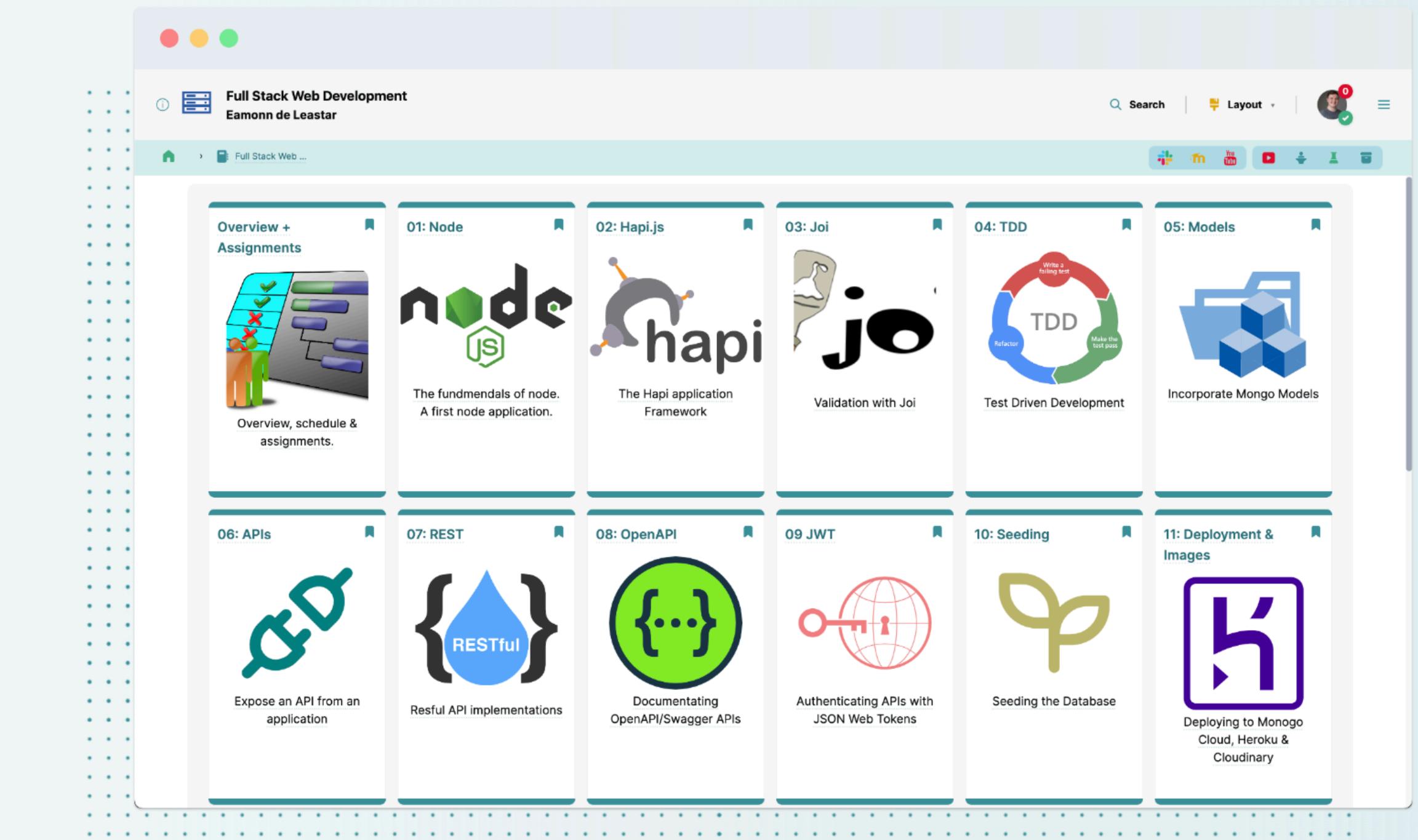


# An Open Learning Web Toolkit

A collection of open source components & services supporting the creation of transformative learning experiences using open web standards.

[View Demo](#)[Documentation](#)[Catalogue](#)[Live](#)

# The **Values** of the project

## Learner Experience



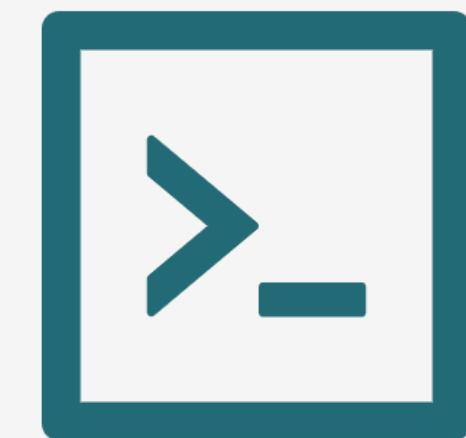
The **Learner Experience** prioritises web interactions that are **engaging**, **contextual**, **linkable**, **searchable**, **accessible** and **responsive**. In addition the experience should foster a sense of **community** and **connection** among fellow learners.

## Educator Experience



The **Educator Experience** prioritises the creation of a **guided paths** through a curriculum via the creation of learning materials that are **autonomous**, **structurally aligned**, **composable**, **auditable**, **extensible**, **versioned** and **independent**.

## Developer Experience



The **Developer Experience** prioritises the specification and implementation of **robust**, **well documented**, **loosely coupled components & services**, integrated into a **coherent toolkit** open to contributions from **diverse skill sets**.



## Four Challenges



**Challenge 1:** Create an course using tutors, showcasing the variety of the learning experience.

**Challenge 2:** Design and implement a new Theme + Icon Pack for Tutors, extending the UX in interesting ways. Rebuild the Tutors Reader to include these changes.

**Challenge 3:** Reimagine the Tutors learning experience, revising the existing UX, proposing simple or radical alternative layouts, navigation, learning objects & interaction patterns.

**Challenge 4:** Map out an implementation of Challenge 3 in the Tutors Open Source Project.

# Challenge 1: Create an course using tutors, showcasing the variety of the learning experience.

## Lab-17a Charts

Full Stack Web Development

Search Layout User Profile

Home Full Stack Web ... 17: Charts & Gr... Labs Lab-17a Charts

Google Sheets Google Slides YouTube Google Slides Google Sheets

### Programming Fundamentals

Colm Dunphy, Peter Windle, WIT

Assignment Specifications

This section details the assignments for module

00: Induction

module structure · delivery approach · java programming language · ...

01: First Contact

processing · java · drawing shapes · colour · grayscale · RGB · syntax errors · ...

02: Selection & Iteration

loop body: increment or decrement; }  
Condition  
If condition is false  
Loop Body  
Process Results  
If condition is true  
Loop Update

03: Methods

method signature · return types · parameters · mouse event methods · bespoke..

04: Classes

String methods · Objects · Classes · behaviour · attributes · Spot class · ...

