

Before we begin...

A Quick Introduction

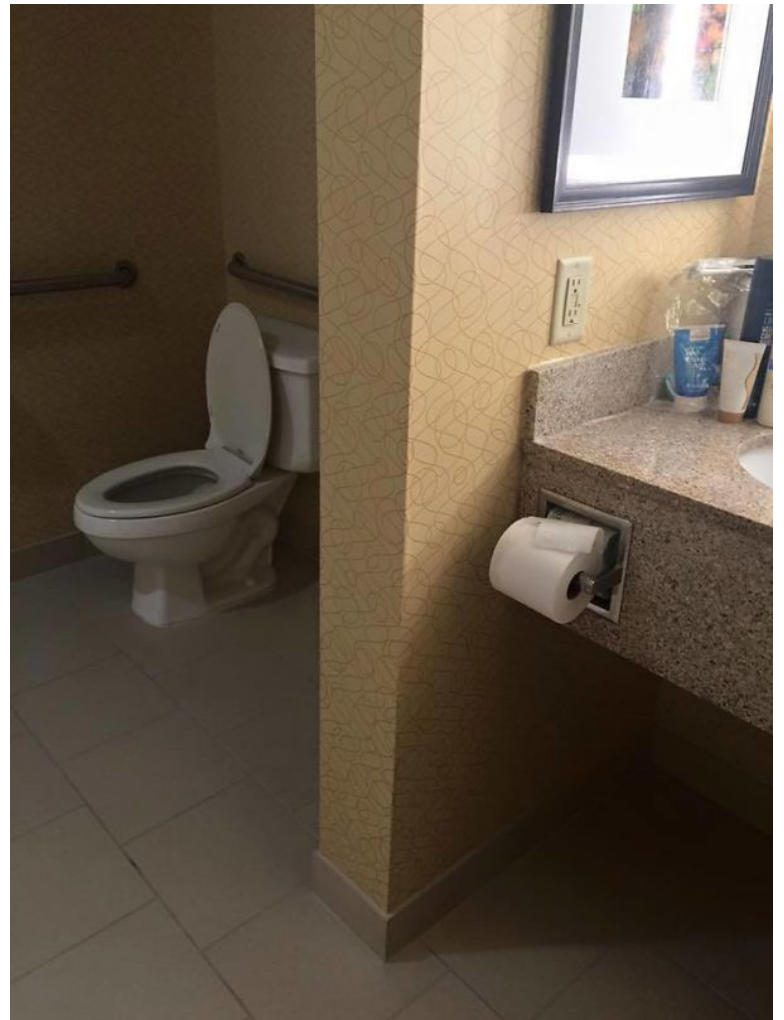
- Name: Amira
- Grade: Junior at Carnegie Mellon
- Major: Computational Biology 🧬
Additional Major in Human-Computer Interaction (just declared) 😁
- Graduated from SciTech in 2021 (C&C / B&B when they went on field trips)



