



**TAKING COMPONENT DRIVEN
ONE STEP FURTHER**



Debbie O'Brien

**Head Developer
Advocate at Bit**



GitHub Star
Microsoft MVP
Google Developer Expert
Media Developer Expert



HOW IT'S GOING



trend

3

- 1 MONOLITHS TO APIS
- 2 GIT TRANSFORMED THE WEB
- 3 COMPONENTS
- 4 PREBUILDING + JS

thinking in
components



Component Driven Development with React



React Applications

Stylish Shoes Online

[Shop Now](#)

Nike Air

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



\$ 110

[ADD TO CART](#)

Grungers

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



\$ 140

[ADD TO CART](#)

Syrps

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



\$ 180

[ADD TO CART](#)

Vans

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



\$ 90

[ADD TO CART](#)

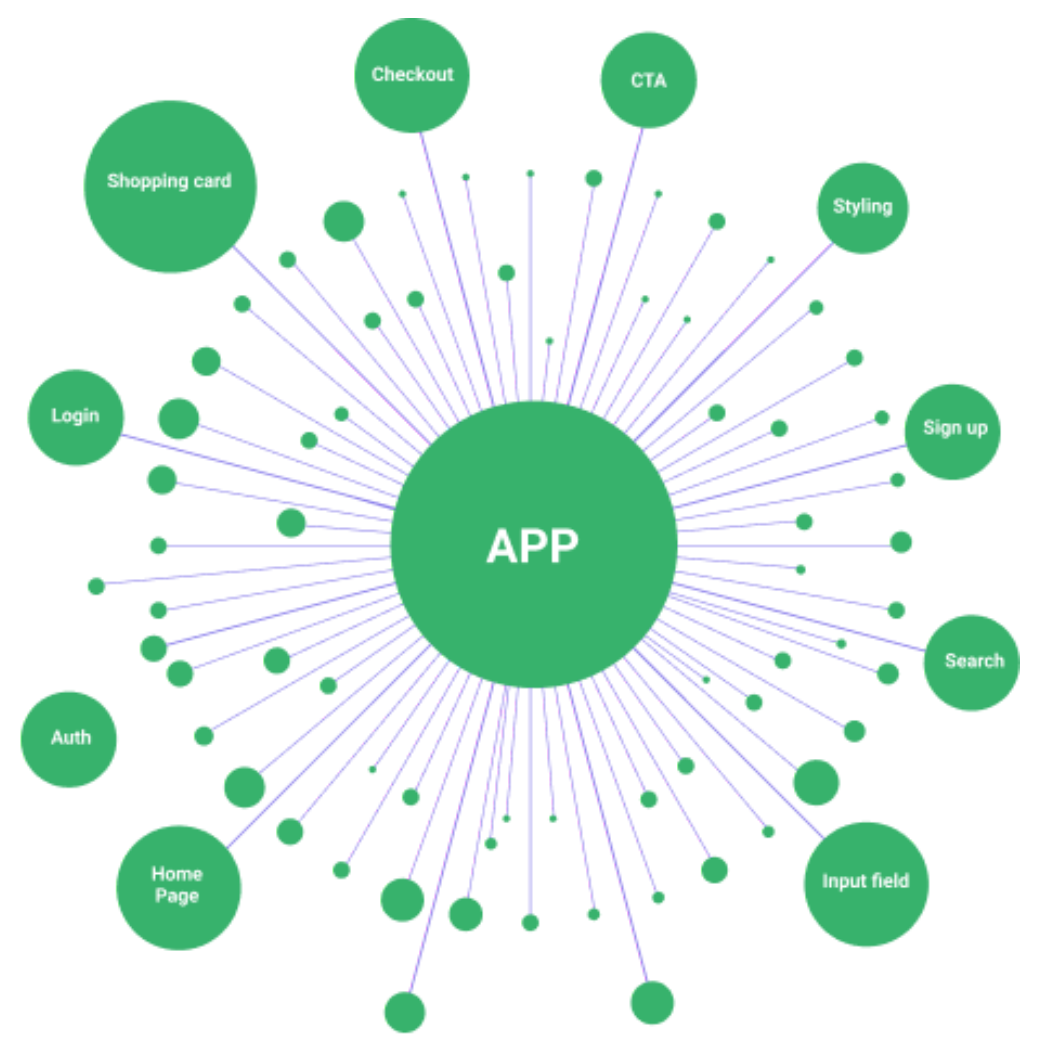
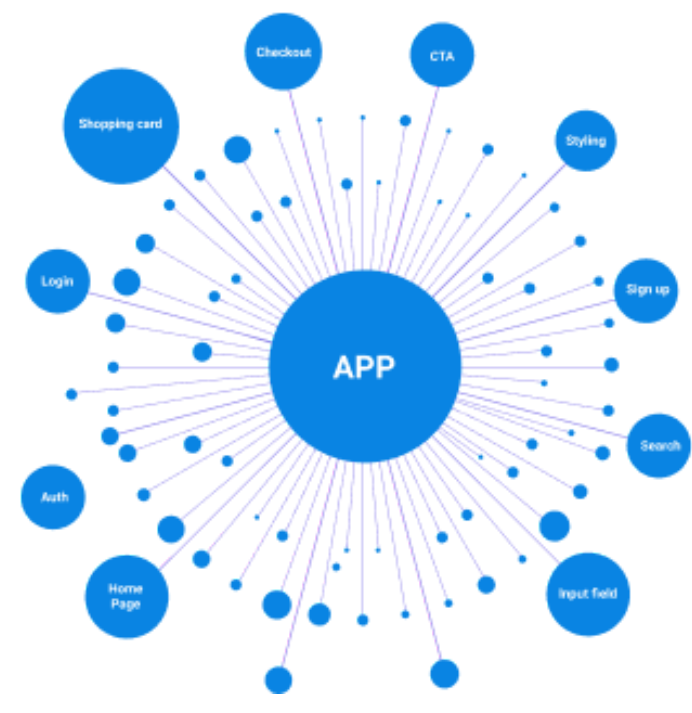
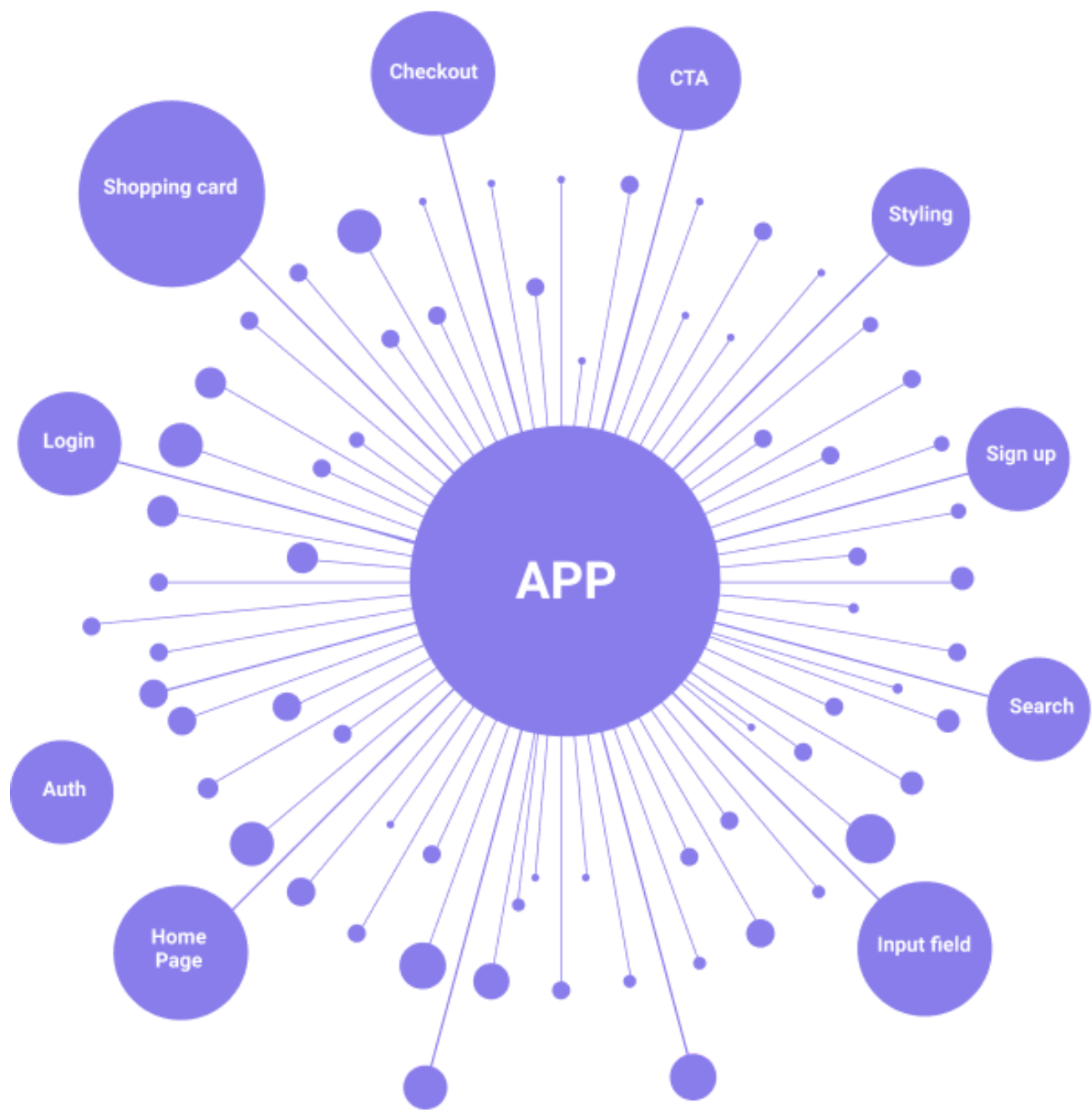
**Components
have no value
outside the
App**



