t's all about Components



Debbie O'Brien Head Developer Advocate at Bit

Open Source Contributor Speaker, Teacher, Blogger, YouTuber

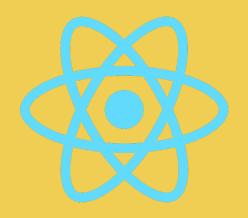
Cycling, Running, Padel, Skiing 4th degree black belt in Taekwondo







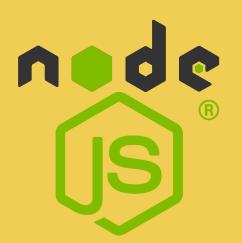




















The Modern Web is Component Driven

Component Driven

Is a reuse-based approach to defining, implementing and composing **loosely coupled independent components** into systems

shoe-store / ui / shoes / shoes - × +						
$\leftrightarrow \rightarrow c$	bit.dev/learn-bit-react/shoe-store/ui/shoes	s/shoes-ca	ard-grid/~compos	sitions		***************
bit	In this scope Search for components			Q		
	learn-bit-react/shoe-store		Overview	Compositions	Tests	Dependencies
	Gallery	#	C			
	 apps shoe-store entity 					
			yrps			
			em ipsum dolo	or sit amet consected	tur adipisicir	ng elit. Modi quos

- entity
- is most-wanted-shoes
- 🕼 shoes
- 🔻 ui
- pages
- 💮 about
- 💮 children
- 💮 home
- \bigotimes home-shoes
- 💮 men
- 🛞 women
- shoes
- shoes-card-grid

A

A

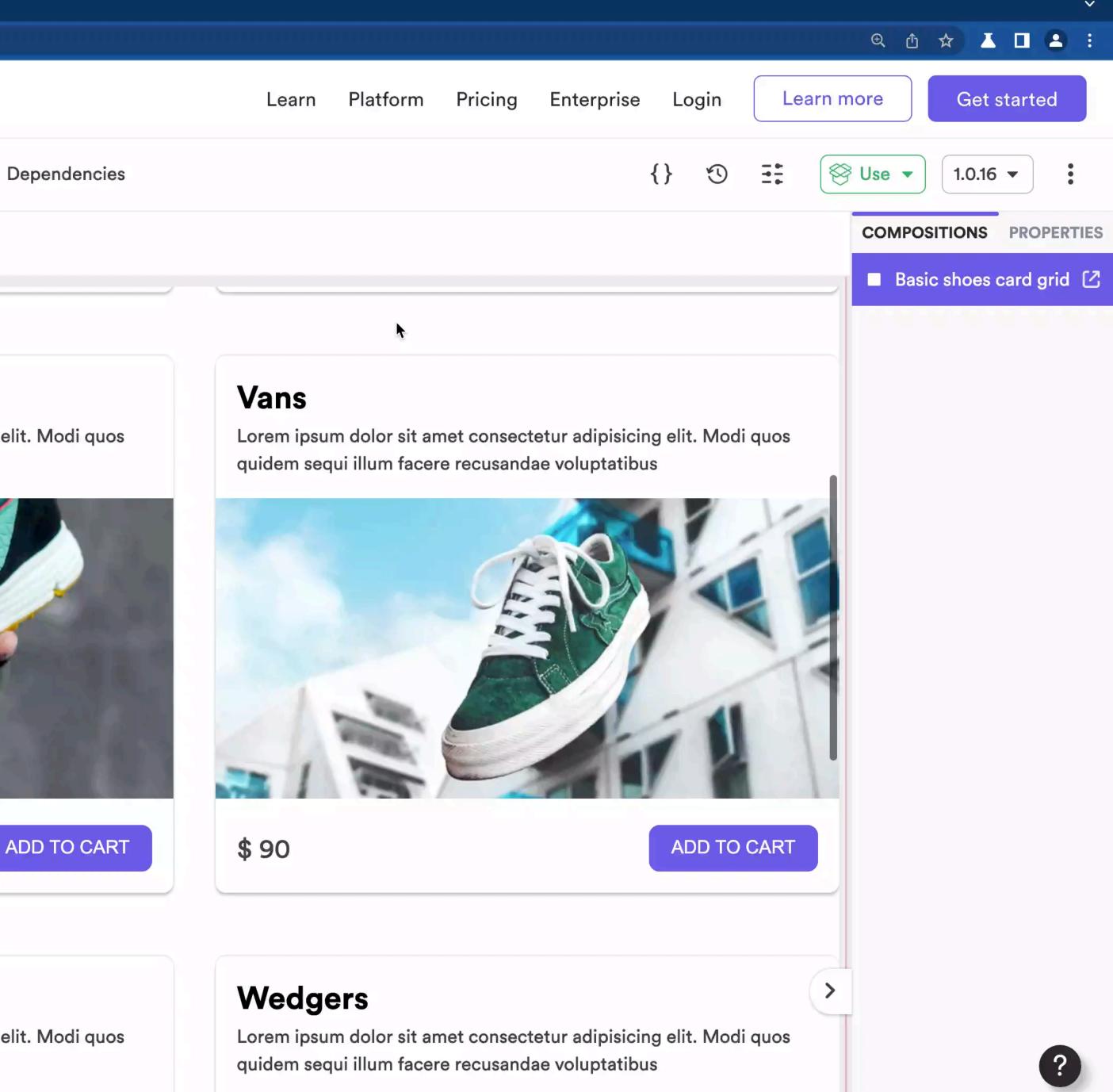
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//imberland

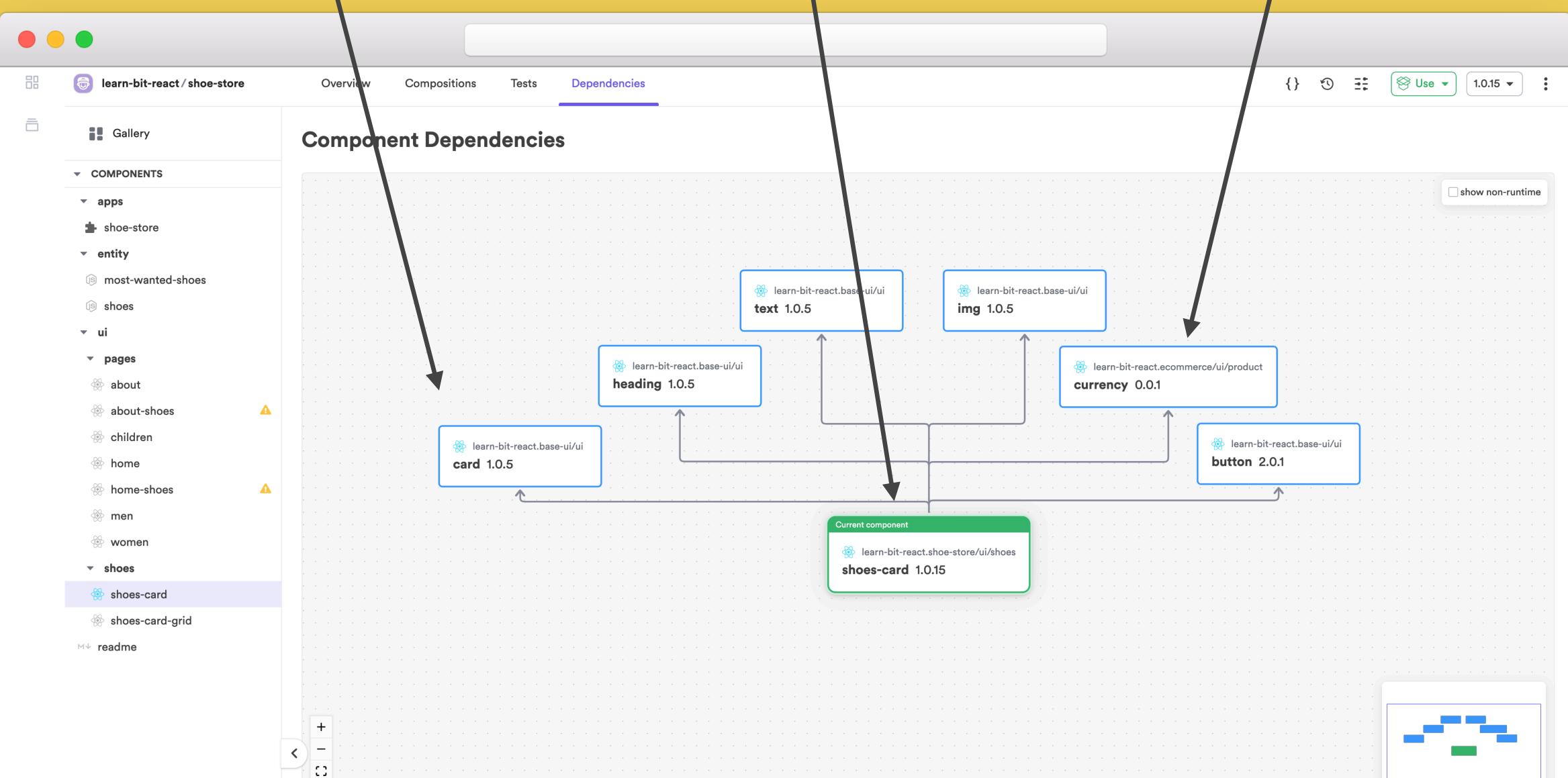
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quidem sequi illum facere recusandae voluptatibus

M≁ readme



base







So how do we build Component Driven?



