

CS 179

*& Useful!*

Design of Usable Interactive Systems

Krzysztof Gajos

# What you will learn in CS 179

- **Discover** and understand people's latent needs
- **Invent** and construct prototypes
- **Design** for people different than yourself
- **Evaluate** and refine your solutions
- **Build** mobile web applications
- **Teamwork**

What Will You Do?

# Observe





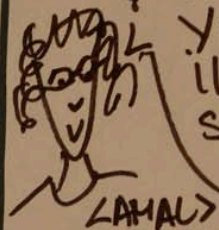


Fail Fast  
to Succeed  
Sooner



# Amal's guide to Storyboarding!

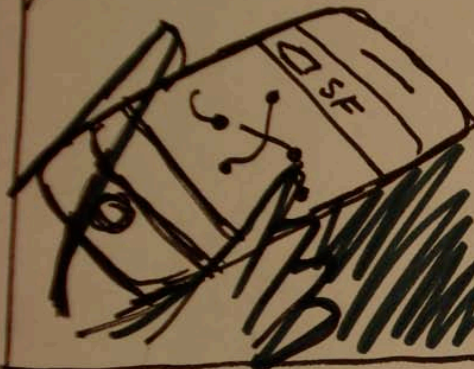
The main point of storyboarding is to understand how your product fits in w/ the world. You want to illustrate a scenario



<AMAL>

THE GIST

LET'S CHECK OUT PLACES IN SF...

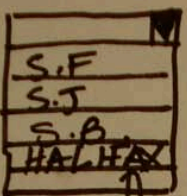


& SHOW INTERACTIONS



DEVELOP A SETTING

CITIES →

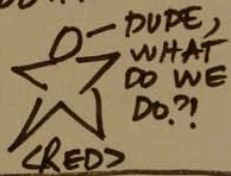


NO!

DON'T USE THIS TO ILLUSTRATE ALL THE UI FEATURES & COMPONENTS...\*

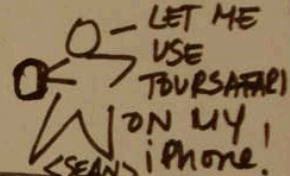
\*This is what paper prototyping is for!

RED & SEAN WERE BORED AFTER GOING TO THE BLUEGRASS FESTIVAL, & DECIDED TO FIND OUT WHAT ELSE THEY COULD DO...



DUDE, WHAT DO WE DO?!

<RED>



LET ME USE TOURSafari ON MY iPhone.

<SEAN>

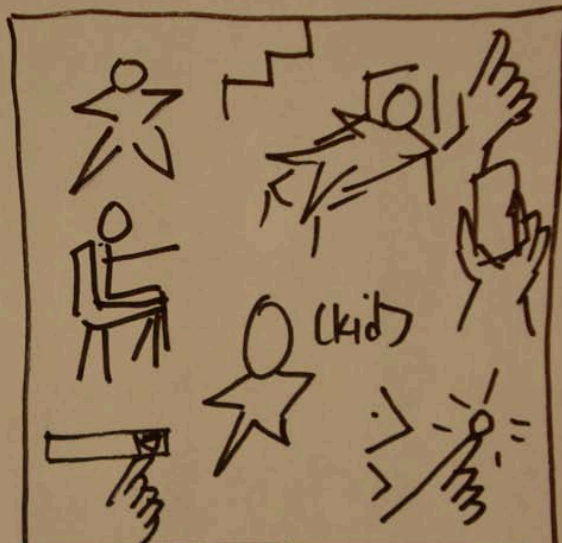
INSTEAD, SHOW WHY & WHEN features would be used

LET'S TRY OUT BURMESE SUPERSTAR. AMAL RATED IT, & IT SOUNDS COOL!



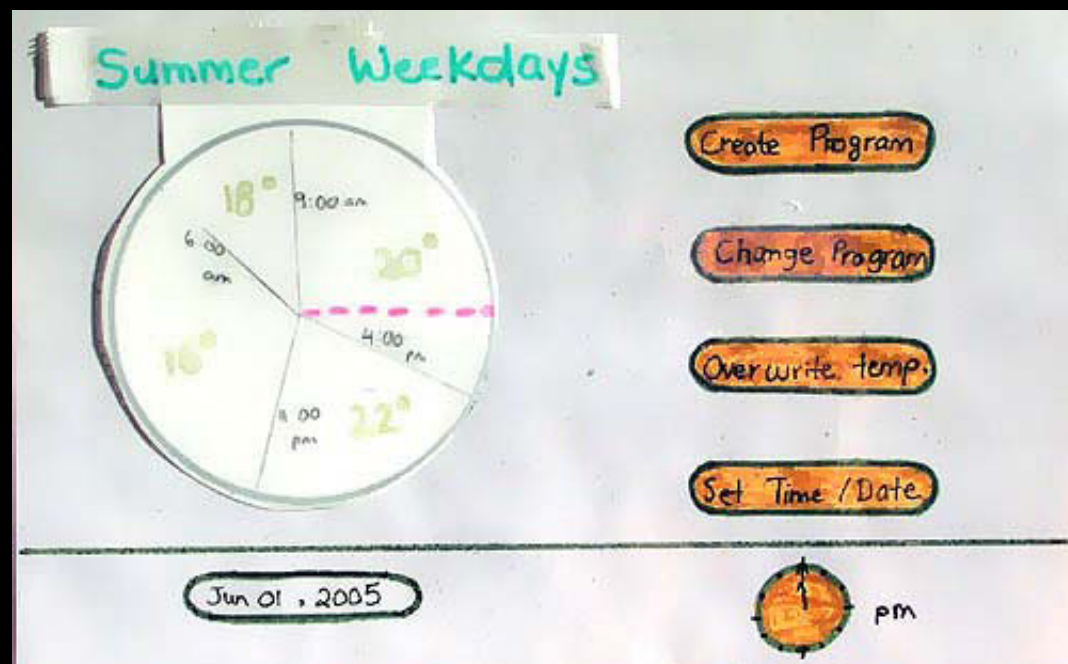
SURE!

