



Responsive Development

WORKSHOP

Note

1. Ask questions
2. Mini challenge
3. Q & A



Slides + Code for Activities

tinyurl.com/rdw-2025

Some time ago...

Developers just had
to solve problems



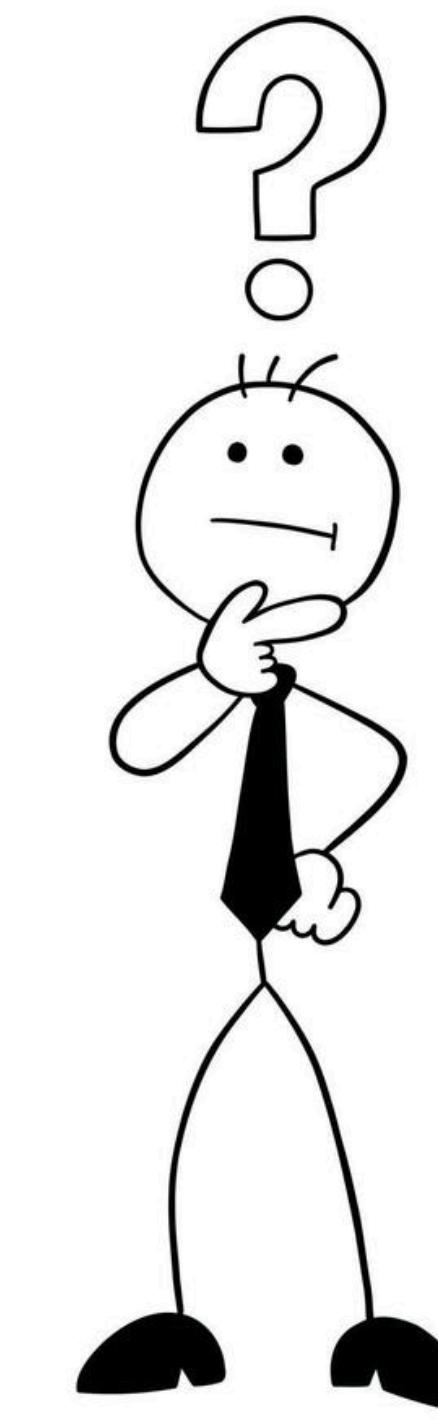
***laptop
*PCs**

Big screens





Now 2 Problems



Google responsive design

All Images Videos Forums Web News Books More Tools

AI Overview Learn more

Responsive design is a web design method that adjusts to the size of a user's device. It ensures that a website looks good on any device, from a desktop computer to a smartphone.

How it works

- Flexible layout: The design uses a fluid layout that adjusts to the screen size.
- Responsive images: Images scale to fit any browser size.
- Media queries: CSS rules that apply based on the device's screen width, height, and orientation.

Show more

What is Responsive Design? — updated 2025 | IxDF
Responsive design uses a fluid layout that adjusts to any screen size—and the content, images, and elements resize a...
The Interaction Design Foundation