**What happens when we
have multiple apps?**



We need to build another app





Monrepo :)



Improve velocity

Code Sharing and reuse

Dev Experience

Large Scale refactoring

Cross team Collaboration

Standardisation



Monrepo :(



Tooling

Visibility and Discoverability

Gradual API Changes

On-boarding Developers

Feedback Loop

Team Boundaries and Ownership

Build Times

DO PEOPLE LIKE MONOREPOS?



Debbie O'Brien
@debs_obrien

What do you love or hate about monorepos?

Doing research for a talk. 🙈

TOOLING IS THE PROBLEM



Oliver @oliverturner · 17h

Replying to @debs_obrien

Huge fan, but the tooling hasn't helped: solutions like Lerna were hamstrung by the npm client's limitations



Garrett McCullough @gwmccull · 17h

Replying to @debs_obrien

I only have experience in one but we managed to end up in the situation where every consuming repo has to import every package in the monorepo. So we have the crappy tooling and bloat of a monorepo, and none of the claimed benefits



Brandon Roberts @brandontroberts · 17h

Replying to @debs_obrien

Love: Shared code between apps/libraries, visibility, collaboration, consistency, ability to standardize, single package versions.

Hate: Insufficient tooling makes the experience bad, can lead to bloated CI times, lots of ad-hoc scripts.



What do people want?

