Common Patterns

The Web has many common UI patterns

- Those present in base HTML elements
    - Bulleted lists, Forms, etc
- Non-interactive, built from HTML
    - Horizontal menus, "Cards", etc
- Interactive, built from HTML
    - Dropdown menus, Accordions, Modal

Accordion Pattern

This UI Pattern is

- A collection of sections
- Each with a title
- Each can collapse/expand
- Sometimes only one/expanded at a time
- Sometimes only collapse by expanding another

Accordion UI Pattern

What to do about a catnip addiction? +

Will I ever catch that red dot? −

Dolor dicta odio inventore ut qui dolorem. Omnis recusandae quo porro voluptatibus veniam? Sed earum rem nobis quasi odit, similique ducimus Voluptatibus fugit sint error?

Why does the human have a problem with me claiming the center of the bed? +

When to use an Accordion?

- When NOT all content is useful to user
- Otherwise show all content and let them scroll!

Accordion filters user to specific content

- Content that isn't worth a separate page

Accordion Implementation Considerations

- What (if any) limitations on expand/collapse?
    - Only one section open at a time?
        - Can be messy with scrolling
- Keyboard/mouse/touch controls
    - Buttons are good for this
    - "Click" is true for all
- Accessibility concerns?
    - Semantic HTML
    - Indicating open/close
        - Not just visual (ARIA)

Unicode Characters

"unicode" characters are a way of encoding characters

- Beyond common english characters and symbols
- Beyond european characters
- Beyond characters of all languages
- Includes an ever expanding list of emoji
    - But emoji can have a11y issues
    - Text may not match intention
        - 😵 (dizzy face)
        - 🚩(triangular flag on post)

How to include a unicode character

- You already are
- but how to include those not on the keyboard?
    - Operating System (ex: apple emoji keyboard)
    - Cut-and-paste
    - Other ways depend on what kind of file is encoding it (js, css, HTML)

🐱

- HTML: `&#128049;`
- CSS: `\1F431`
- JS: `\uD83D\uDC31` or `\u{1F431}`

Finding Unicode characters

Easiest: Search web

My current fav:

- **https://unicode-table.com/en/1F431/**

Unicode warnings

- Font dependent!
  - **https://www.boredpanda.com/entomologist-rates-ant-emojis/**
- Be careful with language characters
  - **https://unicode-table.com/en/2630/**
    - Often misused for hamburger menu
  - Try to use the correct meaning

Borders

We've used borders around a box to make it stand out

But they have additional uses/notes

- A dividing line by putting a border on one side
- Open borders between areas to "connect" them

If two bordered boxes touch, you get a thicker line

- Remove that side from one to fix
- Or overlap by using negative margins
    - When the lines aren't the same length

Planning the HTML

What HTML are we rendering?

- Could be a `<dl>` list
- OR entries could be `<div>`
    - Always question a div
    - But often a div
- Title will be `<button>`
    - Control, not navigation
    - Lots of built in a11y
- Section Heading? (`<h(NUM)>`)
    - Must be correct semantics if we do!

Plan the HTML 2

What additional structure do we need?

- How are we showing open/close?
    - Icons, text would be additional element
        - Might require a wrapper if so
    - `::before/::after` pseudo-elements
        - No extra elements required
    - ARIA covers non-visual indication
- No extra validation info or feedback
    - For this pattern

Using <details>/<summary>

There IS a semantic HTML element pair for this

- With built in semantics and roles
    - No extra ARIA needed
- But it has some severe limitations

```
<details>
    <summary>
        Item 1
    </summary>
    Ipsum minima ad impedit quis alias Quidem fuga quis nemo.
</details>
```

Each entry would be a separate `<details>` element

- Each with a contained `<summary>` element

Details of...<details>

- `open` attribute when opened
    - Can use for styling
- A JS `toggle` event when opened/closed
    - Detect user interactions

```
<details open>
    <summary>
        Item 1
    </summary>
    Ipsum minima ad impedit quis alias Quidem fuga quis nemo.
</details>
```

Limitations of `<details>`

`<details>` has built-in semantics and behaviors, BUT

- Styling is a pain
    - Possible, but a pain
    - And the default is UGLY
- Limitations on using headings
    - `<summary>` overrides other roles
- New-ish candidate for actual use
    - Poor a11y on initial release
    - Limited modern documentation/review
- BUT: No JS required for the interaction!
    - And graceful degradation (all show)

Plan the appearance

- Plan before writing CSS
- Reality-checks HTML plan
- Title button full width
- Where is open/close indicator?
- What is open/close indicator?
- When does it change?
- Animation of open/close?

