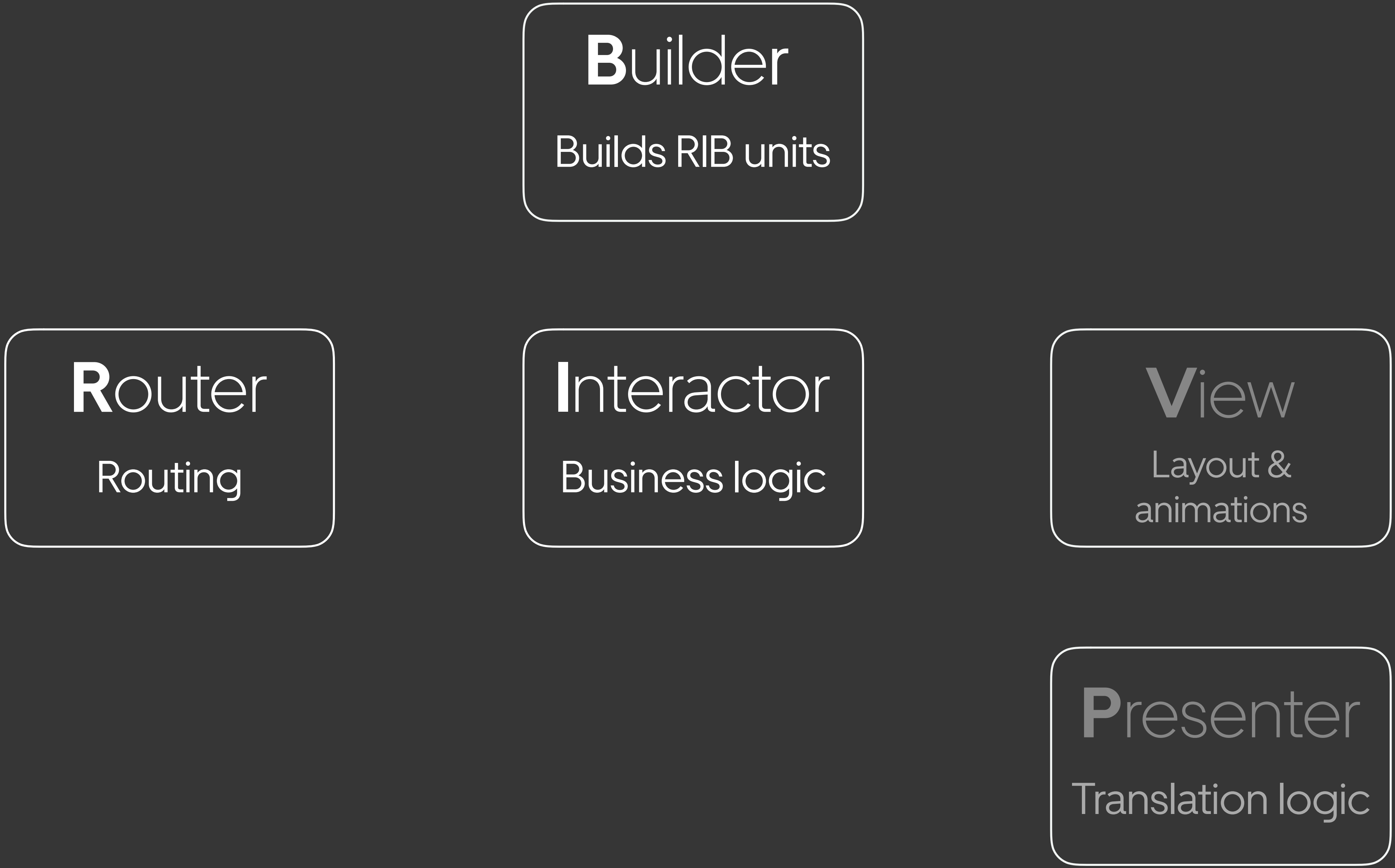

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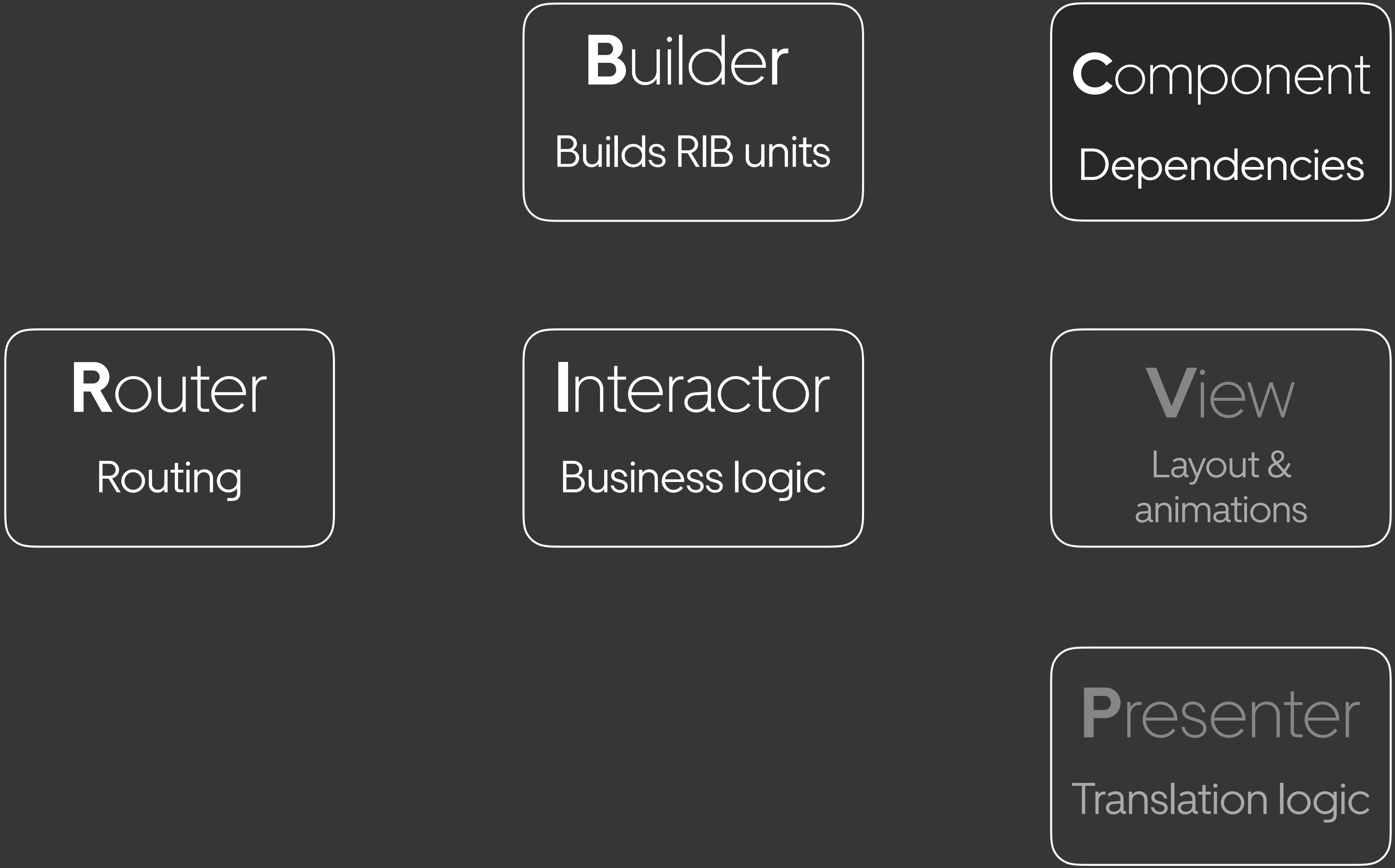

Builder

Builds RIB units

Component

Dependencies

Router

Routing

Interactor

Business logic

View

Layout & animations

Presenter

Translation logic

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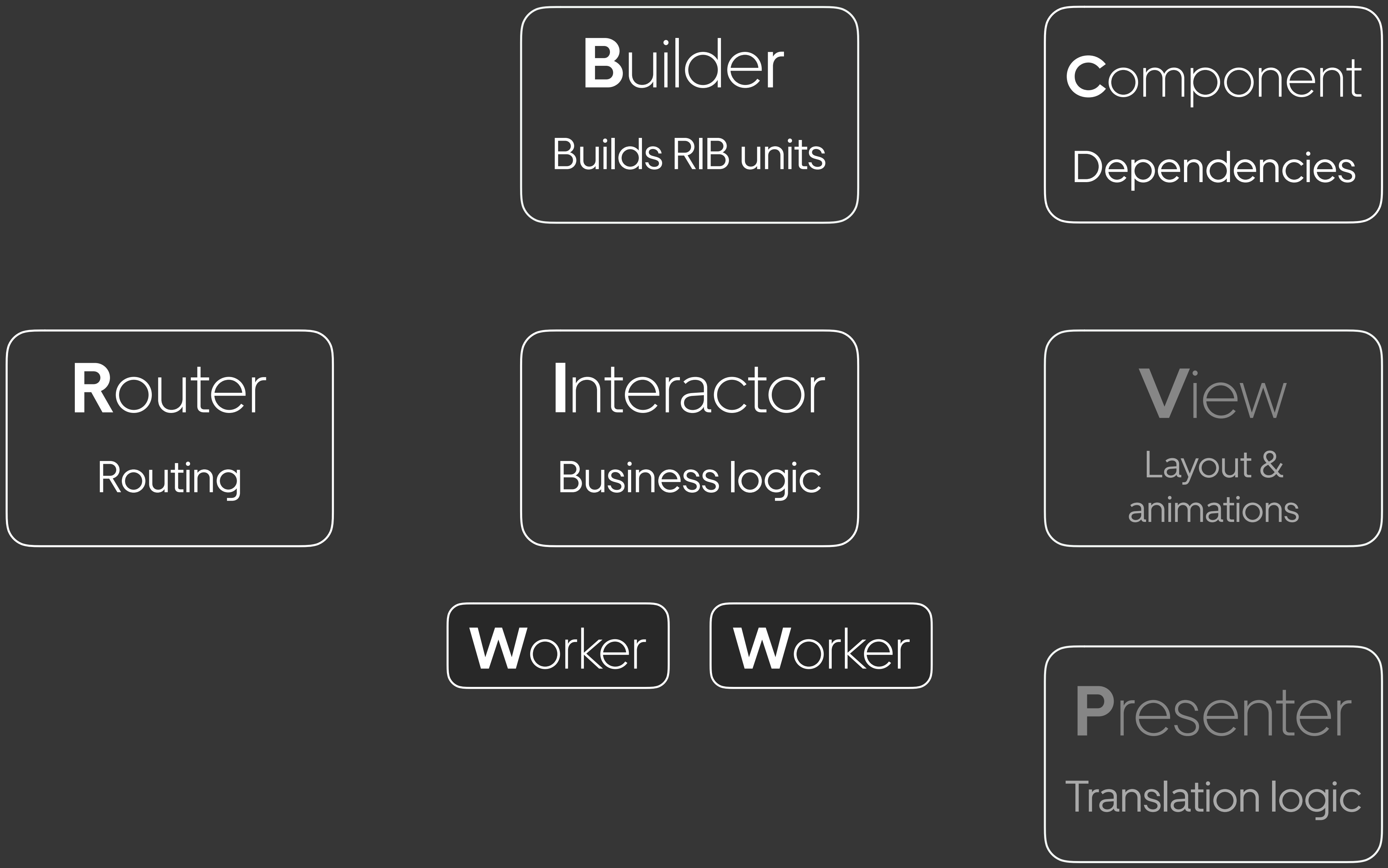

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Layout & animations

Worker

Worker

Presenter

Translation logic

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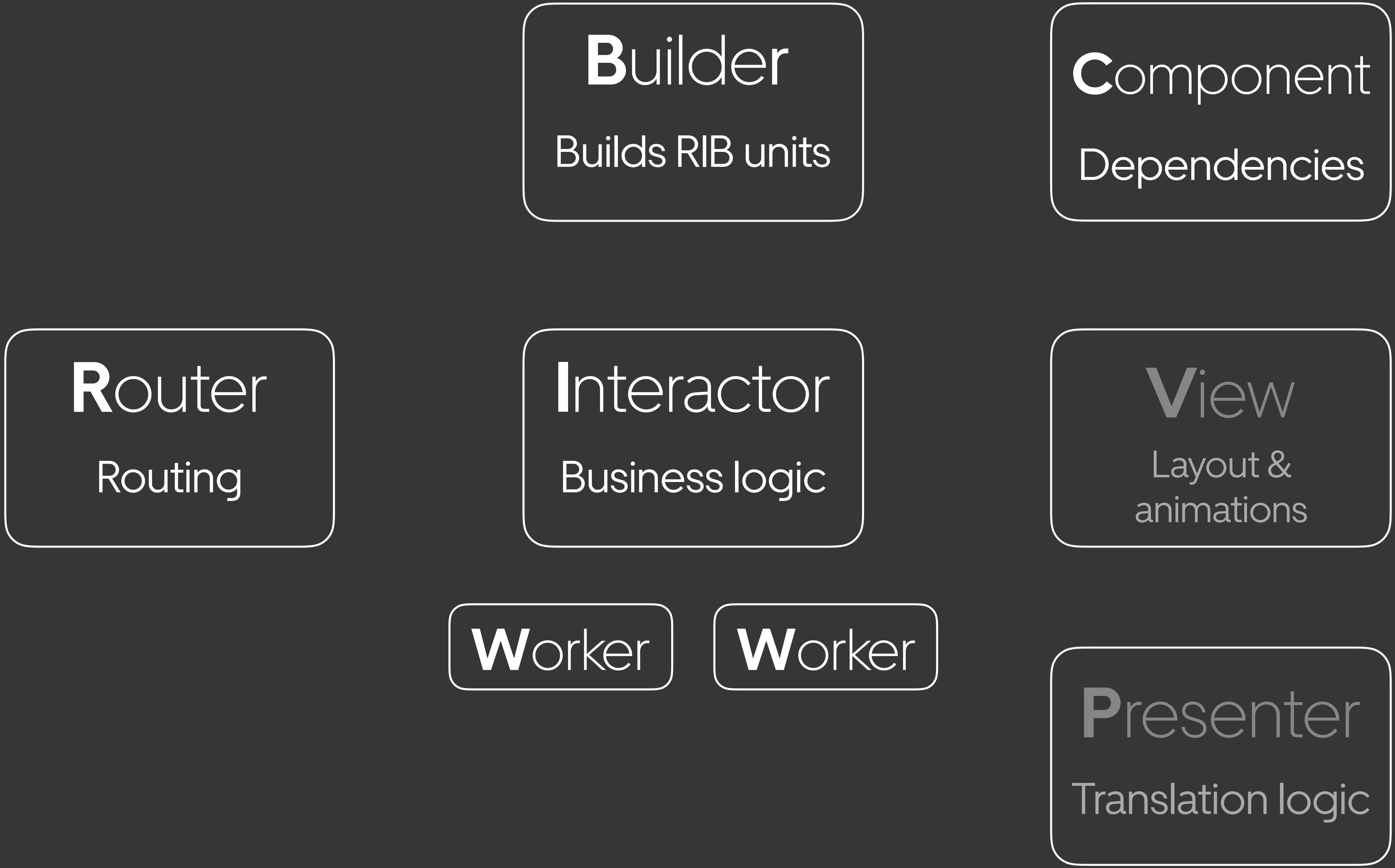

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Builds RIB units

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Router

Routing

Interactor

Business logic

View

Layout & animations

Worker

Worker

Presenter

Translation logic

What

Why

How

Why RIBs?

Why RIBs?