Ability to Share Components

Easy Package Managing

No Version Conflicts

Quicker Build Times

Team Boundaries and Ownership

Consistent Tooling

Simple Decoupled Codebases



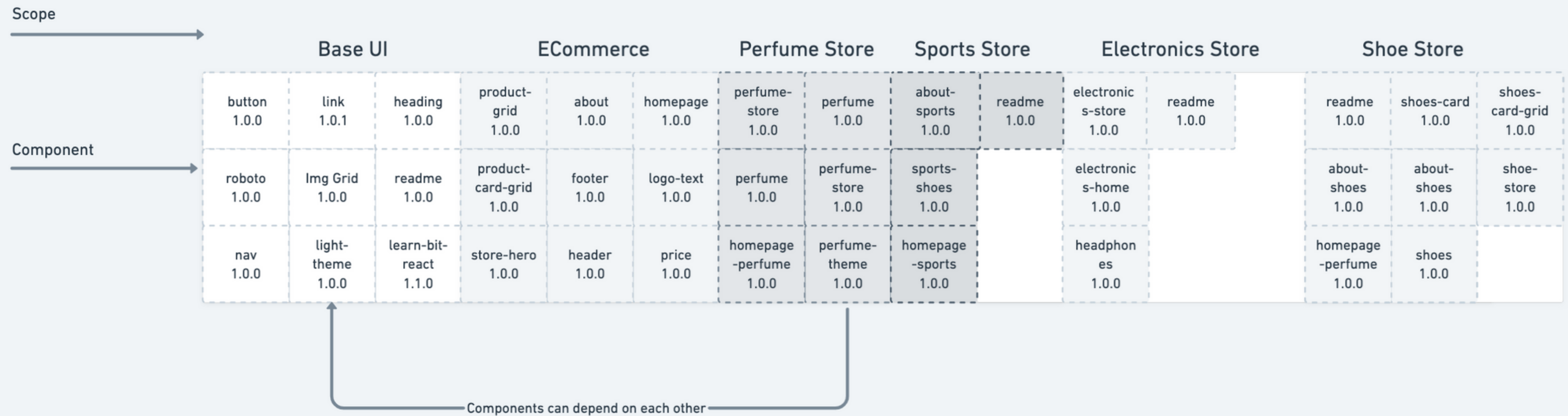


Welcome to Bit

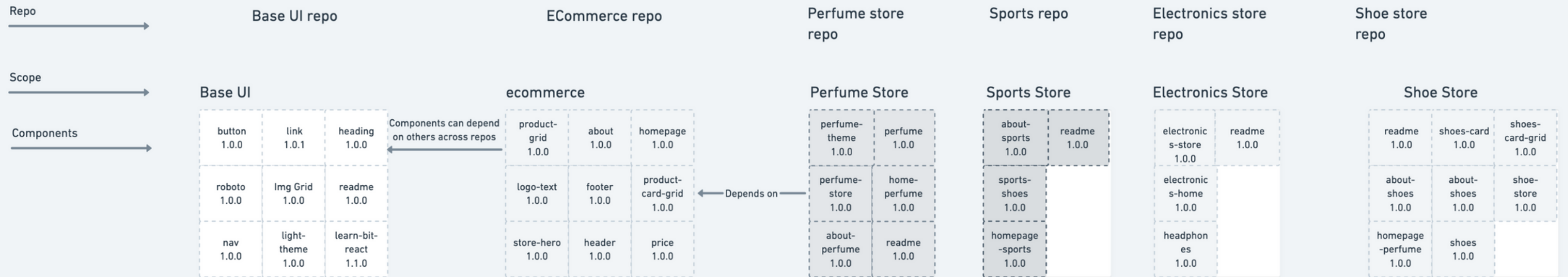
*A tool for Component Driven
Development*

