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# Split Infinities Design System

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## Goal

Create a complete Design Language that helps anyone create anything, inside the constraints of a design tool that is Sketch, and a frontend library that is Stencil.

## Glossary

- **Business Objectives:** Goals your business have. These could be **Brand Standards**, or **Product Strategy**, and many other goals a business may have.
- **Design Principals:** Fundamental intent of all work provided in the system. These motivate the design/front-end engineering department's **Business Objectives**. These help you and your team measure potential or past design/front-end engineering decisions to help your team communicate, achieve success, or mitigate and learn from failure.
- **Design Pattern:** Repeating, reusable parts of an interface, that can be applied in a myriad of different ways to create an interface or solve another kind of problem.
  - **Functional Patterns or Function:** The primitive patterns of

design i.e. buttons, text, inputs, menus, etc.

- **Perceptual Patterns or Style:** Business or Brand specific patterns of design i.e. Typographic, Voice, Motion, Colors, Iconography.
  - **Platform-specific Patterns:** Patterns that are used in a specific context i.e. Desktop versus Web.
  - **Domain Patterns:** Patterns that are used in a specific segment of a Business or Brand i.e. Marketing, Internal/On-prem.
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- **Design Language:** A set of patterns that work together to make a strong, capable language. With a strong language, design problems can be solved well, business objectives can be met on time, and the final work produced can be maintainable.
  - **Source of Truth:** The primary living document(s) that hold the references to a pattern in the design language. These documents are indisputable facts about the **Design Language**.
    - **Pattern Library:** The living document that defines **Design Patterns** used in the **Design Language**. This is a technical document.
    - **Component Library:** The living document or repository of code that implements the **Design Patterns**.
    - **Style Guide:** The living document that converses *about* the **Design Language**, the **Design Patterns**, the **Pattern Library**, and the **Component Library**. This should talk about how all the work helps support your **Design Principals**. This document is not technical and intended to be a conversation. Why, and how, are the **Design Patterns** the designer has defined in the **Pattern Library** living to our design principals, and how can those patterns work together to solve **Business Objectives**. This document validates the decisions you've made during the more technical process of designing. It also works to serve other non-ui aspects of the Business or Brand - Tone of Voice, as an example.
    - **Design System:** A collection of the **Pattern Library**, the **Component Library**, and/or the **Style Guide**. This document provides process, delegates ownership, and should provide

clarity into where decisions should be made and oversight into how and when the above items update or when conversations should be held. A **Design System** is the **Process** between your design team, and your frontend engineering teams. A **Design System** always exists if there is a hand off process between either a designer and developer, or design and development tools. A **Design System** is not exclusively the above Documents, as it also includes process. A **Design System** does not need to contain all three of the Documents, as you can have only one or two, depending on your business needs. However, each of the above Documents are the fundamental parts of what makes a **Design System** successful.

## Design Principals for Split Infinities

1. **Succinct.** You should be able to find what you need with little, or no noise. Everything should be straight forward. There should be no “gotcha’s”
2. **Considerate.** Every aspect of the system will serve to consider the goals of the pattern, but also the additional implications of the pattern, and it’s implementation. Will the pattern be easy to understand in as many contexts as possible? Will the pattern, when codified, be performant? Will it be easy to internationalize? When it inevitably breaks down, will it try to bear that burden more than the user would typically have to? A user must be pleasantly surprised when something “just works”, and it always should.
3. **Honest.** If something sucks, we’ll say it. If something rocks, we’ll say it. If we don’t know something, we’ll say it. We’ll always mean it.
4. **Intentional.** When a decision is made, it is done with intention. There should never be a decision that hasn’t had

it's elasticity tested against.

5. **Obvious.** It should be clear what's next or what happened. No one should ever suffer from decision paralysis.
6. **Consistent.** There should be no deviations, in any capacity, shape or form.

## Design System for Split Infinities

**Pattern Library:** <see directory for sketch file>

**Component Library:** <see directory for folder>

**Style Guide:** <see directory for sketch file>

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# References & Research

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### Component Library:

| Name          | Variants        | Features                                       |
|---------------|-----------------|--|
| Link          |                 | Common link, Stencil router, Button, Span.     |
| Button        | Grouped buttons | Common link, Stencil router, Button, Span.     |
| Theme         |                 | Updates css variables for components in scope. |
| Documentation |                 | Auto documentation for a custom HTML tag.      |