99,99% **Reliability** of core flows

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Monitoring as a first class citizen

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De-risk **Experimentation**

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Support Uber’s growth

Testability

Reactive data flows

Compartmentalisation

RIBs

Business-logic driven

Routing

Scoping

Dependency management

Testability

Reactive data flows

Compartmentalisation

RIBs

Business-logic driven

Routing

Scoping

Dependency management

Open source

Experimentation

Analytics

Code gen

Monitoring

Logging

UI Components

Application Framework

Plugins

Mapping

Networking

Storage

Location Services

Testability

Reactive data flows

Compartmentalisation

RIBs

Business-logic driven

Routing

Scoping

Dependency management

Responsibilities

Navigation

Transitions

Business-logic

UI Layout

Requests

View Data Transform

Data representation

Assemble Modules

UI Interactions

Responsibilities

Model

Data representation

View

UI Layout

UI Interactions

Controller

Navigation

Business-logic

View Data Transform

Requests

Transitions

Assemble Modules

Responsibilities

Model

Data representation

View

UI Layout

UI Interactions

Transitions

Assemble Modules

ViewModel

Navigation

Business-logic

View Data Transform

Requests

Responsibilities

Model

Data representation

View

UI Layout

UI Interactions

ViewModel

Business-logic

View Data Transform

Requests

Coordinator

Transitions

Navigation

Assemble Modules

Responsibilities

View

UI Layout

UI Interactions

Interactor

Business-logic

Requests

Presenter

View Data Transform

Entity

Data representation

Router

Transitions

Navigation

Assemble Modules

Responsibilities

View

UI Layout

UI Interactions

Interactor

Business-logic

Requests

Presenter

View Data Transform

Model

Data representation

Router

Transitions

Navigation

Builder

Assemble Modules

Responsibilities

Router

Transitions

Navigation

Interactor

Business-logic

Requests

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Assemble Modules

Model

Data representation

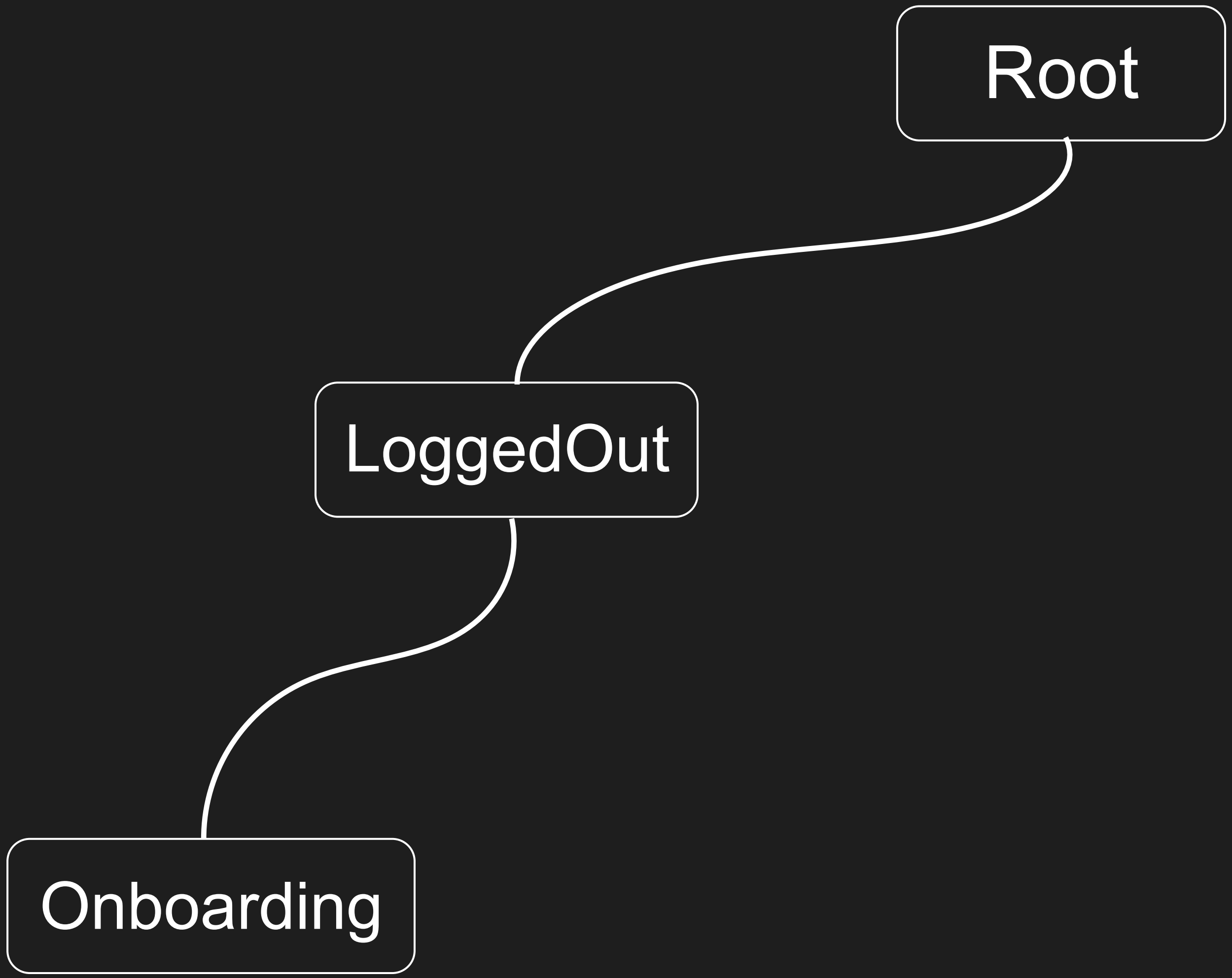
View

UI Layout

UI Interactions

Presenter

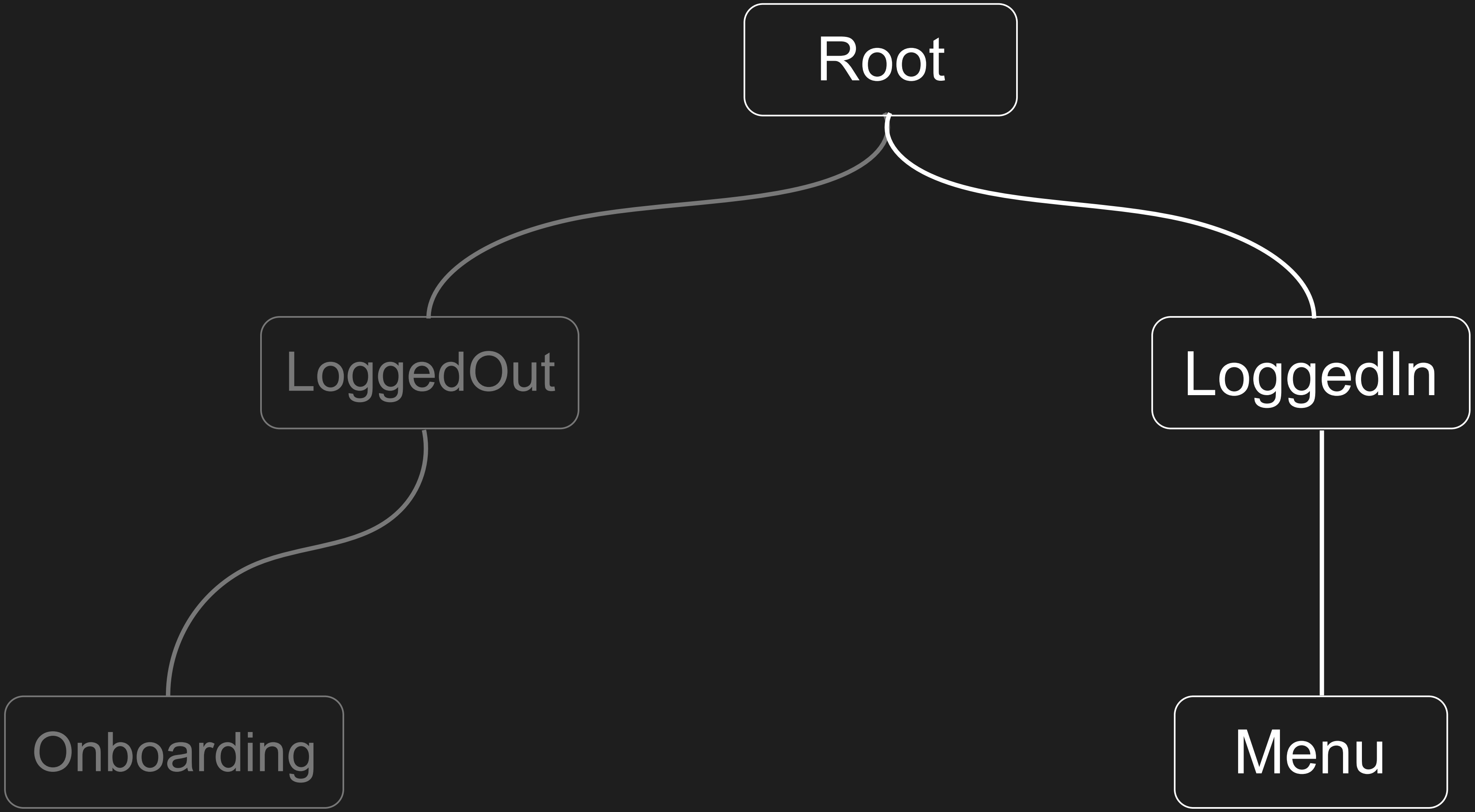
View Data Transform



Root

LoggedOut

Onboarding



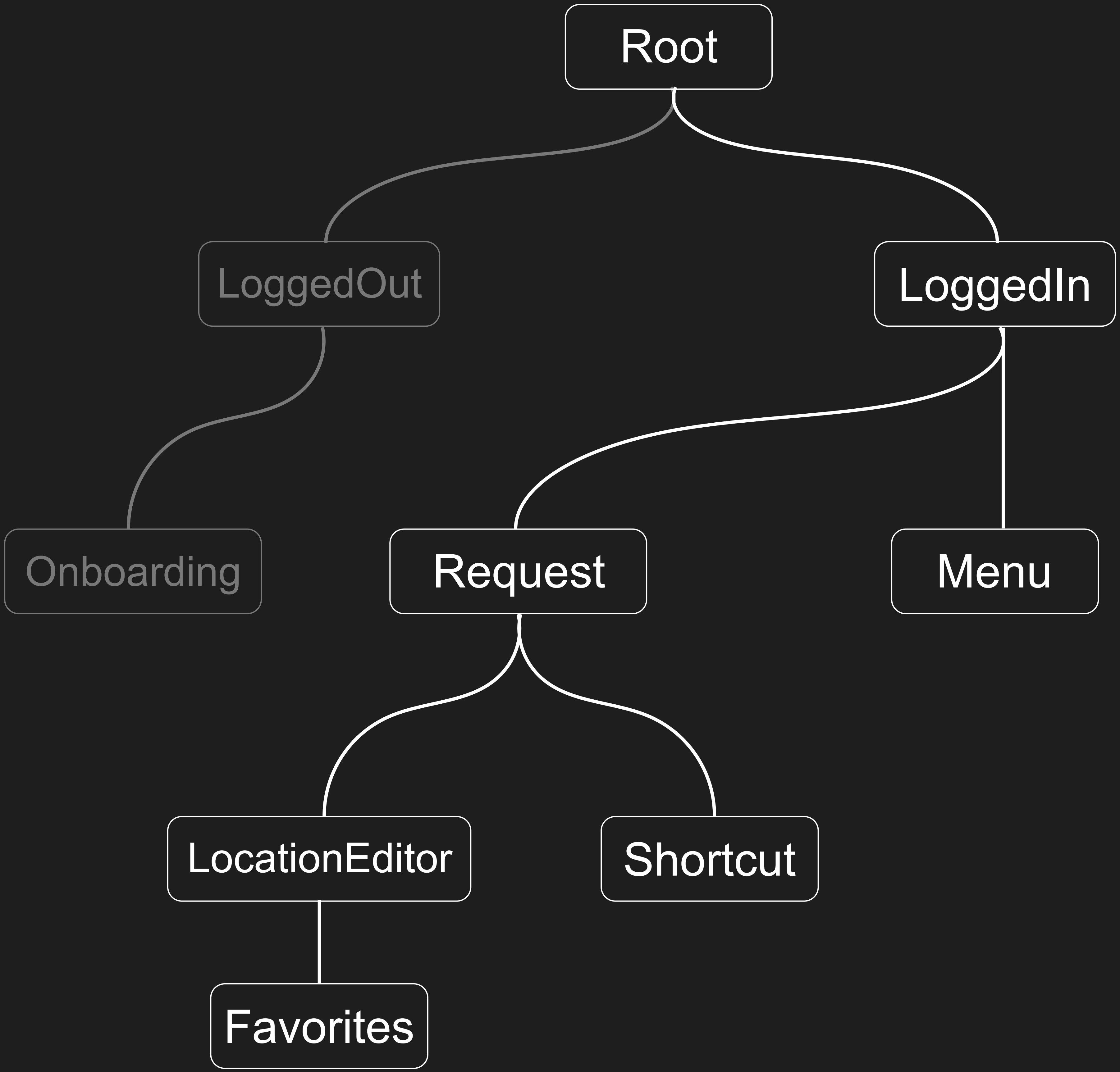
Root

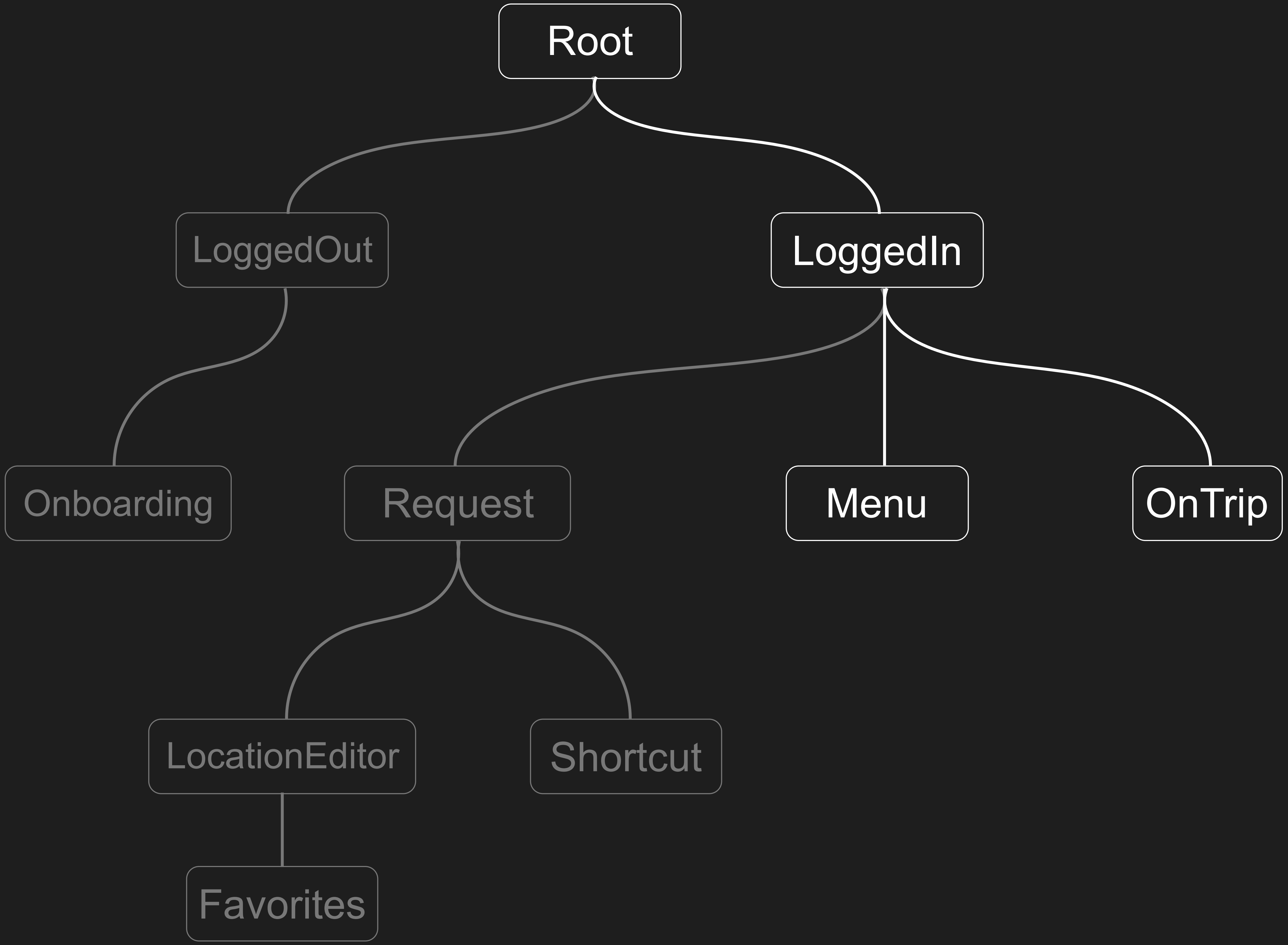
LoggedOut

LoggedIn

Onboarding

Menu


Root
LoggedOut
LoggedIn
Onboarding
Request
Menu
LocationEditor
Shortcut
Favorites



