



香港中文大學  
The Chinese University of Hong Kong

# RENDERING AND UI/UX

CSCI2720 2022-23 Term 1

*Building Web Applications*

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# OUTLINE

- Client vs. server rendering
- Template engine EJS
- UI and UX design
- Accessibility and other concerns

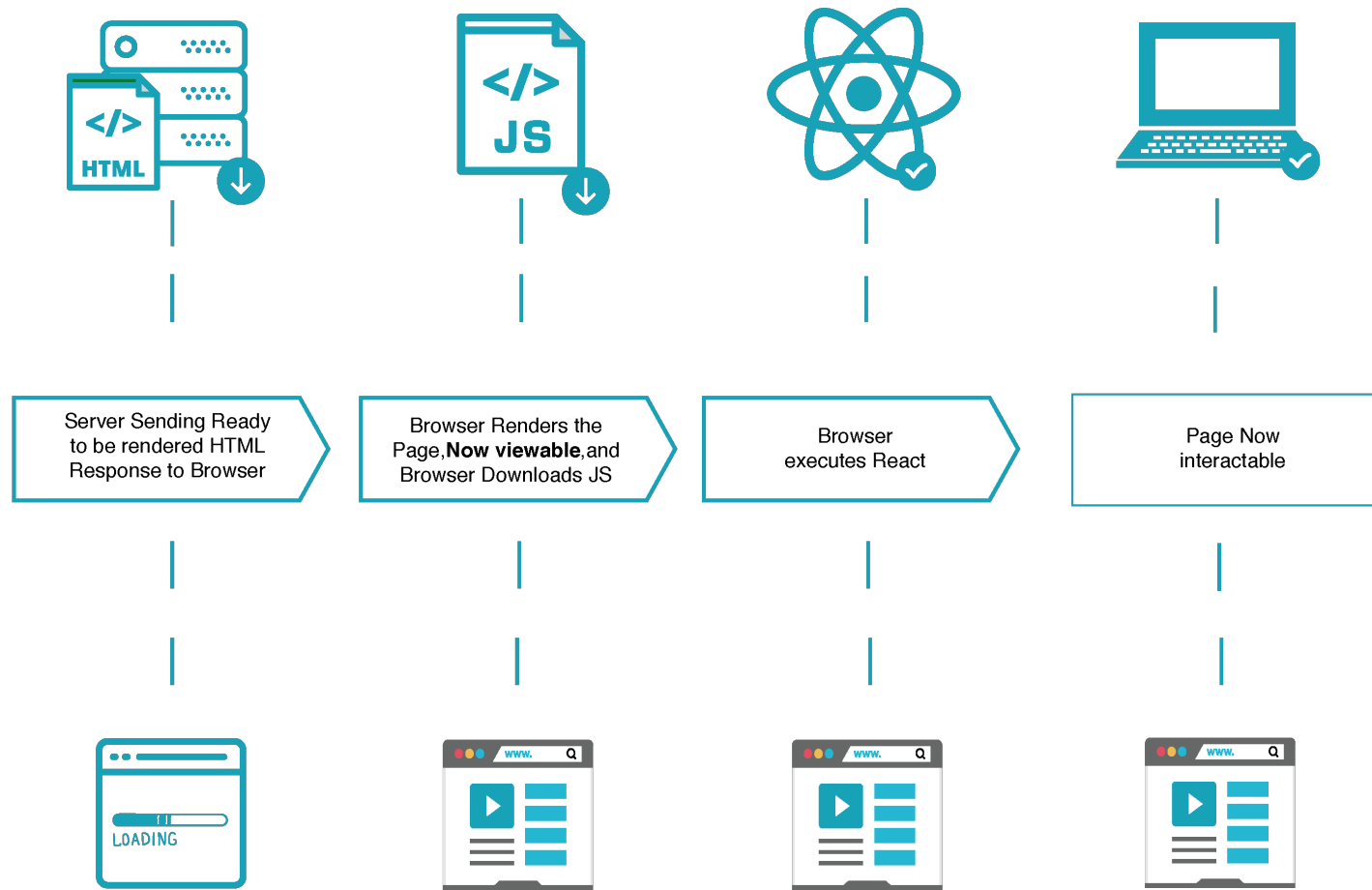
# CLIENT VS. SERVER RENDERING

- Client-side rendering (**CSR**)
  - The usual “default” way HTML pages are rendered
- Server-side rendering (**SSR**)
  - All dynamic elements, e.g., React JS, are rendered on the server, and plain HTML contents are delivered to the client
- Rehydration (CSR+SSR): to start reusing server-rendered HTML DOM tree and data
- See: <https://developers.google.com/web/updates/2019/02/rendering-on-the-web>

# CLIENT VS. SERVER RENDERING

- Thin server vs. thin client
  - Where should the code run?
- Better SEO
- Rendering, generators, template engines
  - React → *NextJs, GatsbyJs*
  - Vue → *NuxtJs, Gridsome*

# SERVER-SIDE RENDERING



See: <https://www.reactpwa.com/docs/en/feature-ssr.html>

# UI/UX

- Is the web developer a designer too?
  - Or is the web designer a developer too?
- UI – ***User Interface***
- UX – ***User Experience***
- They are different ideas, but people can rarely distinguish them apart
- See: <https://hackernoon.com/what-is-ui-ux-design-1f01e9dbbf02>

# UX DESIGN

- “What should be done?”
- User experience design
  - Analysis of competitors and customers
  - Prototyping, wireframing and testing of applications
  - Coordination with developers
- See: <https://www.cleveroad.com/blog/future-of-ux-design--trends-that-really-deserve-your-attention>

# UI DESIGN

- "How should this be done?"
- User interface design
  - How should contents be shown on various screen sizes?
  - How should menus be chosen?
  - How should users answer questions?



- See: <https://uxdesign.cc/2022-ui-design-trends-guide-22ddc386557b>



# DON'T MAKE ME THINK!

- Keep it simple and intuitive
  - People mainly use mobile devices to browser the web
  - Impatience, slow connection, multitasking, forgetfulness, ...
  - Make your points in an eye-catching way, precise and concise
- See: <https://www.designforfounders.com/web-app-ux/>

# ACCESSIBILITY

- People may have disabilities
  - Colorblindness, reading comprehension difficulties, visual/audio/physical impairment
- Devices may be insufficient
  - Network bandwidth, outdoor contrast, operating system
- Be considerate with UI/UX design
- See: <https://uxdesign.cc/designing-for-accessibility-is-not-that-hard-c04cc4779d94>

# TOOLS

- App templates
- Node.js template engines
- UI frameworks
- Typography
- Glyphs / Icons → *Glyphicons*



A Comprehensive Guide to Mobile App Design

<https://www.smashingmagazine.com/2018/02/comprehensive-guide-to-mobile-app-design/>

The Tried and True Laws of UX

<https://uxplanet.org/the-tried-and-true-laws-of-ux-with-infographic-314817e1dbd8>

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