05: Arrays

Arrays  
int n[] = new int[4];  
n[0] n[1] n[2] n[3]  
n[1]=36;

06: Game of Pong

Game of Pong · Ball class · Paddle class · Player class · Tournaments · Statistics · ...

## Charts Page

Introduce an additional icon in our navigator:

MainNavigation.svelte

```
...  
<a href="/charts" class="c...  
  <i class="fas fa-charts...  
</a>  
...
```

This is a new page:  
routes/charts/+page.svelte

```
<script>  
import TitleBar from "$...  
import MainNavigator fro...  
import Chart from "svel...  
  
let data = {  
  labels: ["Sun", "Mo...  
  datasets: [
```

## SQL Aggregate functions

Database

Search Layout User Profile

Home Database 05: SQL: Select... Aggregate funct... SQL Aggregate ...

Google Sheets Google Slides YouTube Google Slides Google Sheets

6 of 13

### Using Round()

- To round a numeric value to a whole number (or to 2 decimal places for example), use `round`.
- `Round(12.75) returns 13`
- `Round(12.751,2) returns 12.75`
- `Round(12.755,2) returns 12.76`

To use round with an aggregate function:

```
select round(avg(price),2) as "Average Book Price"  
from book;
```

### 05: SQL: Select statement

Select statement · Introduction · SQL Select statement · SQL Select statement Lab

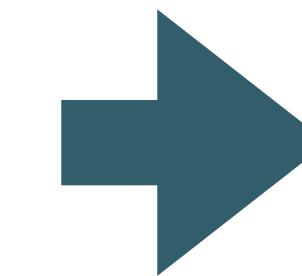
Aggregate functions · SQL Aggregate functions · SQL Aggregate functions Lab

Join clause · SQL Join · SQL Join 1 Lab · SQL Join 2 Lab

Date function · SQL Date functions · SQL Date functions Lab

# Challenge 1: Resources

*Kitchen Sink  
Example*



Reference Course  
A reference course containing all supported learning objects

Current Week  
Reading 5

Search Layout

Reference Cour...

Simple

Varied

Media

Units

Side Units

Cards with SVG

Panel Talk

Panel Note

<https://github.com/tutors-sdk/tutors-reference-course>

<https://reader.tutors.dev/course/reference-course>

Simple Topic with lectures + a lab

Variety of learning objects

Videos presented in various contexts

Units which contain variety of learning objects

An example of a side unit

Learning objects with SVG images

Panel talk promotes a presentation to topic page

Panel note promotes a note to Topic level

# **Challenge 1:** Resources

**Challenge 1: Creating & Publishing a course**

The image shows three cards arranged horizontally under the heading "Challenge 1: Creating & Publishing a course".

- Learner Experience**: An illustration of a person wearing a graduation cap. Below it is the text "An overview of the Tutors Learner Experience".
- Creating a Course**: An illustration of a person holding a book. Below it is the text "Creating a Tutors Course".
- Editing a Course**: An illustration of a person riding a bicycle. Below it is the text "Editing and republishing a course".

*Overview of  
Tutors UX*

*Overview of  
Course  
Creation*

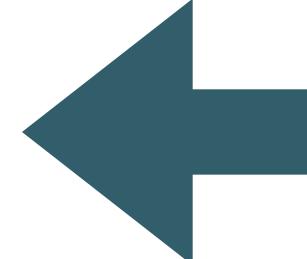
*Course  
Structure*

**Tutors Labs**

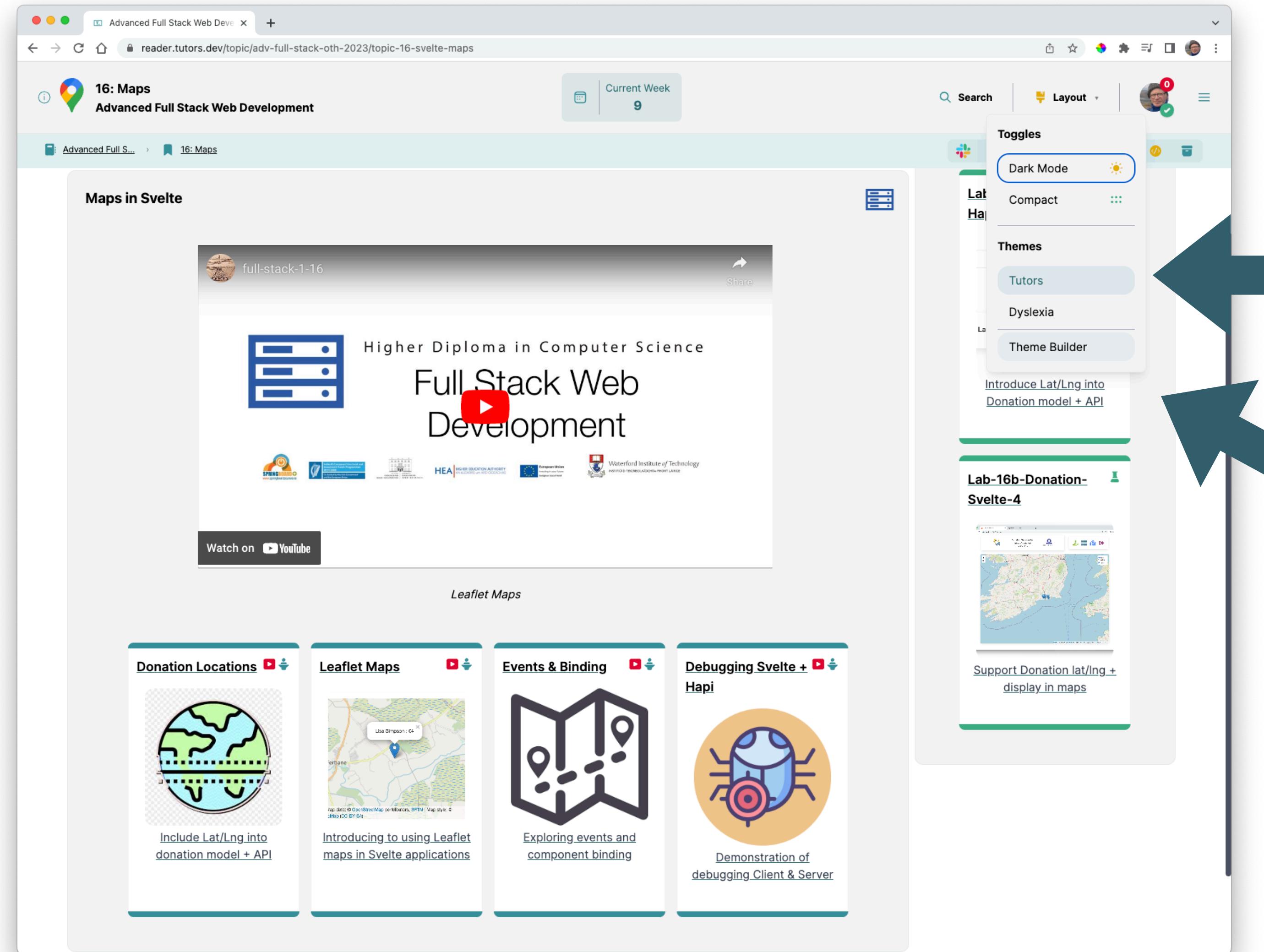
The image shows two cards from the "Tutors Labs" section.

