Designing Interactive Systems I
Gestalt Laws, Information Content, Visibility, Affordances, and Signifiers
Lab 2

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Winter term 2019/2020

https://hci.ac/dis
Update: Short-term Memory

- Miller (1956): Estimated short-term memory to contain \(7\pm2\) chunks on average.
- In 2001, Cowen showed that this is actually \(4\pm1\) chunks
- For details, see https://doi.org/10.1017/S0140525X01003922
In-Class Exercise 1
Assignment 1: Fitts’ Law
Oliver’s Design  Krishna’s Design
Template-driven validation

To add validation to a template-driven form, you add the same validation attributes as you would with native HTML form validation. Angular uses directives to match these attributes with validator functions in the framework.

Every time the value of a form control changes, Angular runs validation and generates either a list of validation errors, which results in an INVALID status, or null, which results in a VALID status.

You can then inspect the control's state by exporting `ngModel` to a local template variable. The following example exports `ngModel` into a variable called `name`:

```
<template-hero-form-template-component.html (name)>

    <input id="name" name="name" class="form-control"
           required minlength="4" forbiddenName="bob"
           [(ngModel)]="hero.name" #name="ngModel">

    <div *ngIf="name.invalid && (name.dirty || name.touched"
          class="alert alert-danger">
        <div *ngIf="name.errors.required">
            Name is required.
        </div>
        <div *ngIf="name.errors.minlength">
            Name must be at least 4 characters long.
        </div>
        <div *ngIf="name.errors.forbiddenName">
            Name cannot be Bob.
        </div>
    </div>

</template-hero-form-template-component.html>
```
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In-Class Exercise 2: Affordances vs. Signifiers

- Find at least 5 examples each of affordances and signifiers in everyday objects
- E.g., think about kitchen appliances, electronics, workplace, etc.
- Affordances ‘afford’ a certain action
- Signifiers signal the affordance (how or where or what action needs to be done)
Assignment 2: Design Principles
Course Content for Week #3
Mappings, Constraints, and the Seven Stages of Actions
DO NOT TURN THIS LIGHT OFF!
How Do People Carry Out a Task?

• A letter or a number is displayed randomly

• User has to press A (left) or press L (right) accordingly

• Remember?
  • Perceive (perceptive processor)
  • Understand & Interpret (cognitive processor)
  • Perform (motor processor)
7 Stages of Action

1. Perceive

2. Interpret

3. 

4. 

5. 

6. 

7. Perform
What Next?

• For your Studio slot on **Wednesday (Oct. 23):**
  • Complete task 1 and bring one or more home appliance(s) you have chosen for task 2.

• By **next Monday (Oct. 28):**
  • Read chapters 1–3 from the Norman book. Please use the 2nd edition!
  • Submit your solution for A02 via RWTHmoodle **by 9 am.**