& SHOW SATISFACTIONS



& FINALLY, BE CREATIVE! YOU DON'T NEED TO BE AN ARTIST TO GET A POINT ACROSS.





Program

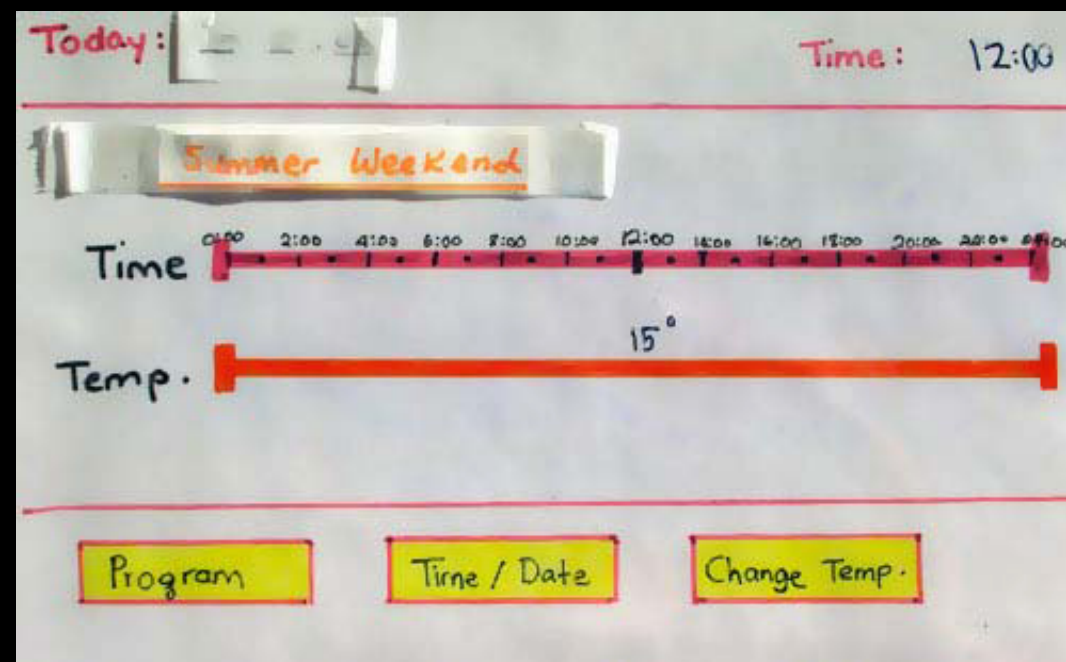
	from	to	temperature
Morning	<input type="text" value="7:00"/>	<input type="text" value="9:00"/>	<input type="text" value="15"/>
Day	<input type="text" value="9:00"/>	<input type="text" value="5:00"/>	<input type="text" value="15"/>
Evening	<input type="text" value="5:00"/>	<input type="text" value="12:00"/>	<input type="text" value="15"/>
Night	<input type="text" value="12:00"/>	<input type="text" value="7:00"/>	<input type="text" value="15"/>