- Lab-01-Create**: An illustration of three overlapping red diamonds. Below it is the text "Create and publish a Tutors course".
- Lab-02-Edit**: An illustration of a red organizational chart with three squares connected to a central square. Below it is the text "Explore and edit the elements of a Tutors course".

*Guides on  
creating +  
publishing  
a course*



**Challenge 2:** Design and implement a new Theme + Icon Pack for Tutors, extending the UX in interesting ways. Rebuild the Tutors Reader to include these changes.

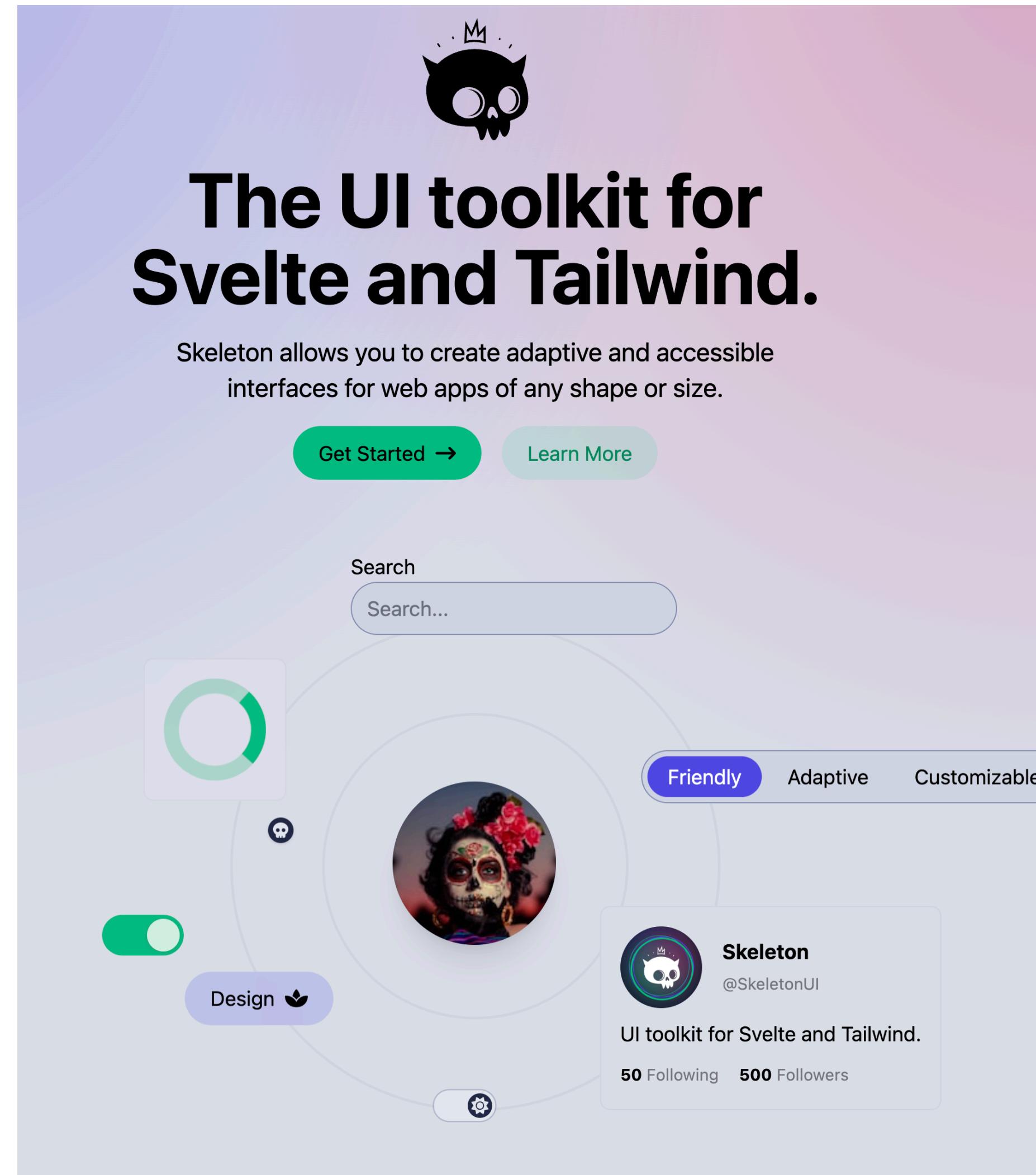
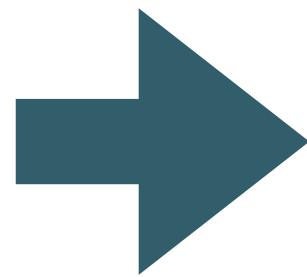


Themes  
Selector

Themes  
Builder

## Challenge 2: Resources

Design System used by Tutors



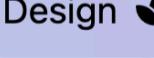
The UI toolkit for Svelte and Tailwind.

Skeleton allows you to create adaptive and accessible interfaces for web apps of any shape or size.

Get Started → Learn More

Search Search...