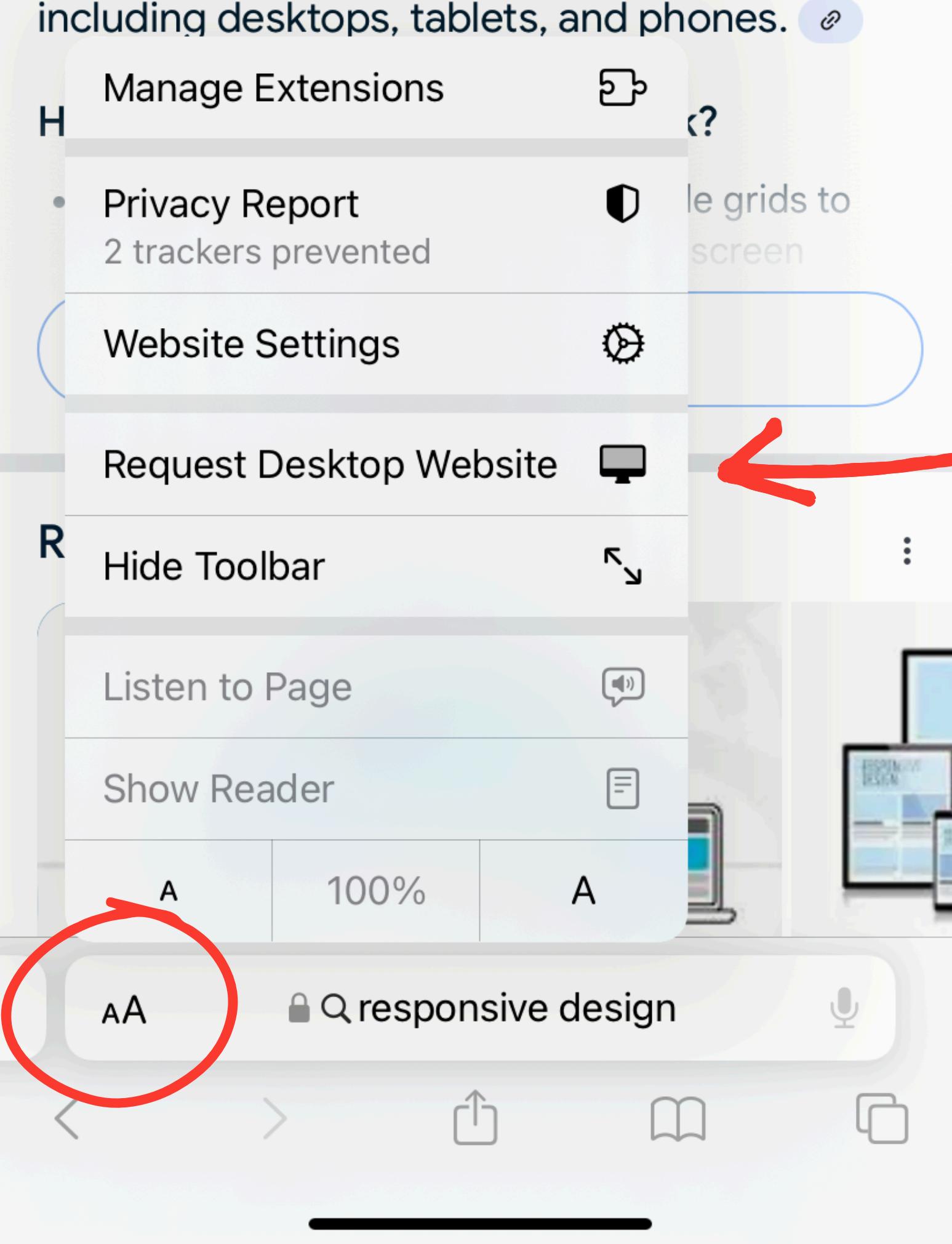
The guide to responsive web design in 2024 - Webflow
Jul 21, 2021 — media queries — the specific CSS function that receives information about size from the viewer's device to...
Webflow

Responsive web design, or RWD, is a design approach that addresses the range of devices and device sizes, enabling automatic adaption to the screen, whether the content is viewed on a tablet, phone, television, or watch. Dec 30, 2024