Introduction to Human-Computer Interaction

Good vs Bad Design

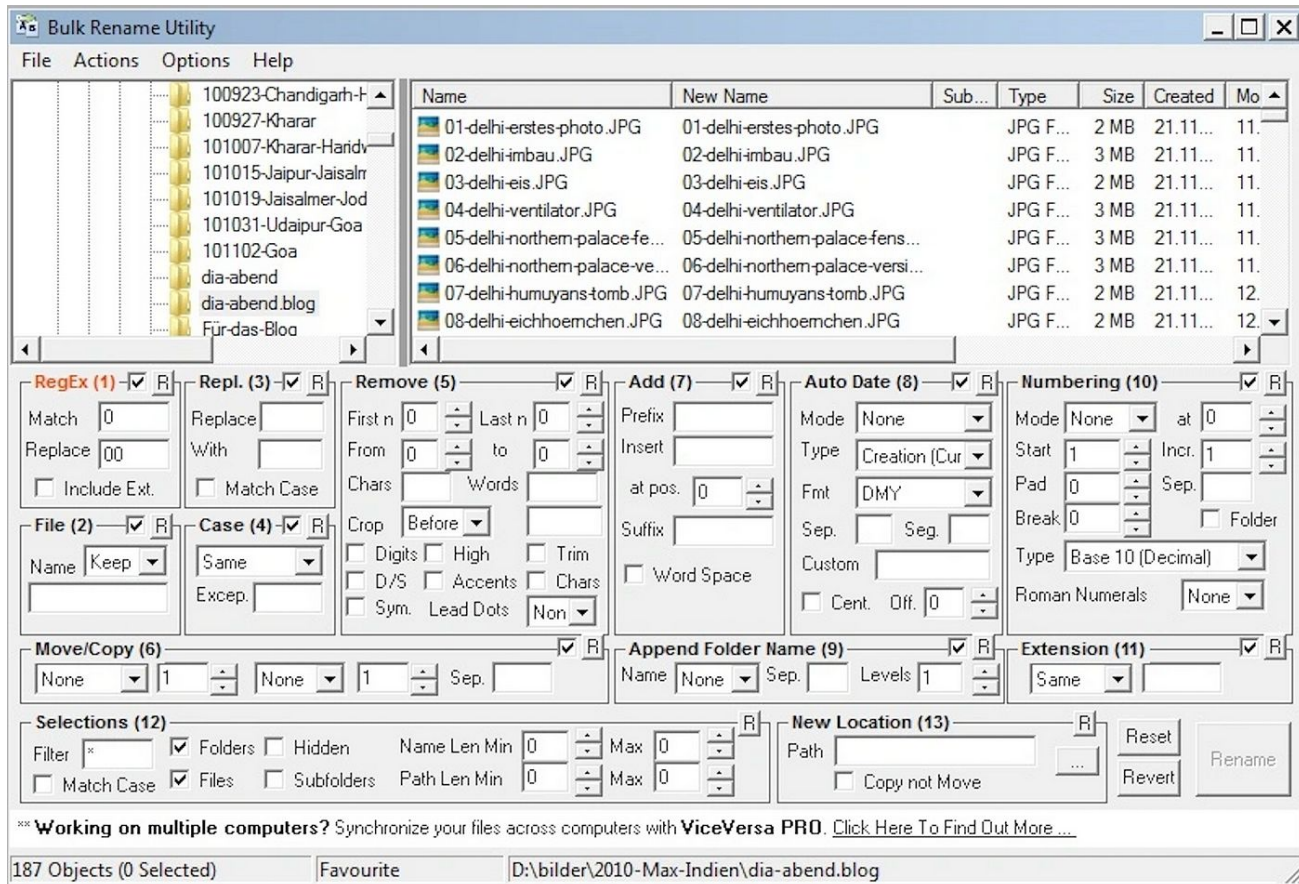
**Bad design does
not think about
the future**



**Bad design
doesn't
acknowledge
the limits of
its users**



**Bad design
fails to
acknowledge
our limited
attention
spans**



**Bad design
doesn't
work for people**



On whiteboards ...

In groups, create a diagram that explains what good design looks like versus bad design. Include some app / website interfaces that you've seen with good design, and ones that ... aren't as good. What could be better about them?

Good

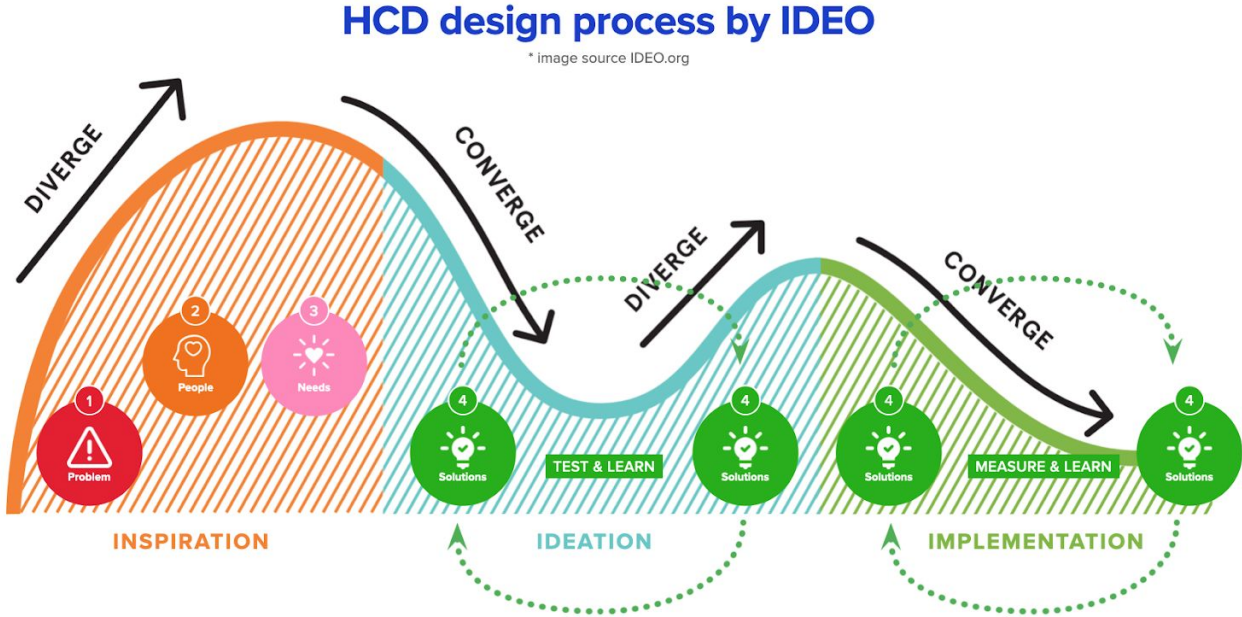
Instagram

Bad

Unity (personal)

<https://www.007museum.com/index.html>

What is Humanity-Centered Design?