Planning state

- Allowing multiple open?
    - On open action, do we close others?
- Is one always open?
    - On close action, act only if another open?
- Adding `hidden` attribute to "closed" sections?
    - To hide visually AND from Assistive Tech
- Adjusting ARIA values
    - `aria-expanded="true"/"false"`

Beyond scope of this class

- But I recommend tracking "state"
    - Outside of DOM

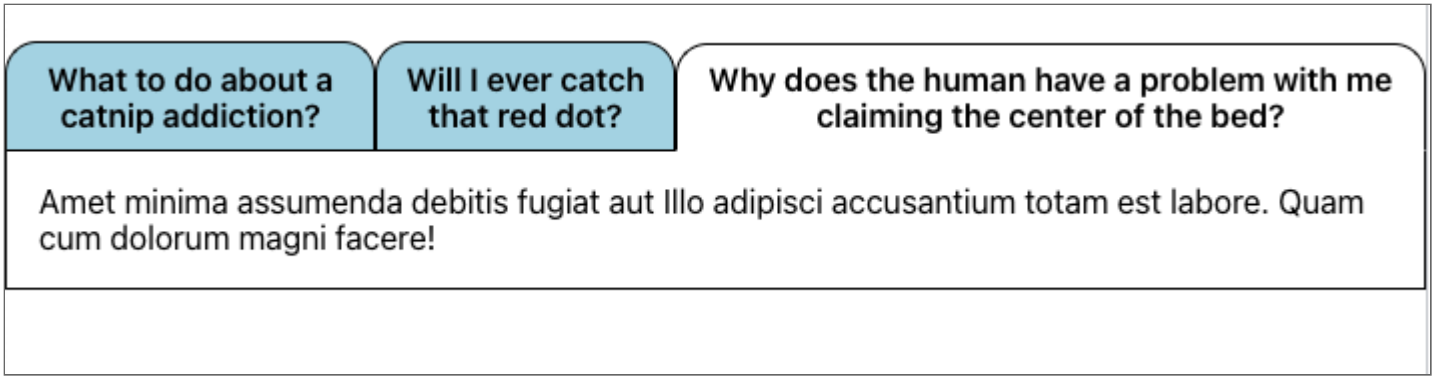
Accordion Resources

- Great walkthrough!
  - **https://www.aditus.io/patterns/accordion/**
- Remember to LEARN, not COPY
  - You need skill to handle variations for future

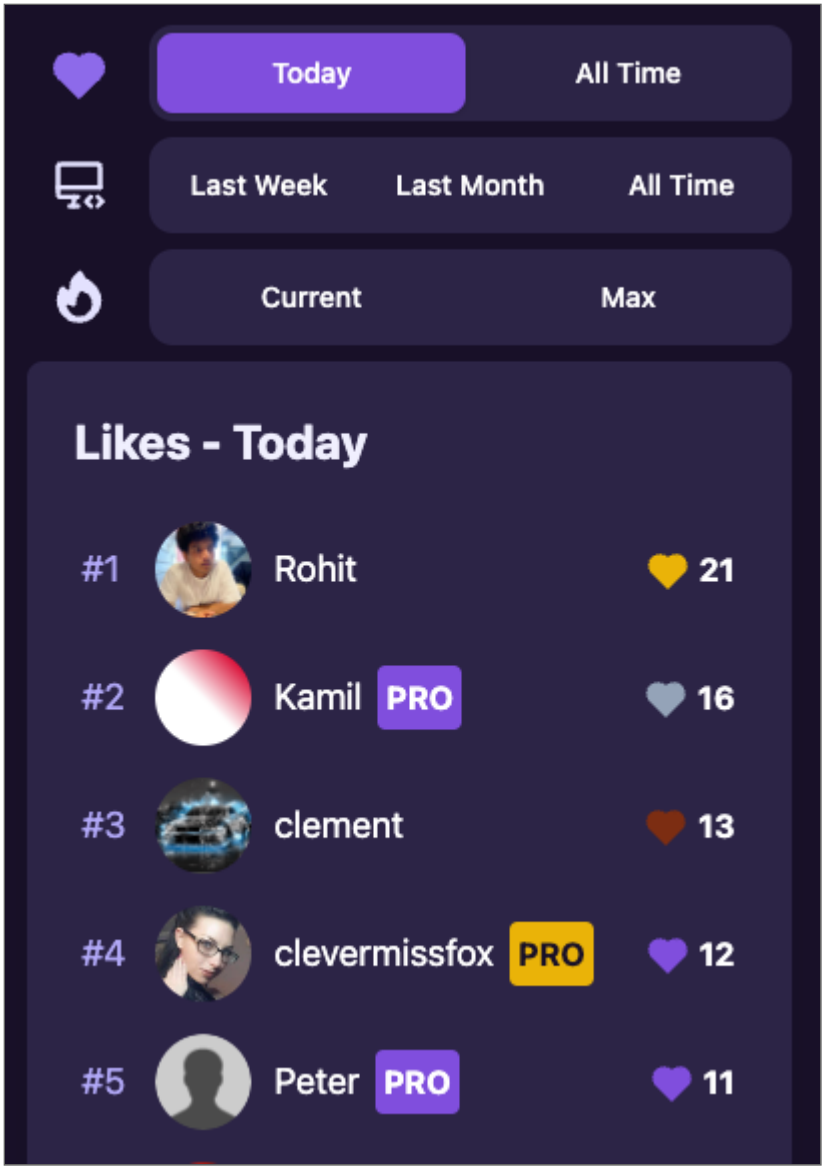
Accordion variations

- Many sections, show one
- Similar UIs:
    - Tabs
        - Vertical or Horizontal?
    - Menus w/on-screen content
        - Just tabs with different UI
- Some sample looks: **https://alvarotrigo.com/blog/html-css-tabs/**