MDN Web Docs

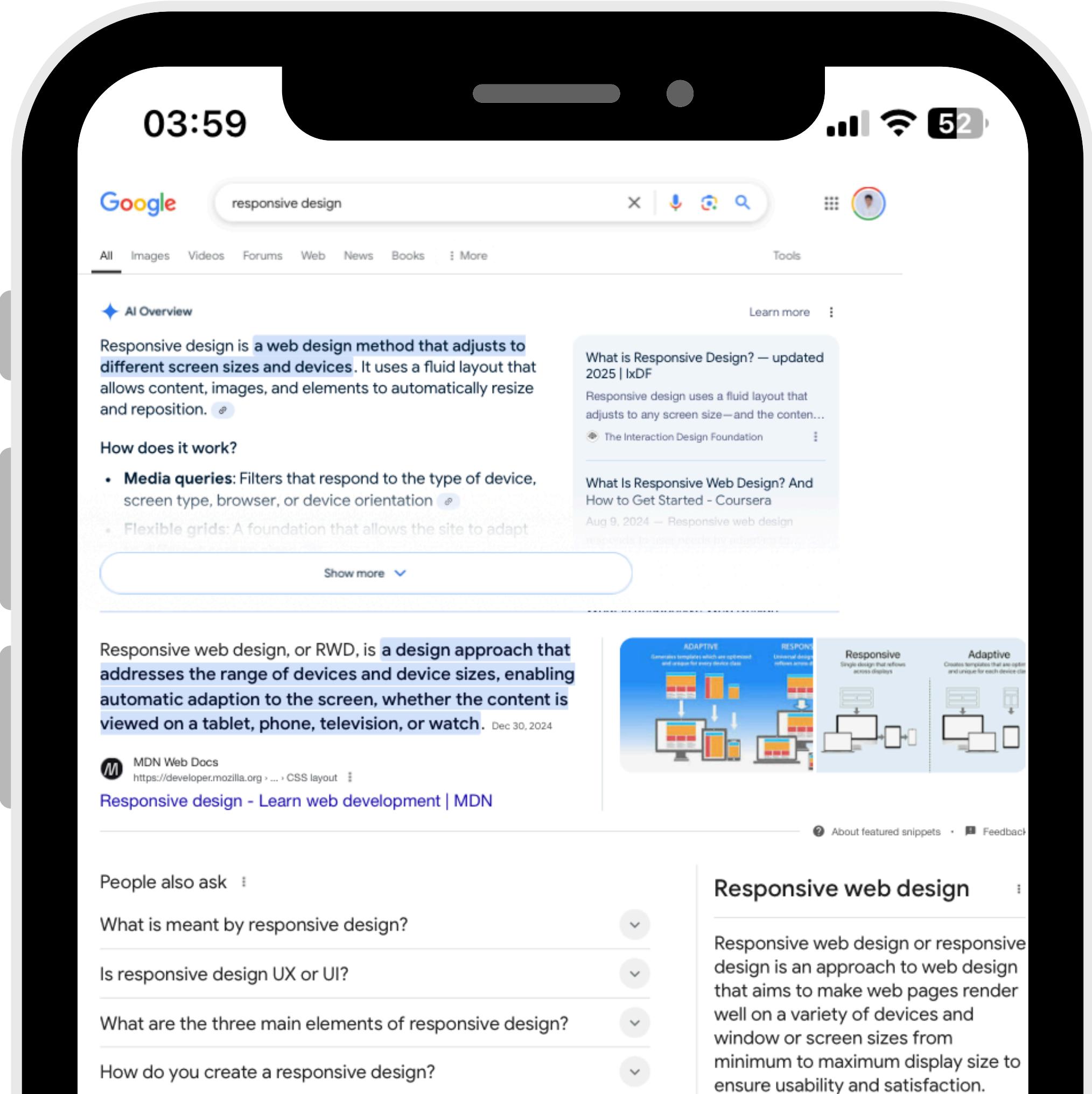
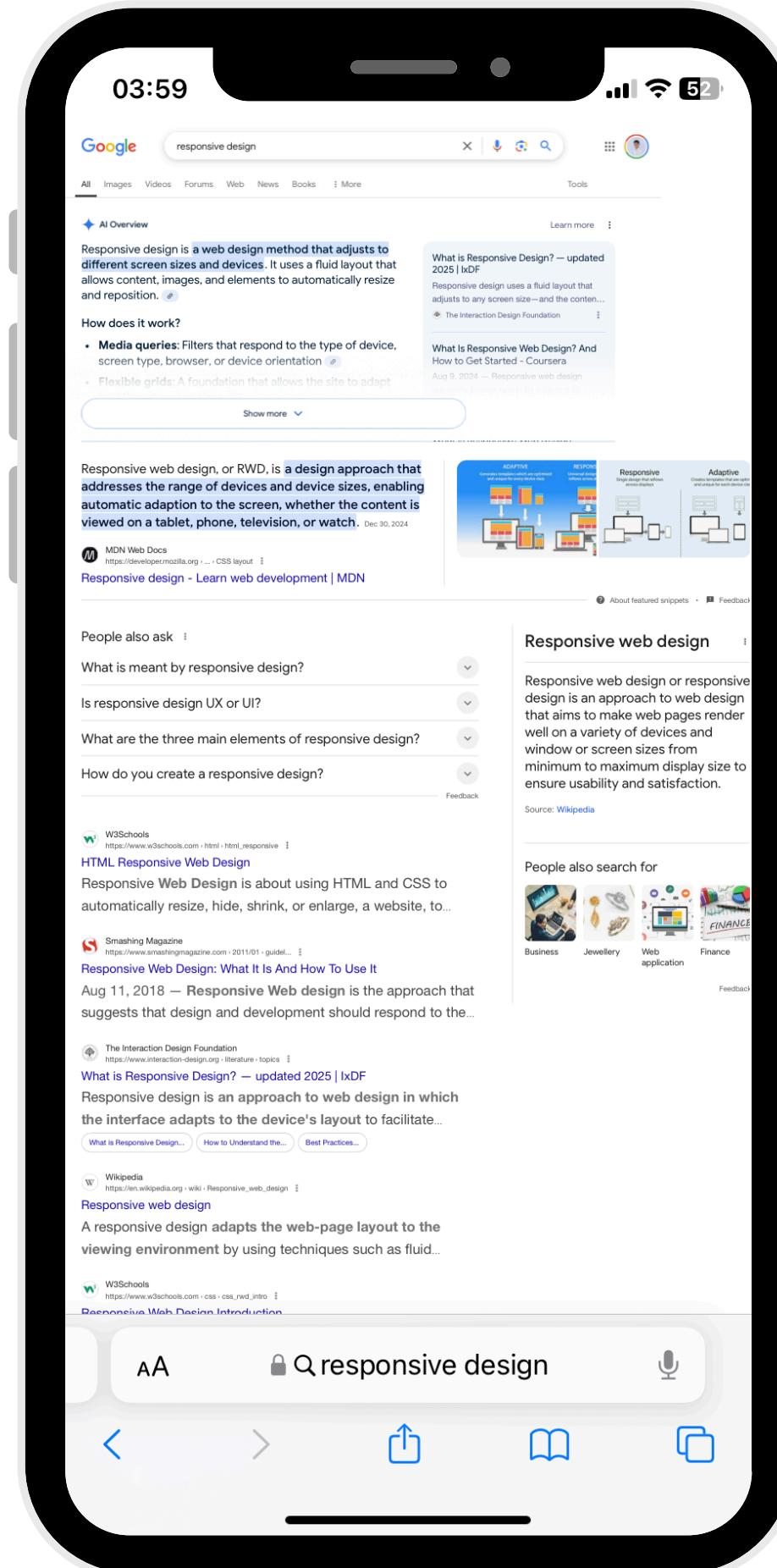
The diagram illustrates three design approaches: Adaptive, Responsive, and Adaptive. Adaptive design (left) generates unique templates for each device class. Responsive design (middle) creates a single design that refows across displays. Adaptive design (right) creates templates optimized for each device class.

including desktops, tablets, and phones.