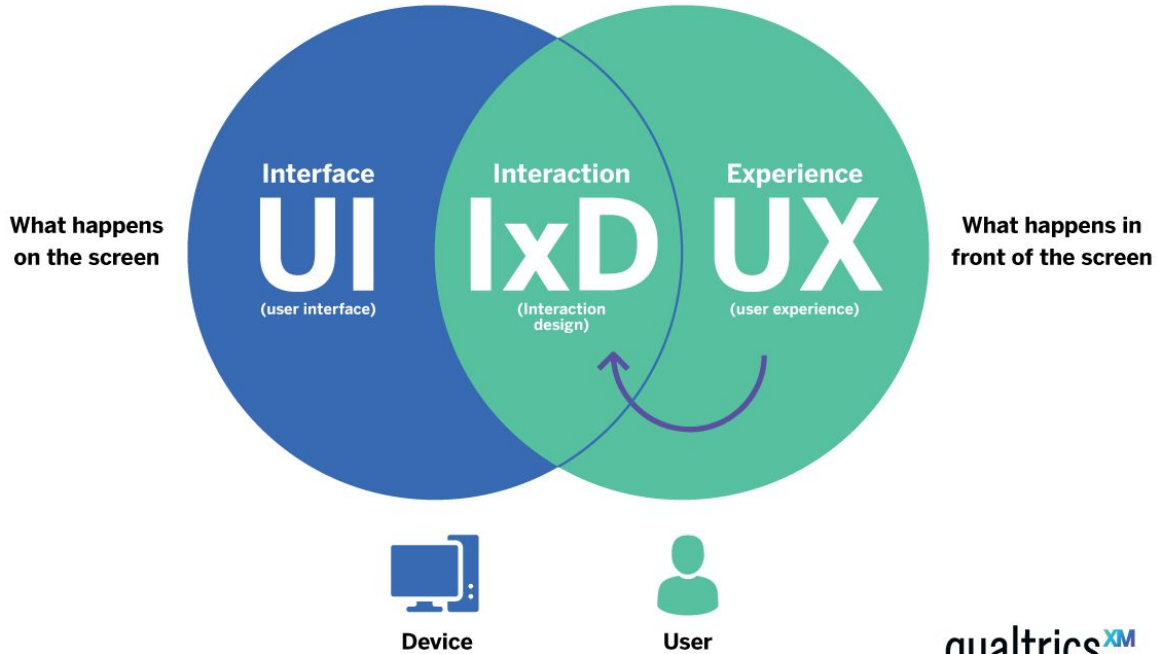


Good, Humanity-Centered Design ...

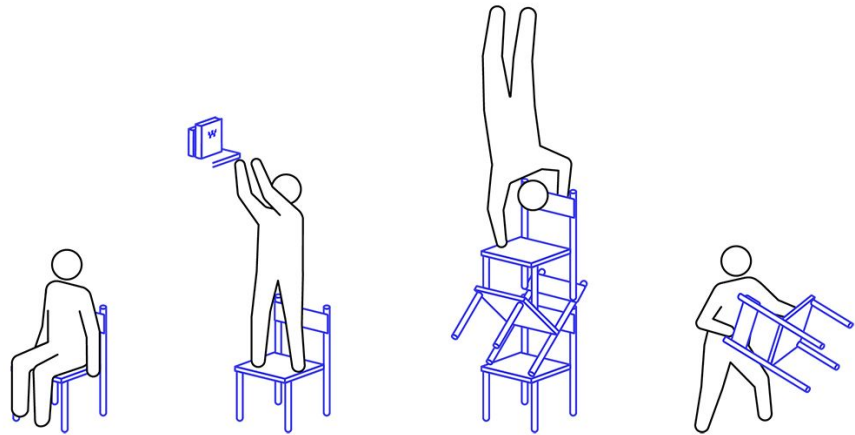
- Makes sense for the people it serves.
- Follows the expectations of humanity.
- Isn't complex
- Is suggestive
- Is consistent -- people don't like change.
- Is inclusive

What is
interaction design?