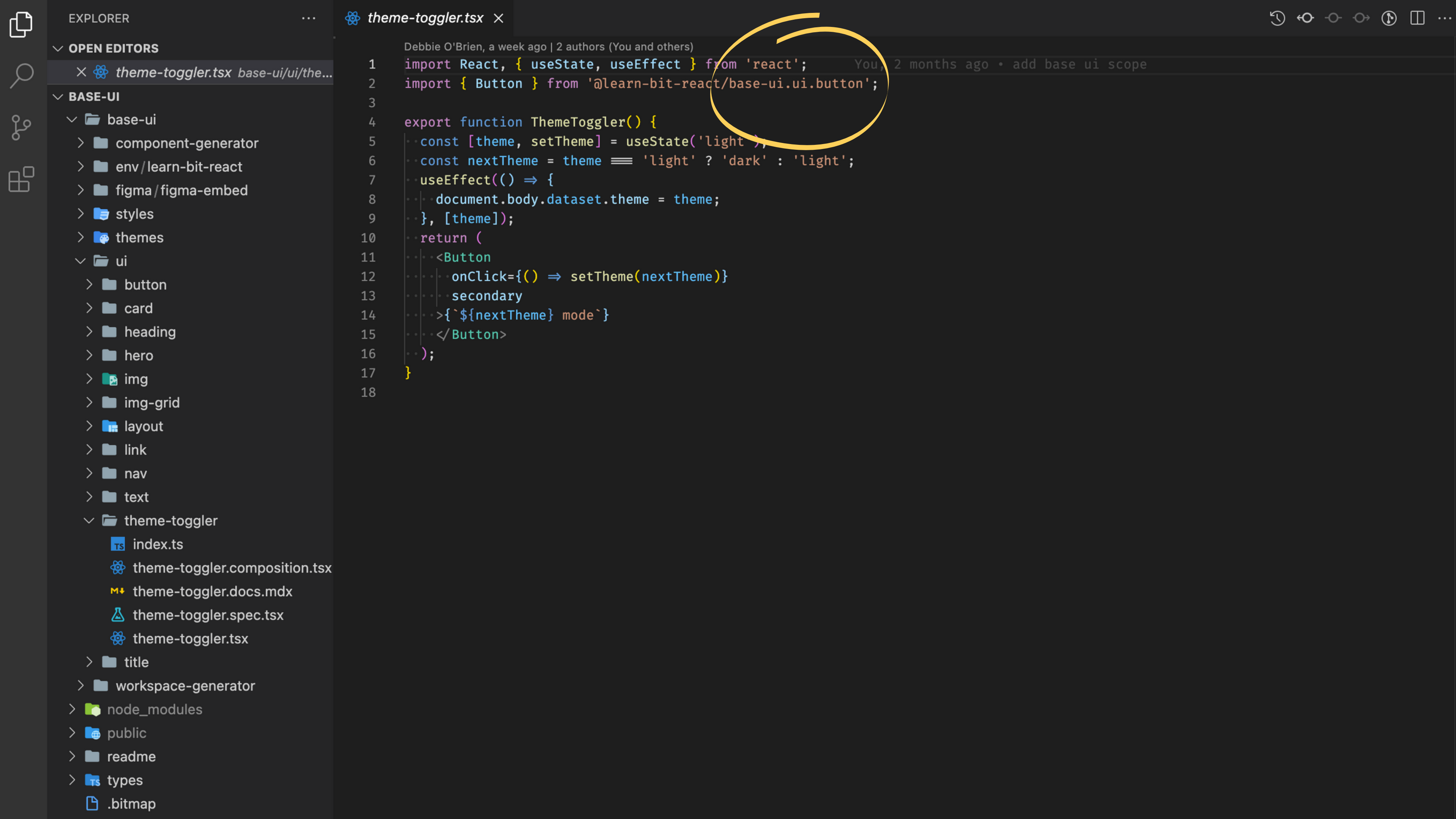


Bit in a Monorepo



Simple decoupled Codebases





EXPLORER

OPEN EDITORS

- product-card.tsx ecommerce/ui/...

ECOMMERCE

- ecommerce
 - content
 - entity
 - readme
- ui
 - footer
 - header
 - logo-text
 - pages
 - product
 - available-colors
 - currency
 - price
 - product-card
 - index.ts
 - product-card.composition.t...
 - product-card.docs.mdx
 - product-card.module.scss
 - product-card.spec.tsx
 - product-card.tsx
- product-card-grid
- store-hero