Think about every component as a product for anyone to use

Your Component:

Great Dev Experience Different contexts Easy to use Great API Loosely coupled

Developers

Better software Maintainable software **Testable software Dev Experience**





Organizations

Better software Save time Save money **Happier Devs**





Component Driven

Reusable



Independent

Theme-able

composable

Components



Theme-able

other apps



Design components with themes so they can be used differently in

Theme-able

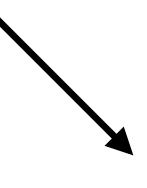
Vans

Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi quos quidem sequi illum facere recusandae voluptatibus



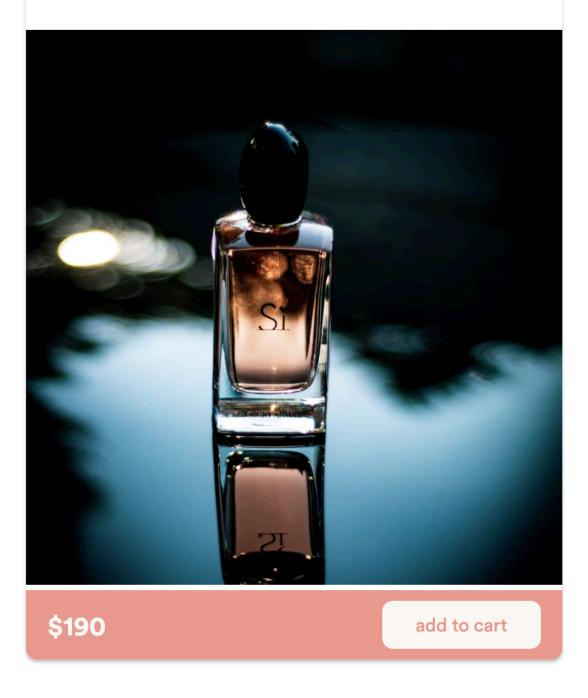
ADD TO CART

Apply different themes



SI

Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi quos quidem sequi illum facere recusandae voluptatibus



Composable

Compose smaller components together to form more

complex components

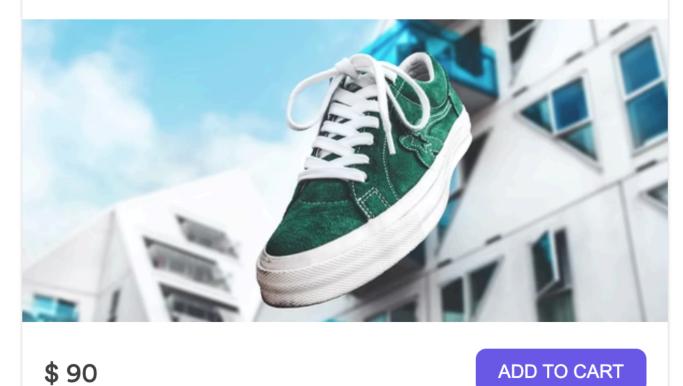


Composable

Anything

Vans

Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi quos quidem sequi illum facere recusandae voluptatibus



u card

A basic which c

Primary

UI

button

A Butto buttons

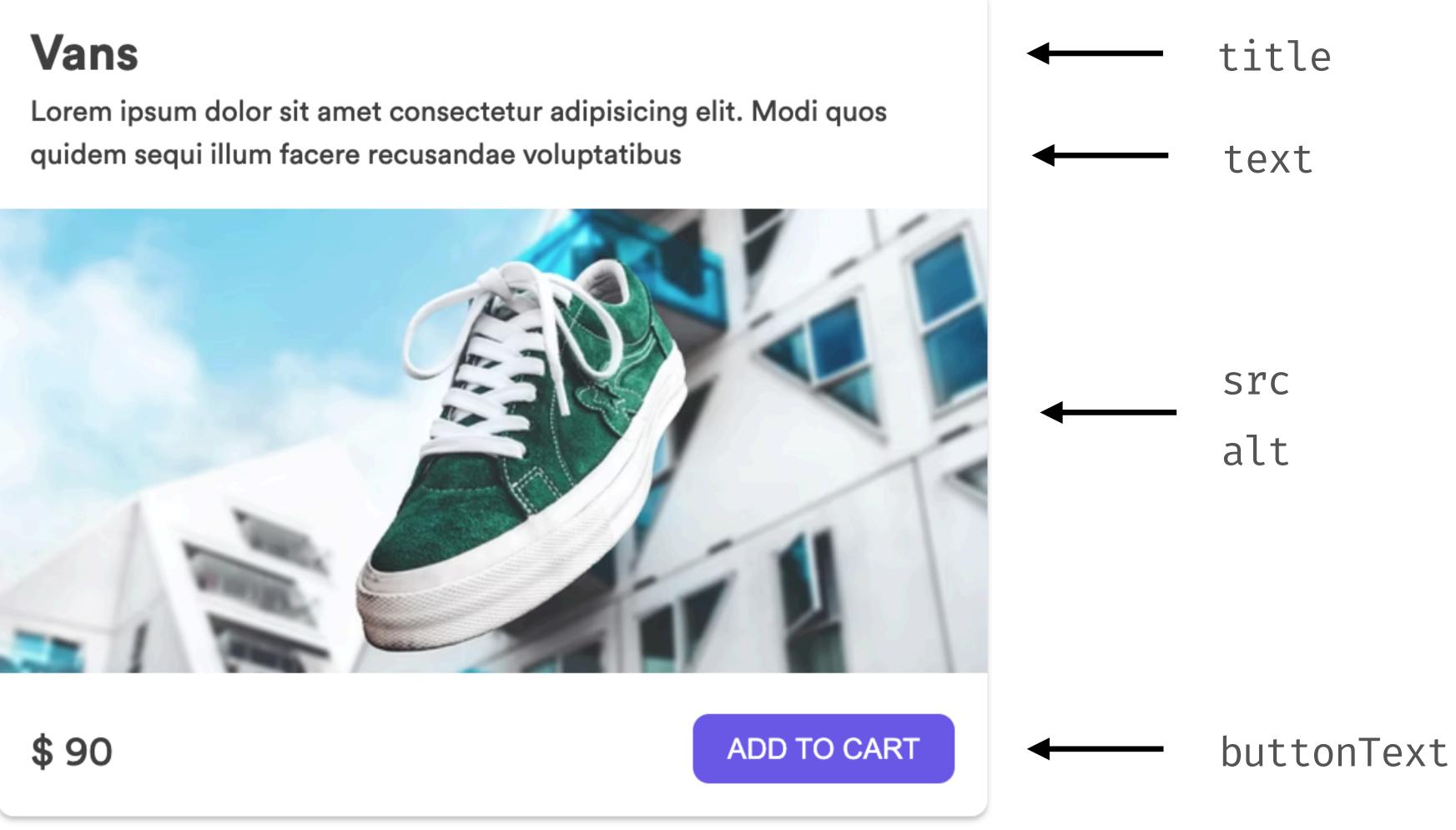
g can be rendered ne card	H1 Heading	hello from Text
v1.0.11 c card component can render anythin	uı heading v1.0.11 A Heading component.	uı text v1.0.11 A Text component for rendering text in a p
y		\$ 120
n v2.0.3 on component for s and elements tha	uı img v1.0.11 A component that renders an image	UI / PRODUCT currency v0.0.1 A Currency component

Encapsulated

Exposes interfaces which allow the caller to use its functionality

Hides details of internal variables or state

Encapsulated





Independent

Components are independent

Components have their own version and revision history

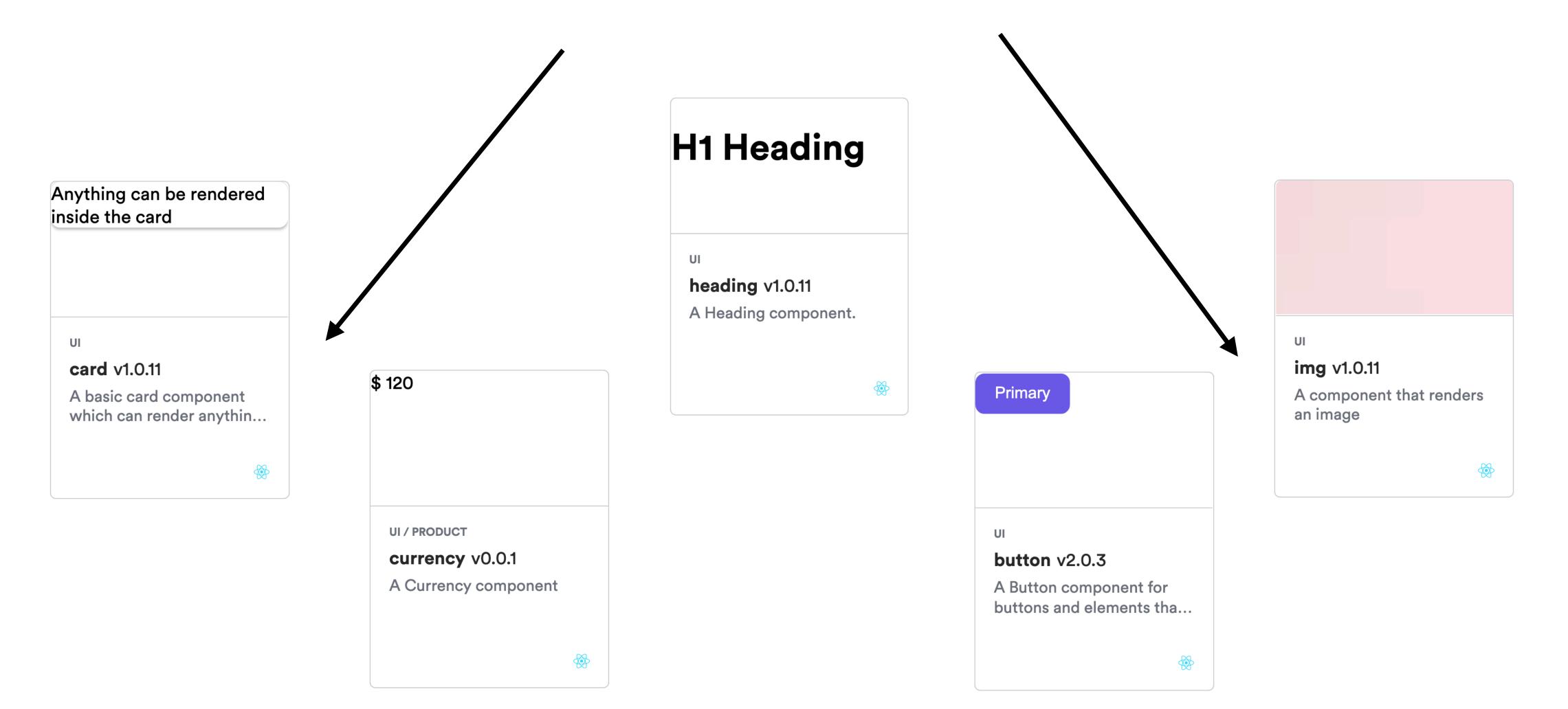
Components have their own build pipeline

