Week 2: Responsive design

Slides: `slides/01_responsive.pdf`
Time: **50 minutes** (Tune In **5** / Activity **35** / Reflection **10**)

Get this instruction:
https://github.com/ruhendrawan/cs1520_recitation

How to work today

- Work in pairs or alone
  - If in pairs: work with your peer on the first and last part
  - If alone: self reflect and write down on the worksheet
- You do not need a grammar check
- Don't overcorrect
- Write like you're saying it out loud

Reflection and Submission

Submit in the google form:
https://forms.gle/tYEtKjJunM1wb2we6

You need to submit the zip file if you're working alone, otherwise just fill in the form.

Upload zip files named as <PITT ID>-<week>.zip, e.g. `rah225-02.zip`, containing:

▶ This worksheet
▶ `page.html` (or any files related to your work)

Part 1 — Tune In (5 minutes)

Pairs: talk in turns. Max **1 minute** per person before switching so everyone gets a chance to talk.

Working alone? Download the worksheet here and write your responses there: https://github.com/ruhendrawan/cs1520_recitation/blob/main/recitations/02-responsive-design-worksheet.md

Pick **1–3 concepts** from this week's lecture and explain them in your own words (fast + messy is fine).

Concept ideas (pick any 1–3):

▶ Visual viewport vs layout viewport
▶ CSS pixels (when a pixel isn't a pixel)
▶ The `<meta name="viewport" ...>` tag (why it exists, what it changes)
▶ CSS media queries (`min-width`, `max-width`, `orientation`)
▶ "Use relative sizes" + "breakpoints" (mobile-first thinking)

Part 1 — Starter questions

▶ What is it (in one sentence)?
▶ Why do we need it on phones vs laptops?
▶ What problem does it solve?
▶ What would break if we *didn't* use it?
▶ Where would you use it in a real app/site you care about?

Part 2 — Activity (35 minutes)

Do **one** of the three tracks below (or split into groups and compare results at the end).

▶ Track A — Follow-along (guided)
▶ Track B — Challenge
▶ Track C — Choose your own

Track A — Follow along and build a page

Choose **Option 1** or **Option 2**.

Option 1: Beginner in HTML CSS

1. Your first website
2. Creating the content
3. Styling the content

▶ Finding color, images, and fonts

Option 2: Understand the basics of HTML and CSS

1. Responsive design (MDN Learn)
2. Media queries (MDN Learn)

Track A — Checkpoints

- ▶ You built a page (HTML + CSS) and can show it in the browser
- ▶ You changed something and saw the browser update (small win)
- ▶ If you did Option 2: you can explain one media query you used (in plain language)

Track B — Challenge (pick one)

1) Responsive "student dashboard"
2) No-scroll mobile page
3) Breakpoint story

Track B — 1) Responsive "student dashboard"

▶ Goal: Build a single-page dashboard layout that feels good on phone + desktop
▶ Constraints:
  ▶ Use at least **2 breakpoints**
  ▶ Use at least **one relative unit** (%, rem, vw, etc.)
  ▶ Navigation changes layout across breakpoints
▶ Stretch:
  ▶ Add `orientation` media query to improve landscape mode

Track B — 2) No-scroll mobile page

- Goal: Make a landing page that never causes horizontal scrolling on mobile
- Constraints:
  - Test at very narrow width (like 320px)
  - Images/cards scale down properly
  - No fixed-width containers that force overflow
- Stretch:
  - Add centered desktop layout with `max-width` + auto margins

Track B — 3) Breakpoint story

▶ Goal: Layout changes "story" at different widths (grid →
sidebar, etc.)
▶ Constraints:
  ▶ 3 layouts total: small / medium / large
  ▶ Each layout changes content emphasis
  ▶ Keep HTML the same; only CSS changes
▶ Stretch:
  ▶ Explain why your breakpoints are where they are (2–3
  sentences)

Track C — Choose your own

Use this week's topics: **relative sizes, breakpoints, viewport/meta viewport, and media queries**.

Examples:

▶ Personal homepage / portfolio grid
▶ Resume/CV page
▶ Study tracker (today/this week/done)
▶ Budget tracker dashboard
▶ Event flyer page
▶ "Link hub" page for online presence

Definition of done:

▶ Viewport meta tag used
▶ 2+ media queries
▶ Relative sizing used (%, rem, max-width, etc.)
▶ Readable on narrow window (no horizontal scrolling)
▶ You can explain what changes at each breakpoint and why

Part 3 — Reflection (10 minutes)

Pairs: talk in turns. Max **1 minute** per person before switching so everyone gets a chance to talk.

Working alone? Download the worksheet here and write your responses there: https://github.com/ruhendrawan/cs1520_recitation/blob/main/recitations/02-responsive-design-worksheet.md

A) What you did

▶ Quick checklist is fine, no overcorrection needed

B) Connect it back (prior lecture)

Prior lecture idea to connect: **HTML metadata + the <meta> tag**

▶ What is an HTML <meta> tag for?
▶ How does the viewport meta tag change what the browser does on mobile?
▶ How did it affect your work today?

If you're stuck

▶ Which screen size are you targeting first (smallest)?
▶ Are you using any fixed widths that force overflow?
▶ Did you include the viewport meta tag?
▶ What is each breakpoint trying to improve (readability, spacing, layout)?