|                  |   |   |
|------------------|---|---|
| Code Highlighter |   | Pretty highlighting with Prism or Highlighter.  |
| Table            | density, fixed header, horizontal scroll, resizable columns, data visualization, pagination, pagination with row count, inline editing, expandable rows (underneath, flyout side panel, modal) sortable columns, Filterable columns (with configurable datatype), searchable columns, | <a href="https://uxdesign.cc/design-better-data-tables-4ecc99d23356">https://uxdesign.cc/design-better-data-tables-4ecc99d23356</a> |
| Graph            | Area, Bellcurve, Pie, Bar, Gantt, Line, Spline, Bubble, Bullet, Error Bar, Heatmap, Histogram, Donut, Scatter, Solid Gauge, Stream, Sunburst, Treemap, Variwide, Vector, Waterfall, Wordcloud, Xrange   |   |
| Google Map       | markers, points, polygons, search, directions   |   |
| Github History   | Orientation (Vertical, Horizontal)  | <a href="http://gitgraphjs.com/">http://gitgraphjs.com/</a>   |
| Slider, Carousel | Transitions   |   |
| Asset            | Loads svgs, simple as that.   |   |
| Smart Image      | Animation (Blur, Pixels, Fade), Click to Expand   |   |
| Range Slider     | Stepped, Fluid , Orientation (Vertical, Horizontal)   |   |
| Forms            |   |   |

|                         |  |   |
|-------------------------|--|---|
| Input                   | Text, image, audio, video, file, password, chat/microphone |   |
| Avatar                  | Shape (Circle, Square, Rectangle)                          |   |
| Layout                  |  |   |
| Grid                    | Column count (2 - 16)                                      |   |
| Breadcrumbs             |  |   |
| Message                 |  |   |
| Toast/Notification      |  | <a href="https://tympanus.net/Development/NotificationStyles/other-thumbslider.html">https://tympanus.net/Development/NotificationStyles/other-thumbslider.html</a> |
| Card                    |  |   |
| Copy-wrap               |  |   |
| Pagination              |  |   |
| Skeleton image          |  |   |
| Skeleton text           |  |   |
| Tabs                    | Tab, tabs, tab content                                     |   |
| Tag/badge               | Ribbon   |   |
| Toggle                  | Checkbox, radio, radio block                               |   |
| Action sheet            |  |   |
| Backdrop                |  |   |
| Fab button              |  |   |
| Fab list                |  |   |
| Fab                     |  |   |
| Infinite scroll content |  |   |
| Item                    | Group, list, option, options                               |   |
| Select dropdown         |  |   |
| Label                   |  |   |
| Menu                    |  |   |
| Header                  |  |   |
| Footer                  |  |   |
| Modal                   |  |   |
| Navigation              |  |   |

|                   |   |  |
|-------------------|---|--|
| Picker            | Date, time  |  |
| Popover           |   |  |
| Search bar        |   |  |
| Split panes       |   |  |
| Audio             |   |  |
| Audio visualizer  | Bar, Wave, Webgl  |  |
| Playlist          |   |  |
| Song              |   |  |
| Parallax wrapper  |   |  |
| Parallax section  |   |  |
| Video player      |   |  |
| Video playlist    |   |  |
| Markdown renderer |   |  |
| Webgl             |   |  |
| Webgl shader      |   |  |
| Webgl filter      |   |  |
| Embedder          |   |  |
| Tweet             |   |  |
| Facebook story    |   |  |
| Codepen           |   |  |
| Device            | iPhone 8, iPhone X, Mac Book Pro, Mac Book, iMac Pro, whatever google phones are available. |  |
| Scrollspy         |   |  |
| Container Query   |   |  |
| Collapsible links |   |  |
| Accordion         |   |  |
| Dropdowns         | Split, sizing, direction  |  |
| Hero/Jumbotron    |   |  |
| Progress          |   |  |
| Tooltips          |   |  |
| Banners           | With side ribbons   |  |
| Pullquote         |   |  |
| Xray              |   |  |

|                                 |  |   |
|---------------------------------|--|---|
| Swipable cards                  |  | A good experience for sorting things  |
| Calendar                        | Month view, week view, 3 day view, day view, agenda view |   |
| Music score                     |  | <a href="https://github.com/0xfe/vexflow">https://github.com/0xfe/vexflow</a> |
| Functional css                  |  |   |
| Rest API                        |  |   |
| Selectable list                 |  |   |
| GraphQL API                     |  |   |
| Rating                          |  |   |
| Switch                          |  |   |
| Status Tracker/Stepper          |  |   |
| Mobile Navigation               |  |   |
| Styled Divider                  |  |   |
| Empty/non-ideal state component |  |   |
| Podcast Episode                 |  |   |
| Comment thread                  |  |   |
| Media Picker                    |  |   |
| Screen Preload                  |  |   |
| Async/loading component         |  |   |
| Fitted Text                     |  |   |
| Page Builder                    |  | <a href="http://grapesjs.com/">http://grapesjs.com/</a>                       |
|                                 |  |   |