Quick Activity

Request desktop website



Responsive Design

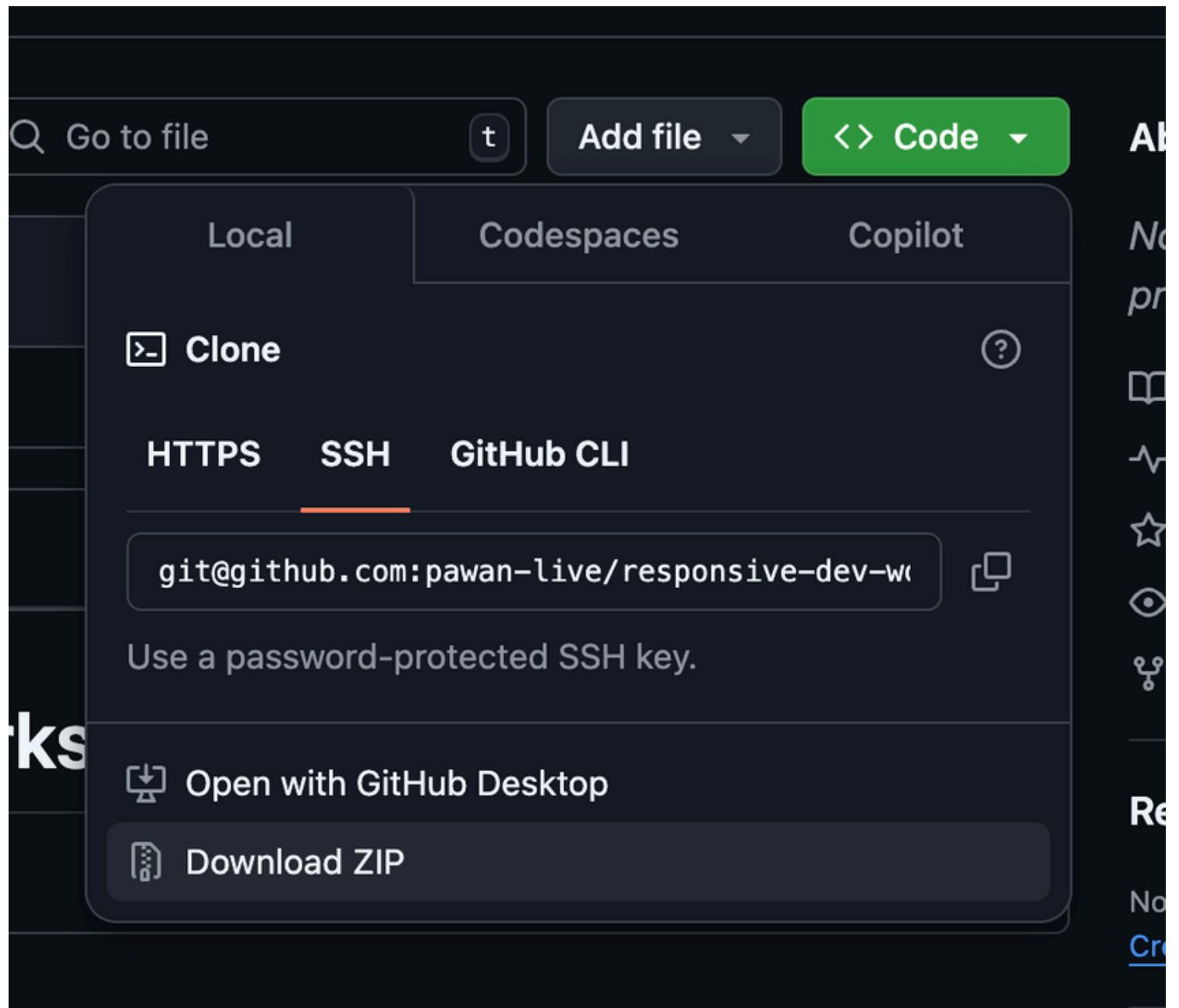
The image shows three iPhone screens side-by-side, each displaying a different website optimized for mobile devices.