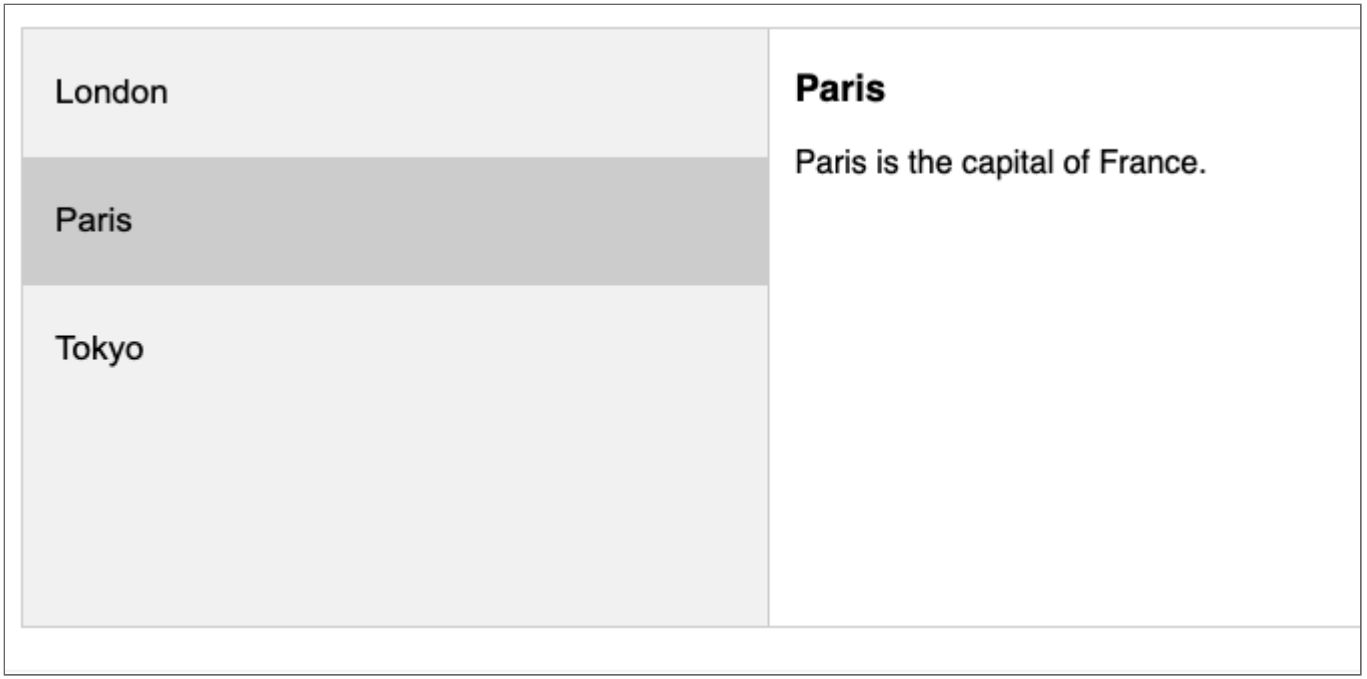
Tabs UI Pattern



Tabs as filter


Today
All Time
Last Week
Last Month
All Time
Current
Max
Likes - Today
#1
Rohit
21
#2
Kamil
PRO
16
#3
clement
13
#4
clevermissfox
PRO
12
#5
Peter
PRO
11

Vertical Tabs



Consider when choosing

- Where is "navigation" interaction?
    - Tabs in same location
- When is navigation interactions?
    - Accordions CAN activate on focus
        - But do not have to
    - What about a staged form?
        - Finishing a stage makes next visible
- Where is visibility?
    - Accordions can push content off screen
- Title size (tabs prefer smaller titles)

Summary - Accordion

- A UI Pattern of multiple collapsible sections
    - Can many sections be open
    - Which section(s) start open?

Summary - Process

- Implement in steps
- Verify before advancing
    - HTML structure
        - Base on semantics
    - Appearance plan
        - Define needs for HTML + CSS
    - Verify A11y
        - Keyboard and accessibility labels min
- Final CSS clean up
    - Colors, whitespace, borders
    - Hover effects

Summary - Implement

- CSS and JS
    - Build in cycles
        - Confirm each step
    - Manually force class states to confirm
- Implement state change handling last
    - You know the UI works already