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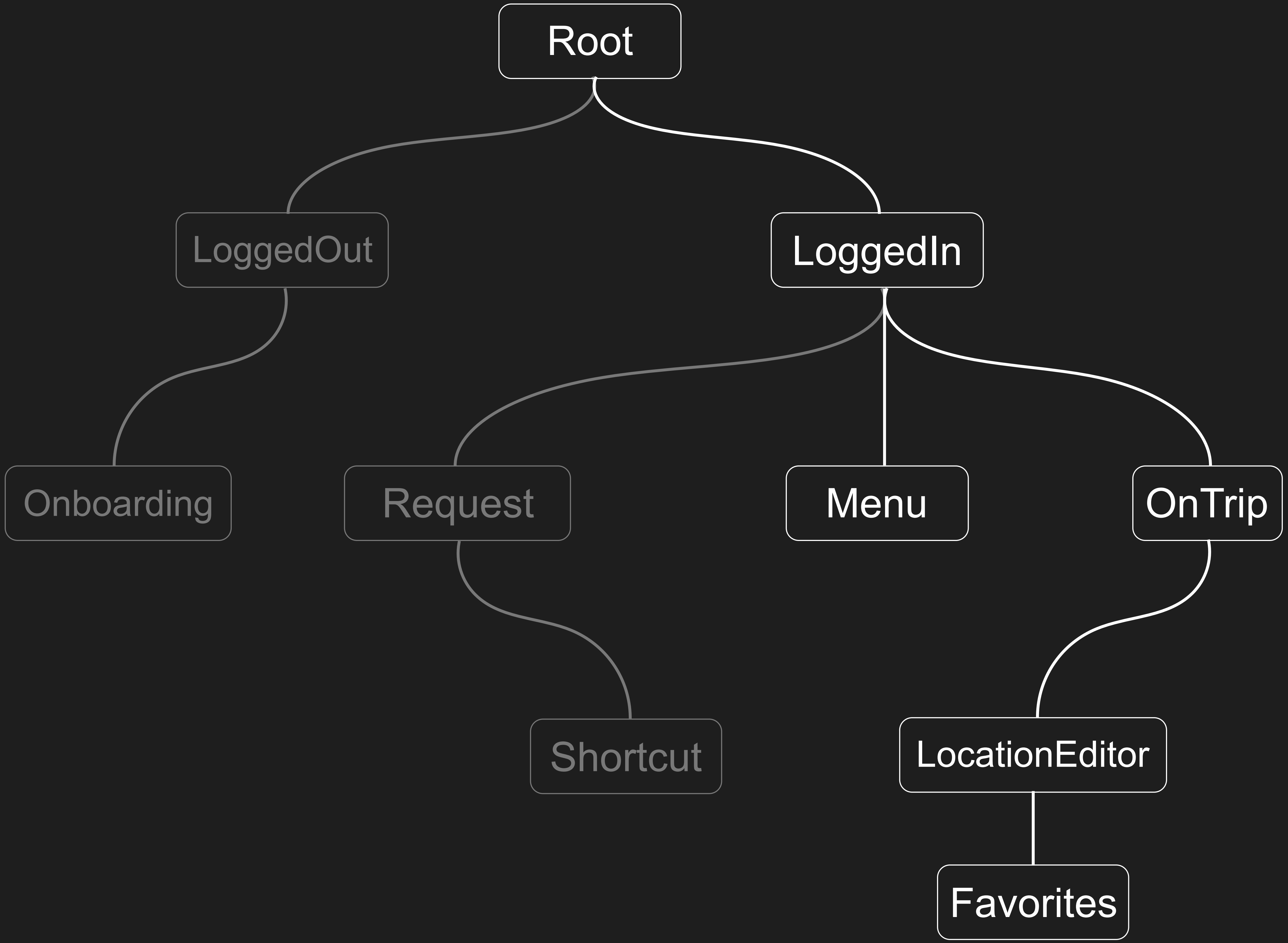
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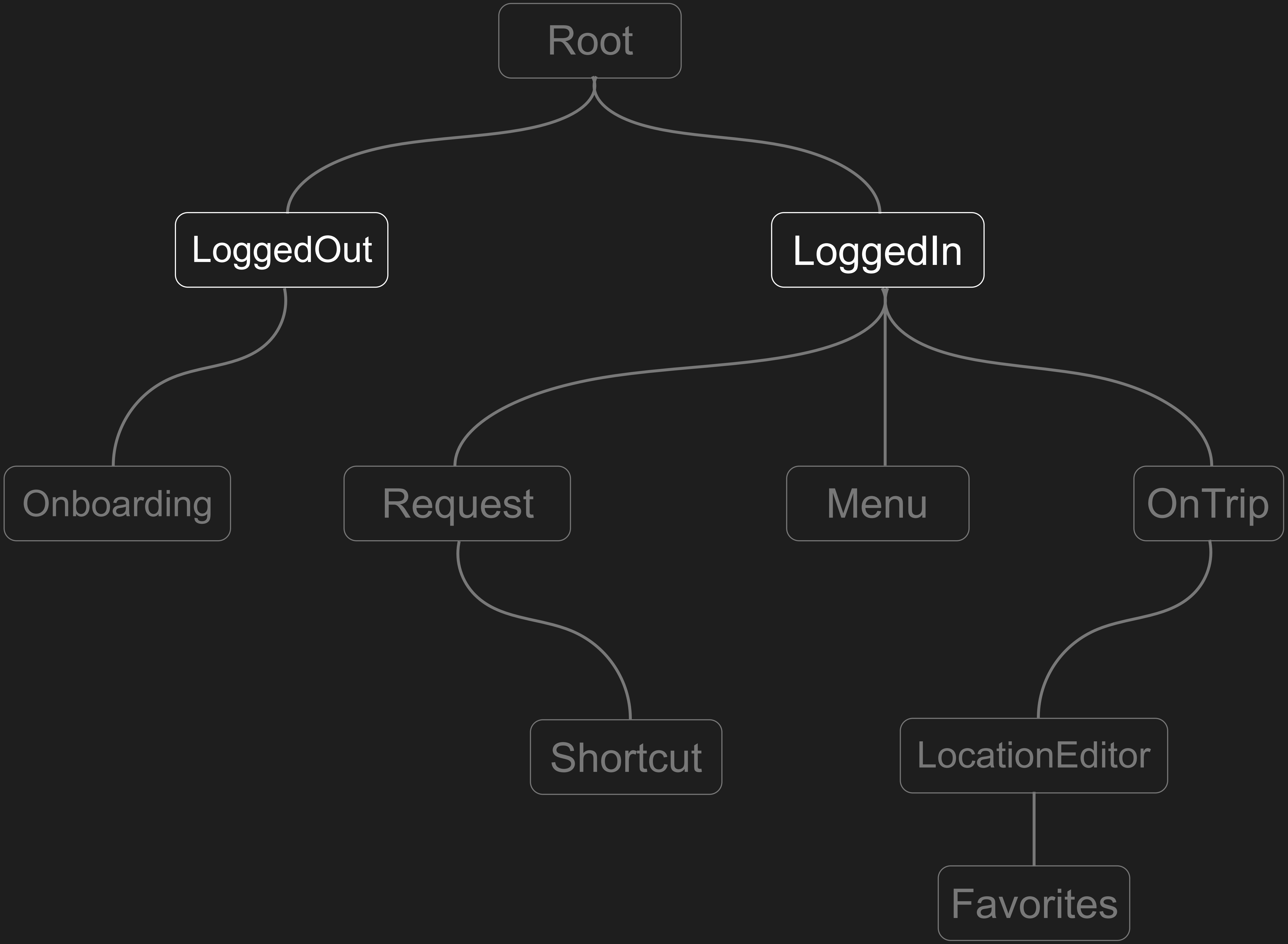
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What

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How RIBs work?

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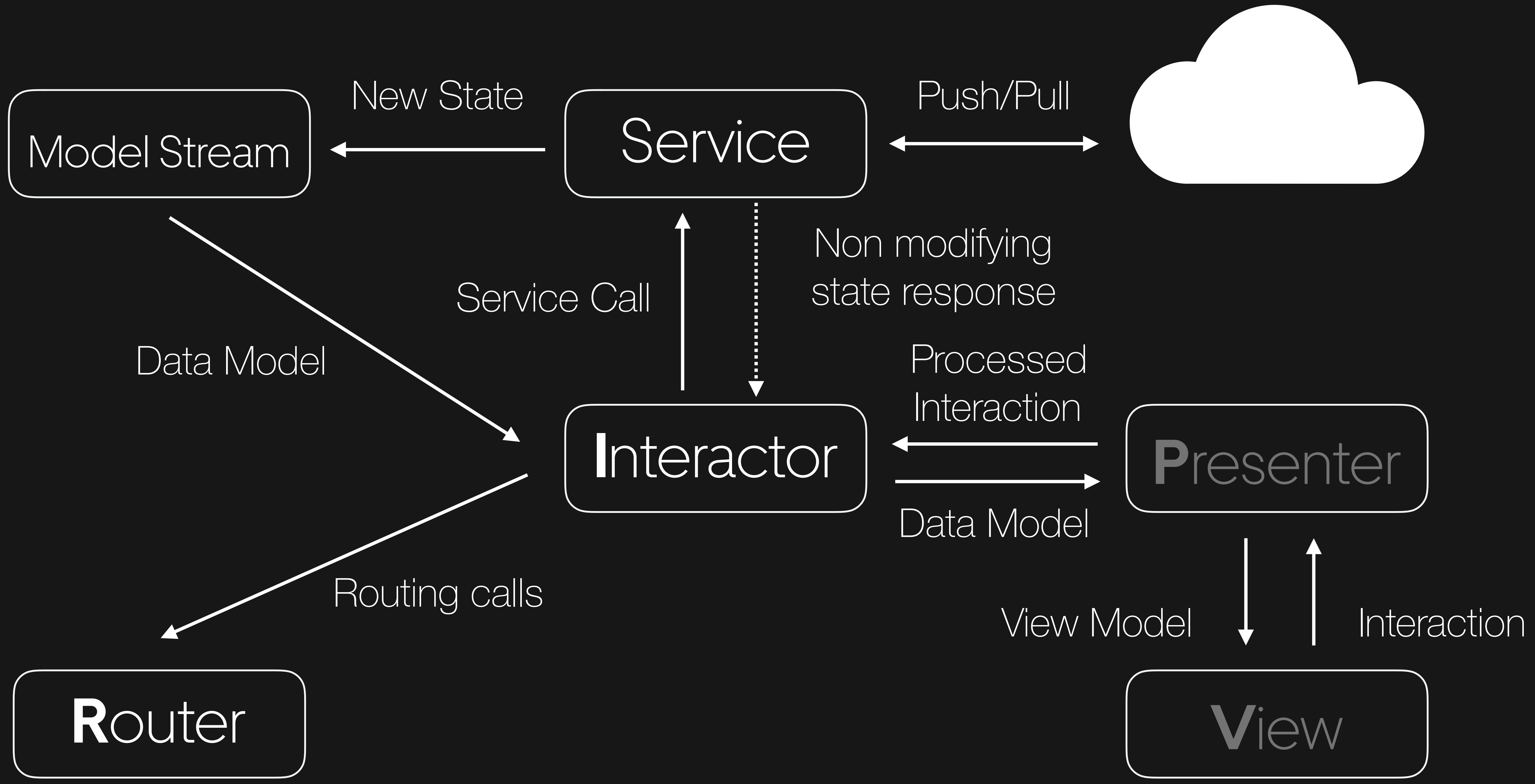