- Google Search:** The search bar shows "responsive design". Below it, a snippet from a search result about responsive design is highlighted in blue. The snippet reads: "Responsive design is a web design method that adjusts to the size of the screen. It allows websites to work on a variety of devices, including desktops, tablets, and smartphones." A "Show more" button is visible below the snippet.
- YouTube App:** The app interface shows the "Trending" section. It features a large video thumbnail for "OFFICIAL TEASER" featuring Ajith Kumar. Below the thumbnail, the video title is "Good Bad Ugly Tamil Teaser | Ajith Kumar | Trisha | Adhik Ravichandran | Mythri Movie...". The video was uploaded by "Mythri Movie Makers" and has 35M views. The "Films" tab is selected at the bottom of the screen.
- Wikipedia:** The homepage displays statistics for various language editions: English (6,952,000+ articles), 日本語 (1,448,000+ 記事), Русский (2 024 000+ статей), Deutsch (2,986,000+ Artikel), Español (2,008,000+ artículos), Français (2 663 000+ articles), Italiano (1,903,000+ voci), 中文 (1,462,000+ 条目 / 條目), and فارسی (+1,۰۲۷,...). A "Read Wikipedia in your language" button is present. The footer notes that Wikipedia is hosted by the Wikimedia Foundation.

Code for Activities

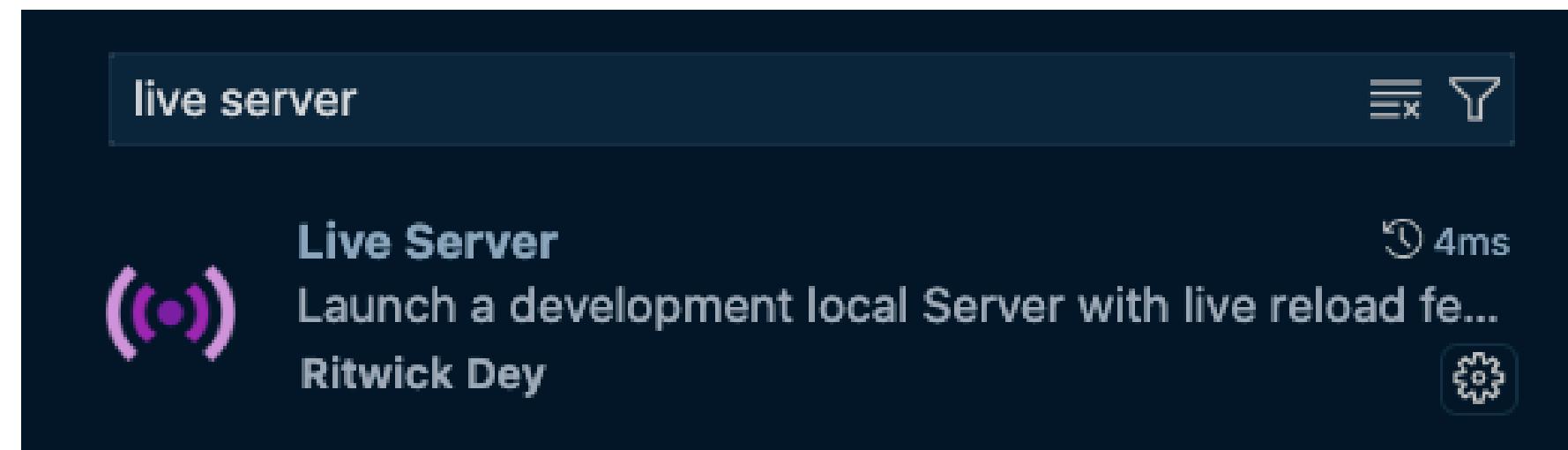
tinyurl.com/rdw-2025

1. Clone or download the code



2. Install Live Server

Extensions > Live Server



Right click on html file >
Open with live server

Core Concepts

Fixed vs. Fluid Analogy

Fixed = Rigid glass cup

Fluid = Water balloon



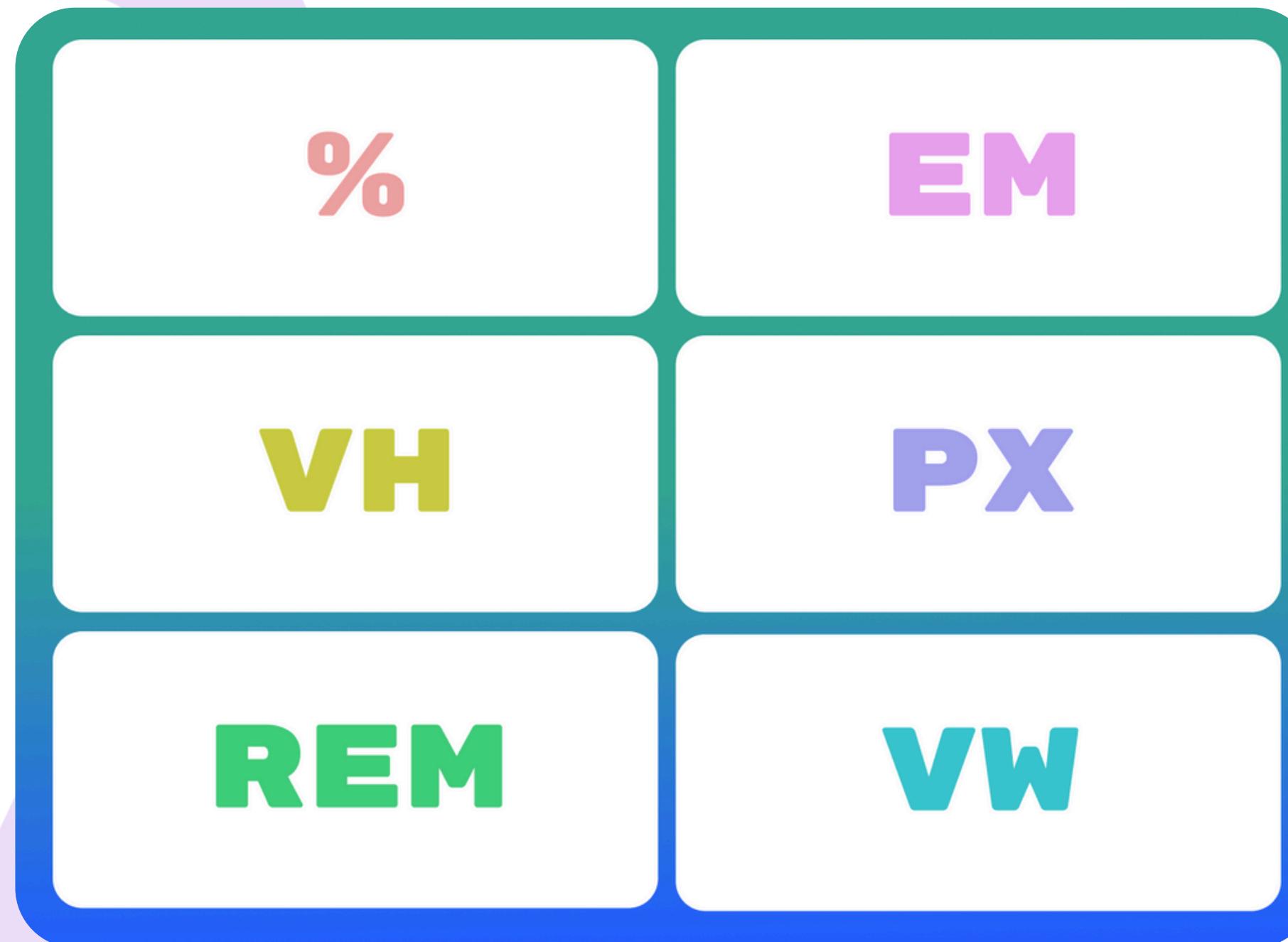
Code demo

```
.fixed {  
    width: 1200px;  
    background-color: #f1e613;  
}  
  
.fluid {  
    max-width: 1200px;  
    width: 90%;  
    background-color: #28afe0;  
}
```



Codelimage

Units Matter!



How
many
do you
know?

Units Matter!

% - Percentage

vw/vh - Viewport width/height

px - Fixed size

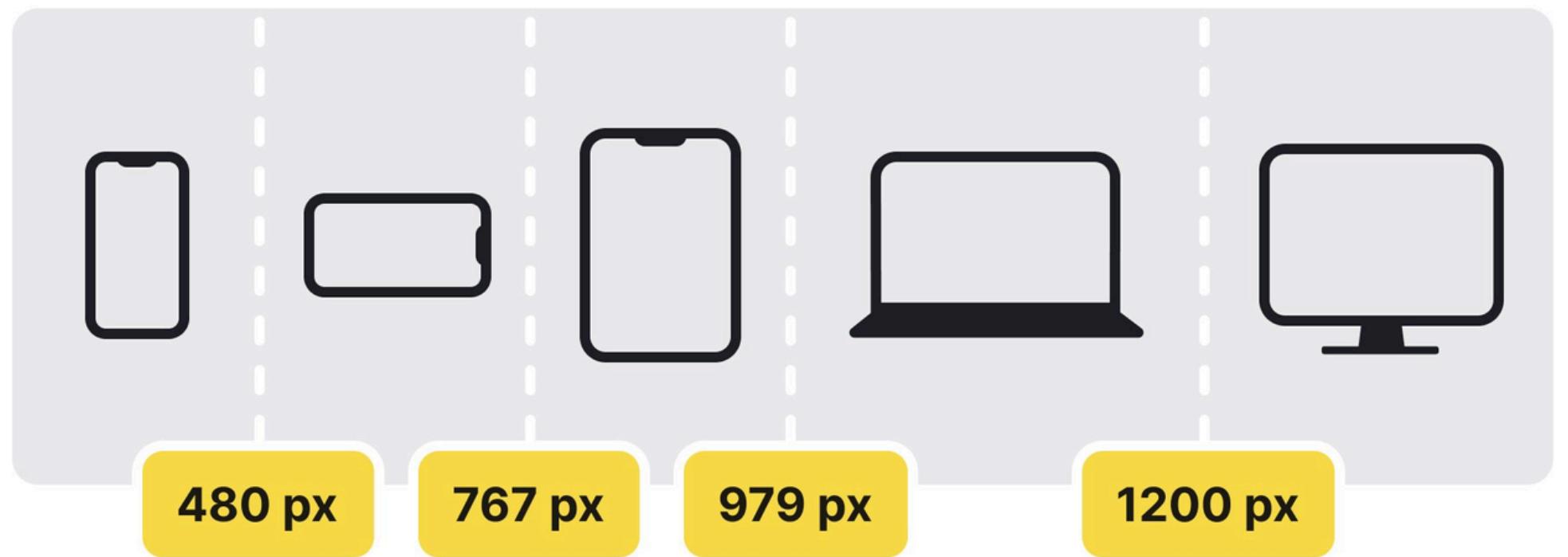
rem - Root element size (default 16px)