---

Date

Time

Temperature



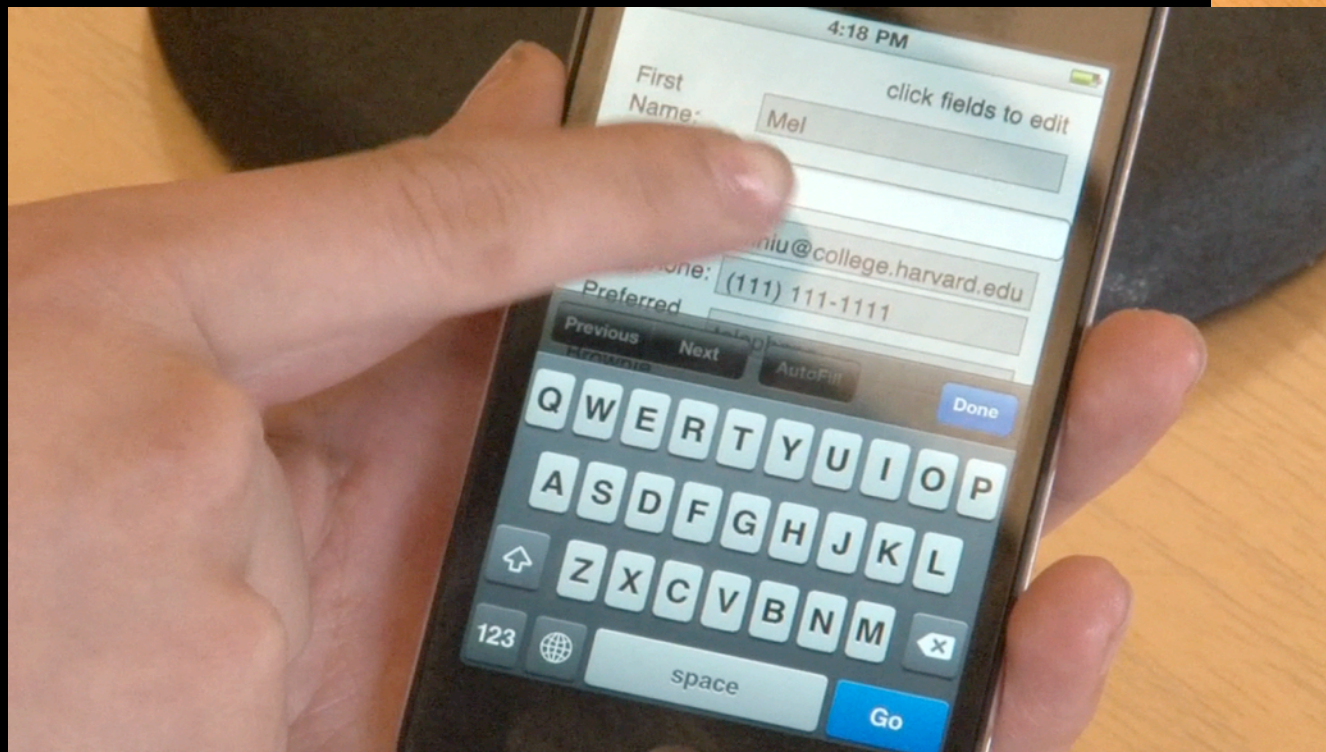
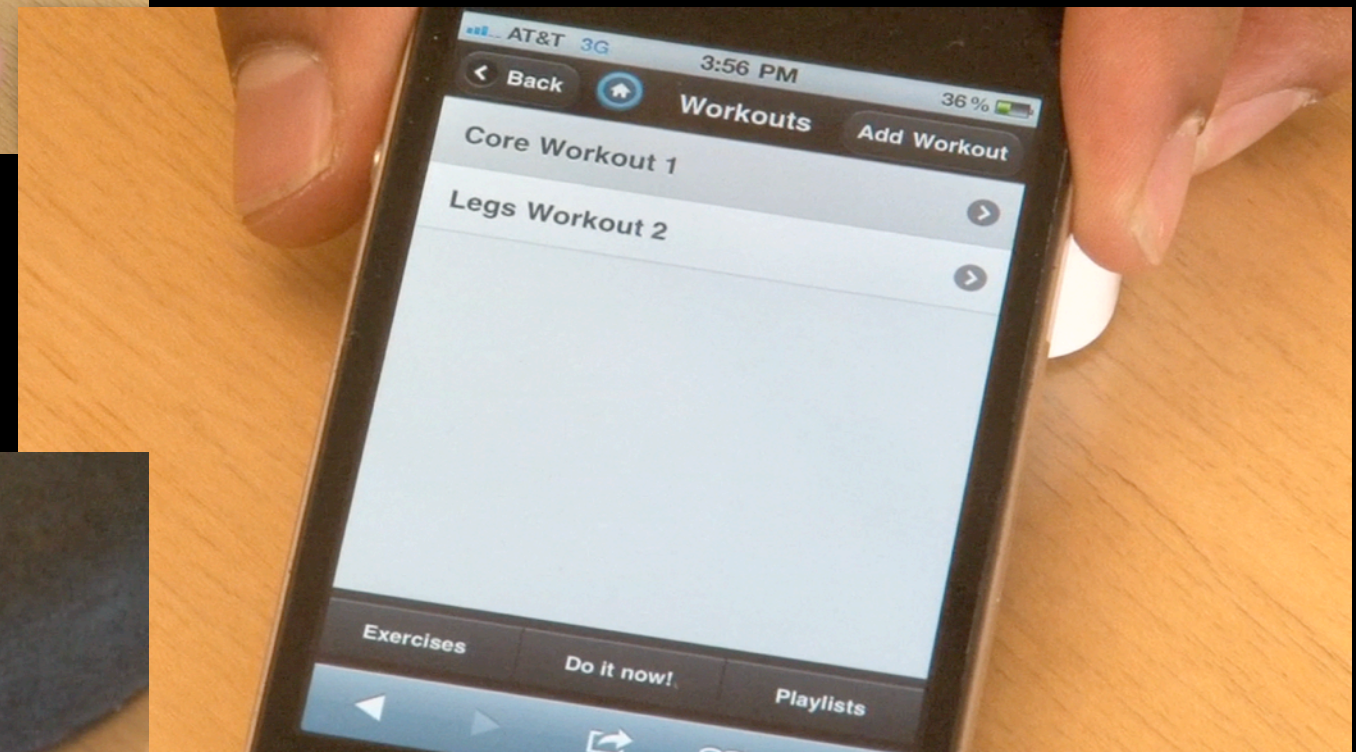
CS.179. Video Prototyping.