Minimal dependencies on other components



Independant

Each component has its own version



Reusable

Reused in different scenarios in the same or in different applications

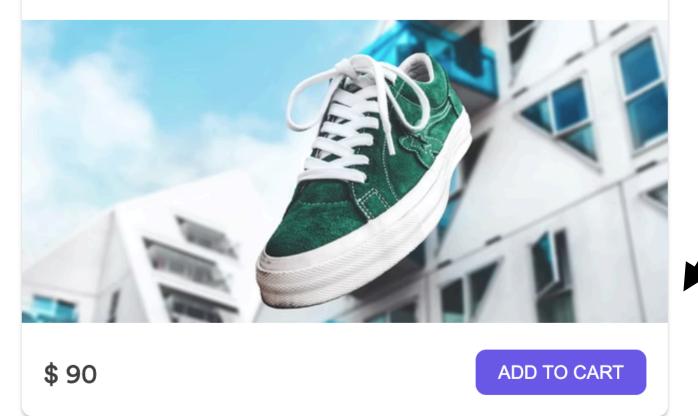
Reusable

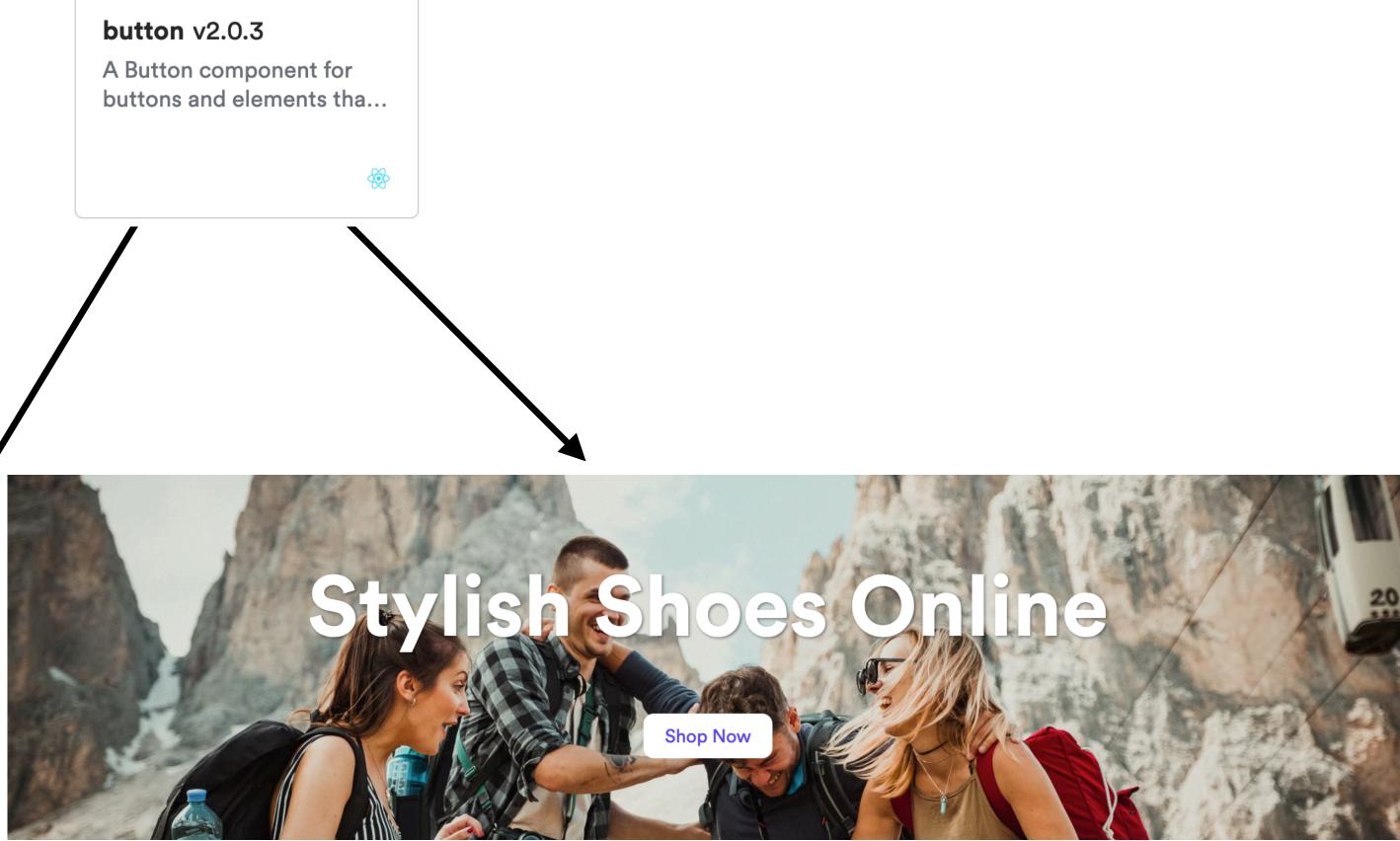
Primary

UI

Vans

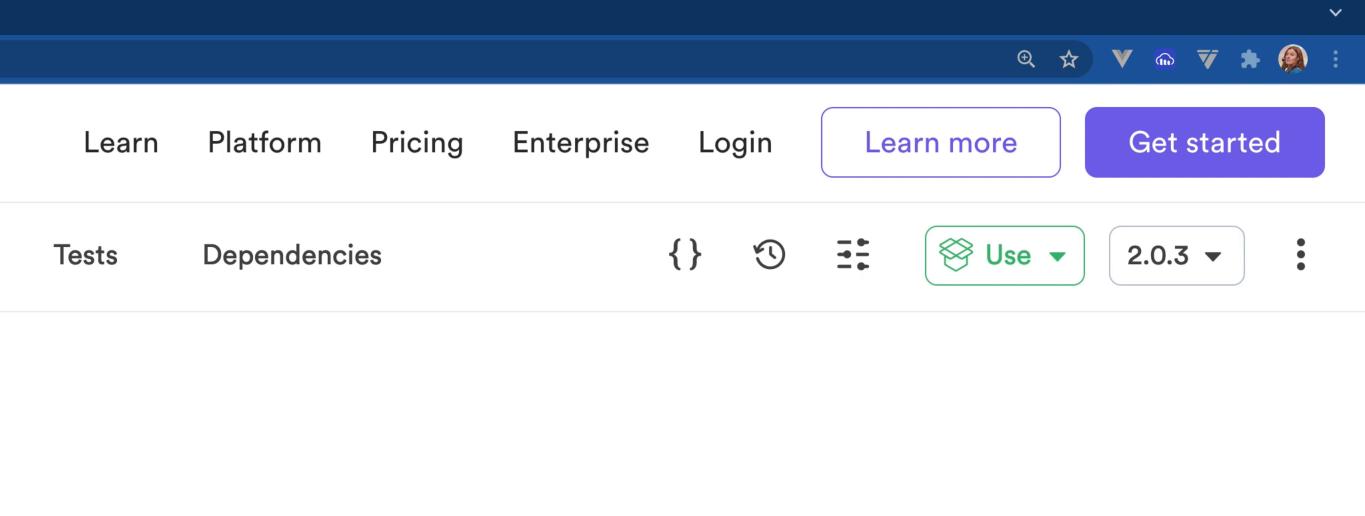
Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi quos quidem sequi illum facere recusandae voluptatibus







bit base-ui / ui / l	button × +				
$\leftrightarrow \rightarrow G$	bit.dev/learn-bit-react/base-ui/ui/button				
bit	In this scope Search for component	ts		Q	
	learn-bit-react/base-ui		Overview	Compo	ositions
	Gallery				
			Butto	n	
 env learn-bit-react figma 			A Button	compor	nent for
		BUTTON PRIMA		PRIMARY	SECOND
	figma-embed				
	 styles 		Package nam	ne	@learn-
	 fonts 				
	book		Button rond	ders the HTML tag	
	i roboto		Dutton rend		
	tangerine-font		Dondoro o prir		
buttoncolors			Renders a prima By adding the primary		nary c
	 themes 	<	removed to	make it a	white b
	light-theme		<button pri<="" th=""><th>mary>Primar</th><th>y</th></button>	mary>Primar	y
	🛞 theme				



r buttons and elements that look like buttons

DARY

n-bit-react/base-ui.ui.button	

<button> as default but can use any HTML tag instead such as an <a> tag.