Ownership

Lifecycle

Leaks

Memory footprint

Access rights

Scope

Hierarchy

Visibility

Undefined behaviour

Dependencies

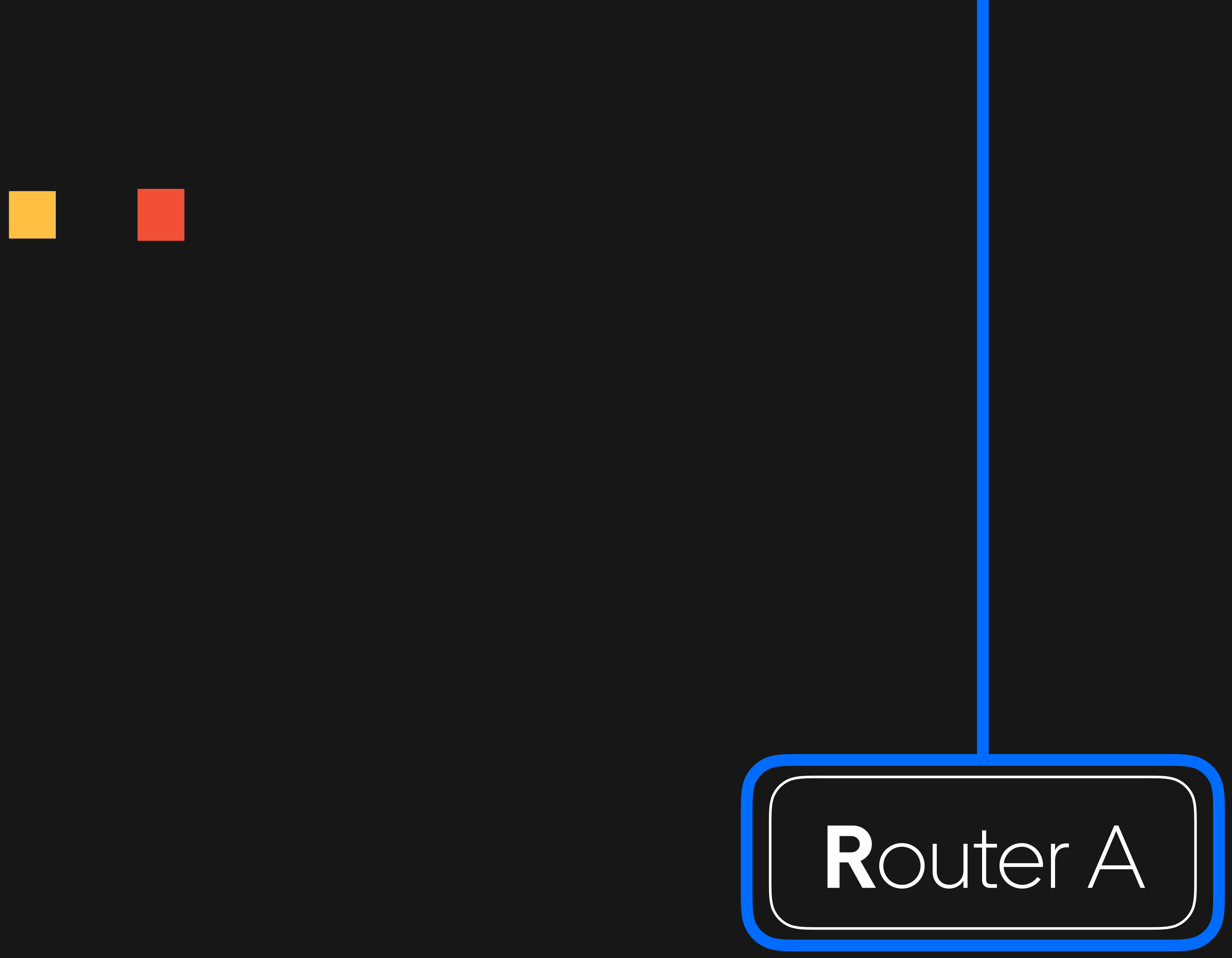
Execution Flow

Infinite loops

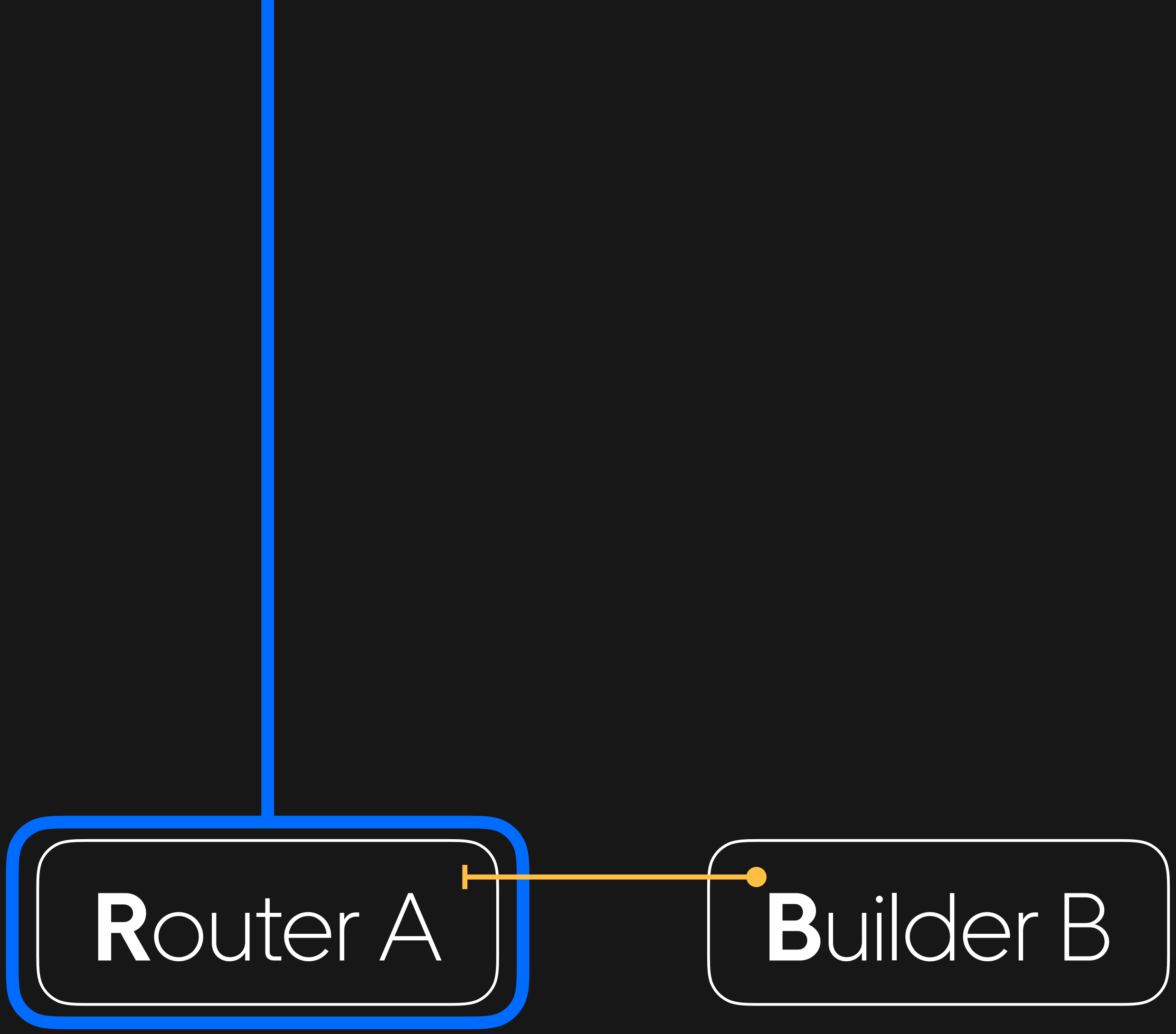
Complexity

Poor performance

Energy waste

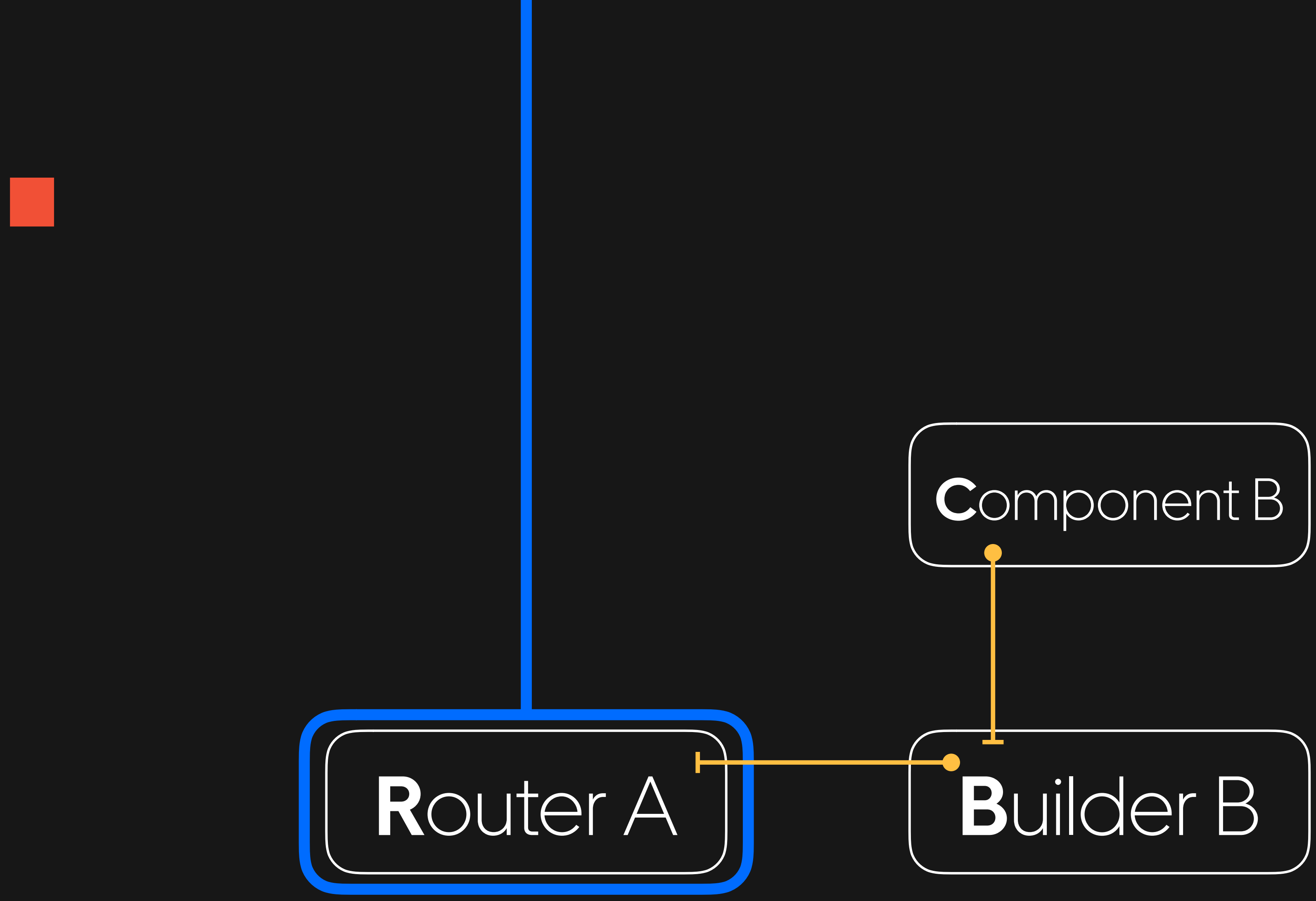


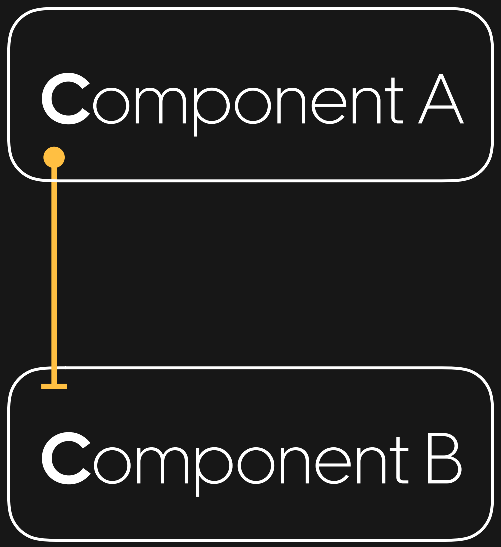
Router A



Router A

Builder B


Component B
Router A
Builder B



Component A

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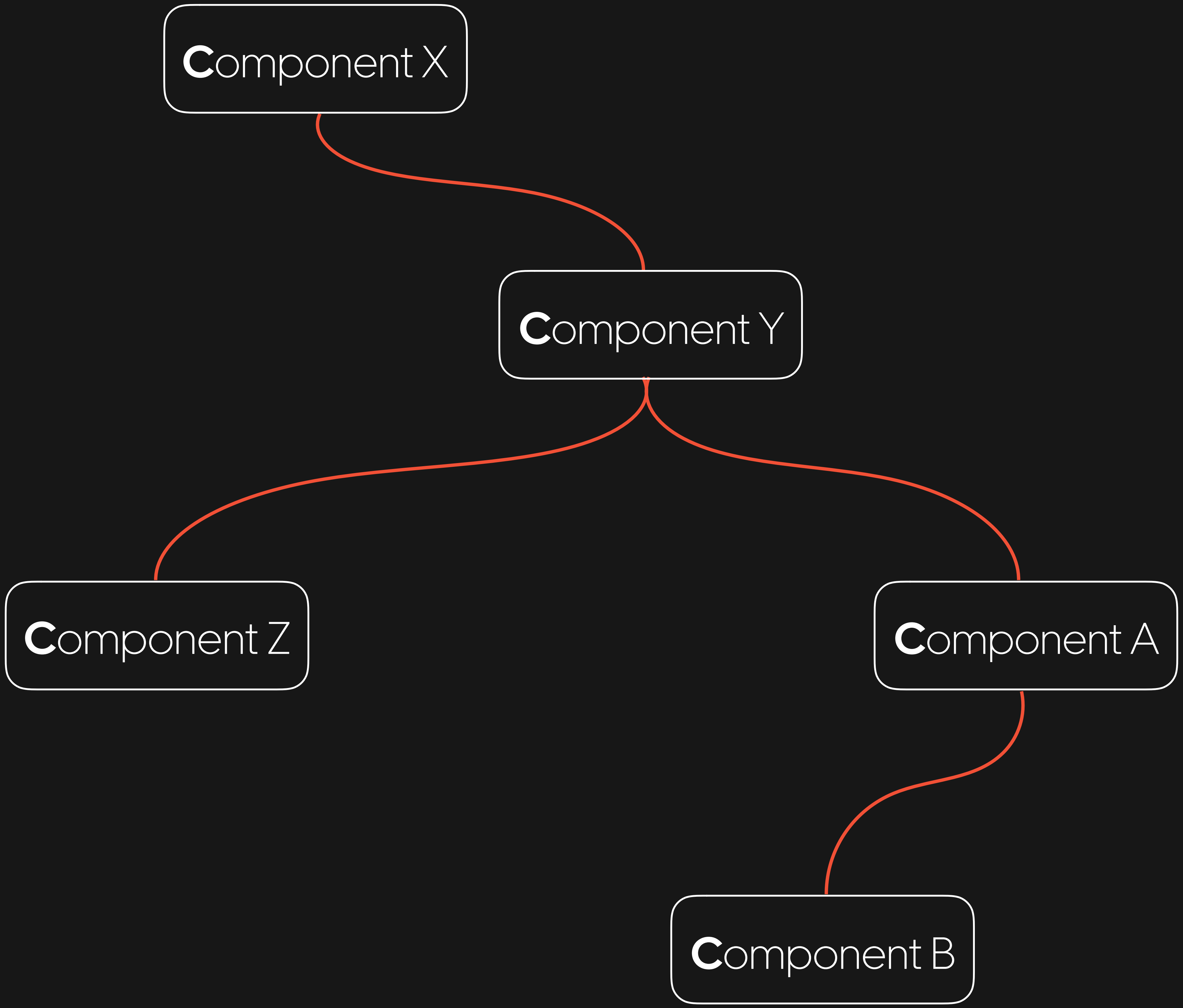