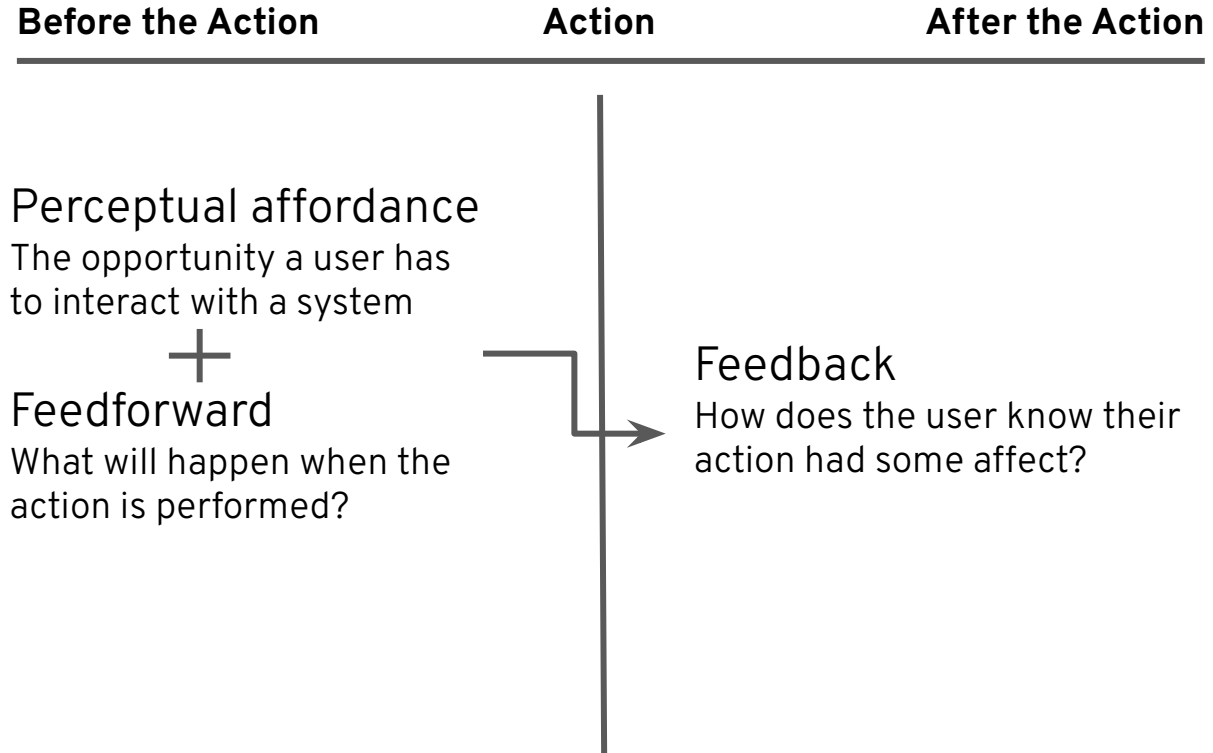
Interaction Design is ...



What is perceptual affordance?



Perceptual Affordance, Feedforward, and Feedback: What's the Connection?