em - Relative to the font size of the parent element

Media Queries

What is a **breakpoint**?

Specific screen width where
your website's layout changes
to better fit different devices.



Media Queries

Syntax

```
@media (max-width: 768px) {  
  .container { padding: 10px; }  
}
```

“When the screen width is 768px or less, reduce the container’s padding to 10px.”

(Applies styles when screen width \leq 768px)

Challenge Time

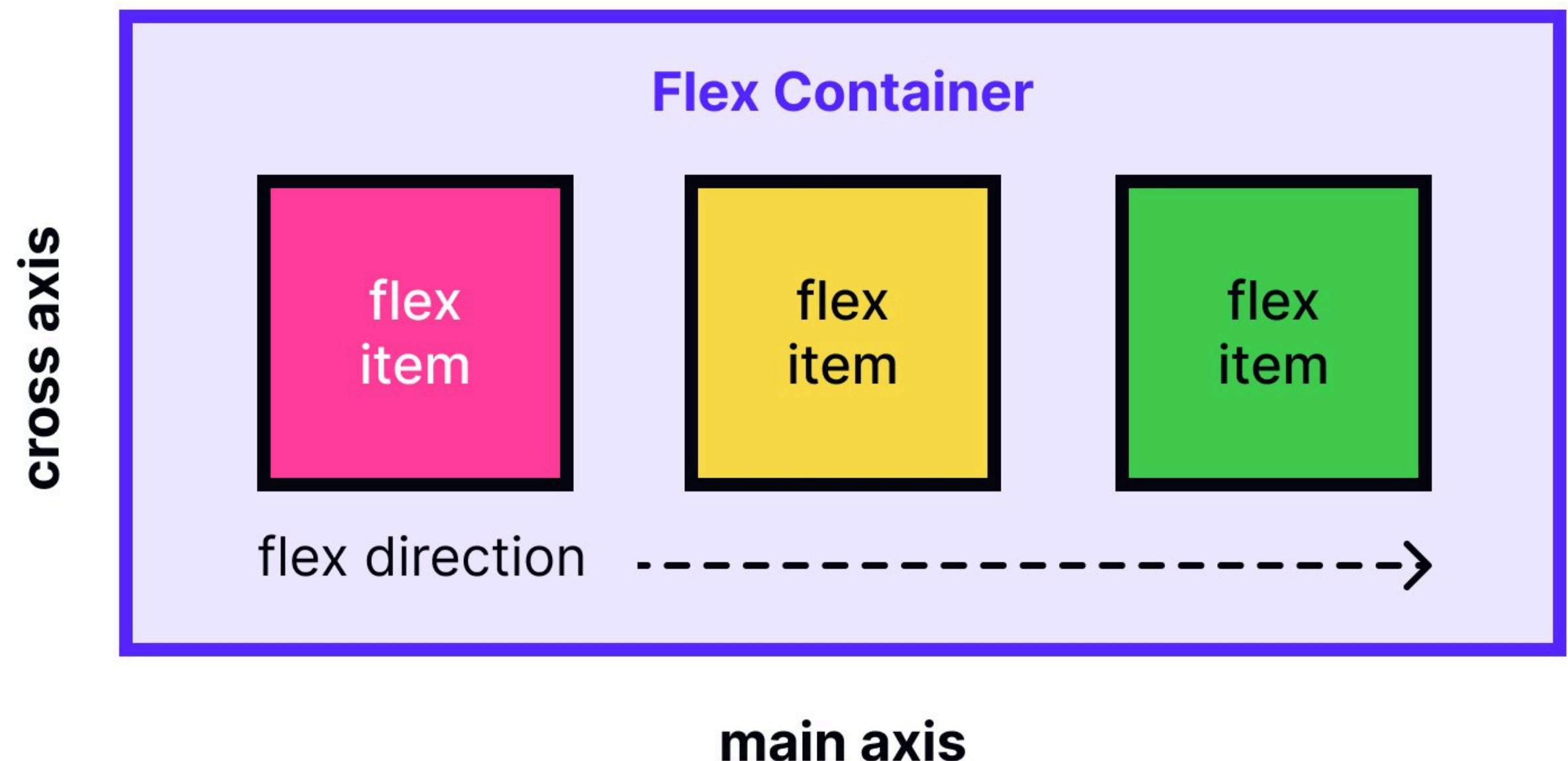
</challenges/mini-challenge>

1. Add a media query to change the background to *lightpink* on screens $\leq 768\text{px}$.
2. Add another media query to increase padding to 40px on screens $\geq 1024\text{px}$.

Flexbox

