CS314 Software Engineering
User Experience

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Web application evolution

• Static server pages
• Active server pages
• Mobile server pages
• Single page applications
Static server pages

browser

http://www.server/page

http server

*.html
*.jpg

Active server pages

Browser

http://www.server/page

http server

asp
php
...

*.html
*.asp
*.php
*.css
*.jpg
Mobile

Browser

http://m.server/page

http://www.server/page

http server
asp
php
...

*.html
*.js
*.asp
*.php
*.css
*.jpg

Single page application

Browser

Javascript

http://www.server/app

http://www.server/app

html
js/jsx
...

*.css
*.html
*.js/*.jsx
*.jpg/...
User Experience Best Practices

• Know your users
• Your users are not like you
• All users are not the same
• Let the user take control
• Content over chrome
• Don’t drown the user in data
• Innovate with intention
• Consistency across application
• Tells a story and use metaphors
• There are no user errors
• Think about the entire user experience

Mobile User Experience

• Consider new use cases
• Think mobile first
• A desktop experience is not a mobile experience
• Selection is preferred over input controls
• New device sizes
• Appropriately sized tap targets
• New device capabilities
• Gestures
• No hover
Web Content Accessibility Guidelines

• Makes content accessible to a wider range of people with disabilities
  – blindness and low vision
  – deafness and hearing loss
  – learning disabilities
  – cognitive limitations
  – limited movement
  – speech disabilities
  – photosensitivity

Application Considerations

• User Experience
  – phone/tablet with touch
  – proprietary (iOS, Android) vs standards (HTML5, Javascript)
  – tools for building user interfaces (React, Grommet, …)

• Client/Server
  – REST with HTTP, node.js, ..
  – security, …