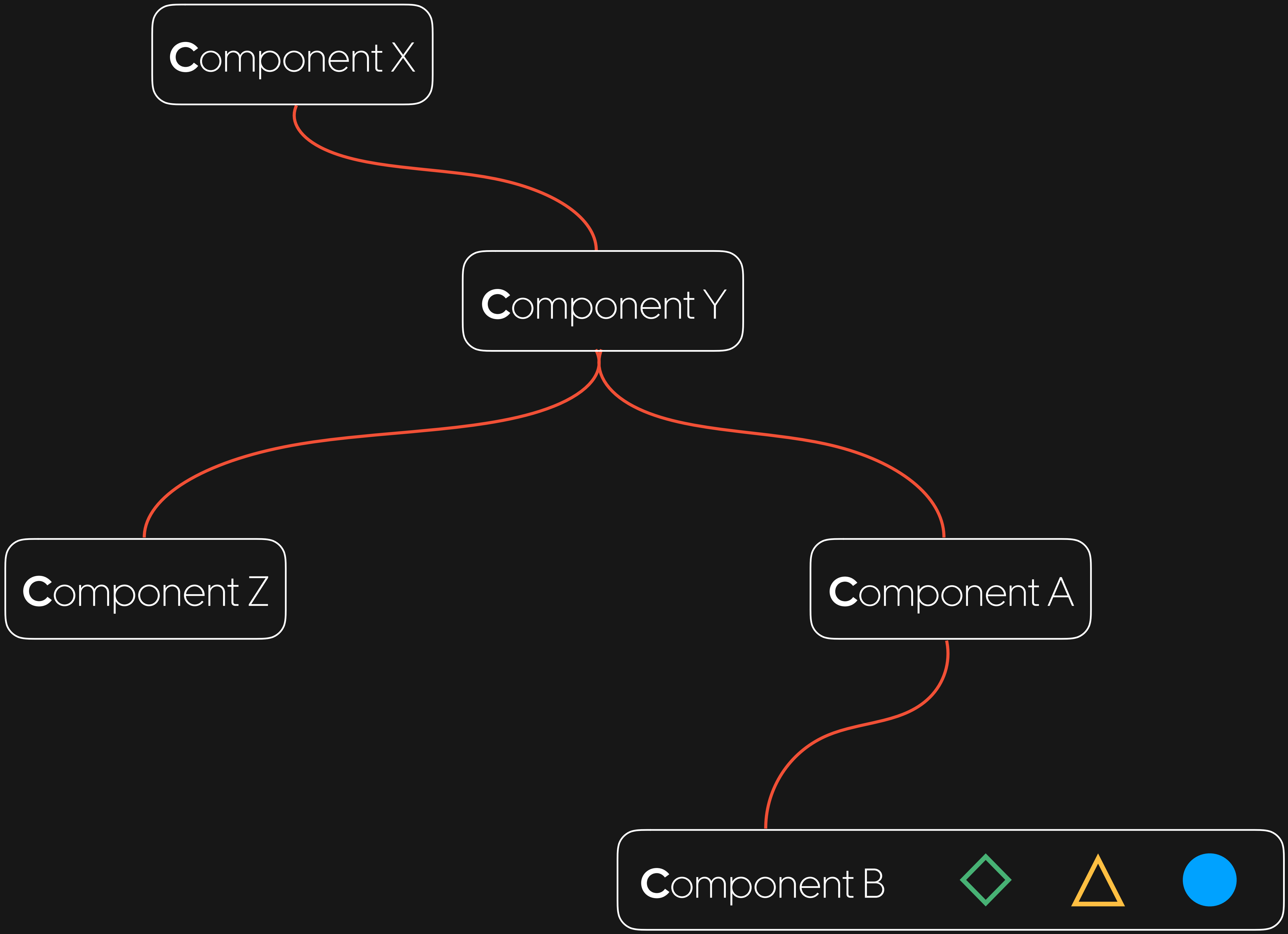
Component X

Component Y

Component Z

Component A

Component B



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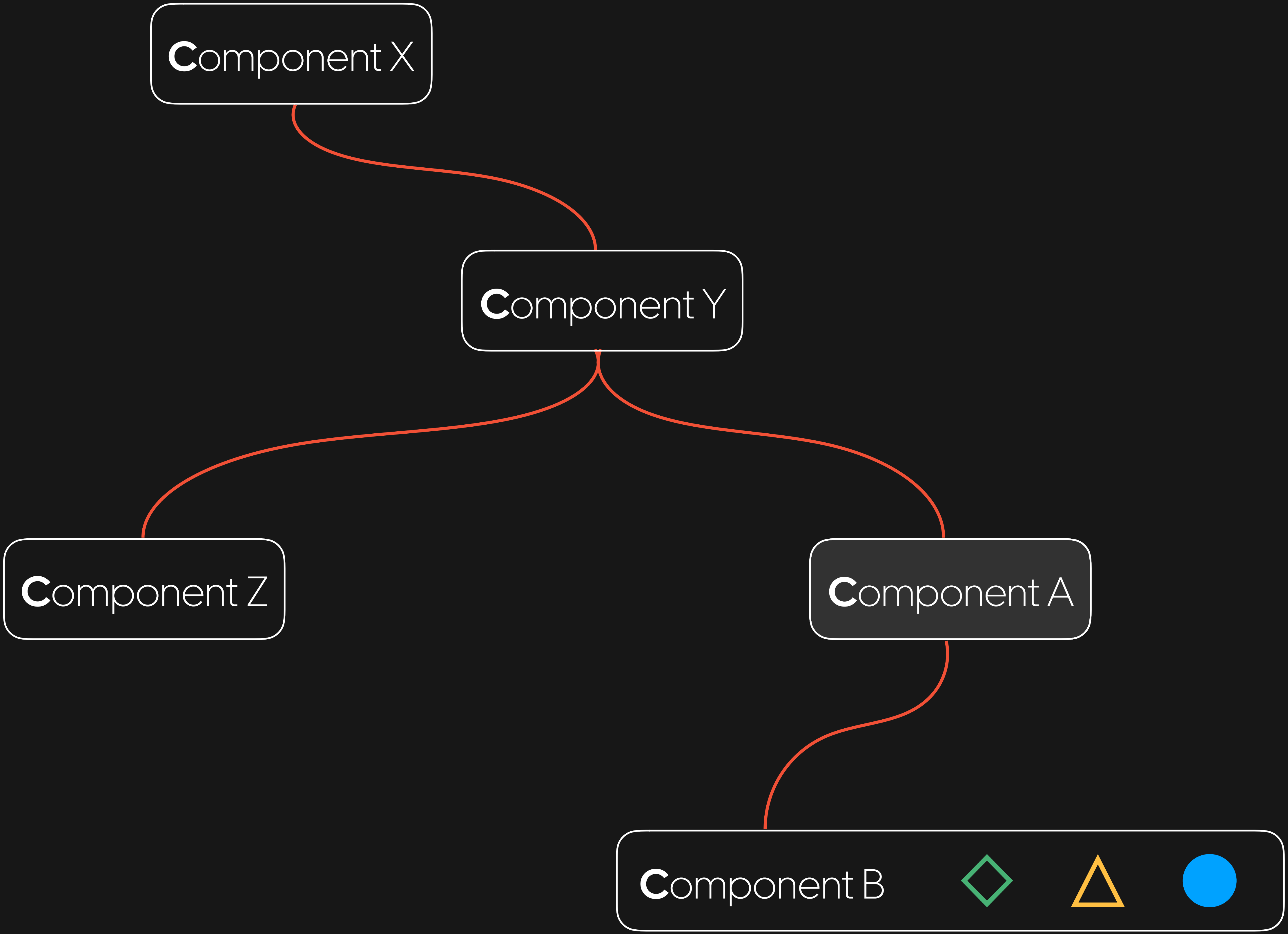

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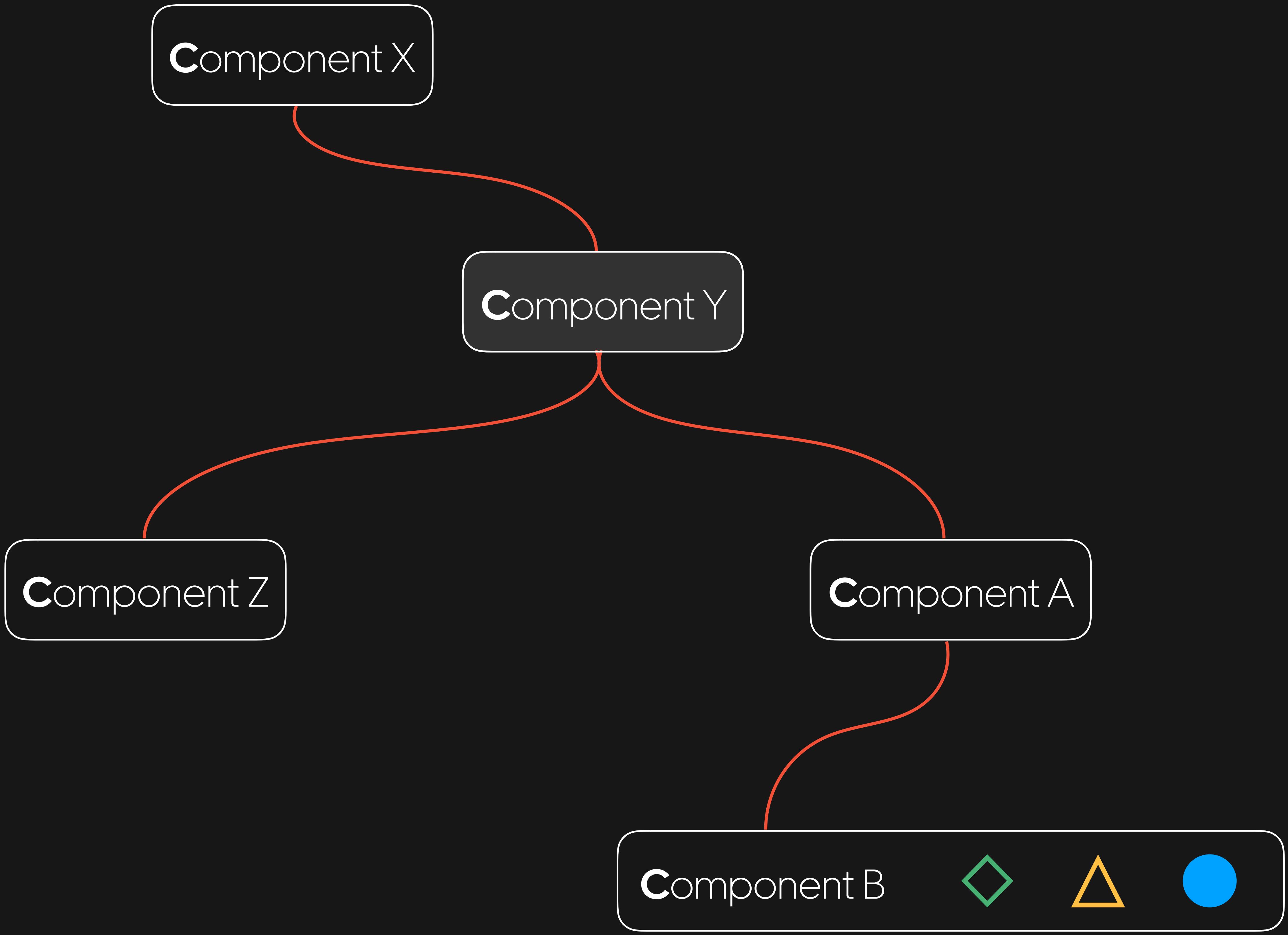
Component B ◇ △ ●



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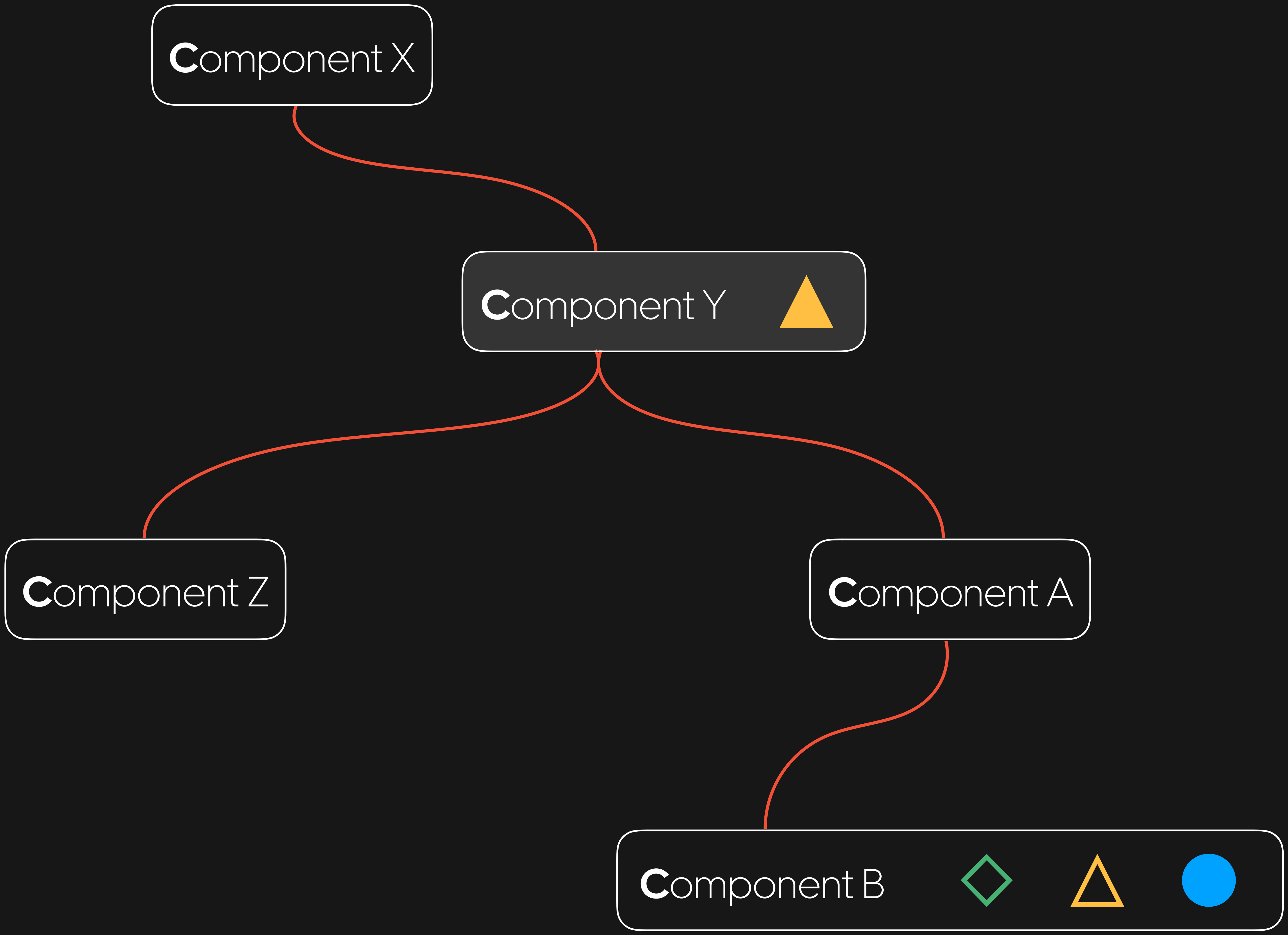

Component X

Component Y ▲

Component Z

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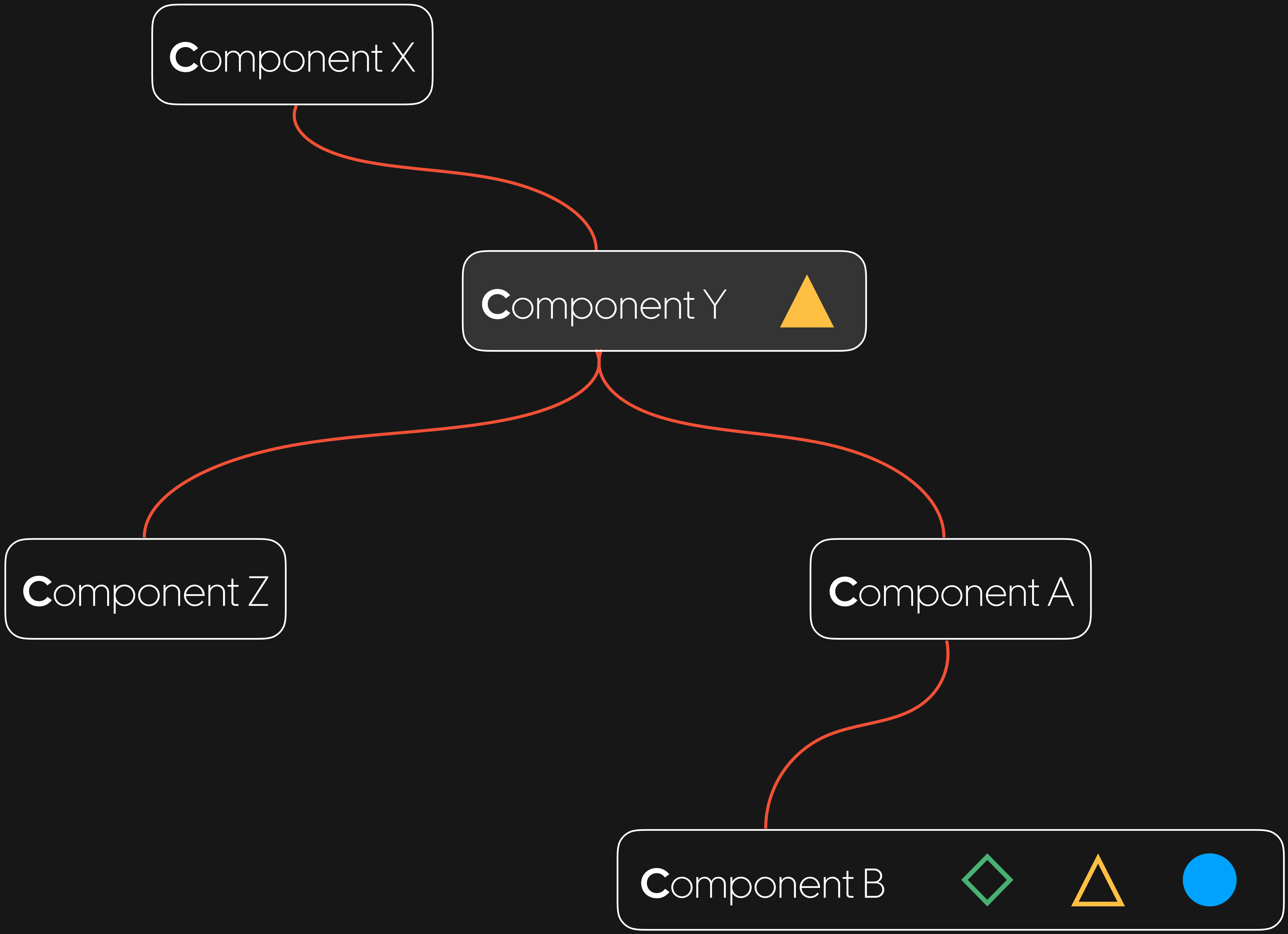