Friendly Adaptive Customizable

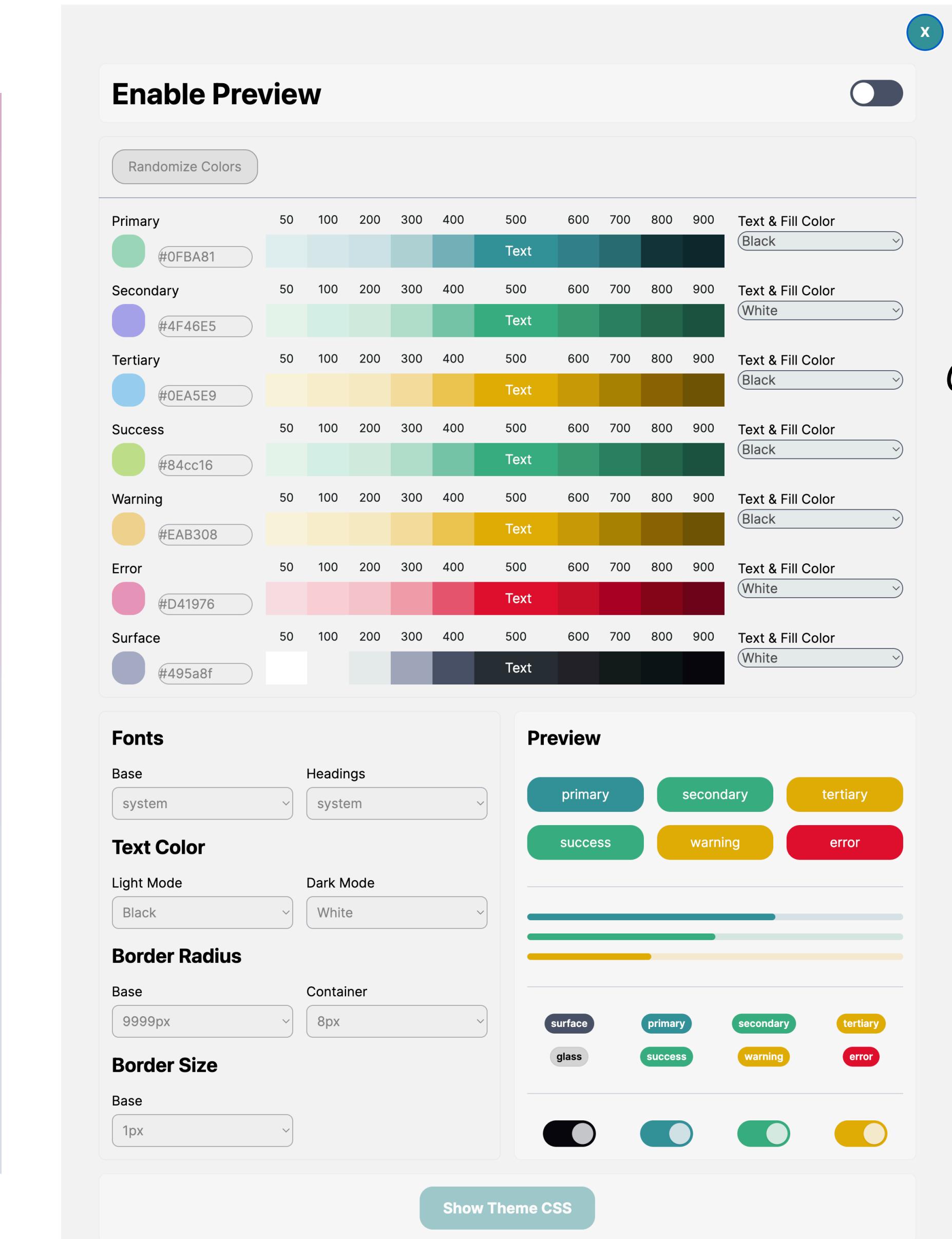
Design 

 **Skeleton** @SkeletonUI

UI toolkit for Svelte and Tailwind.

50 Following 500 Followers

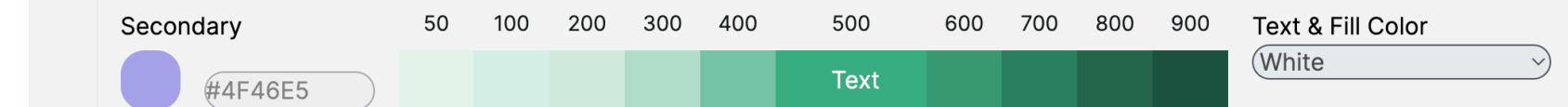
A screenshot of the Skeleton UI toolkit website. It features a purple gradient background with a central owl logo wearing a crown. The main heading is "The UI toolkit for Svelte and Tailwind." Below it is a subtext: "Skeleton allows you to create adaptive and accessible interfaces for web apps of any shape or size." There are two buttons: "Get Started →" and "Learn More". A search bar with placeholder text "Search..." is positioned below the subtext. At the bottom, there's a circular graphic with icons for "Friendly", "Adaptive", and "Customizable", and a "Design" button with a hand icon. On the right, there's a sidebar with social media links for Skeleton (@SkeletonUI) and follower counts (50 Following, 500 Followers).

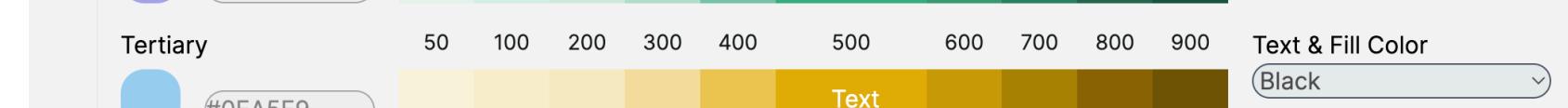


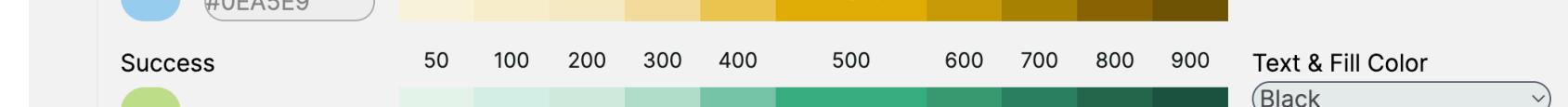
Enable Preview

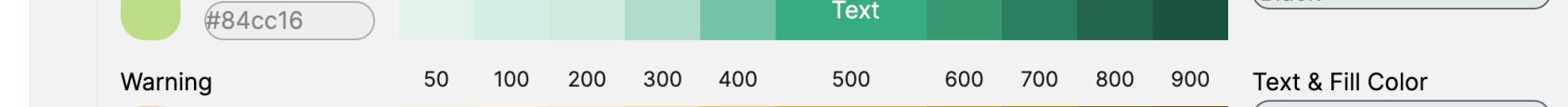
Randomize Colors

Primary  Text & Fill Color: Black

Secondary  Text & Fill Color: White

Tertiary  Text & Fill Color: Black

Success  Text & Fill Color: Black

Warning  Text & Fill Color: Black

Error  Text & Fill Color: White

Surface  Text & Fill Color: White

Fonts

Base: system Headings: system

Text Color

Light Mode: Black Dark Mode: White

Border Radius

Base: 9999px Container: 8px

Border Size

Base: 1px

Preview

primary secondary tertiary

success warning error

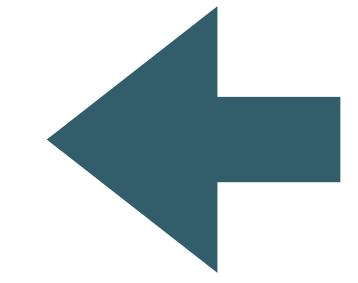
surface primary secondary tertiary

glass success warning error

Show Theme CSS

A screenshot of the "Enable Preview" section of the Tutors Reader theme designer. It shows a list of color palettes for different categories: Primary, Secondary, Tertiary, Success, Warning, Error, and Surface. Each palette includes a color swatch, a numerical slider from 50 to 900, and a dropdown menu for "Text & Fill Color". Below this, there are sections for "Fonts" (Base and Headings both set to "system"), "Text Color" (Light Mode: Black, Dark Mode: White), "Border Radius" (Base: 9999px, Container: 8px), and "Border Size" (Base: 1px). On the right, there's a "Preview" area showing colored buttons and bars corresponding to the themes. At the bottom, there's a "Show Theme CSS" button.