There are two ways to carry meaning in our designs

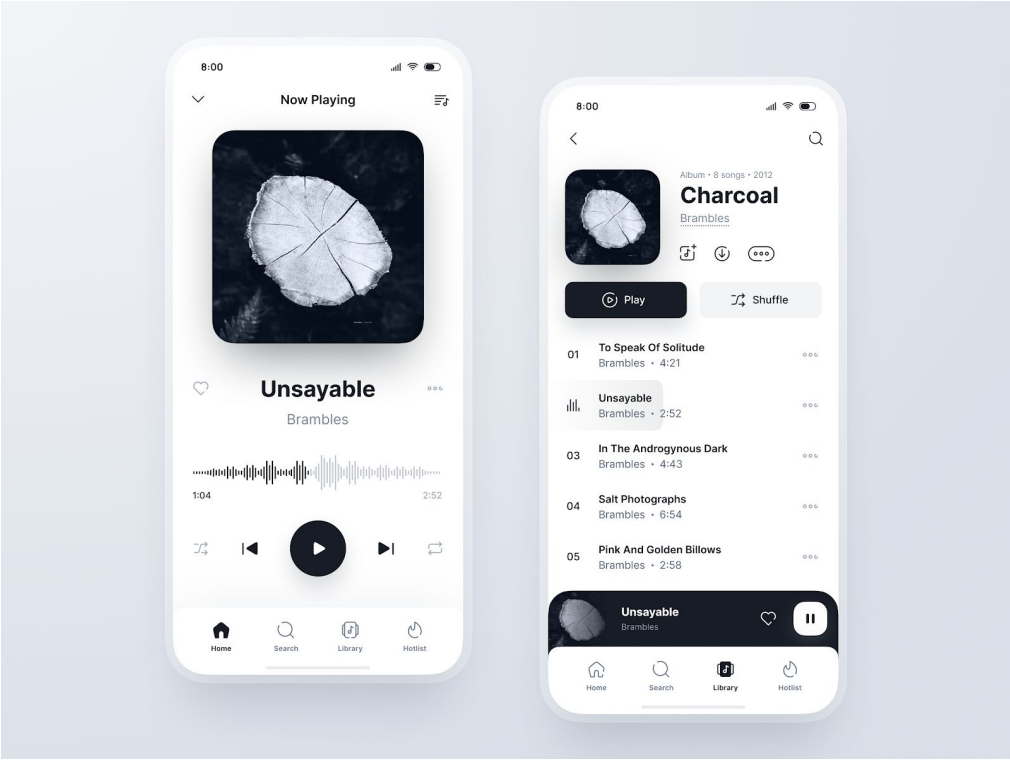
Semantic Carriers

- language
- semantics
- icons

Direct Carriers

- behavioral / action
- affordances / effectiveness
- feedforward / feedback

Carrying Meaning Through Digital Interfaces



Simplicity

Users are better at understanding information that takes less time for us to process.



Where do we see
these principles in
everyday life?

PlayStation Controller

✓ SUCCESSFUL APPLICATION

Buttons imply a behavior or action that they should be pressed.



✓ SUCCESSFUL APPLICATION

Basic functions carry across all similar-looking gaming remotes. The users can expect different versions of the same device to behave similarly.

✓ SUCCESSFUL APPLICATION

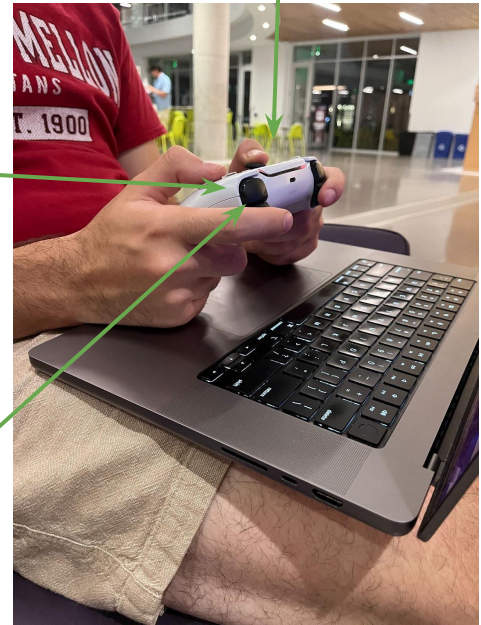
The users immediately see the results of their interactions reflected onscreen.

✓ SUCCESSFUL APPLICATION

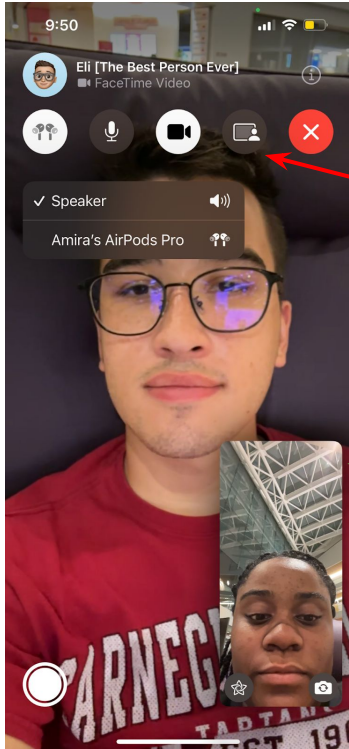
Buttons and controls are sectioned on the remote based on what they do in each game (move left/right, etc)

✓ SUCCESSFUL APPLICATION

Remote vibrates based on what is happening on screen (as a result of user interaction)



Facetime



VIOLATION

This button does not clearly suggest its action. The user does not know what it does until they click it.



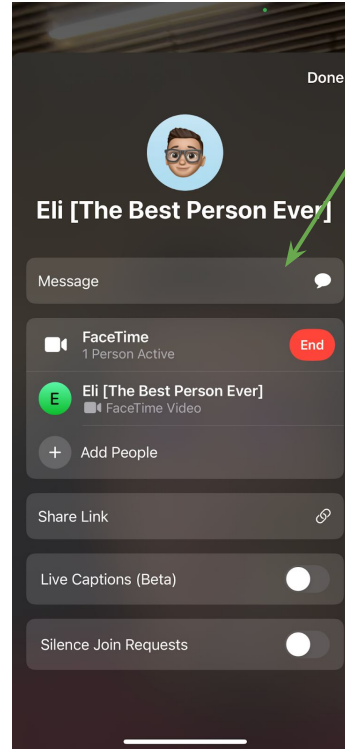
SUCCESSFUL APPLICATION

Controls and buttons are kept to a minimum.