One Accurate  
Measurement Is  
Worth a Thousand  
Expert Opinions

Adm Grace Murray Hopper

# Build



# Mysteries Revealed in CS 179



TRY OUR FAMOUS  
LOBSTER  
STRUDEL







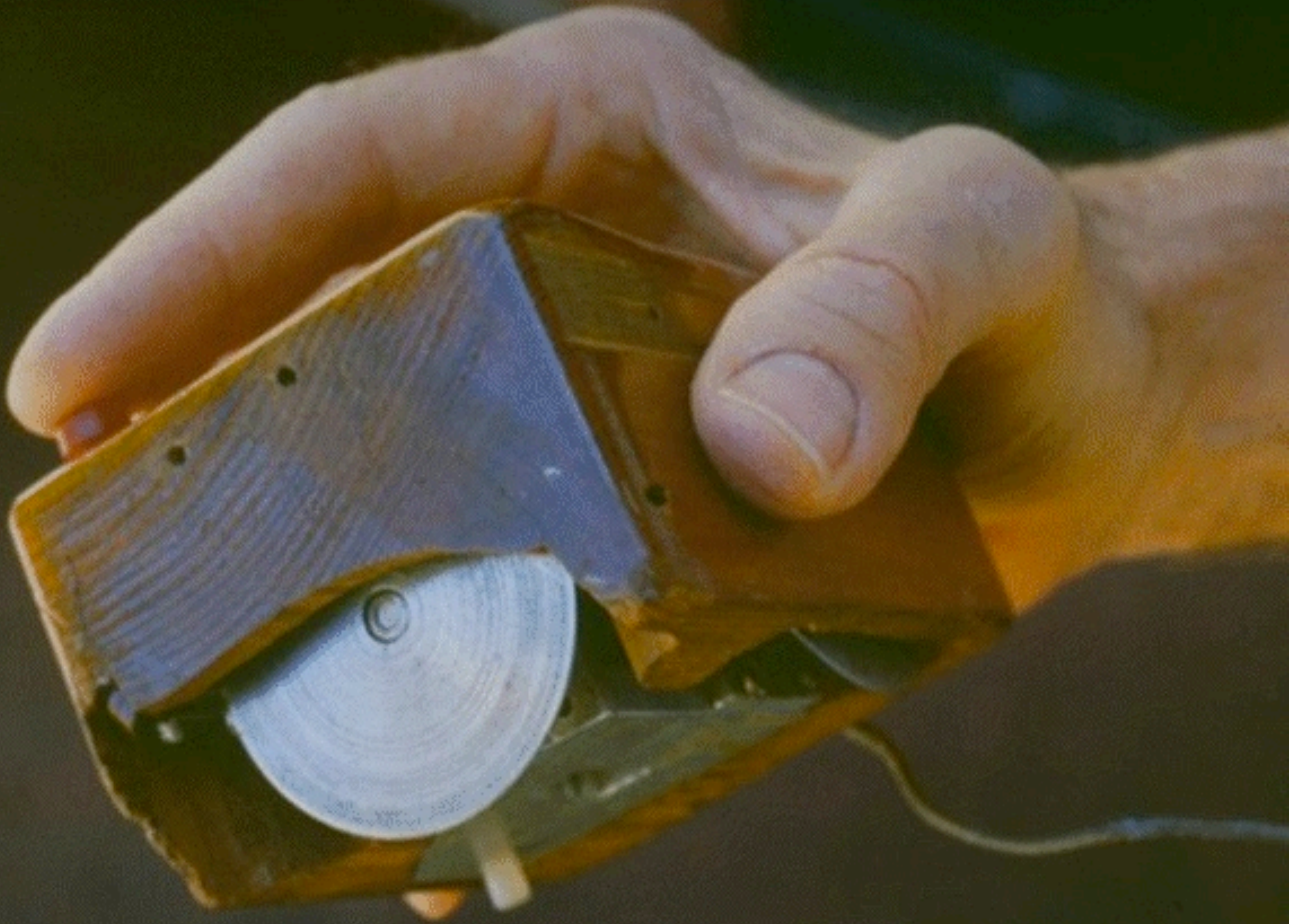