Theme designer built into Tutors Reader



# Challenge 2: Resources

Challenge 2: Theme & Iconography

The slide displays three cards under the heading "Challenge 2: Theme & Iconography".

- Tutors Theming**: Shows a green mountain icon with a sun icon above it. Description: [Exploring the Tutors Theme Subsystem](#).
- Skeleton**: Shows a dark circular icon with a white skull and a crown. Description: [The Skeleton.dev Theming Subsystem](#).
- Iconify**: Shows a blue smiley face icon. Description: [The Icon Libraries used by Tutors](#).

Overview of  
Tutors Themes

Skeleton  
Design  
Systems

Icon Library  
used by Tutors

Lab-03-Rebuild I

Tutors

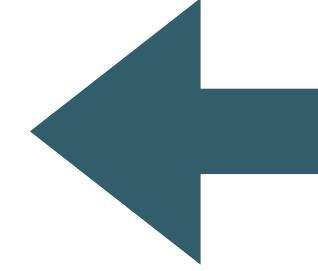
Download and build the [tutors reader application](#).

Lab-04-Create a I

Theme

Generate a new theme

Guides on  
Rebuilding  
&  
Theming  
Tutors



# Challenge 3: Reimagine the Tutors learning experience, revising the existing UX, proposing simple or radical alternative layouts, navigation, learning objects & interaction patterns.

**Unit Panel**

**This is a note with at TOC**

This is the intro to the main page.

- Part 1
- Part 2
- Part 3
- Part 4

**Higher Diploma in Computer Science**  
**Full Stack Web Development**

Watch on YouTube

**Panel Video**

Lecture  
This talk has a pdf + a video with start/end times

Lecture  
This one just has a video, no PDF

Lab-01  
A regular lab but supported by a video

An example of a side unit

Cards with SVG

Learning objects with SVG images

Panel Talk

Panel talk promotes presentation to topic

**Unit 1 Title**

17 Higher Diploma in Computer Science Full Stack Web Development

Panel Video

Lecture  
A short summary of the talk, no more than two sentences. Avoid bullet...

Lecture  
Provide a short summary, perhaps supported by a representative image.

Lab-01  
A set of practical instructions or a walk-through

**Side Unit**

Lab-01: Objectives

01: Text

02: Tables, Lines and Images

**03: Links and Code Blocks**

04: Images

05: Katex

Exercises: Exercises & Archives

**Links and Code Blocks**

You can insert links in bullet points:

- <http://github.com>
- <http://bitbucket.dom>

More Code Block examples

```
publish(path, course) {
  const basePath = '../' + path + '/' + this.folder;
  futils.initEmptyPath(basePath);

  this.resources = this.talks.concat(this.labs);
  futils.copyFileToFolder(this.img, basePath);
  futils.writeFile(basePath + '/index.html', nunjucks.render('index.html', {
    url: this.url.substring(5) + '/' + this.folder
  }));

  futils.writeFile(basePath + '/ajaxlabel.html', nunjucks.render('ajaxlabel.html', {
    url: this.url.substring(5) + '/' + this.folder
  }));
  futils.writeFile(basePath + '/indexmoodle.html', nunjucks.render('indexmoodle.html', {
    url: this.url.substring(5) + '/' + this.folder
  }));

  console.log(this.title);
  this.publishTalks(basePath);
  this.publishLabs(basePath, course);
},
```

1 of 1

Tutors Starter Presentation.pdf

Replace with your own slide deck in a .pdf format!

Panel talk promotes presentation to topic

**Varied**

Note Example  
is a document in Markdown

Resource 1  
A zipped archive for students to download

Github Repo 1  
A repo in github that captures important lessons from this topic

Web Site  
A web site of interest

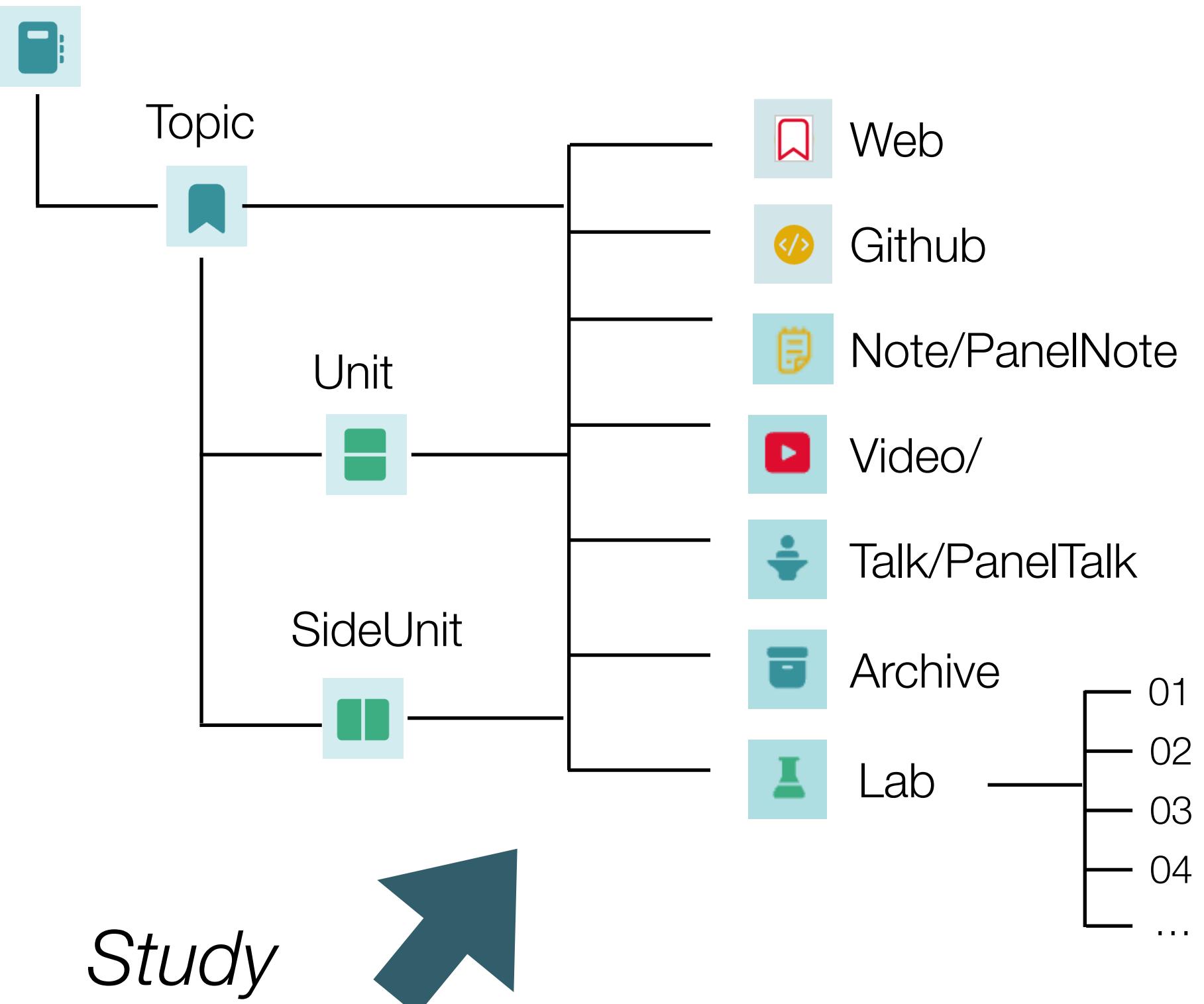
Lab-01  
A set of practical instructions or a walk-through

This is a note with at TOC  
This note has a linkable table of contents, generated automatically

Lecture 1  
A short summary of the talk, no more than two sentences. Avoid bullet...