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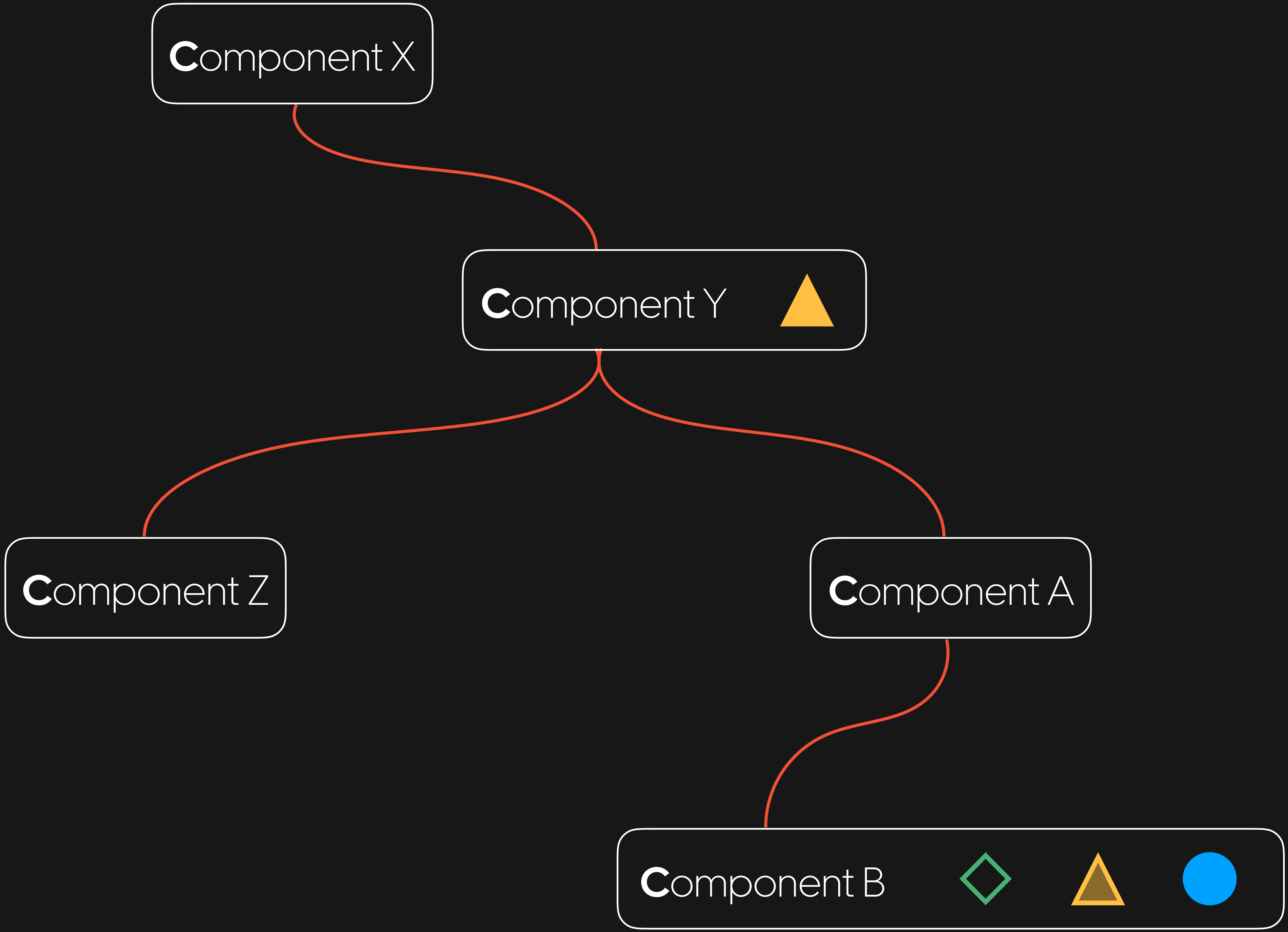

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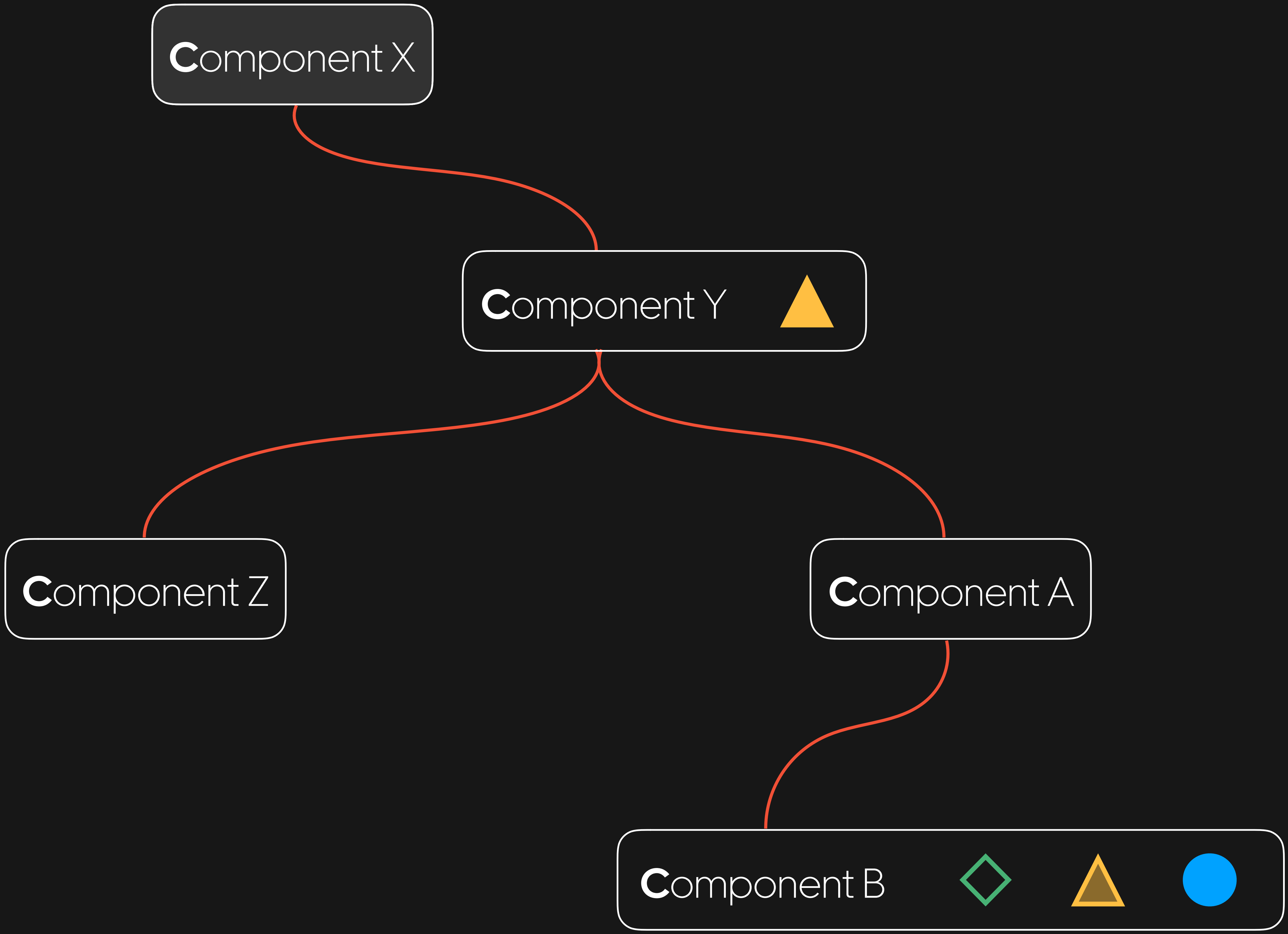

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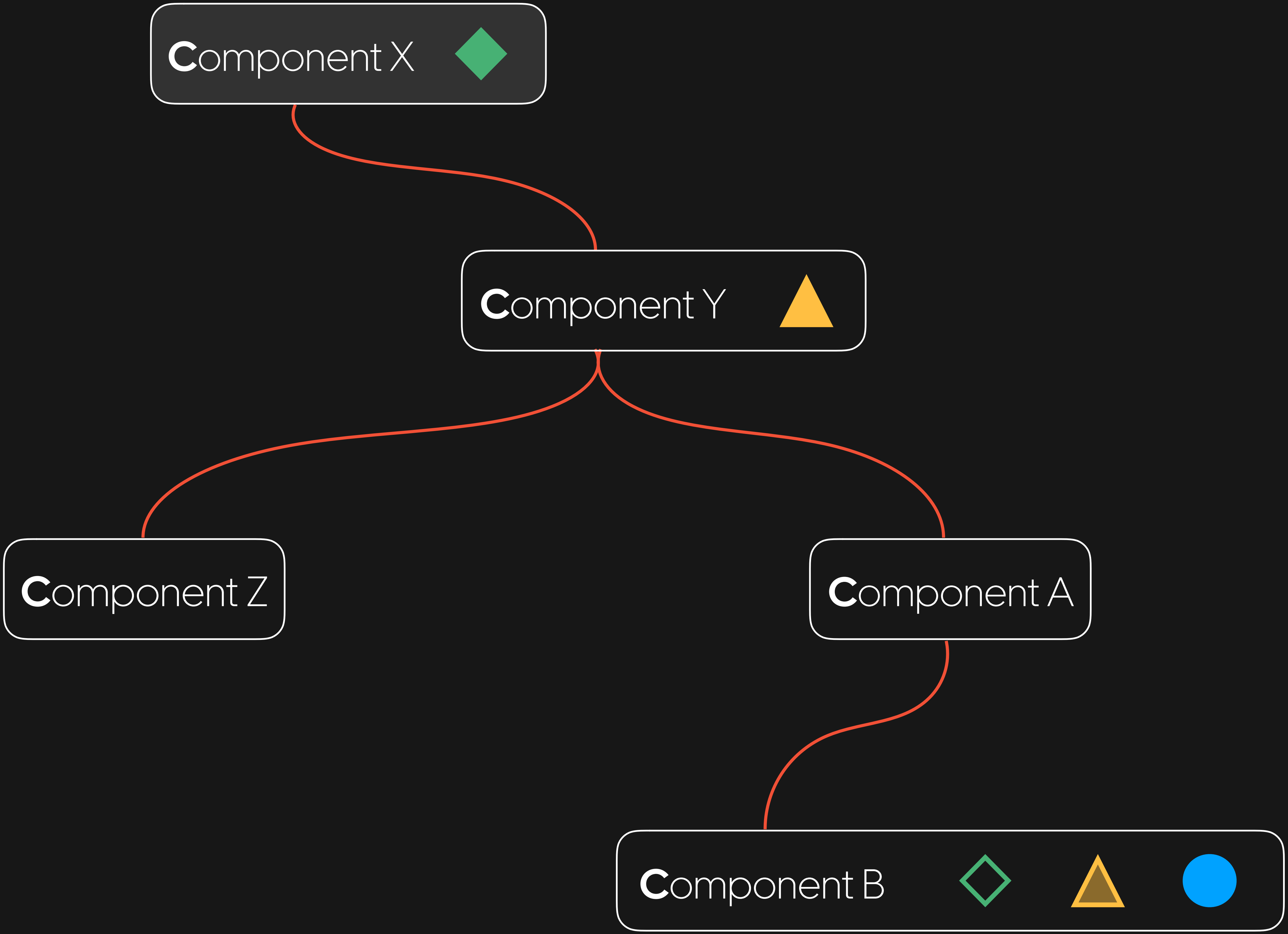

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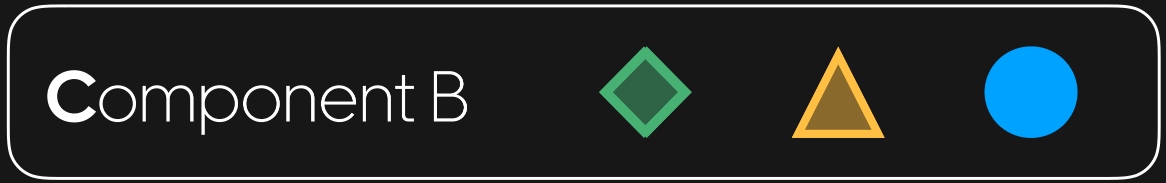
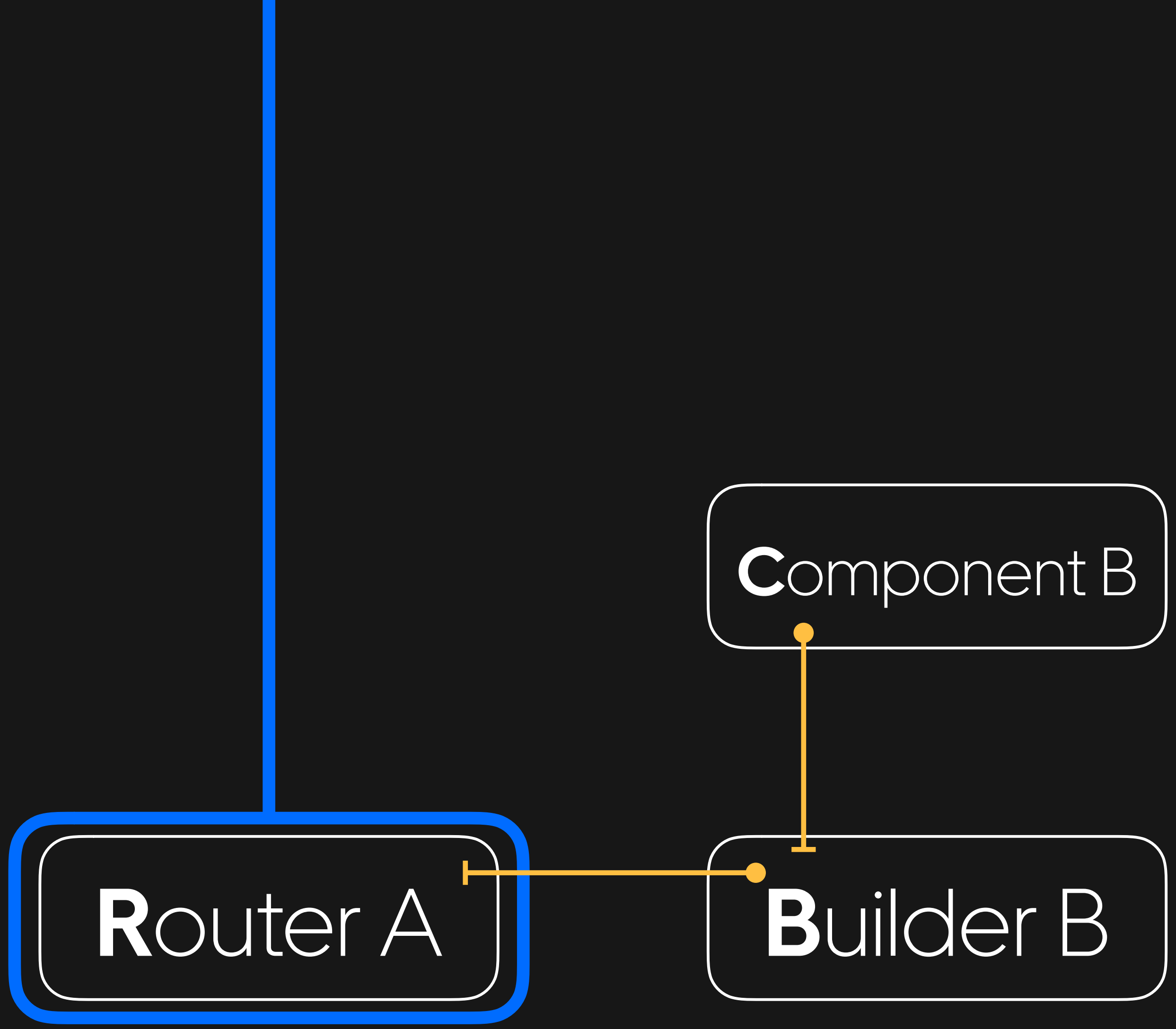