Execution



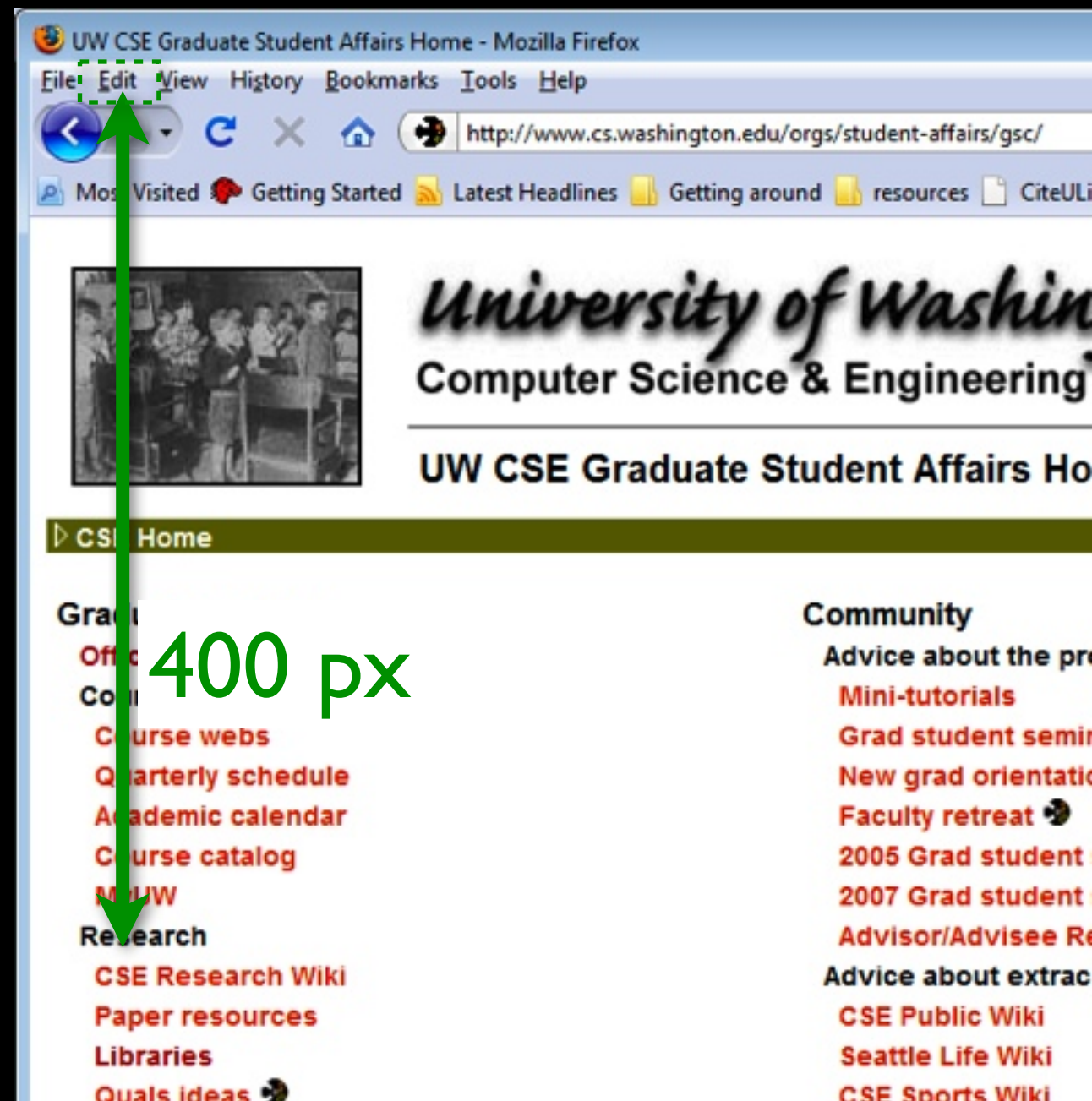
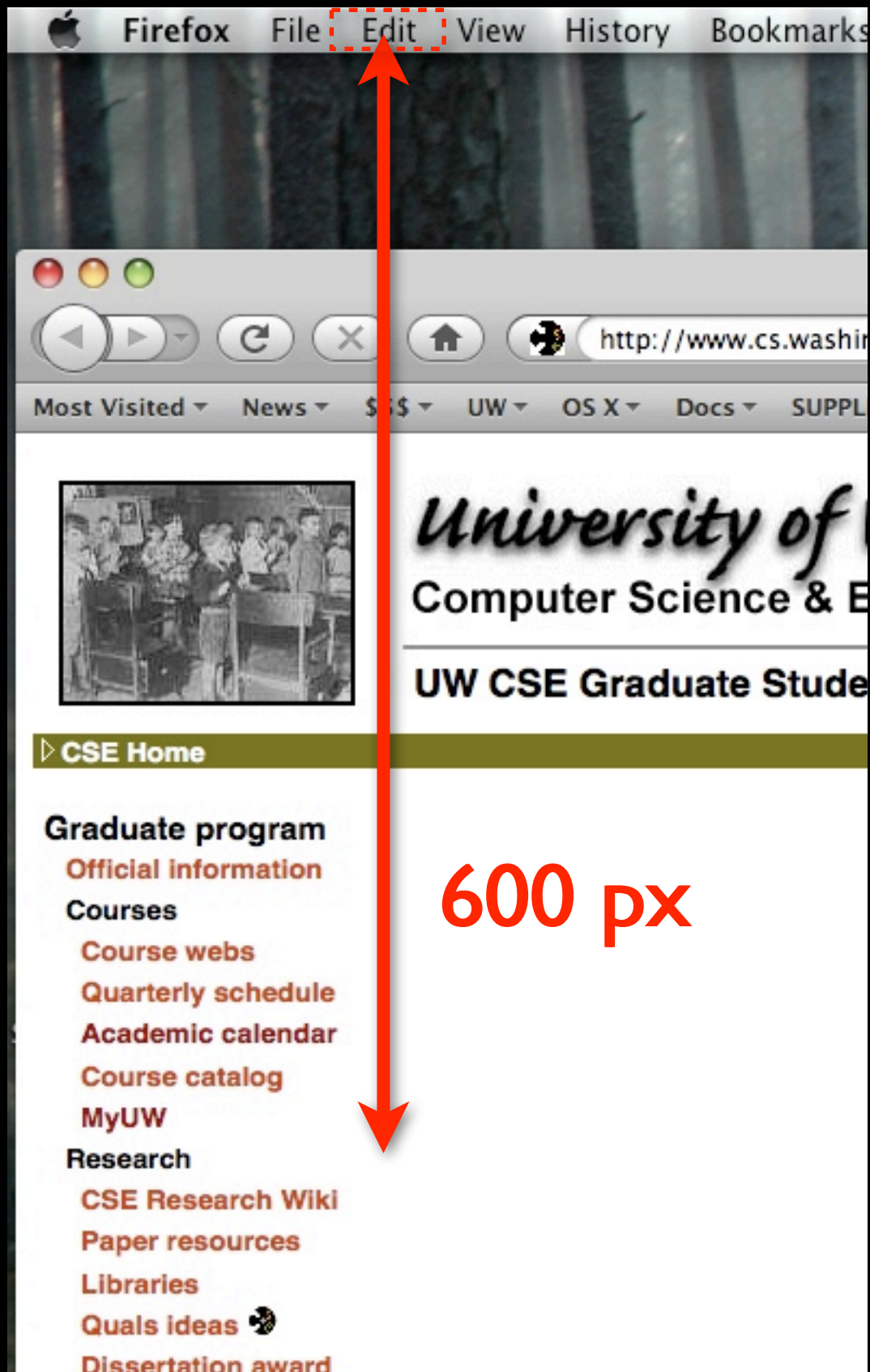
Evaluation