node_modules

public

readme

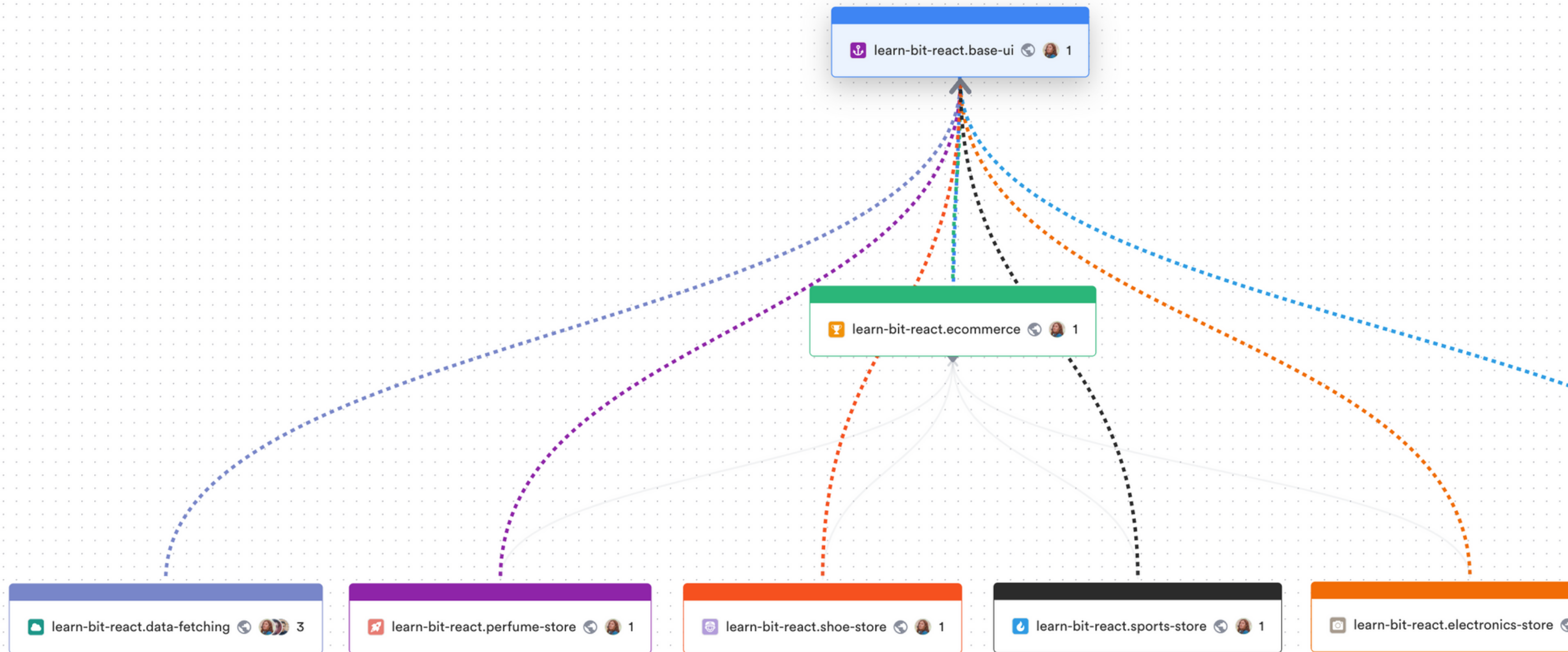
types

- css.d.ts
- mdx.d.ts
- .bitmap
- .gitignore

```
product-card.tsx x
You, 2 weeks ago | 1 author (You)
1 import React from 'react';
2 import classNames from 'classnames';
3 import { Button } from '@learn-bit-react/base-ui/ui.button';
4 import { Card } from '@learn-bit-react/base-ui/ui.card';
5 import { Heading } from '@learn-bit-react/base-ui/ui.heading';
6 import { Text } from '@learn-bit-react/base-ui/ui.text';
7 import { Currency } from '@learn-bit-react/ecommerce/ui.product.currency';
8 import { Img } from '@learn-bit-react/base-ui/ui.img';
9 import { AvailableColors } from '@learn-bit-react/ecommerce/ui.product.available-colors';
10 import styles from './product-card.module.scss';
11
12 > export type ProductCardProps = {
41 } & React.HTMLAttributes<HTMLElement>;
42
43 export function ProductCard({
44   · alt,
45   · src,
46   · title,
47   · text,
48   · price,
49   · buttonText,
50   · className,
51   · availableColors
52 }: ProductCardProps) {
53   · return (
54     ··· <Card className={styles.card}>
55     ····· <div className={classNames(styles['card-header'])}>
56     ······· <Heading element="h3" className={styles.heading}>
57     ········· {title}
58     ········· </Heading>
59     ········· <Text text={text} className={styles.text} />
60     ······· </div>
61     ······· <div className={classNames(styles['card-body'], className)}>
62     ········· <Img alt={alt} src={src} className={styles.img} />
63     ········· {availableColors ? (
64     ··········· <AvailableColors
65     ············· className={styles['available-colors']}
66     ············· availableColors={availableColors}
67     ··········· />
68     ········· ) : null}

```

Team Ownership



learn-bit-react.base-ui

Base components including env, styles, fonts and theme

Public 1

DEPENDENCIES DEPENDENTS

- learn-bit-react.data-fetching
- learn-bit-react.ecommerce
- learn-bit-react.electronics-store
- learn-bit-react.figma-example
- learn-bit-react.perfume-store
- learn-bit-react.shoe-store
- learn-bit-react.sports-store

Documentation + Live Playground

bit In this scope Search for components... Learn + New

learn-bit-react / ecommerce Overview Compositions Tests Dependencies Use 1.0.13

- Gallery
- Settings
- COMPONENTS
 - content
 - about
 - entity
 - product
 - ui
 - pages
 - about
 - home-page
 - product
 - available-colors
 - currency
 - price
 - product-card**
 - product-card-grid
 - footer
 - header
 - logo-text

Product Card

A ProductCard component composed from smaller components

CARD PRODUCT

Package name @learn-bit-react/ecommerce.ui.product.product-card


A product card for any product which includes a title, description, price, and image.

Renders a product card

```
<ProductCard
  title="Nike Air"
  text="Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi quos quidem sequi illum facere recusar
  alt="Nike Air"
  src="https://images.unsplash.com/photo-1595950653106-6c9ebd614d3a?ixid=MnwMjA3fDB8MHxzZWFyY2h8NDV8fHNuZW
  price={160}
  buttonText="add to cart"
/>
```

NIKE AIR

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



Figma Designs

The screenshot displays the Figma design tool interface. At the top, there is a search bar with the text "In this scope" and "Search for components...". To the right, there are links for "Learn" and "+ New", along with a user profile picture. Below the search bar, the project name "learn-bit-react / ecommerce" is shown, followed by navigation tabs for "Overview", "Compositions", "Tests", and "Dependencies". The "Overview" tab is currently selected. On the left side, there is a sidebar with a "Gallery" and "Settings" section, and a "COMPONENTS" section. The "COMPONENTS" section is expanded to show a tree view of components: "content" (with sub-item "about"), "entity" (with sub-item "product"), "ui", "pages" (with sub-items "about" and "home-page"), "product" (with sub-items "available-colors", "currency", "price", "product-card", and "product-card-grid"), "footer", "header", and "logo-text". The "product-card" component is highlighted. The main design area shows a "Design" view of a "Figma" component, which is a product card. The card has a white background and a grey shadow. It features a "Brand name" section with the text "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus arcu metus." Below this is a large grey rectangular area representing an image. At the bottom left of the card, the price "\$190" is displayed, and at the bottom right, there is a blue "ADD TO CART" button. In the bottom right corner of the design area, there is a vertical toolbar with a "+" sign and a "-" sign. At the bottom left of the design area, there is a small icon and the text "store - components Edited 6 days ago".

Different States

bit In this scope Search for components... Learn + New

learn-bit-react / ecommerce Overview Compositions Tests Dependencies Use 1.0.13

Gallery Settings


COMPONENTS

- content
 - about
- entity
 - product
- ui
 - pages
 - about
 - home-page
 - product
 - available-colors
 - currency
 - price
 - product-card
 - product-card-grid
 - footer
 - header
 - logo-text

Compositions

NIKE AIR


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



\$ 190 [add to cart](#)

CONVERSE

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



\$ 140

View Component Props


bit In this scope Search for components... Learn + New

learn-bit-react / ecommerce Overview Compositions Tests Dependencies Use 1.0.13

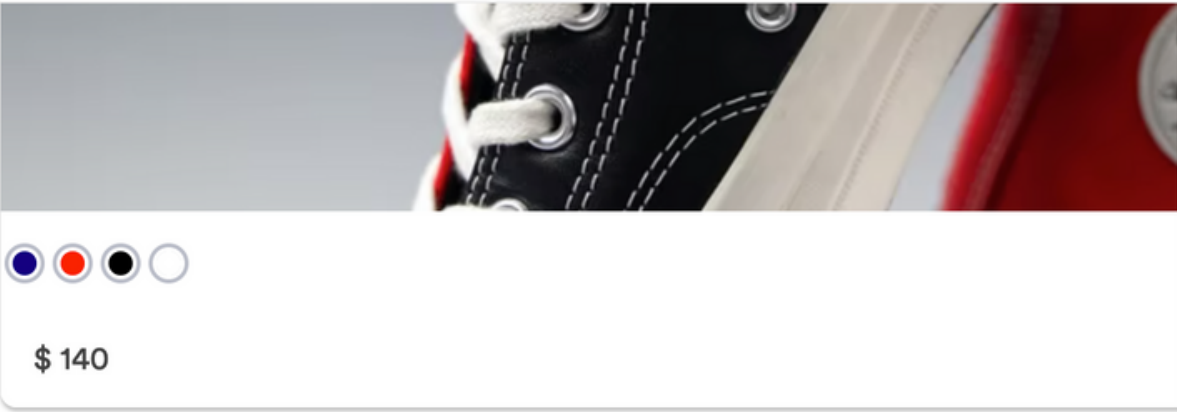
Gallery Settings

COMPONENTS

- content
- about
- entity
- product
- ui
 - pages
 - about
 - home-page
 - product
 - available-colors
 - currency
 - price
 - product-card**
 - product-card-grid
 - footer
 - header
 - logo-text
 - store-hero