SUCCESSFUL APPLICATION

The buttons have symbols that explain what they do; isn't difficult for someone to understand how to work them.



SUCCESSFUL APPLICATION

These options display clearly, using language, how they should be used / what they should be used for.

Transaction Pin Pads



❌ VIOLATION

It is not always clear where you should place your phone when using tools like ApplePay. Often you assume a store has ApplePay, but then it doesn't because it has a pin pad like the one on the right.



❌ VIOLATION

The screen is small, buttons have letters when not necessary for use. Difficult for users who are visually impaired.

✅ SUCCESSFUL APPLICATION

The screen, which is touch screen, and the buttons that you need to press are grouped separately based on how you should interact with them.

❌ VIOLATION

The user is presented with numerous choices which increases the time it takes it to make a decision. It would be best to include images in a list of some sort.

❌ VIOLATION

In order to pay, the user doesn't need to see all these choices, it could simply be like the first image.

Dwarf Fortress

❌ VIOLATION

The screen is very crowded and can be confusing for users.



❌ VIOLATION

Nothing on the screen suggests how the game should be played / what the end goal is.

Pacman Arcade Game



✓ SUCCESSFUL APPLICATION
The users immediately see the results of their interactions reflected on screen.

✓ SUCCESSFUL APPLICATION
What players need to do to play is implied or can be easily picked up on.

Activity

Take a look at some of the physical objects that we have, and rate their successes and violations of interaction design principles.

Do they show successful examples of affordances/carriers of meaning, etc?

Can you identify any violations?

How can we design
digital user
interactions?

Figma

A tool used for ...

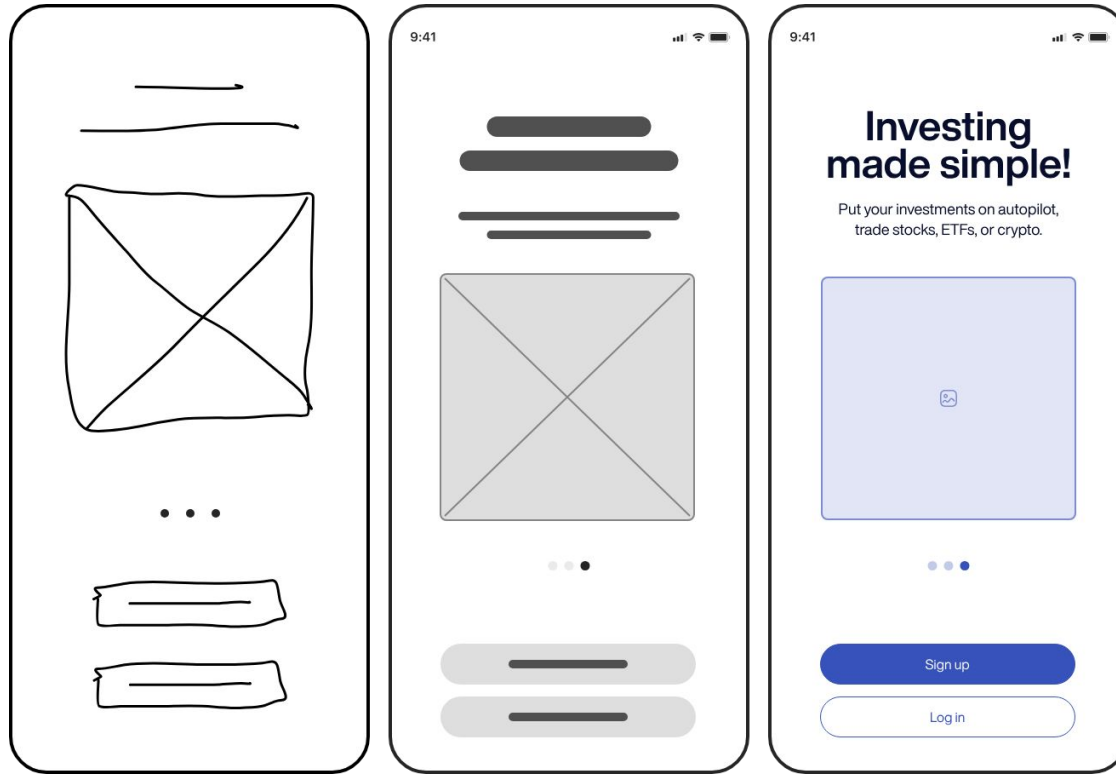
- Designing Interfaces (Mockups)
 - Apps
 - Websites
 - Games (?)
- Prototyping (Mockups + Interactions)

Proof: Figma can be used for game design

- On your laptops, visit [Figma.com/community](https://www.figma.com/community).
- Search “Game Design”
- What kinds of designs do you see?