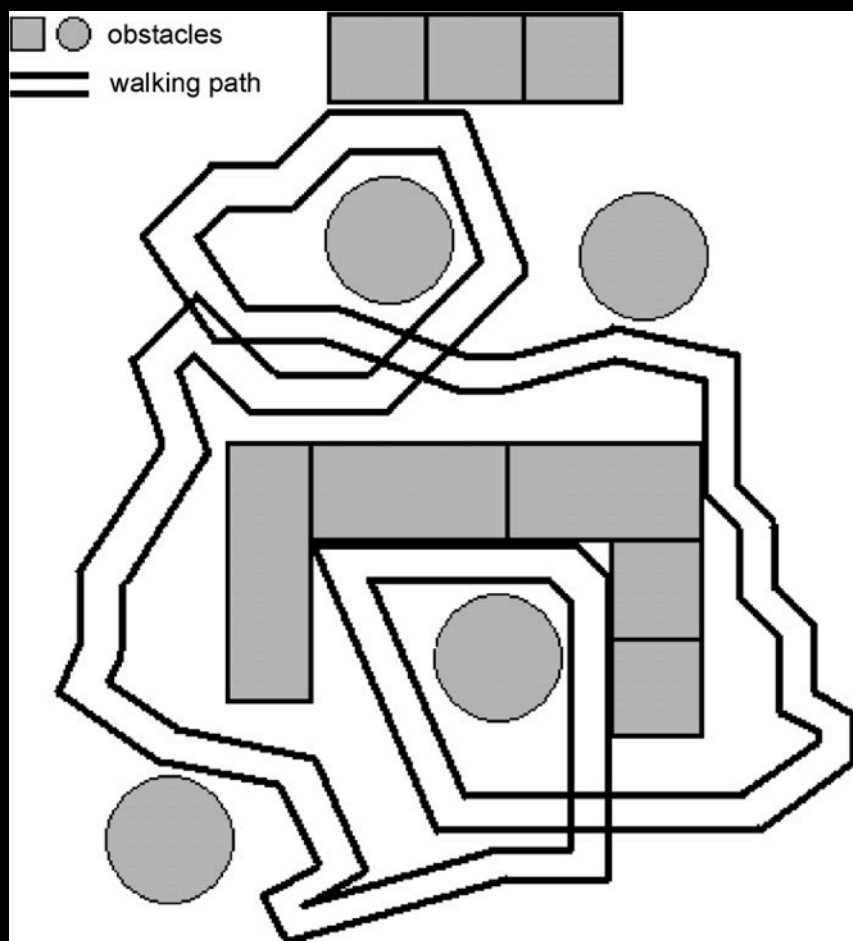








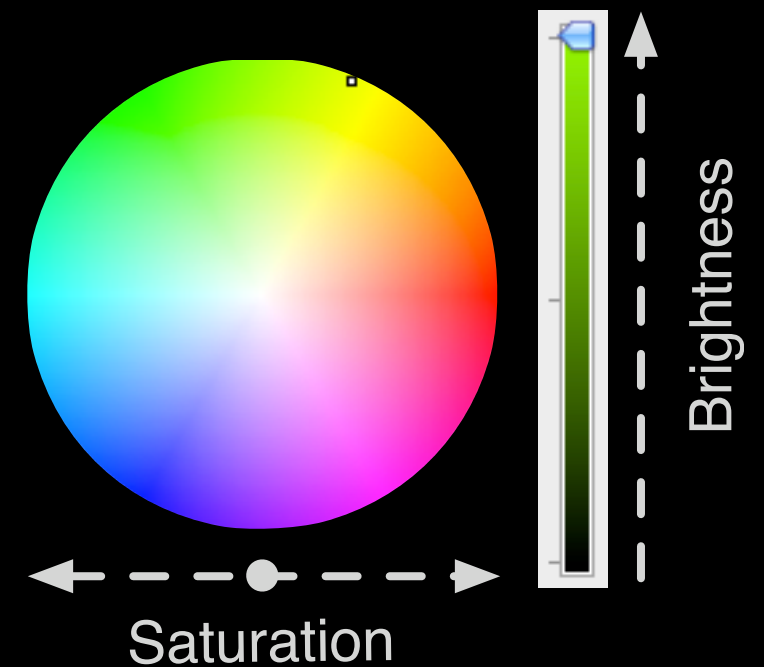






# Color

- **friendly and professional**
- **serious and professional**
- **exciting and dynamic**



# Progress Bars





# Microsoft Word

C# and Visual Studio Tools for Office

Soylent is a prototype crowdsourced word processing interface. It focuses on three main tasks: shortening the user's writing, proofreading [...]

shorten(text)

User selects text



Displayed to the user

Soylent, a prototype crowdsourced word processing interface, focuses on three tasks: shortening the user's writing, proofreading [...]

return(patches)

# Mechanical Turk

Javascript, Java and TurKit

## Find

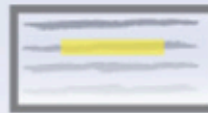
"Identify at least one area that can be shortened without changing the meaning of the paragraph."



Find overlapping areas (patches)

## Fix

"Edit the highlighted section to shorten its length without changing the meaning of the paragraph."



Soylent, a prototype...

Randomize order of suggestions

## Verify

"Choose at least one rewrite that has significant style errors in it. Choose at least one rewrite that significantly changes the meaning of the sentence."

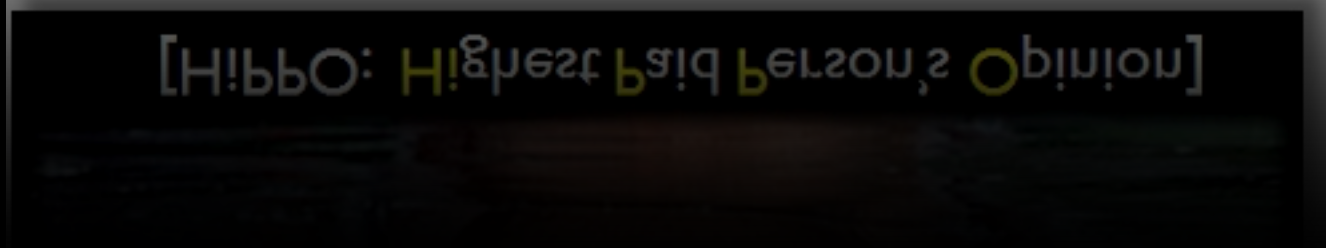
- ☐ Soylent ~~is,~~ a prototype...
- ☐ Soylent ~~is a~~ prototype...
- ☒ Soylent is a ~~prototype~~ test...