Nike product card



Converse product card

Properties

NAME	TYPE	DEFAULT	DESCRIPTION
<code>buttonText</code> (Required)	string	-	text for the link element styled as button
<code>price</code> (Required)	number	-	products price
<code>src</code> (Required)	string	-	products image src
<code>alt</code> (Required)	string	-	products image alternative text
<code>text</code> (Required)	string	-	products description

Visibility and Discoverability

The screenshot displays the Bit UI component library interface. At the top, there is a search bar with the text "In this scope" and "Search for components...". The main content area shows a search for "prod" with a dropdown menu listing several components: "ui/product/product-card-grid", "ui/product/product-card", "entity/product", "ui/product/price", and "ui/product/available-colors". The "ui/product/product-card-grid" component is highlighted. Below the search results, there is a grid of component cards, each with a preview and a description. The cards include "NIKE AIR", "footer v1.0.10", "product v1.0.3", "about v1.0.11", "about v1.0.2", and "price v1.0.8". A large black circle is drawn around the search results dropdown menu.

bit In this scope Search for components... Learn + New Use

learn-bit-react / ecommerce

Gallery Settings

COMPONENTS

- content
 - about
- entity
 - product
- ui
 - pages
 - about
 - home-page
 - product
 - available-colors
 - currency
 - price
 - product-card
 - product-card-grid
 - footer
 - header
 - logo-text

learn-bit-react prod

Components for creating an data and content

Public 1 Collaborator 13

- ui/product/product-card-grid
- ui/product/product-card
- entity/product
- ui/product/price
- ui/product/available-colors

NIKE AIR
Lorem ipsum dolor sit amet conse
adipiscing elit. Modi quos quiden
facere recusandae voluptatibus

Bit Store
Links go
No preview available

About
About

About our store
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.
Aenean commodo ligula eget
liber tempore Com...

\$120

UI / PRODUCT
product-card-grid v1.0.10
A Product Card Grid
component for displaying a...

UI
footer v1.0.10
A Footer component

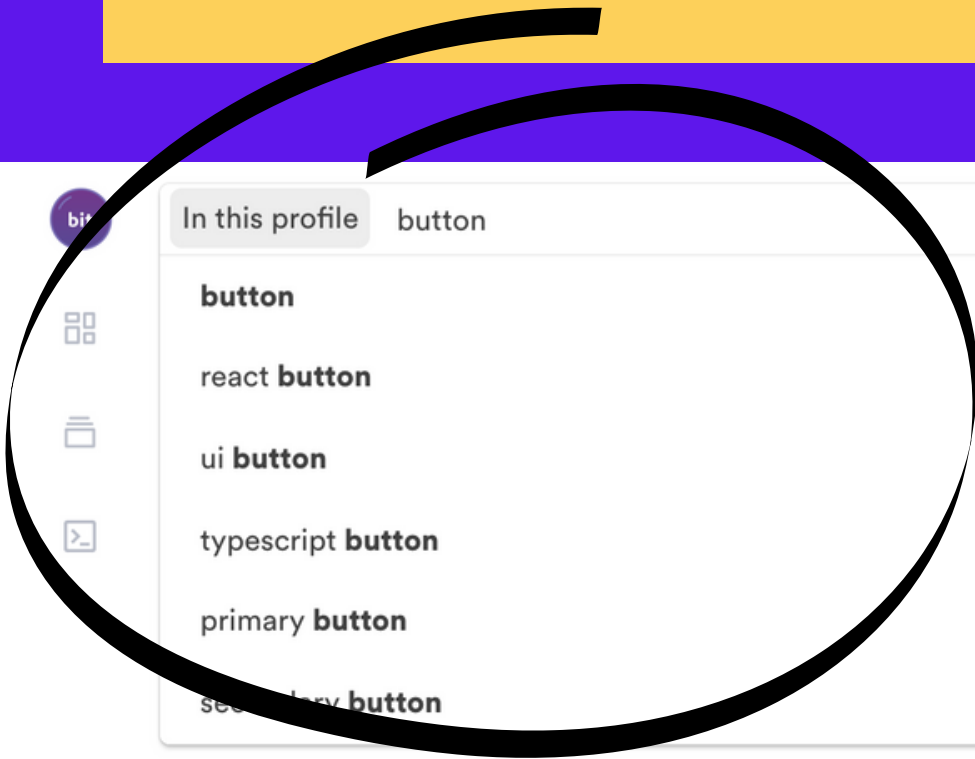
ENTITY
product v1.0.3
A Product data structure
component.

UI / PAGES
about v1.0.11
An About component that can
be reused across multi...

CONTENT
about v1.0.2
Content to be rendered on the
about page

UI / PRODUCT
price v1.0.8
A Price component with
currency

Search across multiple scopes



Learn

+ New



Edit

Settings

20 Members

See all



n React. From base ui scopes to ecommerce and apps. Examples
ta and more.

Components Scopes Scope graph

Labels

Dependencies

Size

More options



base-ui

Base components including env, styles, fonts and theme



Anything can be rendered
inside the theme

- primary-color
- primary-heavy
- primary-light
- primary-text
- primary-text-heavy

primary

Hello

Header

Body

About

hello from Text

LEARN-BIT-REACT / BASE-UI / THEMES

theme v1.0.8

Theme Component to define
the theme colors, fonts ...

LEARN-BIT-REACT / BASE-UI / STYLES

colors v1.0.6

A Colors component for
theming

LEARN-BIT-REACT / BASE-UI / THEMES

light-theme v0.0.3

Colors for light theme

LEARN-BIT-REACT / BASE-UI / STYLES

button v0.0.9

A CSS Component - Button

LEARN-BIT-REACT / BASE-UI / UI

layout v1.0.11

A Layout component for
rendering child elements wi...