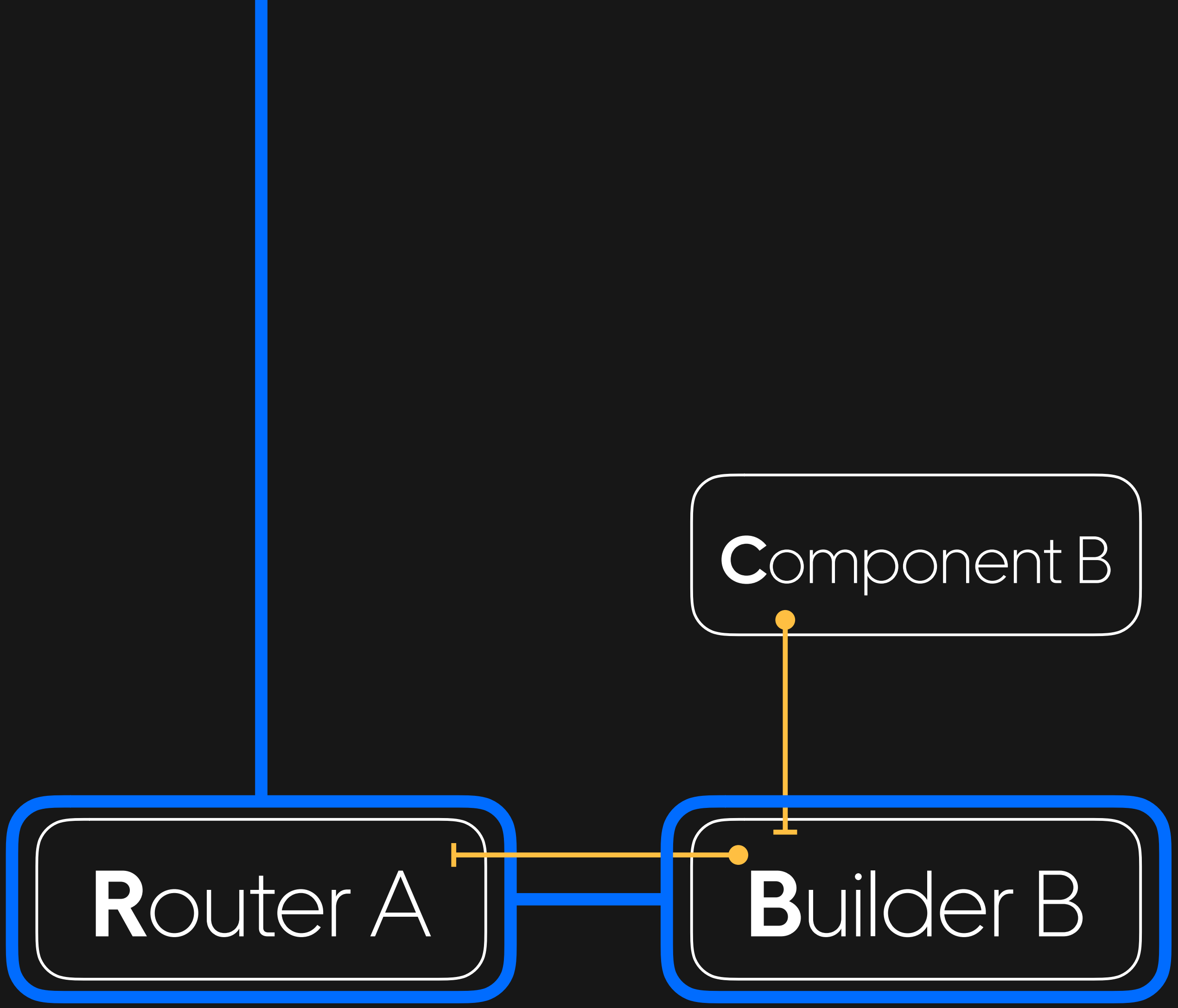
Component B



Component B

Router A

Builder B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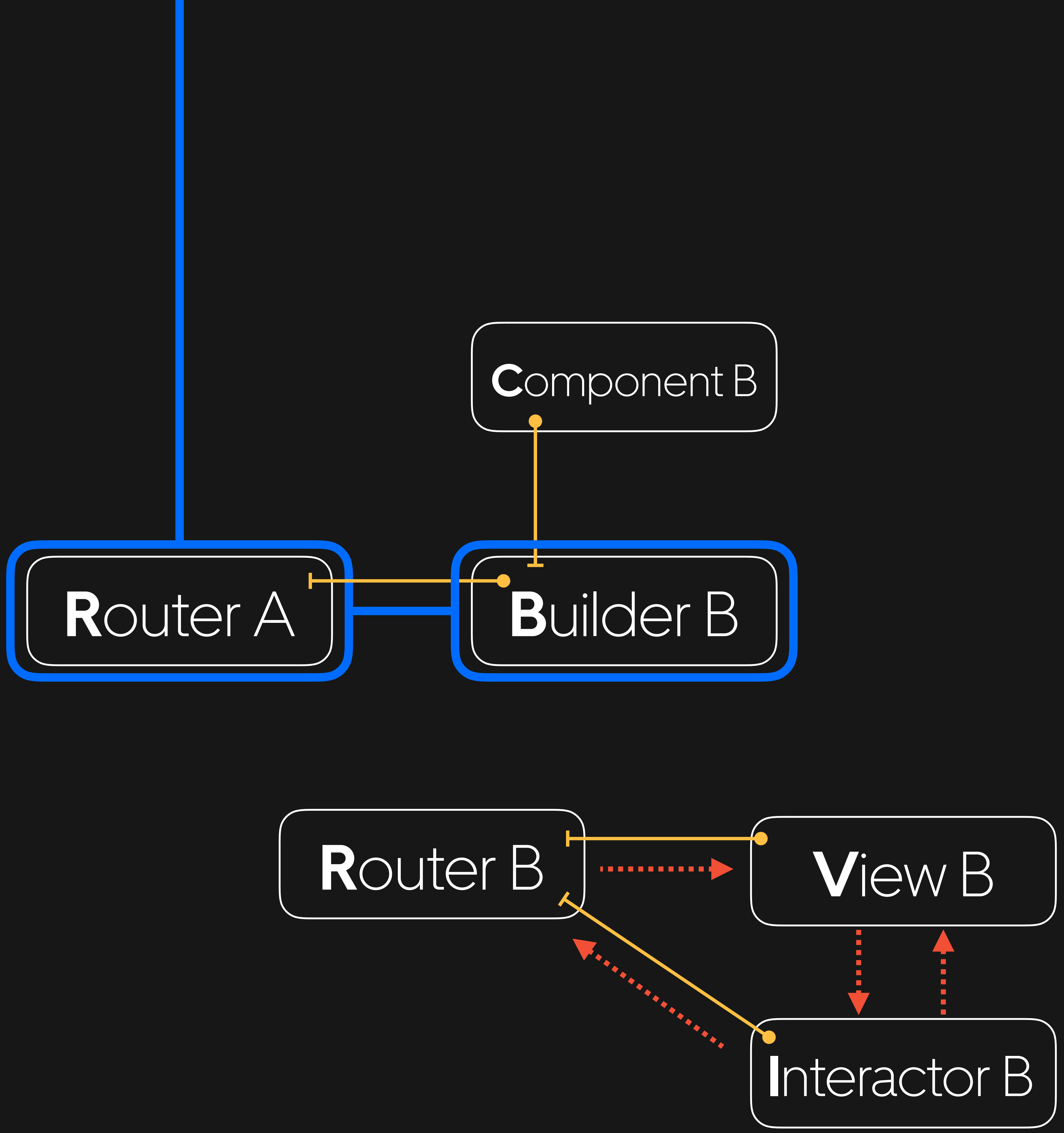
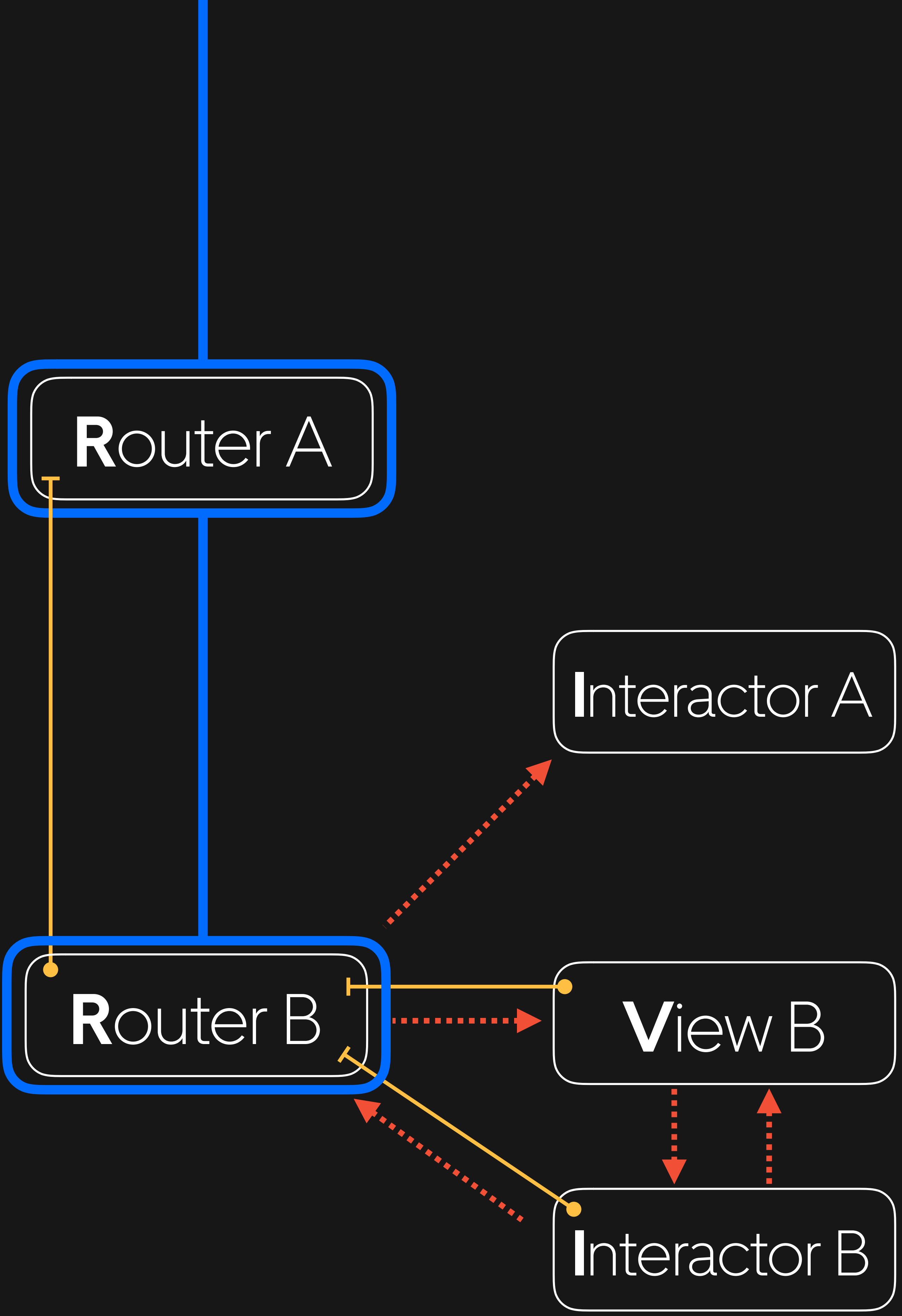