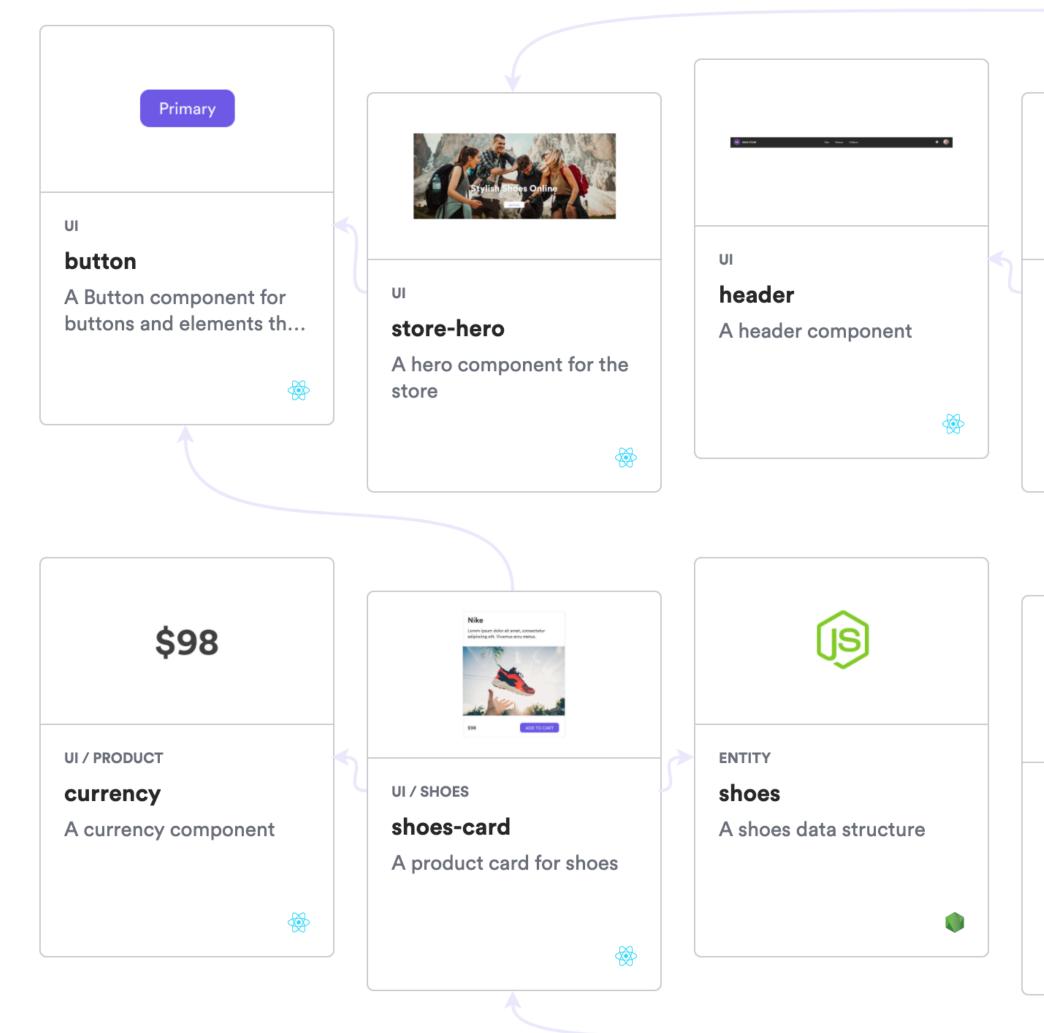
button

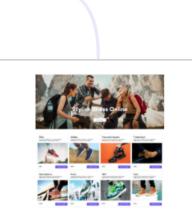
, the button will be styled as secondary button. This can be changed to secondary or button.

or



Decoupled

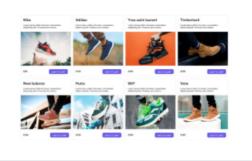




UI / PAGES

home

A page component for rending contents of the...



UI / SHOES

shoes-card-grid

A card grid for the product cards for shoes



Nike Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus arcu metus



New balance

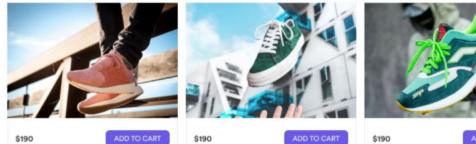
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Adidas



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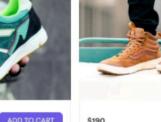




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Vans

Timberland

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Store name

Privacy Contact About

Depend on others or build your own?

Why waste time reinventing U components?

 \times

Unstyled, accessible components for building high-quality design systems and web apps in React.

Install Primitives \rightarrow

Edit Profile					
Make changes to your profile here. Click save when you're done.					
Name	Pedro Duarte				
Username @peduarte					
		Save			

Options ~

New Tab

New Window

Favorites

>

Downloads

✓ Show Toolbar

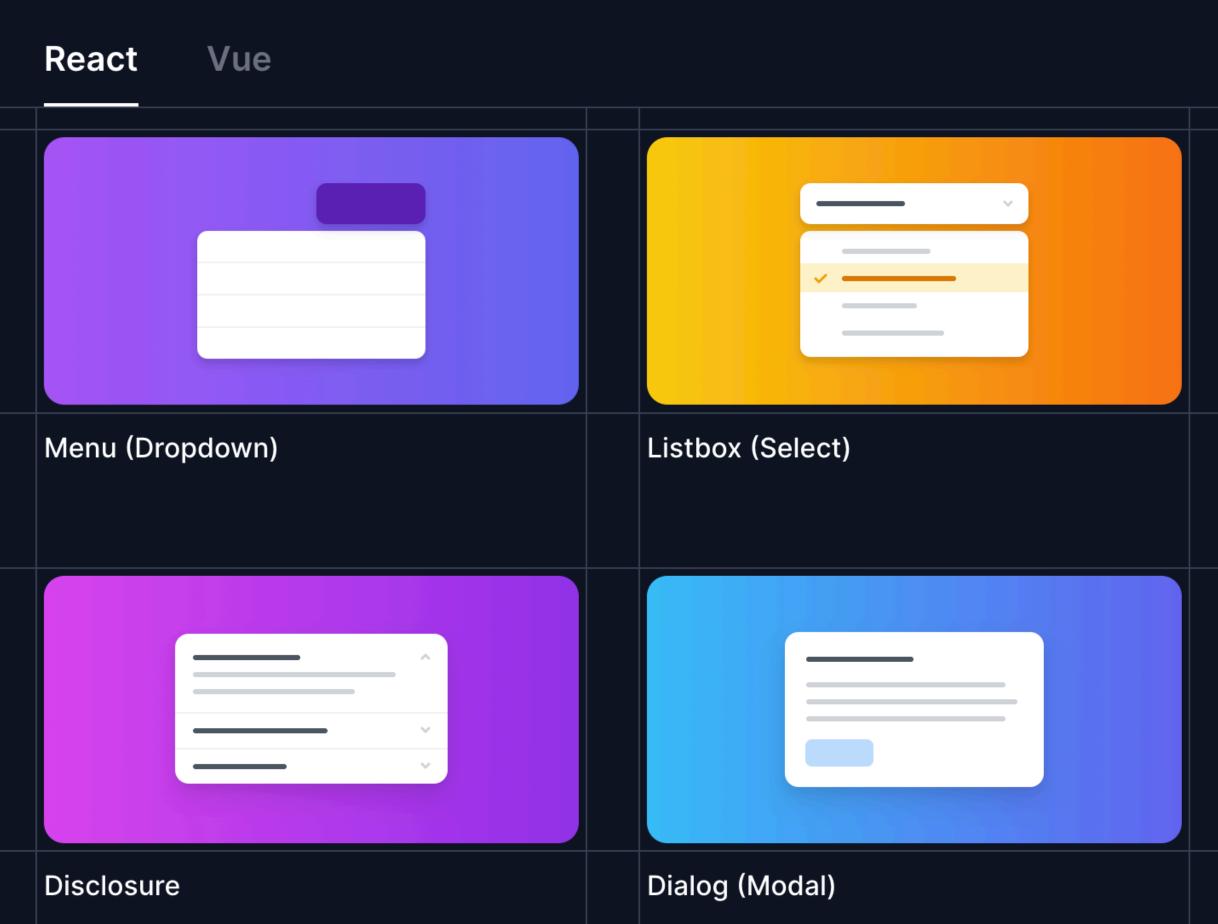
Show Full URLs

Dimensions

X Dimensions Width 100% Height 20vh Margin 0 Padding 10%



Completely unstyled, fully accessible UI components, designed to integrate beautifully with Tailwind CSS.





Erij 🗘	
Combobox (Autocomplete)	Switch (Toggle)
Popover	Radio Group





Let's tak Design Systems

It all starts with the designers



bit Bit Shoe Store

Men

Product Det

Syrps

size: 36 color: black

Jimmy Sho

size: 36 color: black

Converse

size: 36 color: black







Women Children Cart (3)

dark mode

Cart

etails	Quantity	Price	
	1	\$ 180	X
C			
	1	\$ 280	x
noes			
C			
	1	\$ 50	X
5			



Design Tokens **SIZE TOKENS** size wrapper

sizes/40

NAME

NAME

sizes/60

PROPERTIESPROPERTIESPROPERTIESwidth: 40pxwidth: 60pxwidth: 80px

50 NAME Sizes/80

Design Tokens



By Lukas Oppermann

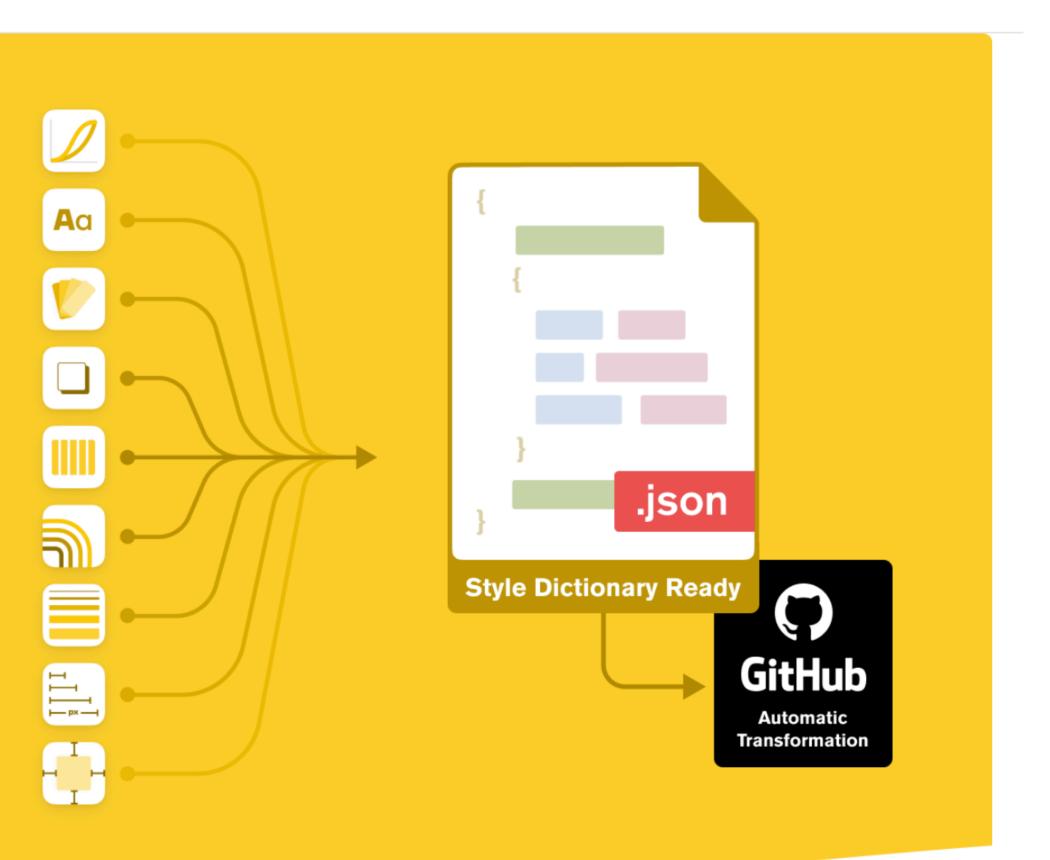


Design Tokens

Make figma your source of truth.