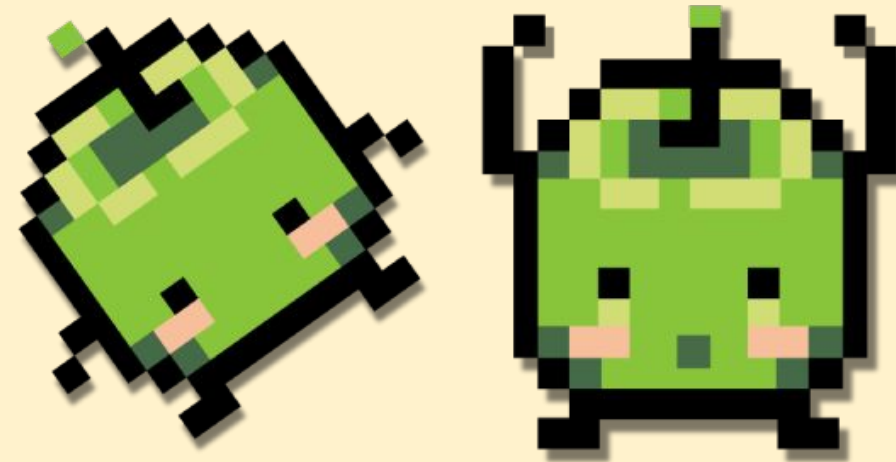
Everyone should learn to use Figma and utilize it when designing your games!

Activity: Using Figma to Design A Website





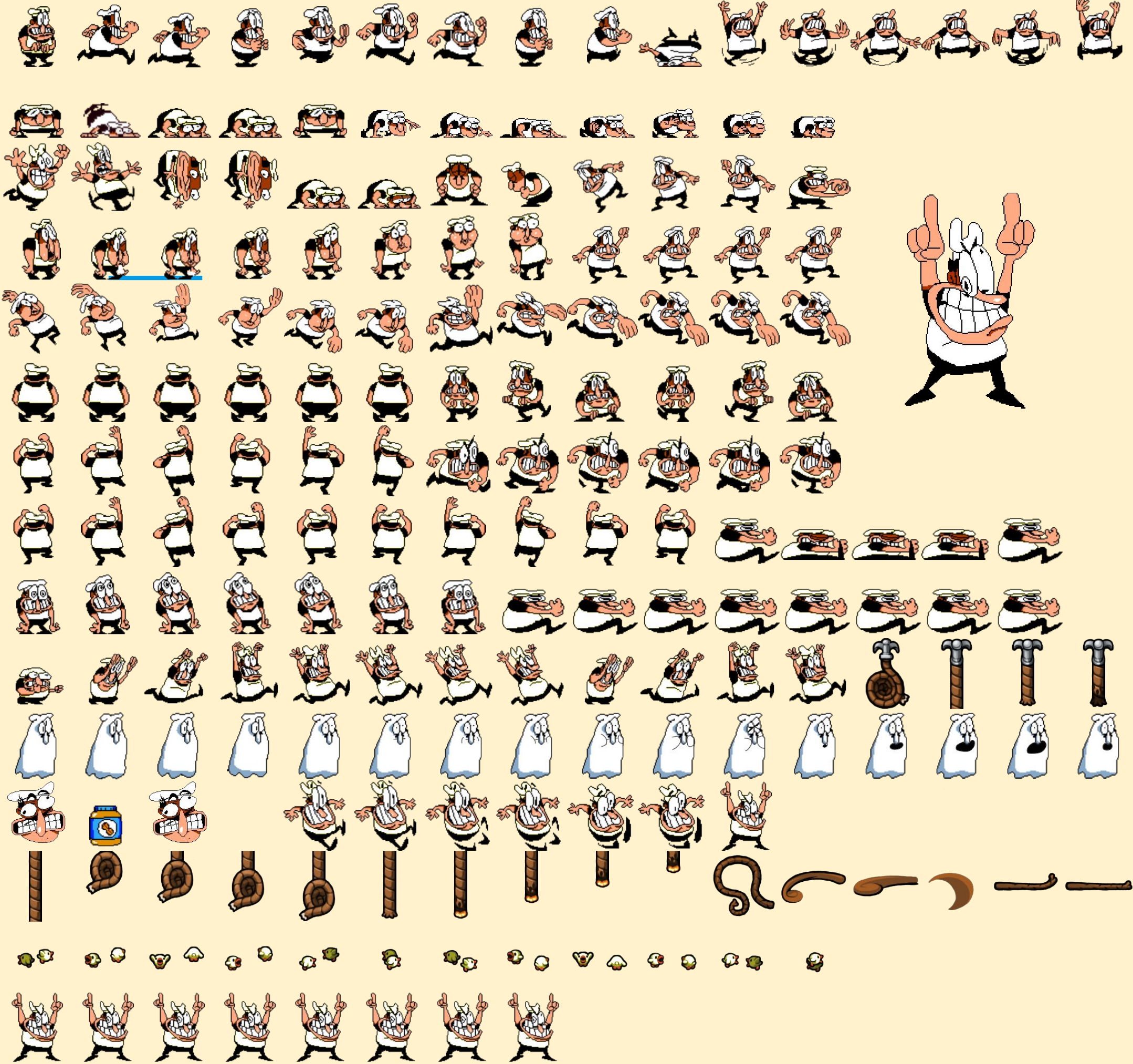
Assets for Games



Sprite Sheets!