## Design System References:

| Name    | Link  | Reason |
|---------|---|--------|
| Mozilla | <a href="https://design.firefox.com/">https://design.firefox.com/</a>   |        |
| Forma   | <a href="https://www.producthunt.com/posts/forma-sketch-library">https://www.producthunt.com/posts/forma-sketch-library</a> |        |
| Base UI |   |        |



|                                |  |  |
|--------------------------------|--|--|
| Essential                      |  |  |
| UI design system (shitty name) |  |  |
| Dashboard UI                   |  |  |
| Frames                         |  |  |
| Cabana                         |  |  |
| AirBnb                         |  |  |
| Tachyons                       |  |  |
| Solid (buzzfeed)               |  |  |
| Atlassian                      | <a href="https://atlassian.design/guidelines/product/resources/web-product-gui-pack">https://atlassian.design/guidelines/product/resources/web-product-gui-pack</a>  |  |
| Horizon Design System          |  |  |
| Alibaba Ant                    | <a href="https://ant.design/">https://ant.design/</a>  |  |
| Bloom                          | <a href="http://bloom.appearhere.co.uk">http://bloom.appearhere.co.uk</a>  |  |
| Audi                           | <a href="http://www.audi.com/ci/en/guides/user-interface/introduction.html">http://www.audi.com/ci/en/guides/user-interface/introduction.html</a>  |  |
| BBC                            | <a href="http://www.bbc.co.uk/gel/guidelines/category/design-patterns">http://www.bbc.co.uk/gel/guidelines/category/design-patterns</a>  |  |
| Blueprint                      | <a href="http://blueprintjs.com/docs/v1/#blueprint">http://blueprintjs.com/docs/v1/#blueprint</a> ,<br><a href="http://blueprintjs.com/docs/v2/#core/components/toast">http://blueprintjs.com/docs/v2/#core/components/toast</a> |  |
| Boundless                      | <a href="https://boundless.js.org">https://boundless.js.org</a>  |  |
| Cloudflare                     | <a href="https://cloudflare.github.io/cf-ui/">https://cloudflare.github.io/cf-ui/</a>  |  |
| Co-op                          | <a href="https://coop-design-manual.herokuapp.com/">https://coop-design-manual.herokuapp.com/</a>  |  |
| Duolingo                       | <a href="https://www.duolingo.com/design/">https://www.duolingo.com/design/</a>  |  |
| Primer (Github)                | <a href="https://primer.github.io/">https://primer.github.io/</a>  |  |
| Help Scout                     | <a href="http://style.helpscout.com/">http://style.helpscout.com/</a>  |  |

|                                       |  |  |
|---------------------------------------|--|--|
| Purple3 (Heroku)                      | <a href="https://purple3.herokuapp.com/">https://purple3.herokuapp.com/</a>  |  |
| Carbon                                | <a href="http://carbondesignsystem.com">http://carbondesignsystem.com</a>  |  |
| Intuit                                | <a href="http://harmony.intuit.com/">http://harmony.intuit.com/</a>  |  |
| Lexicon                               | <a href="https://lexicondesign.io/">https://lexicondesign.io/</a>  |  |
| Lonely Planet                         | <a href="http://rizzo.lonelyplanet.com/styleguide/design-elements/colours">http://rizzo.lonelyplanet.com/styleguide/design-elements/colours</a>  |  |
| Fluent Design System                  | <a href="https://fluent.microsoft.com/">https://fluent.microsoft.com/</a>  |  |
| Predix UI                             | <a href="https://www.predix-ui.com/#/home/">https://www.predix-ui.com/#/home/</a>  | Uses Polymer, for analytics and data visualization |
| Lightning Design System by Salesforce | <a href="https://www.lightningdesignsystem.com/downloads">https://www.lightningdesignsystem.com/downloads</a> ,<br><a href="https://github.com/salesforce-ux/design-system">https://github.com/salesforce-ux/design-system</a> | Whole, complete, and thorough                      |
| Shopify's Polaris                     | <a href="https://polaris.shopify.com/">https://polaris.shopify.com/</a>  |  |
| US Design System                      | <a href="https://designsystem.digital.gov/getting-started/download/">https://designsystem.digital.gov/getting-started/download/</a>  |  |
| Clarity Design System                 | <a href="https://vmware.github.io/clarity/">https://vmware.github.io/clarity/</a>  | Data grid  |
|                                       |  |  |