Base Theme

- tokens,
- fontFamilyTokens, fontSizeTokens,
- fontWeightTokens,
- primaryColorTokens,
- secondaryColorTokens,
- errorColorTokens,
- borderRadiusTokens, borderSizeTokens,
- textColorTokens,
- backgroundColorTokens,
- boxShadowTokens,
- generalColorTokens,
-);

export const baseTheme: Partial<ThemeSchema> = Object.assign(

headingsSizeTokens



Design Tokens

import { ThemeSchema } from '../theme-schema';

primaryColor: '#6c5ce7', primaryHeavy: '#5d4aec', primaryLight: '#897dec', textOnPrimary: '#ffffff', primaryBg: '#c9c3f6', primaryBgHeavy: '#3e29df'

- export const primaryColorTokens: Partial<ThemeSchema> = {



borderColor #000	0
	a9a9
formText #fff form-text	f bgColor #
	^{99e14c} backgroundBody #
tertiaryColor #836	67C7 background #
tertiary-color complimentaryColor #F0E complimentary-color	FFF1 backgroundAlt # background-alt
twitter #1da twitter	alf2
slack #4a1	154b
General colors	Background colors

Design Tokens



CSS Vars

```
&.primary {
  color: var(--text-on-primary, #fff);
  background-color: var(--primary-color, #5d4aec);
  border: 1px solid var(--primary-color, #5d4aec);
  box-shadow: none;
  &:hover {
    border: 1px solid var(--primary-heavy, #5d4aec);
    color: var(--text-on-primary, #fff);
    background-color: var(--primary-heavy, #5d4aec);
    text-decoration: none;
  &:active {
    border: 1px solid var(--primary-heavy, #5d4aec);
    background-color: var(--primary-color, #6c5ce7);
    color: var(--text-on-primary, #fff);
  &:disabled {
    color: #babec9;
    background-color: #f6f6f6;
    border: 1px solid #babec9;
```



Primary colors

Base Theme

7		secondaryColor secondary-color	#ffffff
C		secondaryHeavy secondary-heavy	#ffffff
C		secondaryLight secondary-light	#ffffff
f		textOnSecondary text-on-secondary	#6c5ce7
6		secondaryBg secondary-bg	#ffffff
f		secondaryBgHeavy secondary-bg-heavy	#ffffff
	Seconda	ary colors	

import { createTheme } from '@teambit/base-react.theme.theme-provider';

<BaseTheme.ThemeProvider overrides={customTheme}> {children} </BaseTheme.ThemeProvider>

Theme Provider

	primaryColor primary-color	hotpink
	primaryHeavy primary-heavy	#£7768d
	primaryLight primary-light	#ff9aac
	textOnPrimary text-on-primary	#ffffff
	primaryBg primary-bg	#ffe5ea
	primaryBgHeavy primary-bg-heavy	hotpink
Primary	colors	

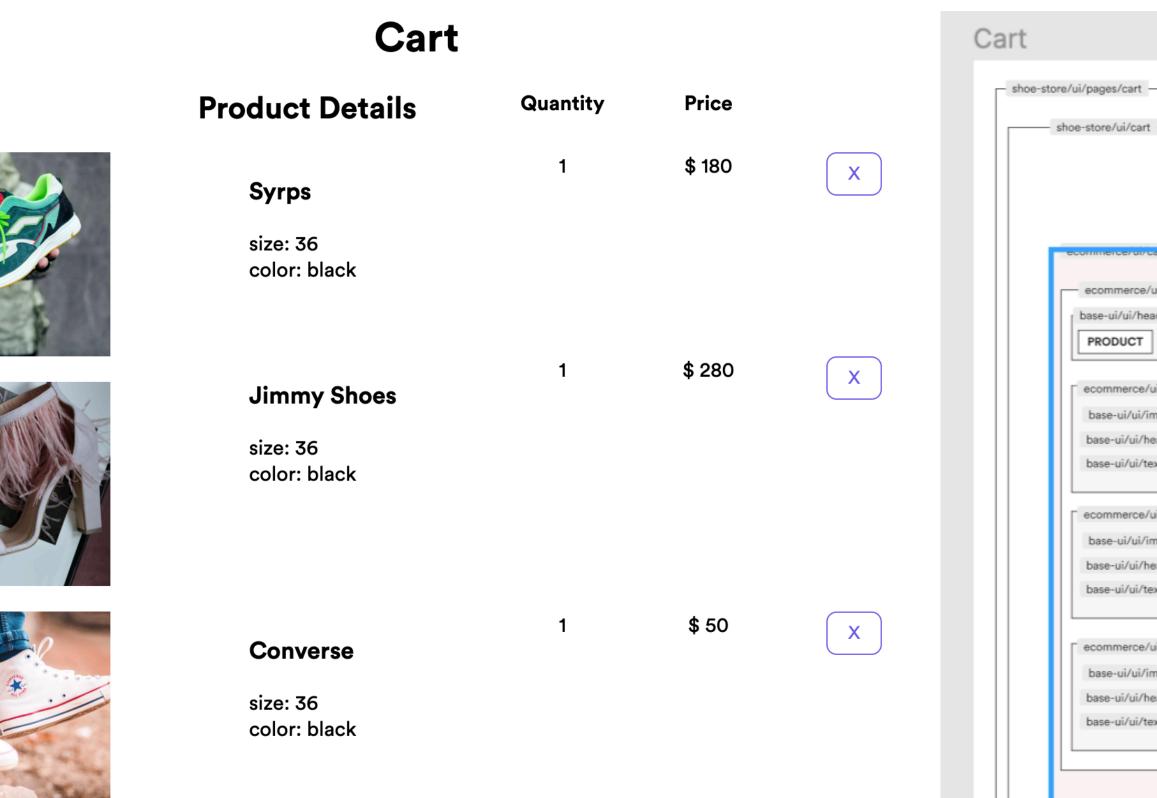


	secondaryColor secondary-color	#ffffff
	secondaryHeavy secondary-heavy	#ffffff
	secondaryLight secondary-light	#ffffff
	textOnSecondary text-on-secondary	hotpink
	secondaryBg secondary-bg	#ffffff
	secondaryBgHeavy secondary-bg-heavy	#fffff
Seconda	ary colors	

It's Component Time

noe-store/ui/cart		base-ui/ui/heading		
		Your cart		
		rour care		
ecommerce/u/cart-items				
ecommerce/ui/cart-item	ecommerce/ui/cart-item	ecommerce/ui/cart-item	ecommerce/ui/cart-item	ecommerce/ui/cart-item
base-ui/ui/heading	base-ui/ui/heading	base-ui/ui/heading	base-ui/ui/heading	
PRODUCT	PRODUCT	PRODUCT	PRODUCT	
ecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	commerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail
base-ui/ui/img				
base-ui/ui/heading base-ui/ui/text	ecommerce/ui/product/currency	ecommerce/ui/product/quantity-selector	ecommerce/ui/product/item-total	ecommerce/ui/product/remove-product-from-cart
base un un text				
cecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	r ecommerce/ui/cart-item-detail	c ecommerce/ui/cart-item-detail
base-ui/ui/img				
base-ui/ui/heading	ecommerce/ui/product/currency	ecommerce/ui/product/quantity-selector	ecommerce/ui/product/item-total	ecommerce/ui/product/remove-product-from-cart
base-ui/ui/text				
ecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	cecommerce/ui/cart-item-detail
base-ui/ui/img				
base-ui/ui/heading	ecommerce/ui/product/currency	ecommerce/ui/product/quantity-selector	ecommerce/ui/product/item-total	ecommerce/ui/product/remove-product-from-cart

Cart Page



Cart Page

- shoe-store/ui/pages/cart	

base-ui/ui/heading

Your cart

ecommerce/ui/cart-item	ecommerce/ui/cart-item	ecommerce/ui/cart-item	ecommerce/ui/cart-item	ecommerce/ui/cart-item
ase-ui/ui/heading	base-ui/ui/heading	base-ui/ui/heading	base-ui/ui/heading	
PRODUCT	PRODUCT	PRODUCT	PRODUCT	
commerce/ui/cart-item-detail	cecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	cecommerce/ui/cart-item-detail
base-ui/ui/img				
base-ui/ui/heading	ecommerce/ui/product/currency	ecommerce/ui/product/quantity-selector	ecommerce/ui/product/item-total	ecommerce/ui/product/remove-product-fr
base-ui/ui/text				
commerce/ui/cart-item-detail	cecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	commerce/ui/cart-item-detail	commerce/ui/cart-item-detail
base-ui/ui/img				
base-ui/ui/heading	ecommerce/ui/product/currency	ecommerce/ui/product/quantity-selector	ecommerce/ui/product/item-total	ecommerce/ui/product/remove-product-fr
base-ui/ui/text				
commerce/ui/cart-item-detail	F ecommerce/ui/cart-item-detail	C ecommerce/ui/cart-item-detail	F ecommerce/ui/cart-item-detail	F ecommerce/ui/cart-item-detail
	ecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail	ecommerce/ui/cart-item-detail
base-ui/ui/img				
base-ui/ui/heading	ecommerce/ui/product/currency	ecommerce/ui/product/quantity-selector	ecommerce/ui/product/item-total	ecommerce/ui/product/remove-product-fr
base-ui/ui/text				



List the Components

- heading
- image
- text
- currency
- button
- remove from cart
- cart items
- cart
- cart page