# Challenge 3: Resources

Course



Study  
Course  
Structure

## An Open Learning Web Toolkit

A collection of open source components & services supporting the creation of transformative learning experiences using open web standards.

View Demo Documentation

Catalogue Live

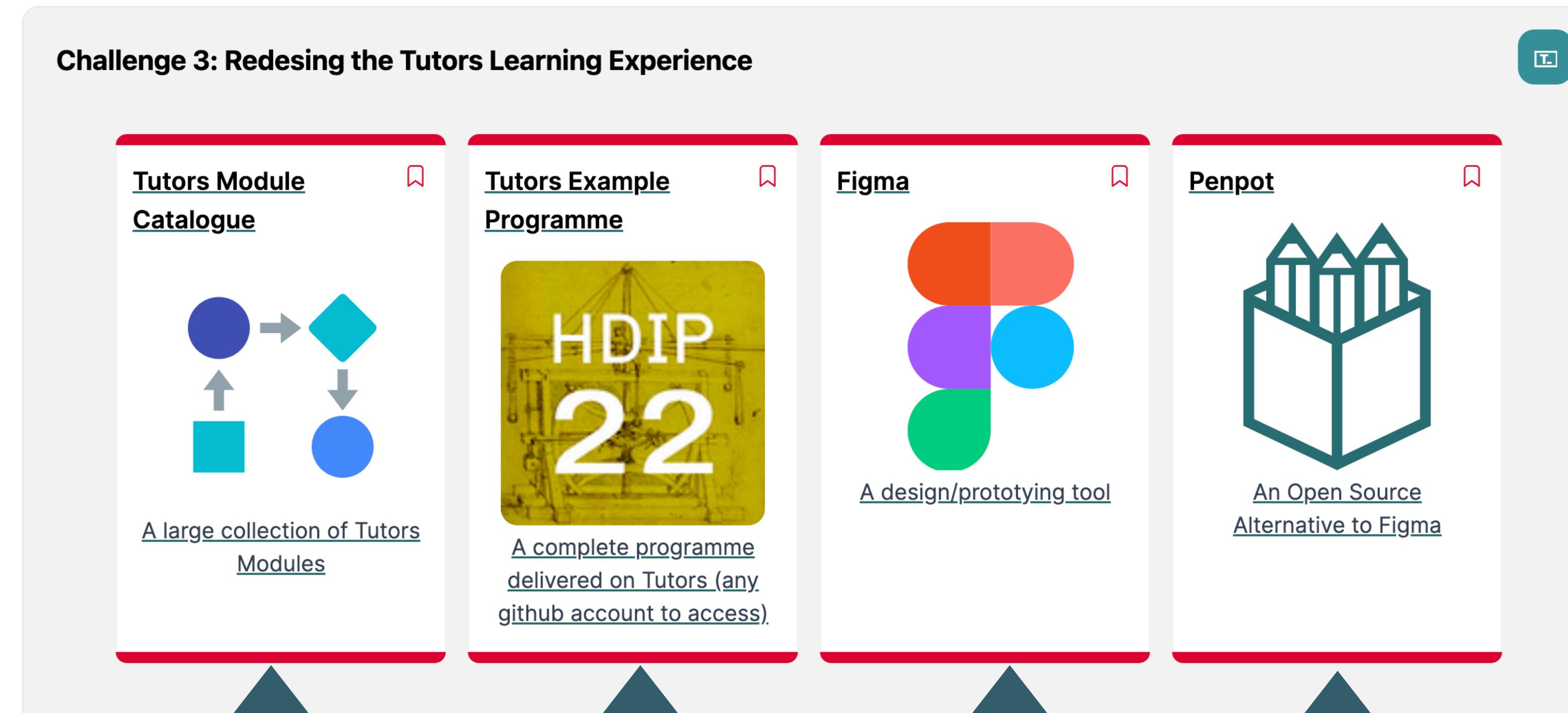
Tutors Module Ecosystem

Explore Catalogue

The 'Tutors Module Ecosystem' dashboard shows a grid of module cards:

- Agile Software Development
- Business Intelligence and...
- Business Intelligence...
- Business Intelligence...
- Business Intelligence
- Business Intelligence - MB...
- Computer Forensics
- Computer Forensics
- Computer Systems &...
- Computer Systems &...
- Course Title
- Course Title
- Database