Component B
Router A
Builder B
Router B
View B
Interactor B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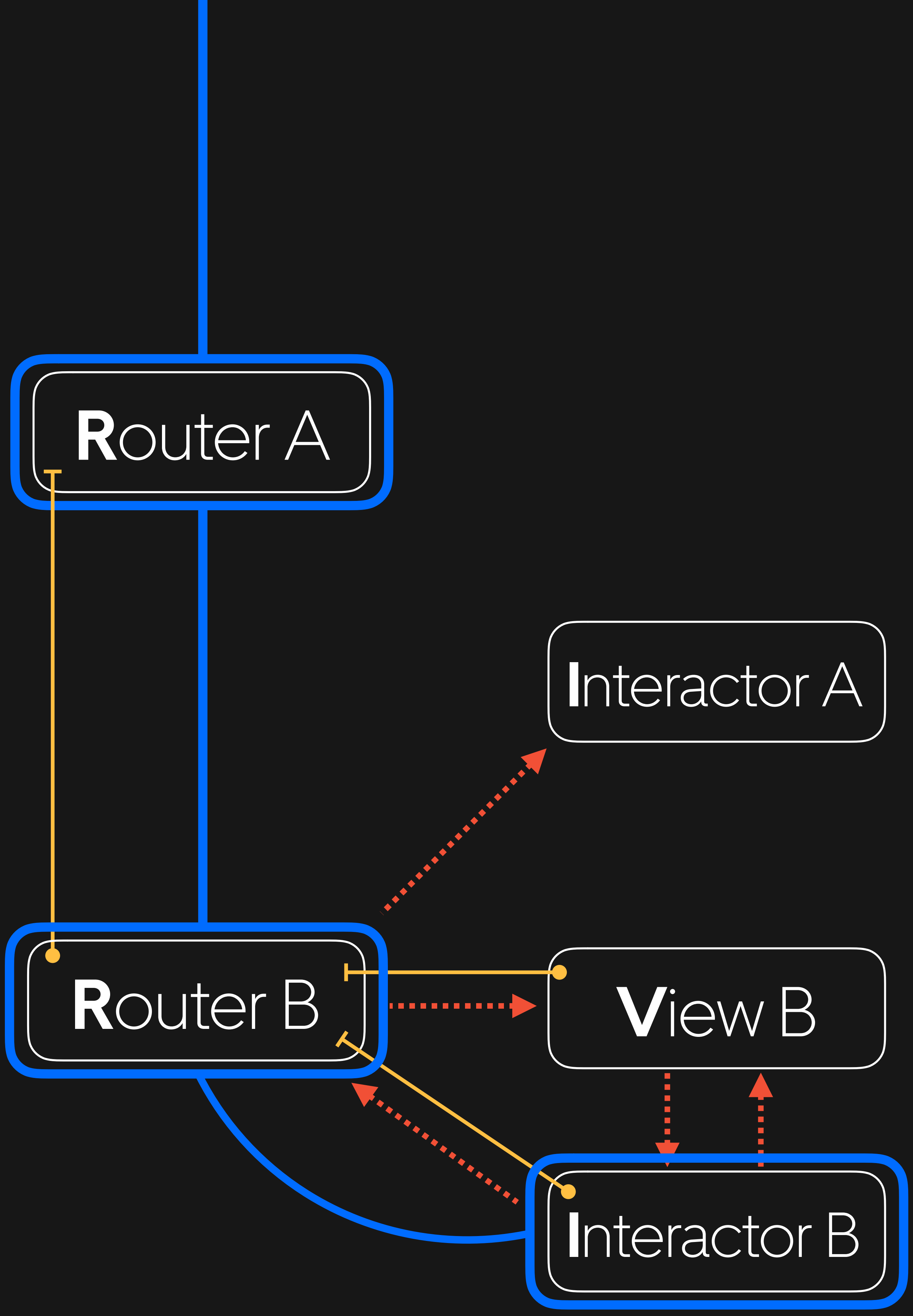
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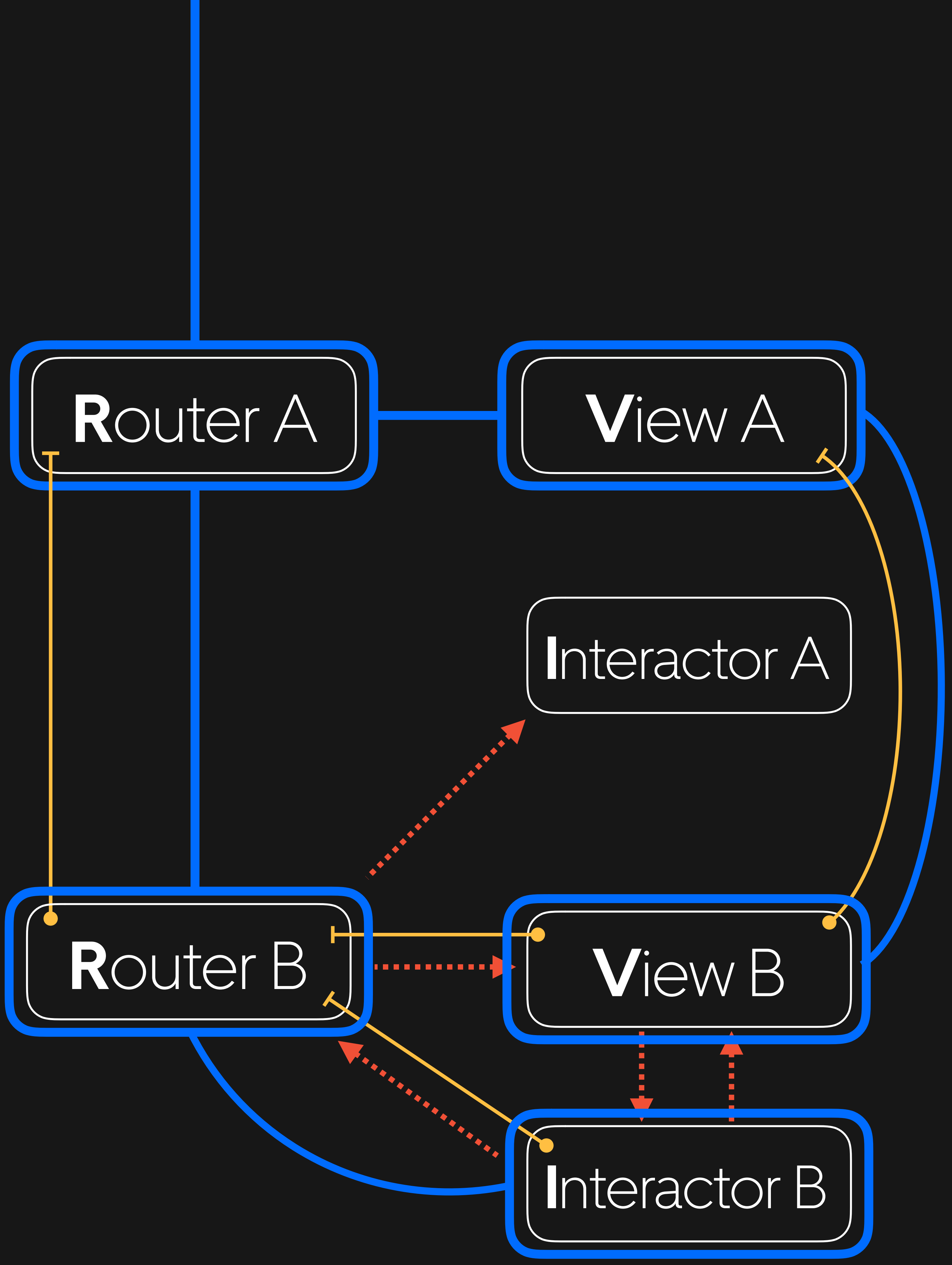
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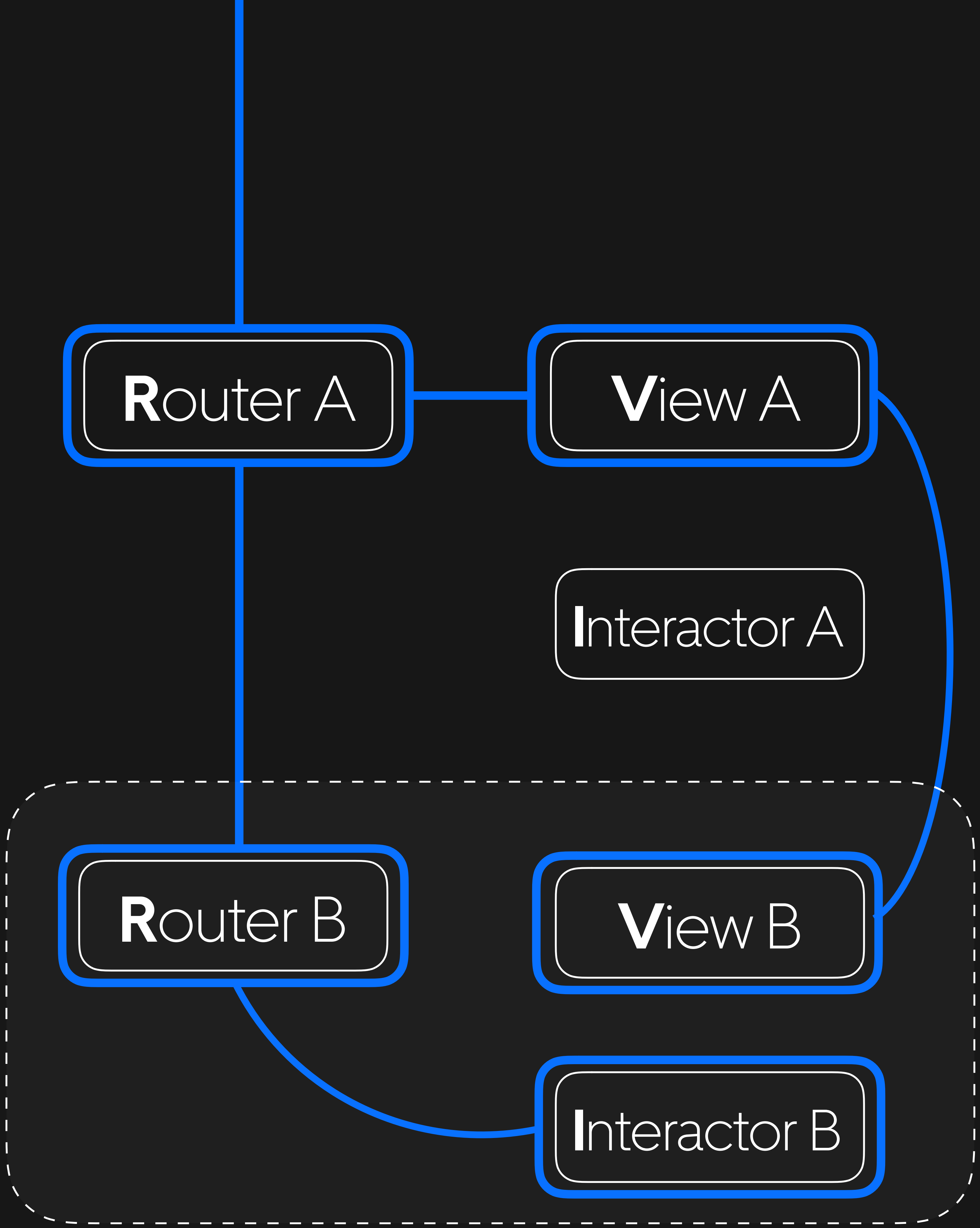
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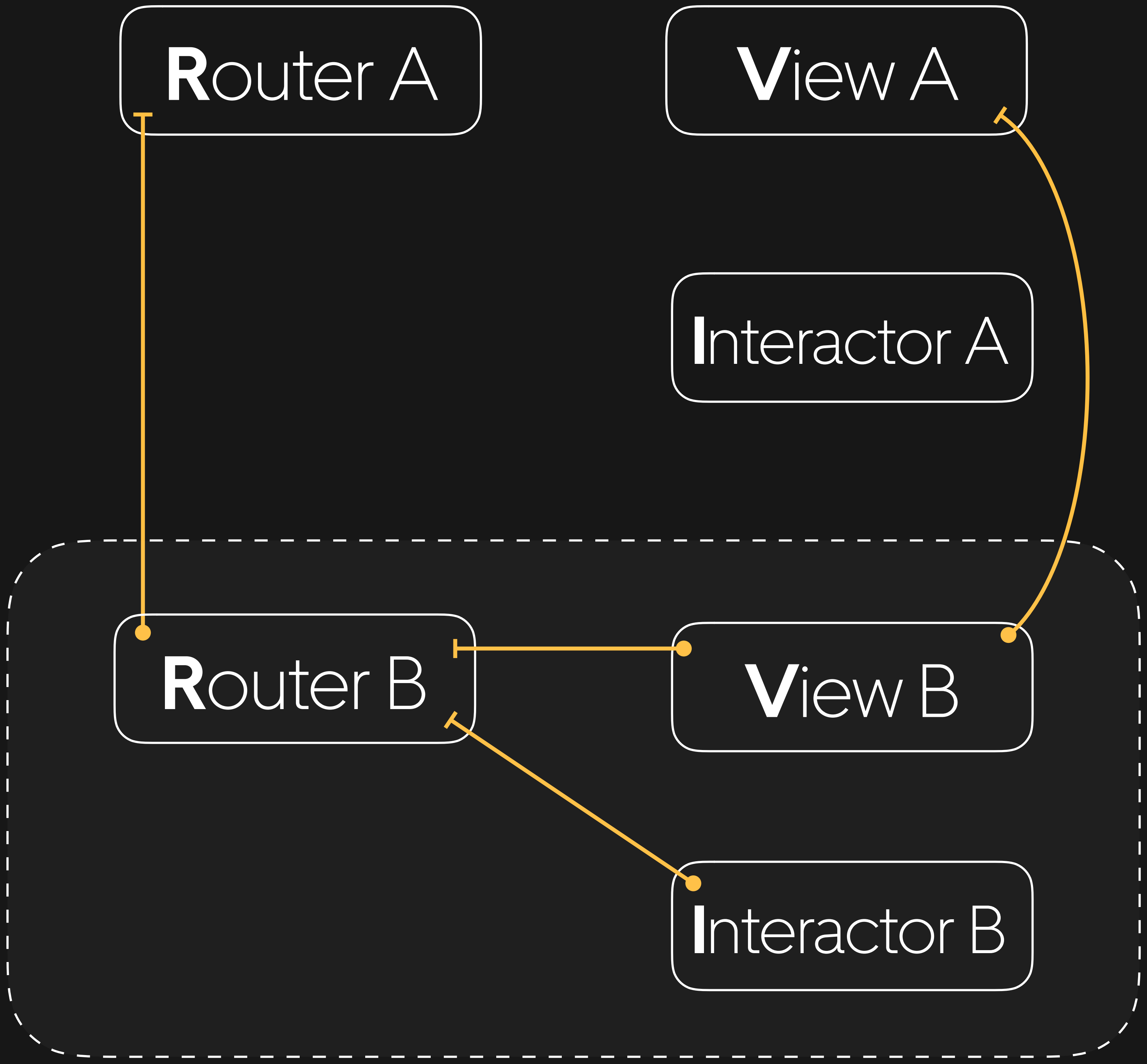

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Router B

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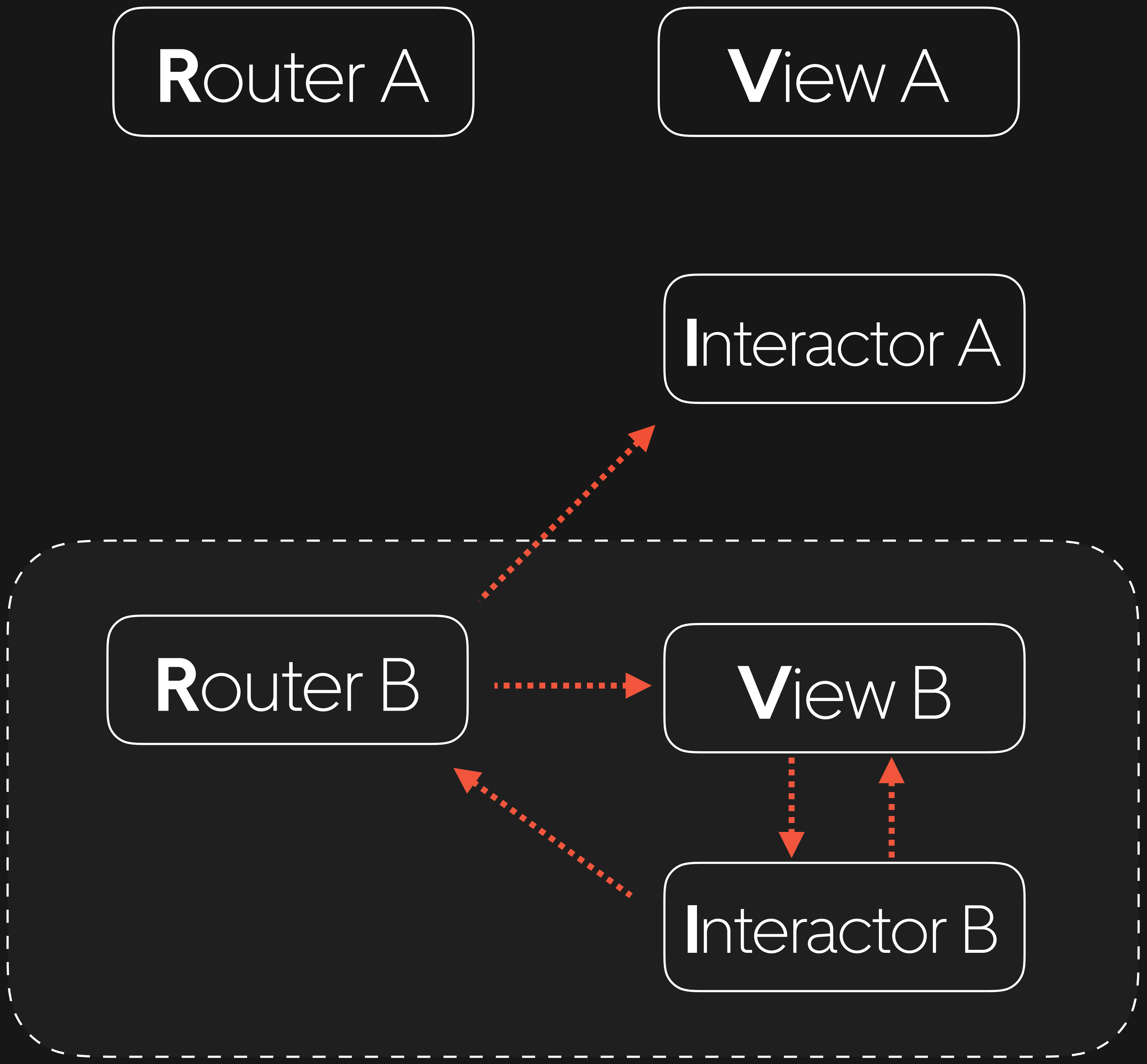

Router A

View A

Interactor A

Router B

View B

Interactor B

What

Why

How

What

3 main components

Cross-Platform

Why

How

What

3 main components

Cross-Platform

Why

Business logic driven

Compartmentalised

How

What

3 main components

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How

Ownership

Scopes

Execution flow

Thanks

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