Think about the

Heading Component

Properties

NAME

TYPE

element

'h1' | 'h2' | 'h3' | 'h4' | 'h5' | 'h6' DEFAULT

_

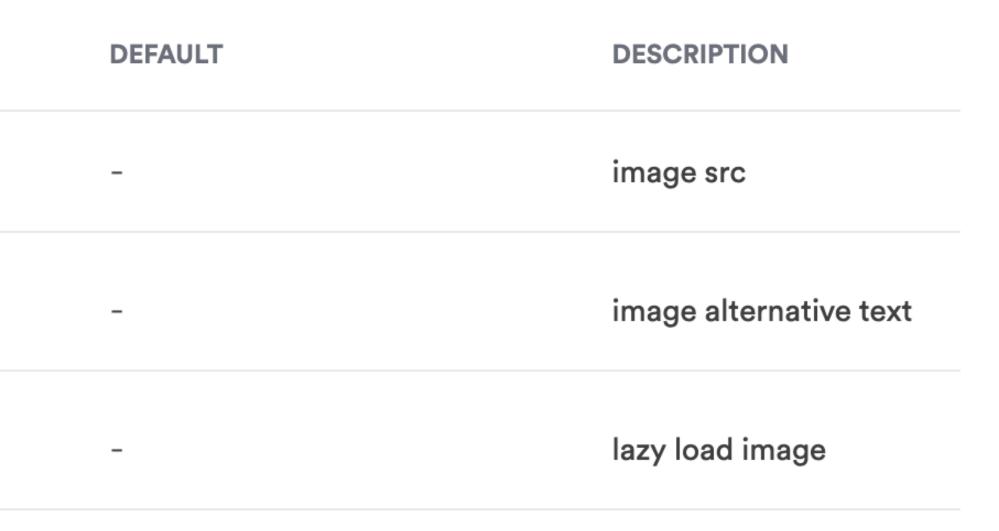
DESCRIPTION

html element to be rendered

Image Component

Properties

NAME	TYPE
src (Required)	string
alt (Required)	string
loading	'lazy' 'eager'



Text Component

Properties

NAME

TYPE

element

'p' | 'span'

DEFAULT

_

DESCRIPTION

text rendered as p element or span element

Button Component

Properties

NAME	ТҮРЕ
children (Required)	string
primary	boolean
secondary	boolean
white	boolean
counter	boolean
link	boolean
href	string

DEFAULT	DESCRIPTION
_	content of the button
false	sets the button as primary
false	sets the button as secondary
false	sets the button as white
false	sets the button as a counter button
false	renders the Link component instead of the button
1 1	href if using Link component
_	uses any element instead of button such as an <a> tag for external links

Remove From Cart Component

Properties

NAME

TYPE

cartItem (Required)

Shoe

DEFAULT

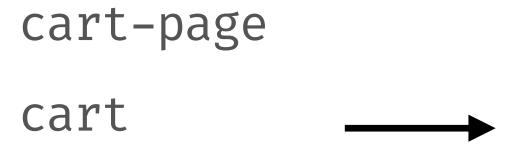
_

DESCRIPTION

item in cart

Now It's Time to Build

Cart Page



cart-item

image







Product Details

Syrps

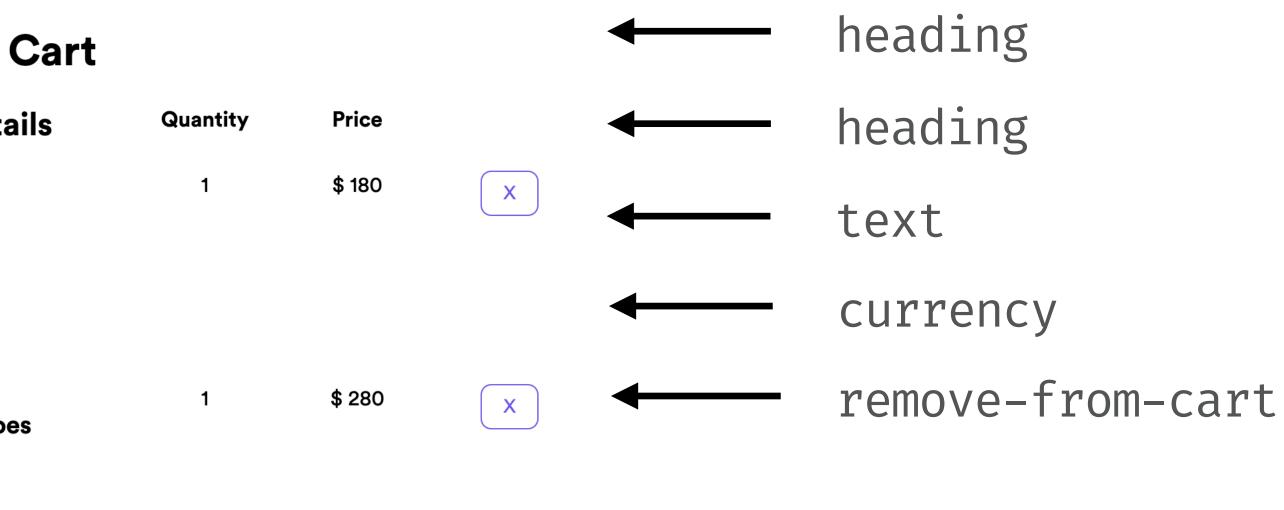
size: 36 color: black

Jimmy Shoes

size: 36 color: black

Converse

size: 36 color: black



\$ 50 1 Х

Component Library

•••



UI	

		No preview available	Anything can be rendered inside the card	H1 Heading	
UI	UI	ENV	UI	UI	
img-grid v1.0.16	img v1.0.12	learn-bit-react v1.0.25	card v1.0.18	heading v1.0.18	
A ImgGrid component.	A component that renders an image	A custom React component development environment	A basic card component which can render anything i	A Heading component.	
		\$			*
About	text default to p tag	Text in Roboto Font	HELLO FROM	primary-colorprimary-heavy	
			TITLE	 primary-light primary-text primary-text-heavy 	
		STYLES / FONTS		STYLES	
link v1.0.31	text v1.0.26	roboto v1.0.3	title v1.0.12	colors v1.0.7	
A Link component for rendering extenal links	A Text component for rendering text in a p element	RobotoMono Font from Google	A Title component that renders a <h5></h5>	A Colors component for theming	
		*			*