# Challenge 3: Resources



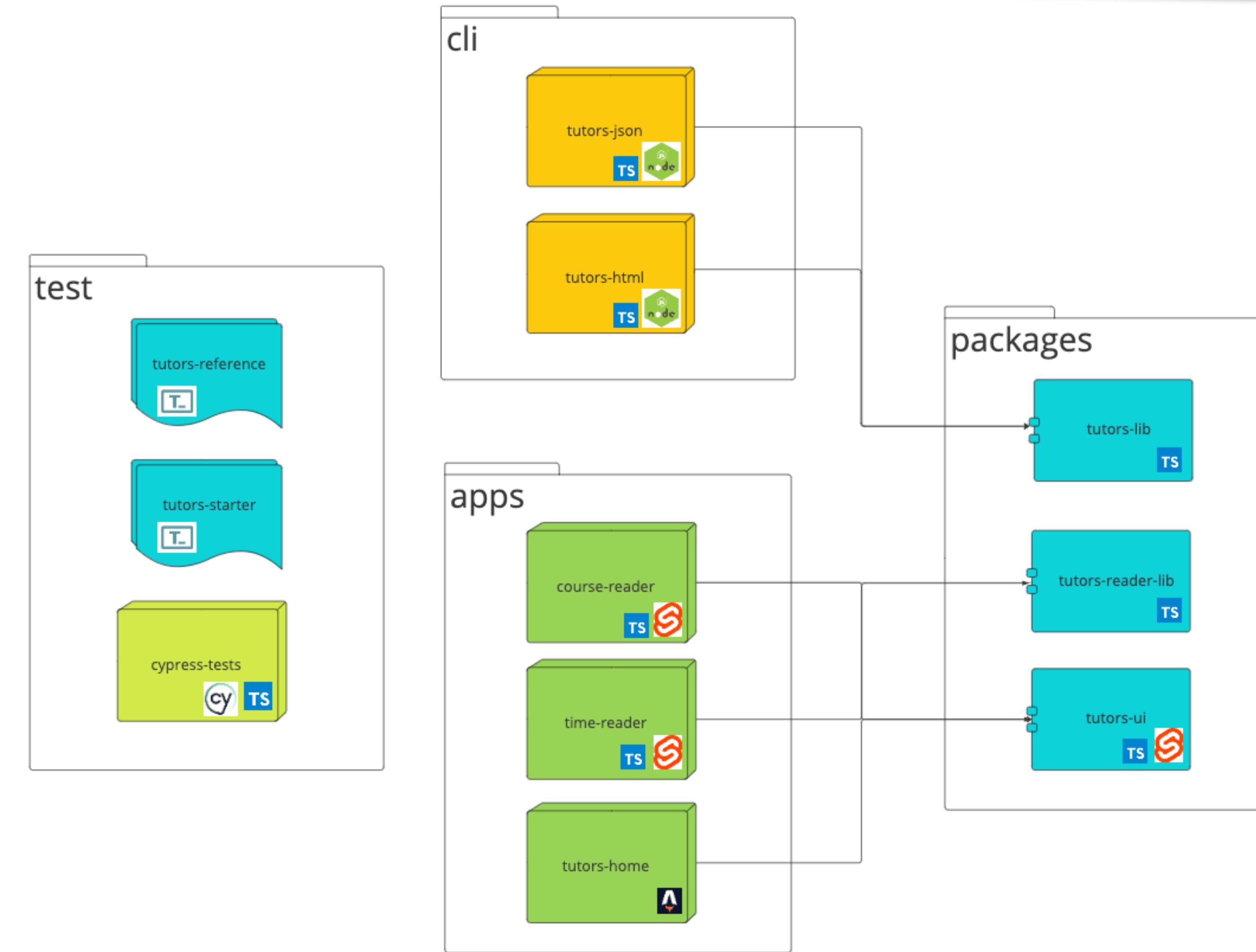
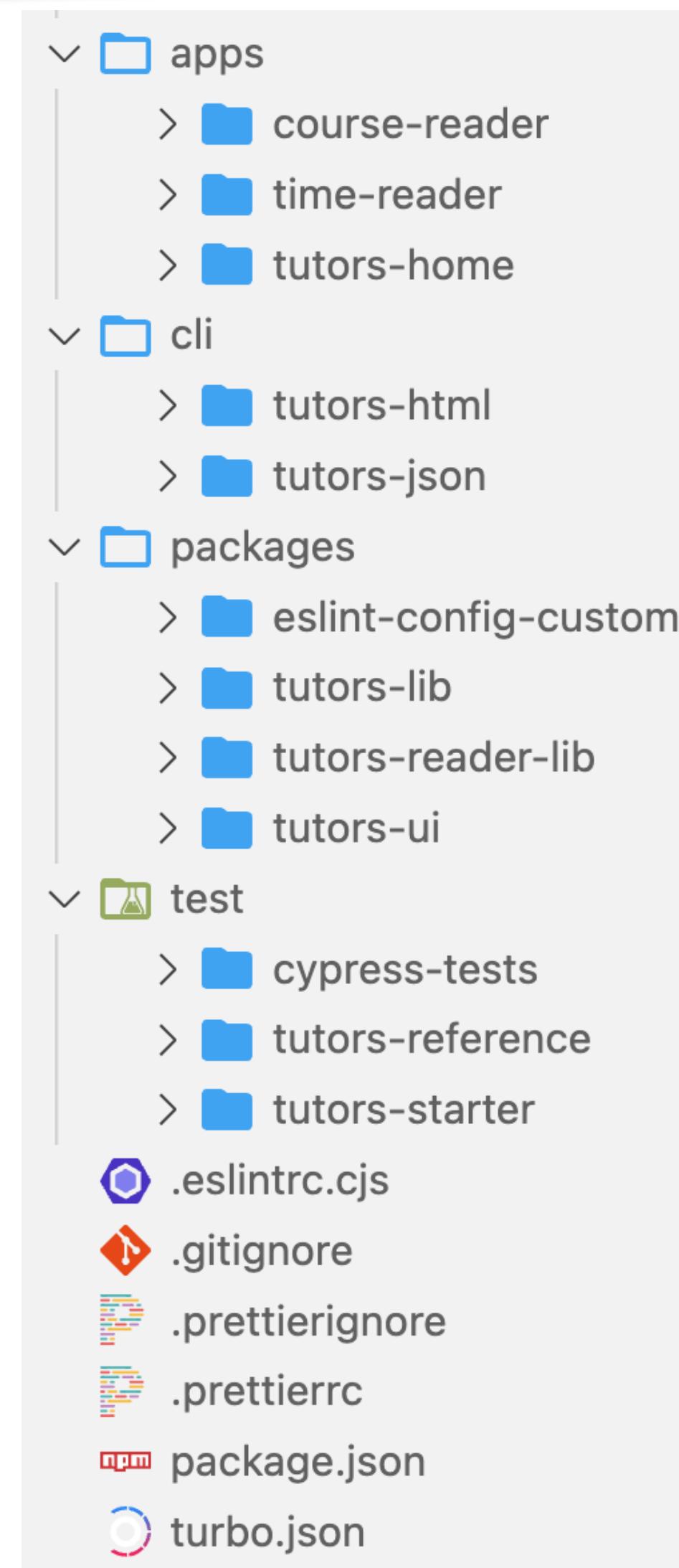
*Tutors Module Catalogue*