- Sprite sheets are used to map out the look & animations of your character
- Should be used for any asset you plan to animate
- Main characters, NPCs, animals, 'living' environment



Pizza Tower Sprite Sheets



Environmental Storytelling, Game Spaces

- What can the environment tell us about the world? How does it strengthen the narrative?
 - How can we connect environmental storytelling to our discussion about mechanics and narrative design? What about human-computer interactions?
- How does the game space -- whether limited or open -- affect the narrative/affect our perception?



Limenick



21



19 Pebble

19545

40





Oof
"Can't wait ta get outta 'ere!"



11990

B



COMBO!



10 10 10

PIZZA



2:17



Arstotzkan
 Ministry of Admission

Ministry of Labor
 Work Pass

This pass grants its holder right to work in a specific field for a limited time.

HOLDER ZAHRA MAIR

FIELD FOOD-SERVICE

UNTIL 01.06.1983

Keep this pass with you at all t

ARSTOTZKAN

DENIED

ALIGN VISA BENEATH STAMP

ZAHRA MAIR

bearing passport number
S65Q2-V9UNG

Purpose WORK

Duration 6 MONTHS

Enter by 16.12.1982

Ministry of Admission

APPROVED

GRANTED

ENTRY VISA

OBRISTAN

Mair, Zahra


DOB. 29.05.1961

SEX F

ISS. Mergerous

EXP. 25.08.1983

S65Q2-V9UNG



28.11.02

02

55 kg

DRAG DOCUMENTS





Resources

Assets:

- Unity Asset Store
- Kenney

Digital Art:

- Krita
- Aseprite
- Piksel

Project Scope

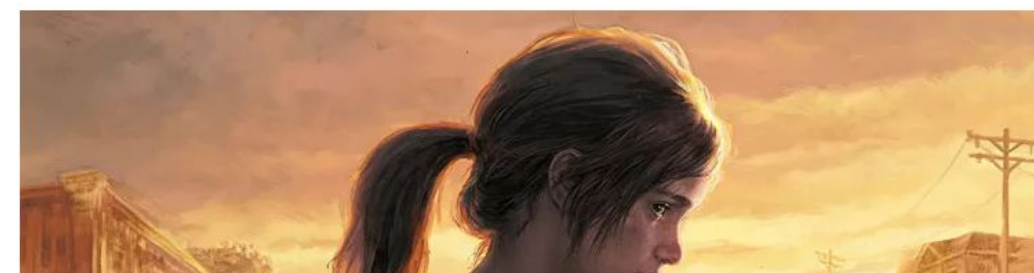
- Narrowing down the scope of your project will greatly help you to not overextend yourself. Industry game designers continually struggle with this (ex. No Man's Sky, Cyberpunk 2077)
- Think back to design process; prototyping and iterative processes exist for this reason
- You will thank yourself later!

No Man's Sky received mixed reviews at its 2016 launch, with some critics praising the technical achievements of the procedurally generated universe, while others considered the [gameplay](#) lackluster and repetitive. However, [the critical response was marred](#) by the lack of several features that had been rep to be in the game, particularly [multiplayer](#) capabilities. The game was further criticised due to Hello Ga lack of communication in the months following the launch, creating a hostile backlash from some of its players. Murray stated later that Hello Games had failed to control [hype](#) around the game and the larg than-expected player count at launch, and since have taken an approach of remaining quiet about upc the game until they are nearly ready to release. The promotion and marketing for *No Man's Sky* becan subject of debate and has been cited as an example of what to avoid in video game marketing.



PC GAMING / GAMING / ENTERTAINMENT

The Last of Us on PC is a rare disappointing PlayStation port at launch



/ PC players are reporting lots of issues with *The Last of Us Part I*, and Naughty Dog is promising patches to fix things.

share with your partners:

- Storyline, base idea
 - Characters
 - Setting
 - Mechanics
-
- share with your partner your idea; other give feedback. your feedback can be “cool! great idea!” but we also encourage you to think about project scope.
 - at the end, you and your partner should recap.
 - you and your partner will be presenting each others games to the group; try to remember what they talked about!