LEARN-BIT-REACT / BASE-UI / UI

link v1.0.16

A Link component for
rendering external links

LEARN-BIT-REACT / BASE-UI / UI

text v1.0.11

A Text component for
rendering text in a p element

Filter by dependencies, size...

The screenshot shows the Bit UI interface for the profile 'learn-bit-react'. At the top, there is a search bar and navigation links like 'Learn' and '+ New'. The profile name 'learn-bit-react' is prominently displayed. Below the name is a description: 'Learn how to use Bit with our demo projects built in React. From base ui scopes to ecommerce and apps. Examples include use of fonts, styles, themes, envs, mock data and more.' A '20 Members' section is visible on the right. The main content area shows a list of components, with a filter menu open over it. The filter menu includes options for 'Labels', 'Dependencies', 'Size', and 'More options'. The 'Dependencies' dropdown is selected, showing a search bar and a list of dependency packages with checkboxes:

- @testing-library/react (54)
- classnames (33)
- react-router (17)
- @mdx-js/react (9)
- @teambit/harmony (9)
- @learn-bit-react/movies.context.api-context-provider (7)
- @types/classnames (7)

The component list below the filter menu includes items like 'button v0.0.9', 'layout v1.0.11', 'link v1.0.16', and 'text v1.0.11', each with a brief description of its function.

Use it anywhere

The screenshot displays the Bit UI component library interface. On the left, a sidebar lists components under 'ecommerce', with 'product-card' selected. The main area shows the 'Product Card' component details, including its description, package name, and installation instructions. A large black circle highlights the 'Use product-card' section, which provides commands for installing the component as a dependency or importing it into a workspace. Below this, a code block shows the JSX for rendering a product card, and a preview shows a 'NIKE AIR' product card with a shoe image.

In this scope Search for components...

learn-bit-react / ecommerce Overview Compositions Tests Dependencies

Gallery Settings

COMPONENTS

- content
 - about
- entity
 - product
- ui
 - pages
 - about
 - home-page
 - product
 - available-colors
 - currency
 - price
 - product-card**
 - product-card-grid
 - footer
 - header
 - logo-text

Product Card

A ProductCard component composed from smaller components

CARD PRODUCT

Package name @learn-bit-react/ecommerce.ui.product.product-card

A product card for any product which includes a title, description, price, and image.

Renders a product card

```
<ProductCard
  title="Nike Air"
  text="Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi quos quidem sequi illum facere recusar
  alt="Nike Air"
  src="https://images.unsplash.com/photo-1595950653106-6c9ebd614d3a?ixid=MnwMjA3fDB8MHxzZWFyY2h8NDV8fHNuZW
  price={160}
  buttonText="add to cart"
/>
```

NIKE AIR

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

Use product-card

bit npm yarn

Add product-card as a dependency

```
bit install @learn-bit-react/eco...
```

Import product-card to your workspace

```
bit import learn-bit-react.ecomm...
```

Install Bit on your computer

Consistent and Standard Tooling

The screenshot displays the Bit IDE interface for the component `learn-bit-react / base-ui`. The main editor shows the file `learn-bit-react.main.runtime.ts` with the following TypeScript code:

```
28  /**
29  * override the ESLint default config here then check your files for lint errors
30  * @example
31  * bit lint
32  * bit lint --fix
33  */
34  react.useEslint({
35    transformers: [
36      (config) => {
37        config.setRule('no-console', ['error']);
38        return config;
39      }
40    ]
41  })),
42
43  /**
44  * override the Prettier default config here the check your formatting
45  * @example
46  * bit format --check
47  * bit format
48  */
49  react.usePrettier({
50    transformers: [
51      (config) => {
52        config.setKey('tabWidth', 2);
53        return config;
54      }
55    ]
56  })),
57
58  /**
```

The interface includes a sidebar on the left with a 'COMPONENTS' list containing items like `env`, `learn-bit-react`, `figma`, `figma-embed`, `styles`, `fonts` (with sub-items `book`, `roboto`, `tangerine-font`), `themes` (with `light-theme`, `theme`), and `ui` (with `button`, `card`). The top right shows a search bar, 'Learn' link, '+ New' button, and a user profile. The right sidebar shows a 'FILES' list with items like `jest` (containing `jestconfig.js`), `typescript` (containing `tsconfig.json`), `webpack` (containing `webpack.config.js`), `index.ts` (MAIN), `learn-bit-react.aspect.ts`, `learn-bit-react.docs...` (DEV), and `learn-bit-react.main.runti...` (selected).

Independent Versions

The screenshot displays the Bit UI component library interface for the 'learn-bit-react/ecommerce' project. The 'product-card' component is selected in the left sidebar. The main area shows the 'History' of this component, listing versions v1.0.10, v1.0.11, v1.0.12, and v1.0.13. A dropdown menu is open, showing a list of versions from 1.0.7 to 1.0.13, with '1.0.13 Latest' selected. A large black circle highlights the dropdown menu.

bit In this scope Search for components... Learn + New

learn-bit-react/ecommerce Overview Compositions Tests Dependencies

Gallery Settings

COMPONENTS

- content
 - about
- entity
 - product
- ui
 - pages
 - about
 - home-page
 - product
 - available-colors
 - currency
 - price
 - product-card
 - product-card-grid
 - footer
 - header
 - logo-text
 - store-hero