Anything can be rendered inside the theme	Text ín Tan

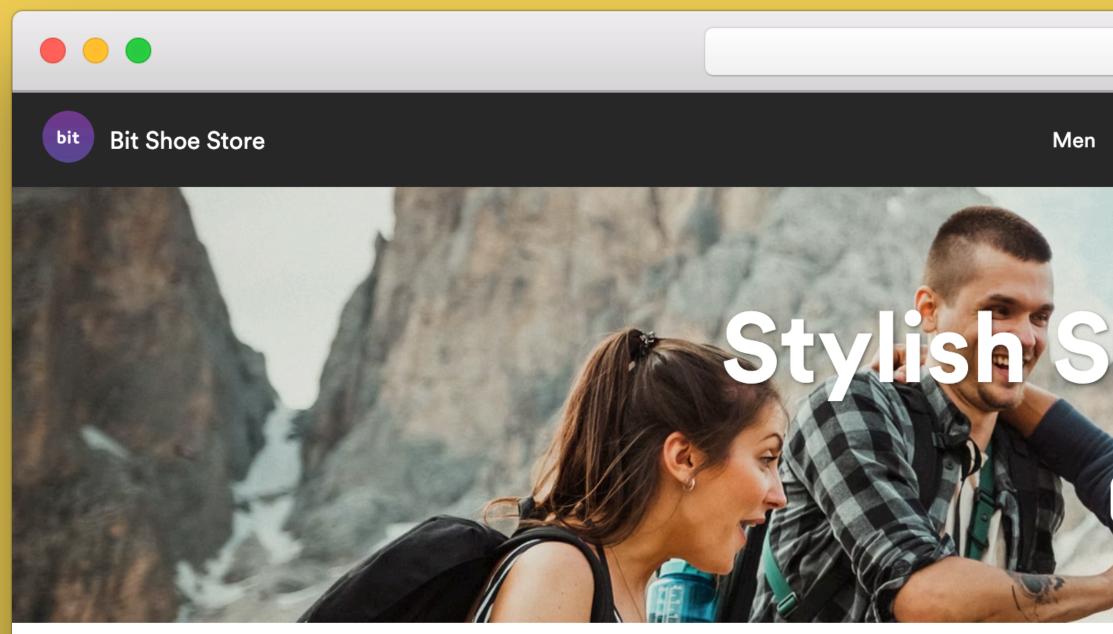
hello

dark mode

ingeríne Font Primary **Stylish Shoes** Online

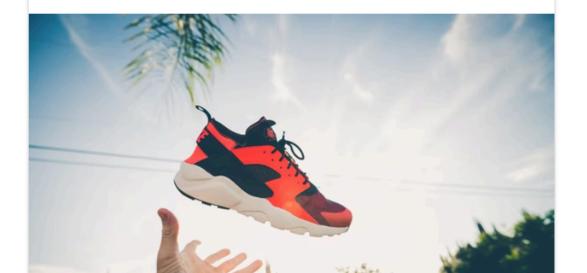






Nike Air

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Grungers

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Keep Building

Women Children



zishShoes On in Shop Now

Syrps

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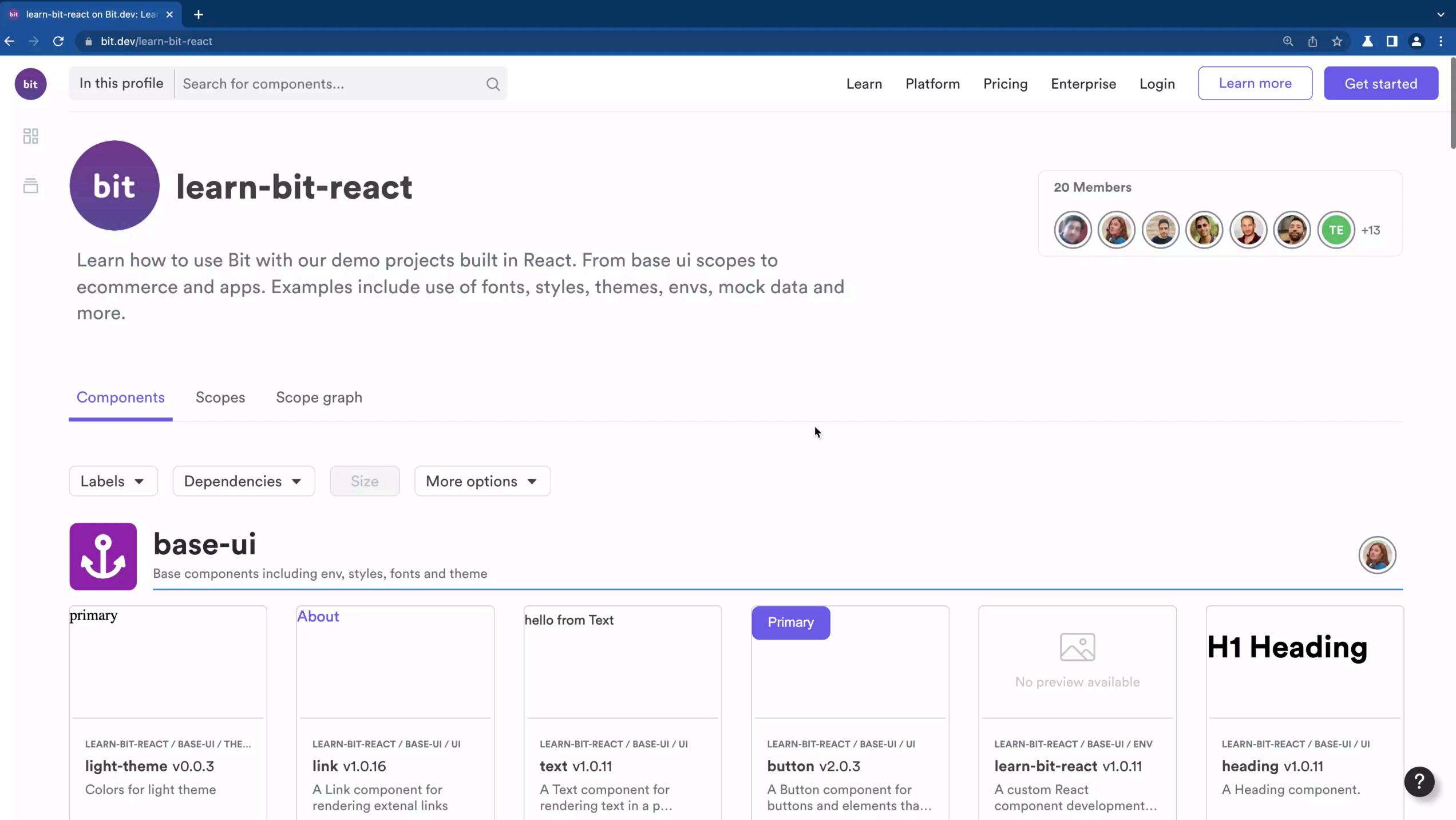
Vans

Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi quos quidem sequi illum facere recusandae voluptatibus

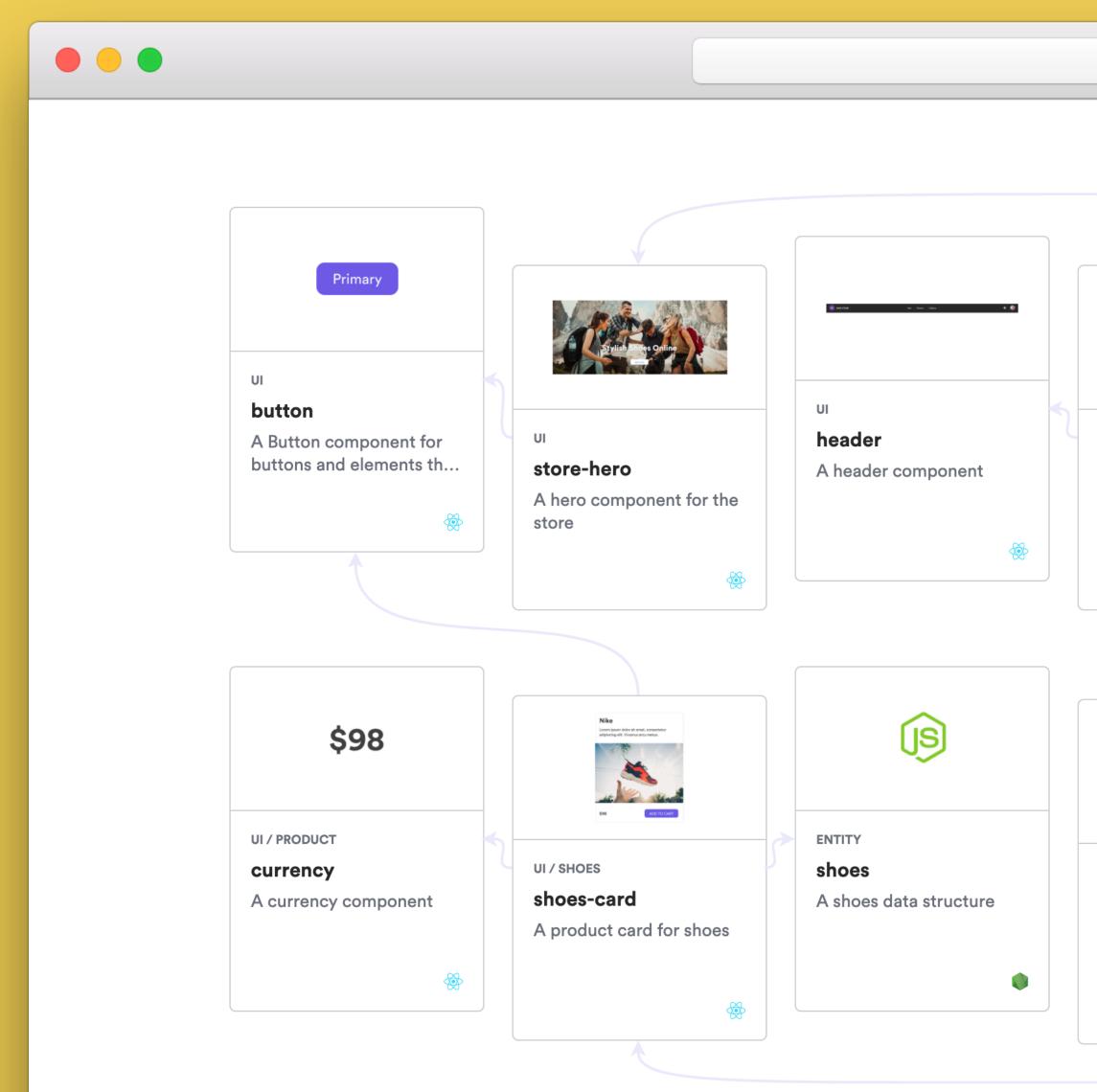








Compose Components to create Apps





UI / PAGES

home

A page component for rending contents of the...



UI / SHOES

shoes-card-grid

A card grid for the product cards for shoes







New balance Lorem ipsum dolor sit amet, consecter

Store name



Adidas

\$190

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SKP Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus arcu metus

\$190



Yves saint laurent

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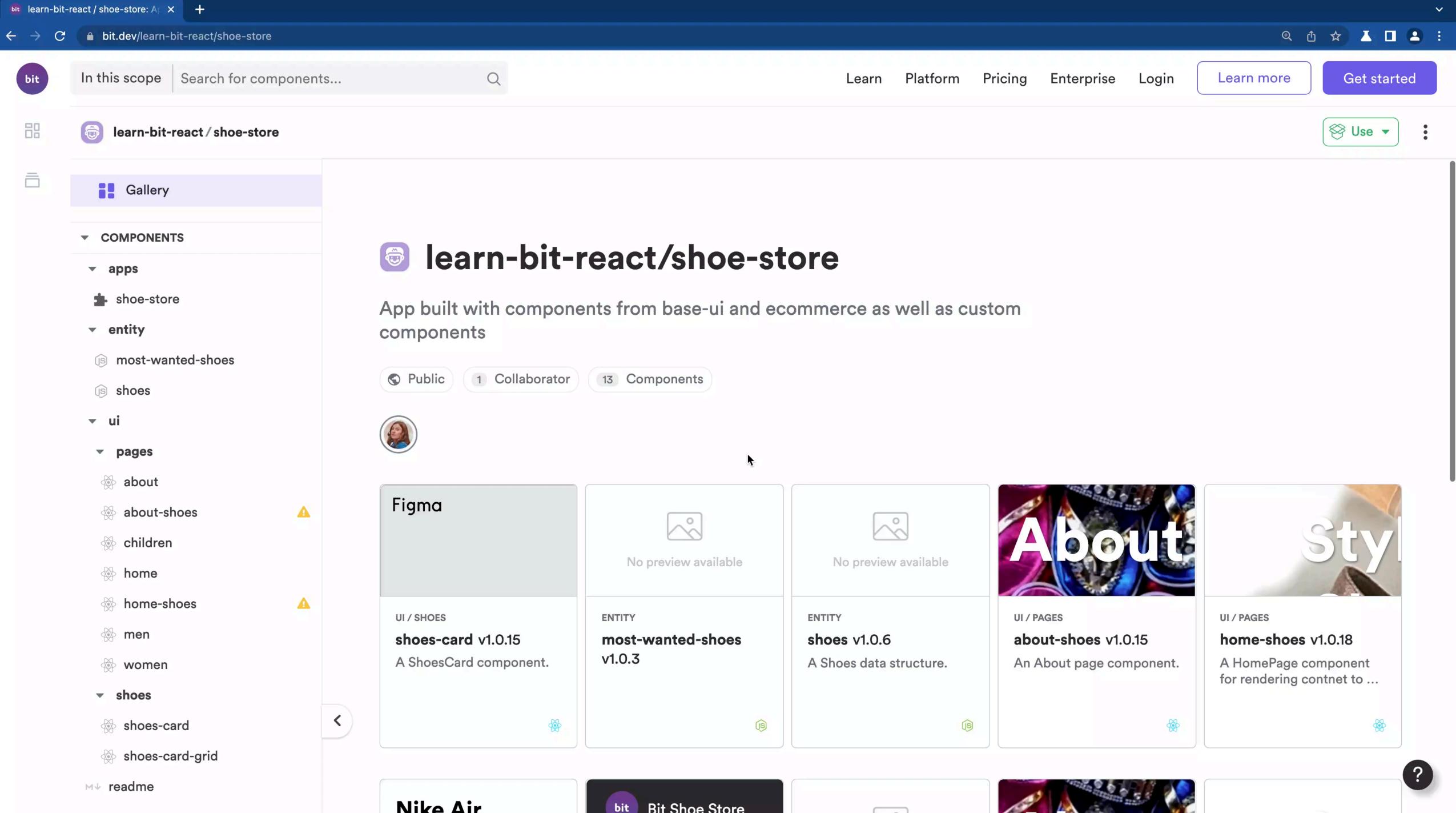
Timberland