One-dimensional layout model for distributing space between items

Has many alignment properties



Using Flexbox

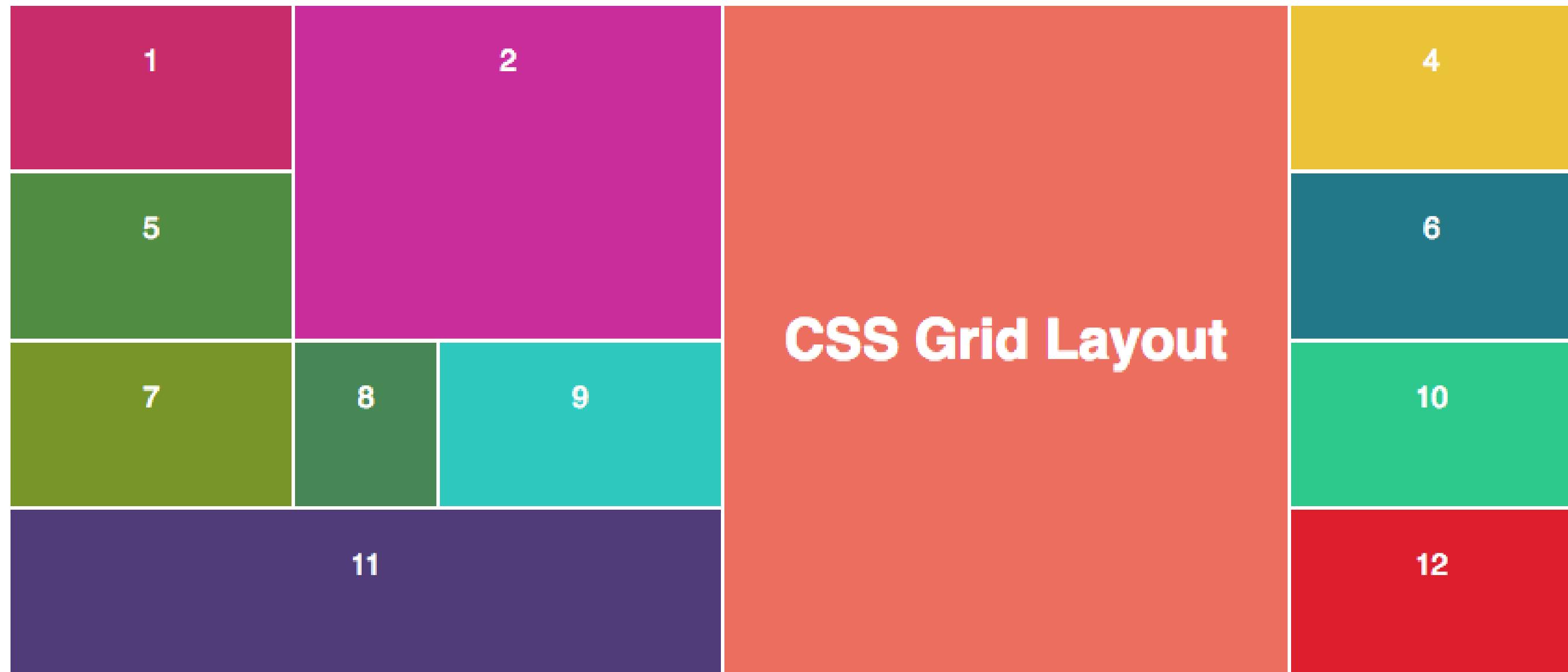
```
.container {  
  display: flex;  
  flex-direction: column;  
}
```

For reference

[https://developer.mozilla.org/en-US/docs/Web/CSS/CSS flexible box layout/Basic concepts of flexbox](https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_flexible_box_layout/Basic_concepts_of_flexbox)

CSS Grid

Two-dimensional grid-based layout system



Final Challenge

</challenges/final-challenge>



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Session conducted by Pawan Senpura (<https://www.linkedin.com/in/pawan-senpura/>)

Theme design by Senith Udara | SESC.