Design Thinking for Developers

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What do ~~users~~ humans need?

(examples)

- mental models
  - ???
  - JAVASCRIPT
    - [ ] + [ ]
    - { } + { }
    - [ ] + [ ]
    - { } + { }
- consistency
- limited memory load
  - CSS

```
display: flex;
flex-direction
flex: wrap
flex-flow
flex-grow
flex-shrink
flex-basis
flex
align-items
align-content
  flex-start
  flex-end
  center
  space-between
  space-around
  stretch
align-self
justify-content
order
```

- feedback

- error handling
  - hard to make
  - easy to recover from

Who is the ~~user~~ human?

- The World
- Company/Team
- Future You

Terms

- **Human-Centered Design**
- Design
  vs. Art
- Human
  vs. User
  - limited
  - "lazy"
  - has complicated memory
  - visual
  - requires a mental model

Goals

- Define design
  (and related terms)
- Show the benefits of design
  (and the costs of bad design)
- Share concrete applications
  (that will improve your career)

Who Am I?

(and why should you care?)

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- **designer**
- author
- developer
- composer
- entrepreneur
- etc.

What can I do??

Style

Naming

- examples
  - doThing()
    not thing!
  - isVisible
    (not negative!)
  - isInvisible = !isNotDisabled;
  - hasProperty
  - 4 * 5 * 8
    (no magic values!)
- accomplishes
  - mental load
  - consistency

Code Reviews

- User Advocates!

```
injectData( 5, 5, 100, true, 'int', 15,
105, 127, 0, 0, 0, 170, 1.8, false,
false, true, 'HUD' );
```

Test-Driven Development

(resistance is futile)

```
if ((len == NULL || len->length() == 0) && (title->Endwith("]") || title->Endwith(")")))
{
    title->RemoveChar(title->length());
    len = data->GetLocationsFor(title);
}
else if ((len == NULL || len->length() == 0) && title->length() > 0)
{
    while ( * title->Char(title->length()-1);
    if (title->length() == 0)
    {
        title->Append("]");
    }
    else
    {
        title->Append("]");
    }
    len = data->GetLocationsFor(title);
}
```

Why don't we design well?

- The Curse of Knowledge
- No User Advocate

What's a non-HCD world like?

real world

- WTF doors

- Norman doors

- VCRs
- git
  forgive me!
- ???

Resources

- The Design of Everyday Things
  Donald Norman
- Don't Make Me Think
  Steve Krug