History

Latest

Tests Compositions

v1.0.13

Debbie O'Brien released this 2 weeks ago

update dependencies

v1.0.12

Debbie O'Brien released this 2 weeks ago

styling and docs improvements

v1.0.11

Debbie O'Brien released this 2 weeks ago

styling improvements

v1.0.10

Debbie O'Brien released this 2 weeks ago

Tests Compositions

Select version to view

- 1.0.13 Latest
- 1.0.12
- 1.0.11
- 1.0.10
- 1.0.9
- 1.0.8
- 1.0.7

Component Dependencies

The screenshot displays the Bit IDE interface for the 'learn-bit-react/ecommerce' project. The 'Dependencies' tab is active, showing a dependency graph for the 'product-card' component. The graph consists of a central 'Current component' box at the bottom, 'product-card 1.0.13', with arrows pointing up to seven other component boxes. These dependencies are: 'button 2.0.1', 'card 1.0.5', 'heading 1.0.5', 'img 1.0.5', 'text 1.0.5', 'available-colors 0.0.8', and 'currency 0.0.1'. The left sidebar shows a component tree with 'product-card' selected. The top navigation bar includes 'Overview', 'Compositions', 'Tests', and 'Dependencies' tabs, along with a search bar and a '+ New' button.

bit In this scope Search for components... Learn + New

learn-bit-react/ecommerce Overview Compositions Tests Dependencies Use 1.0.13

Component Dependencies

show non-runtime

learn-bit-react.base-ui/ui **button** 2.0.1

learn-bit-react.base-ui/ui **card** 1.0.5

learn-bit-react.base-ui/ui **heading** 1.0.5

learn-bit-react.base-ui/ui **img** 1.0.5

learn-bit-react.base-ui/ui **text** 1.0.5

learn-bit-react.ecommerce/ui/product **available-colors** 0.0.8

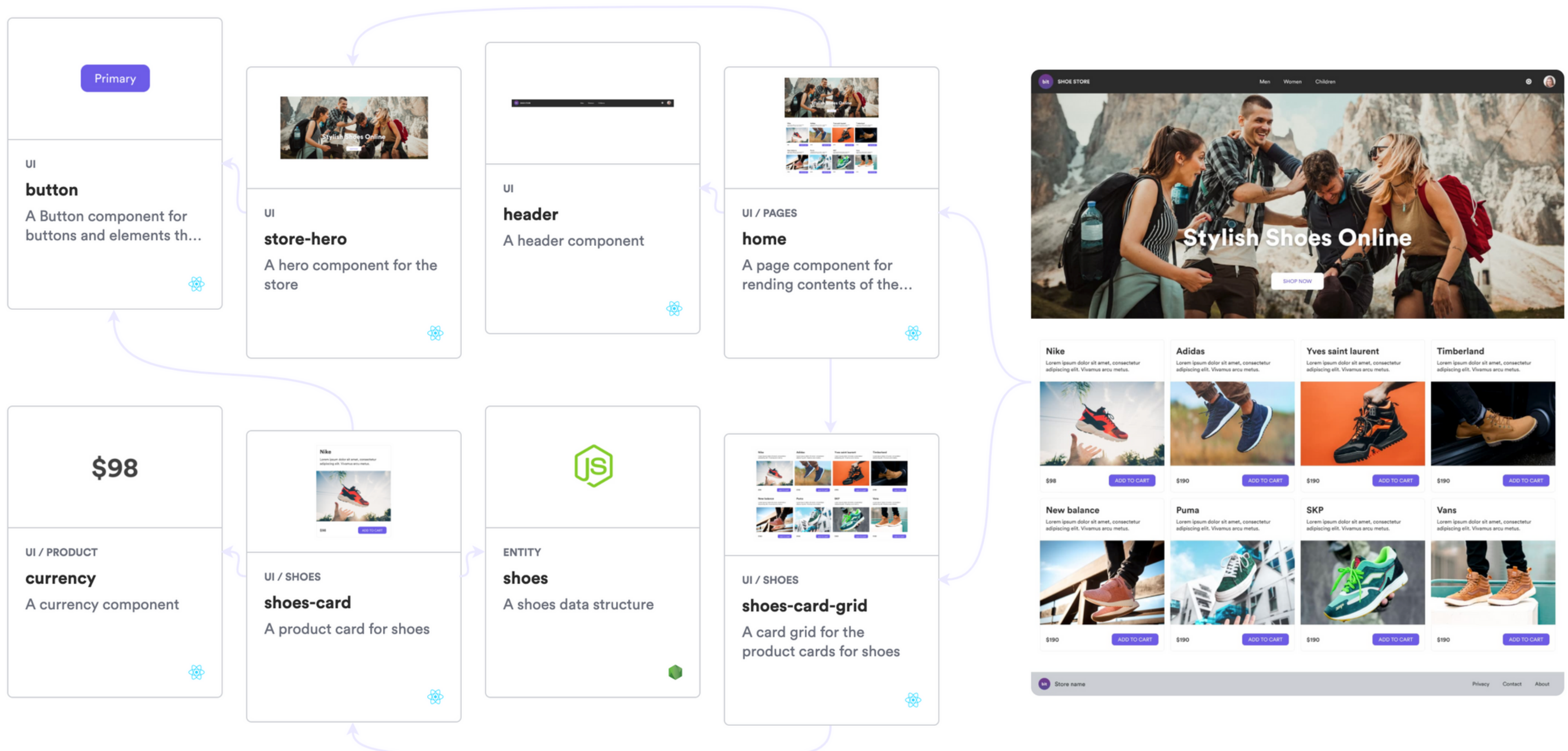
learn-bit-react.ecommerce/ui/product **currency** 0.0.1

Current component
learn-bit-react.ecommerce/ui/product **product-card** 1.0.13

COMPONENTS

- content
 - about
- entity
 - product
- ui
 - pages
 - about
 - home-page
 - product
 - available-colors
 - currency
 - price
 - product-card**
 - product-card-grid
 - footer
 - header
 - logo-text
 - store-hero

Reuse Components in any app



Build Component Driven

Build with Bit

bit





Thank you

Bit Demos

bit.dev/learn-bit-react
github.com/bit-demos

Bit docs

harmony-docs.bit.dev/

Twitter

[debs_obrien](https://twitter.com/debs_obrien)