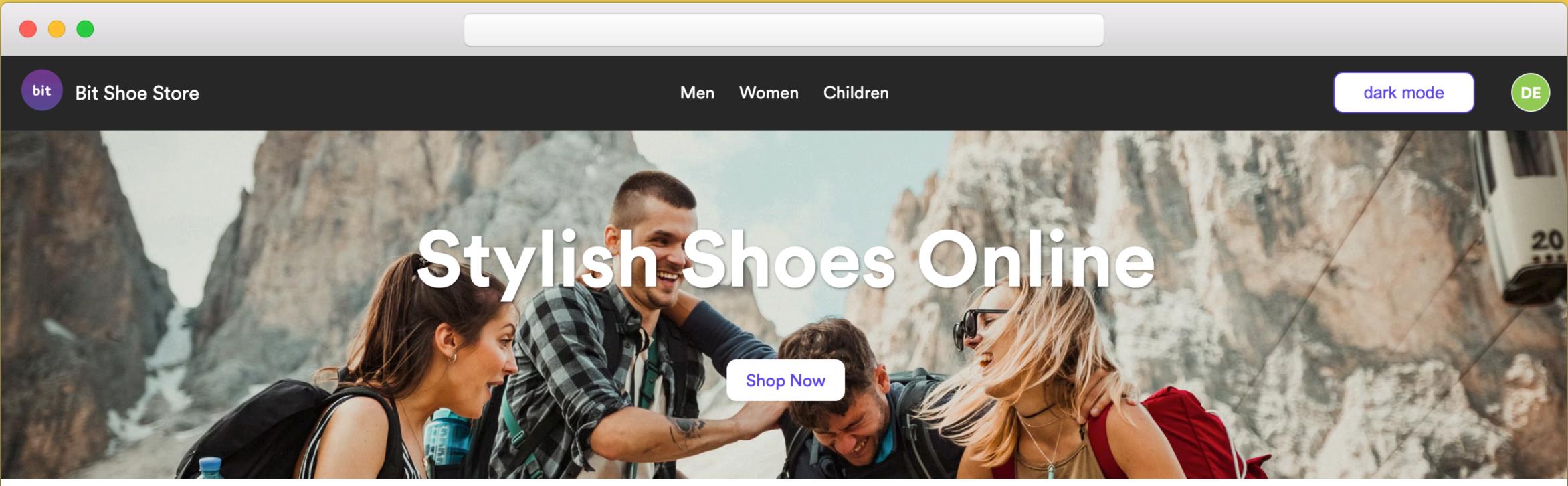
Vans Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus arcu metus



Privacy Contact About







Nike Air

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Grungers

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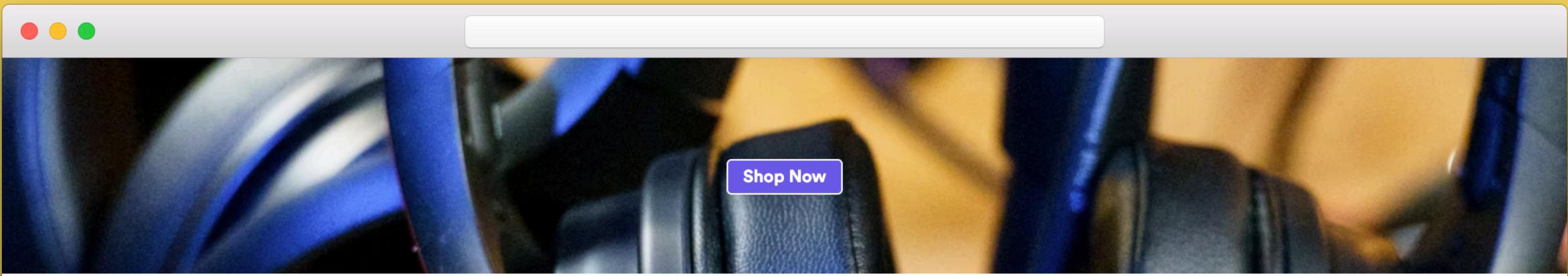
Syrps

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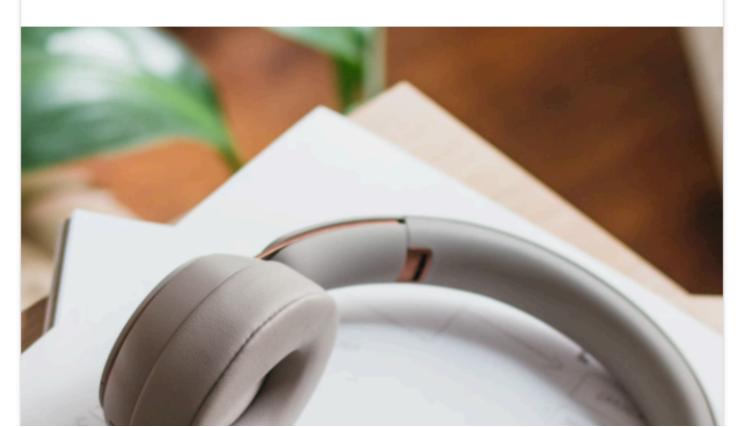
SISQ

Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi quos quidem sequi illum facere recusandae voluptatibus



BOSE

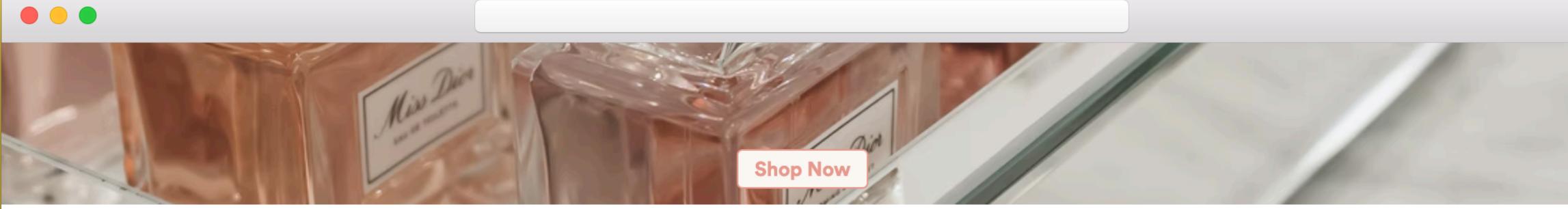
Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi quos quidem sequi illum facere recusandae voluptatibus



BO 5

Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi quos quidem sequi illum facere recusandae voluptatibus





SI

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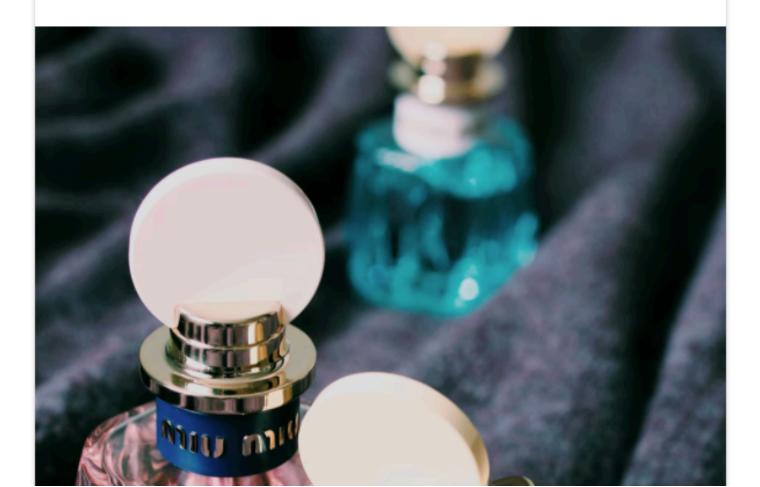
CKBE

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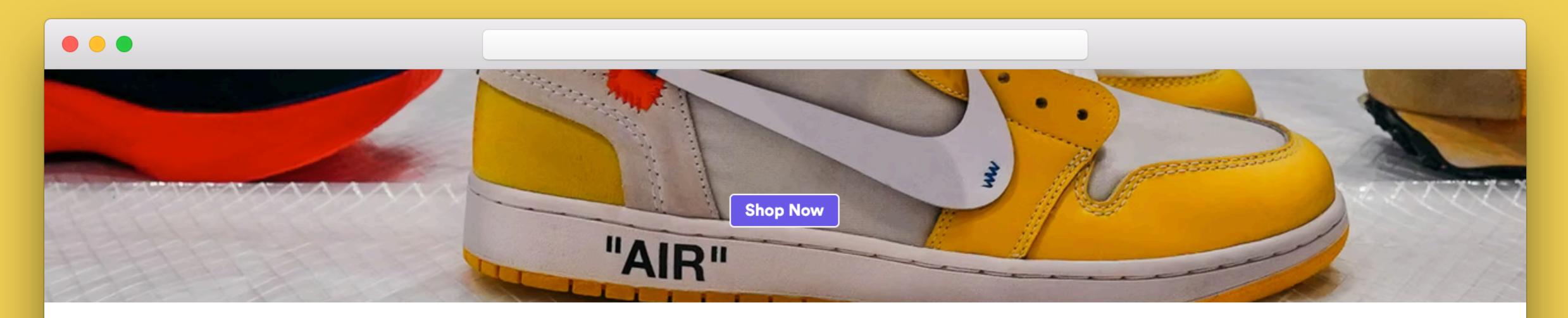


DIAMONDS

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NIKE AIR

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CONVERSE

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YEEZY

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Configs as a Component

Sharing ESLint config

Create your config as a component Add your rules



};

```
my-eslint.js
module.exports = {
  overrides: [
      files: ['*.ts', '*.tsx', '*.js', '*.jsx', '*.mjs'],
      rules: {
        'no-console': 'error'
```

Sharing ESLint config

Export the config

index.js

module.exports = require('./my-eslint-config');

Sharing ESLint config

Import the config All projects stay up to date

};

yarn add @learn-bit-react/configs.my-eslint --dev

```
module.exports = {
 extends: [
    require.resolve('@learn-bit-react/configs.my-eslint')
  .
  // override rules here
 rules: {}
```

Prettier, Tailwind, TSConfig

Create one config Apply it to all your projects

```
.prettierrc.js
import prettierConfig from 'ComponentName';
module.exports = {
    ...prettierConfig,
    //override what ever you want
    spaces:4
};
```

Component Driven

- Components are truly isolated
- Scoped to a Particular Team
- Independently Versioned
- Independently Released
- No longer coupled to the App
- Can be consumed in the app, any app, many apps

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thanks for Istening







Demo Projects on bit.dev