*Complete Multi-Course Programme*

*Figma Prototyping Tool*

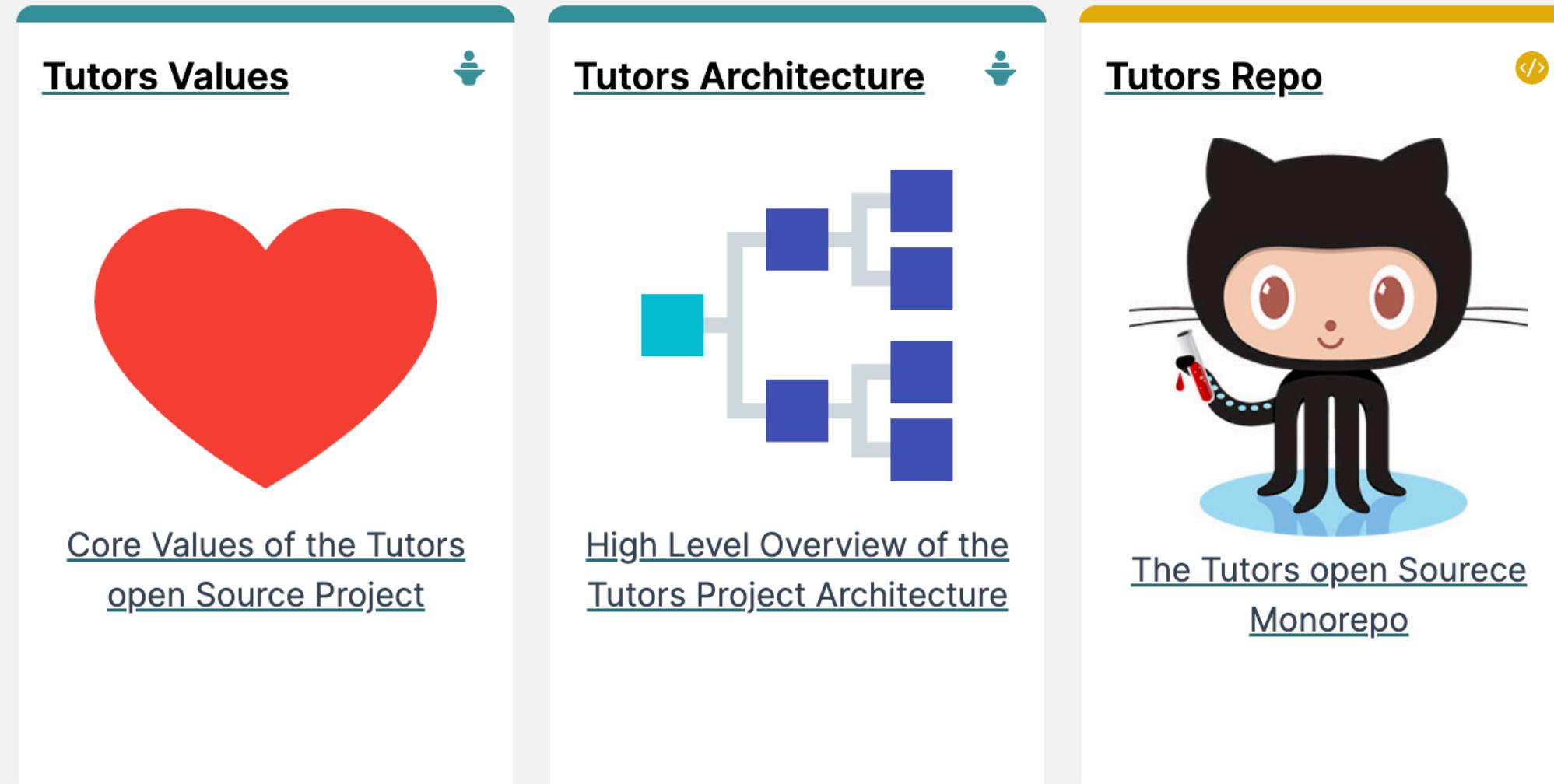
*Open Source Figma Alternative*

# Challenge 4: Map out an implementation of Challenge 3 in the Tutors Open Source Project.



# Challenge 4: Resources

**Challenge 4: Implement (some of) the re-imagined features**

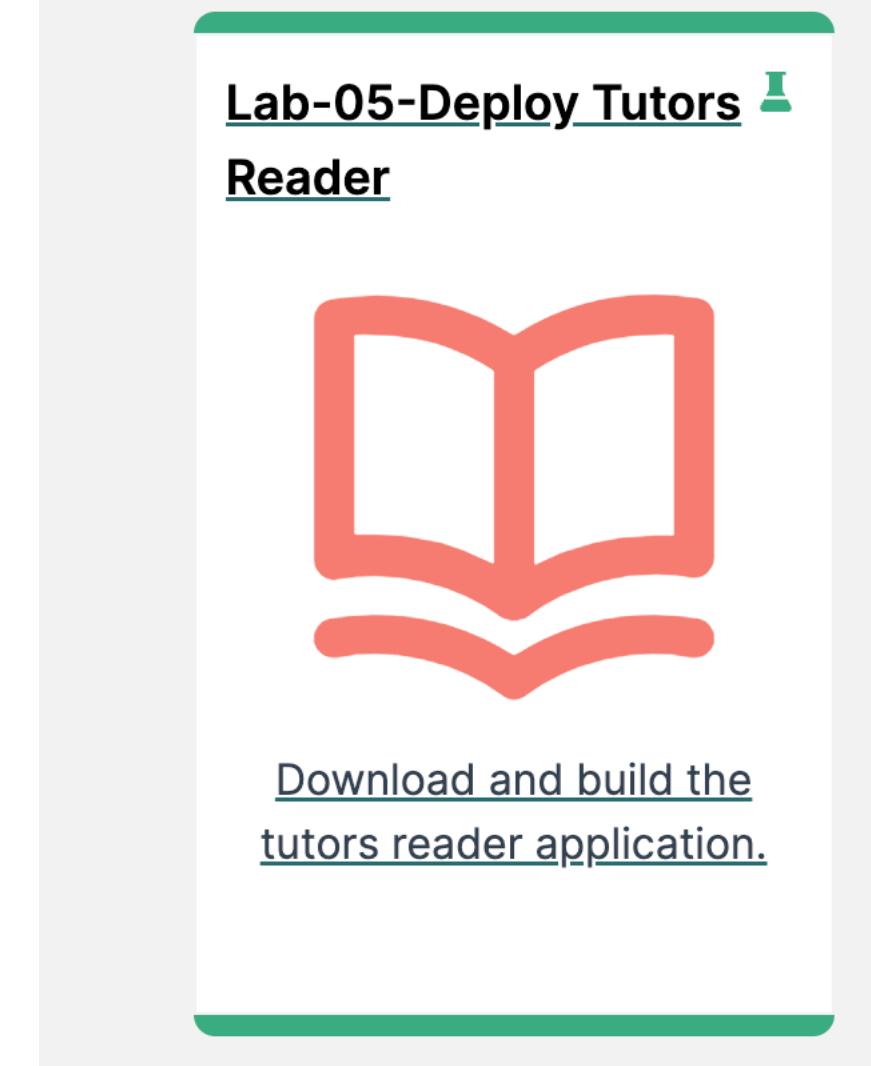


The three cards are arranged horizontally. The first card, 'Tutors Values', features a large red heart icon and the text 'Core Values of the Tutors open Source Project'. The second card, 'Tutors Architecture', features a circuit board icon and the text 'High Level Overview of the Tutors Project Architecture'. The third card, 'Tutors Repo', features a GitHub cat icon and the text 'The Tutors open Source Monorepo'.

*Guiding  
Principles of  
Tutors*

*Tutors  
Architecture*

*Tutors Source  
Monorepo*



**Lab-05-Deploy Tutors Reader**



[Download and build the tutors reader application.](#)

*Deploying  
a new  
Tutors  
Reader*