The image shows a screenshot of the Obama 2008 campaign website. At the top, there is a small circular logo with the word "OBAMA" inside, and below it, the word "OBAMA" in a larger, bold, sans-serif font. The main content area features a large, light blue background with the words "GET INVOLVED" in a large, white, sans-serif font. Below this text is a photograph of Barack Obama, smiling and looking to the right. The bottom section of the page is a white horizontal bar containing a "JOIN THE MOVEMENT" link on the left, followed by two input fields labeled "Email Address" and "Zip Code". To the right of these fields is a red "SIGN UP" button. Below the white bar is a dark blue footer with the text "REGISTERED BY CONSTITUTION. MONITORING." on the left, a small circular logo in the center, and "CONTINUE TO WEBSITE" on the right. Two white arrows point to the "SIGN UP" button: one from the right labeled "Media" and one from the right labeled "Button".

Baseline sign up rate: 8.26%

STANFORD  
UNIVERSITY



# Practicalities

- Prerequisites: CS 50
- Lectures T,Th 10-11:30am
- Studios on Fridays
- Weekly assignments (mostly in teams)

What is  
Computer  
Science?







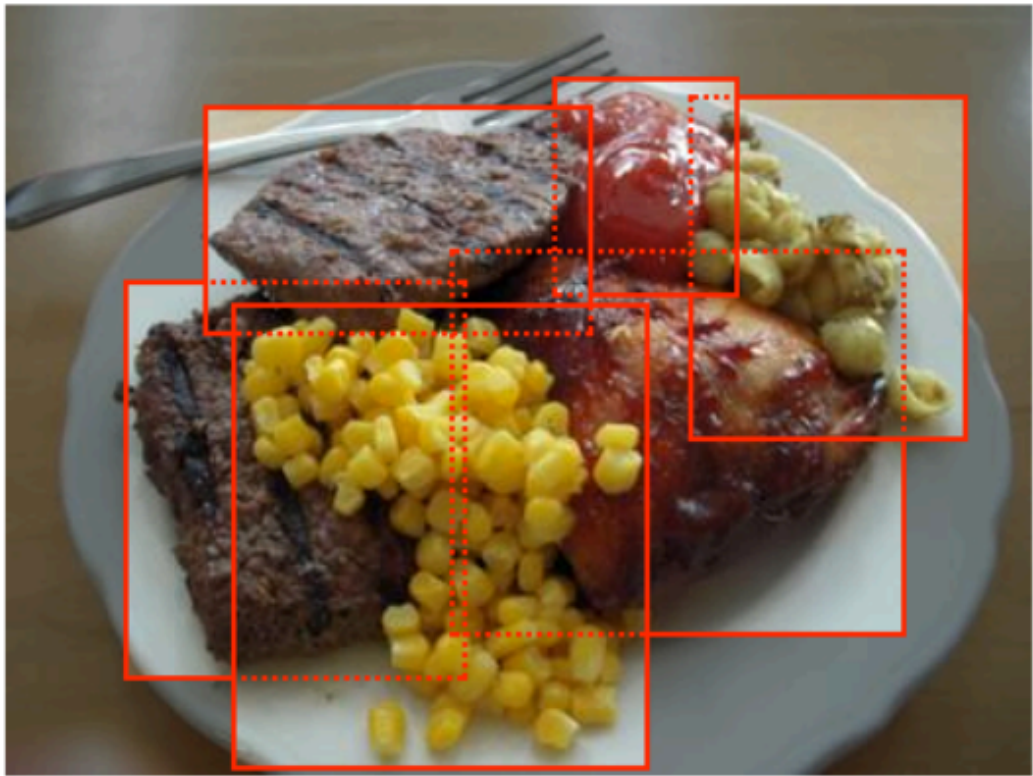
# What is Computer Science?



# PlateMate

(by Jon Noronha '11 & Eric Hysen '11)

DINNER



Yellow Corn (0.50 cup)

barbeque chicken breast

Chicken Breast Meat and Skin (Broilers or Fryers) (1.00 breast, bone removed)

Barbeque Sauce (Low Sodium, Canned) (0.14 cup)

Beef Steak (0.92 medium steak (yield after cooking, bone removed))

Hominy (White, Canned) (0.44 cup)

Ketchup (2.00 tbsp)

Beef Steak (0.86 medium steak (yield after cooking, bone removed))

+ Add Food

⊖

Delete this photo

	kcal	fat (g)	carbs (g)	protein (g)
	1573.2	72.9	84	138.9
Yellow Corn (0.50 cup)	303	3.9	61.6	7.8
barbeque chicken breast				
Chicken Breast Meat and Skin (Broilers or Fryers) (1.00 breast, bone removed)	249	13.4	0	30.2
Barbeque Sauce (Low Sodium, Canned) (0.14 cup)	26.6	0.6	4.5	0.6
Beef Steak (0.92 medium steak (yield after cooking, bone removed))	471.3	28.1	0	51.0
Hominy (White, Canned) (0.44 cup)	52.8	0.6	10.4	1.1
Ketchup (2.00 tbsp)	30	0.1	7.5	0.5
Beef Steak (0.86 medium steak (yield after cooking, bone removed))	440.5	26.2	0	47.7



# PETALS

by Lahiru Jayatilaka '10

