



Introduction to Design

CS 88S | Kevin Tan | Lecture 1

Logistics

Facilitator: Kevin Tan (do NOT call me professor!!!!)

Faculty Advisor: Paul Eggert

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Class Info: Tuesdays 12 PM-1 PM, Kaplan Hall A48

Office Hours: By appointment

Who am I?

Kevin Tan

- 3rd year Computer Science major 🐾
- President of UCLA ACM 🍈
- Software Engineering Intern, iOS at BuzzFeed 📈

Hobbies: Volleyball, piano, going to the gym 🏋️‍♂️, spending time with friends, secretly watching anime

Favorite Food: Anything Italian, Japanese, or Chinese 🥟

Favorite Dining Hall: BPlate 🌿🐿️

Go-to Drink at Kerckhoff: Black coffee ❤️



Your turn! 🤠

What You'll Learn

Course Objectives

- **Demonstrate** an understanding of the principles of good product design
- **Analyze** mobile app design choices critically and thoughtfully
- **Create** mobile app User Interface (UI)/User Experience (UX) flows of your own

My Goal: Give you a foundation so that you can explore the world of **design** on your own!

Road Map

Design of Physical
Products

Design in modern
mobile applications

History of the iPhone



Grading & Assignments

This class is **P/NP**, meaning you need a **70%** to pass.

- **40%**—Participation
- **20%**—Discussion Posts
- **10%**—Wireframe Project
- **30%**—Final Project

You **must** complete **at least half of the discussion posts**, and **submit both projects** in order to receive a Pass.

Course Reader

\$18 in Ackerman!!!

As a seminar, this class is very discussion-based! It is important that you complete the readings so you can most effectively contribute to discussions.

What is Design?

Your First Design Task

Design a **name tag** that also expresses who you are!

Design Task

Design a **name tag** that also
expresses who you are!

Artistic Task

Design a **name tag** that also
expresses who you are!

Designs can be evaluated using
concrete criteria.

Arguably, designs can be
objectively good or bad.

Bad Designs



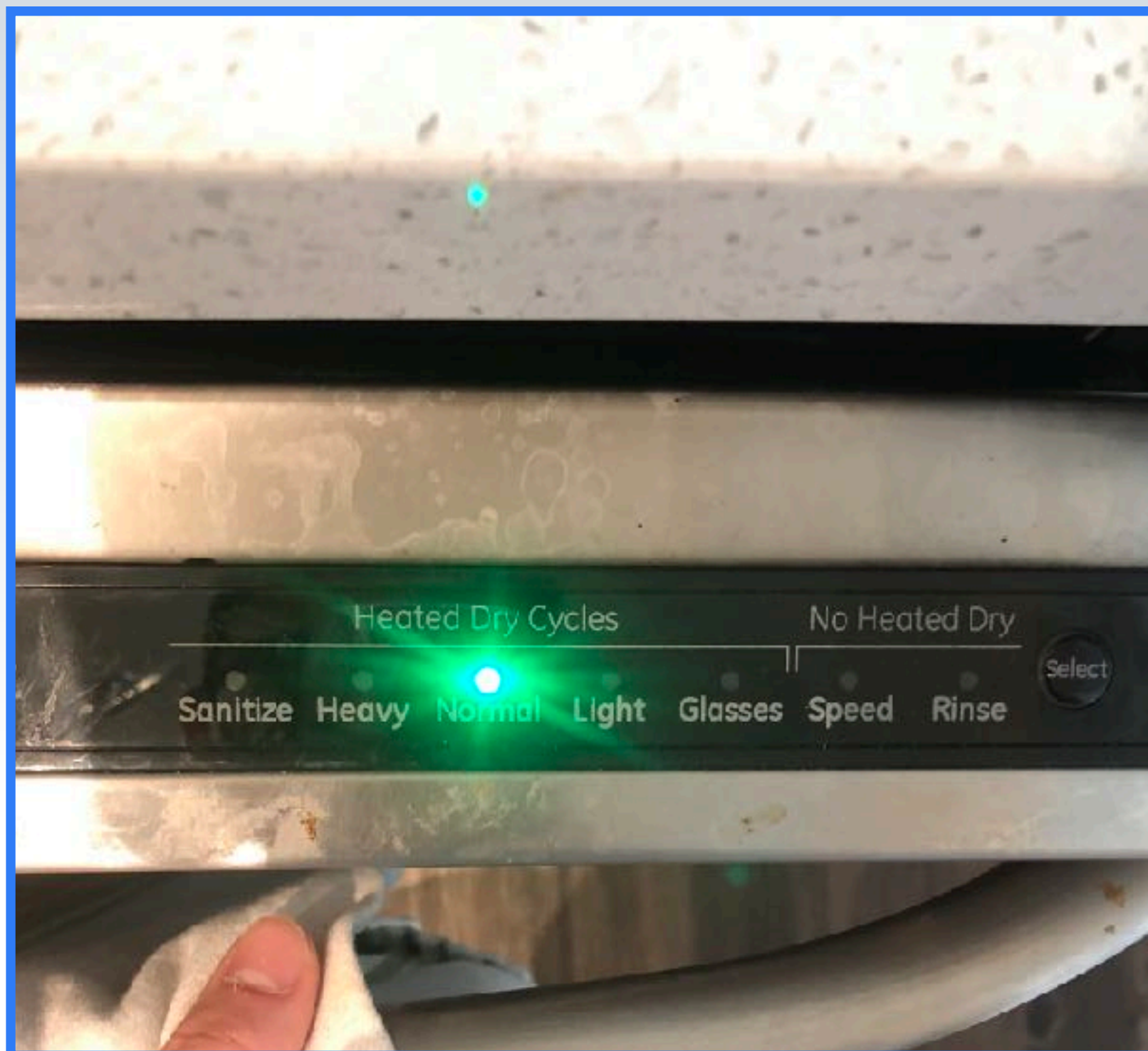
Notes on Poster

- Poster reads "Suicide on Bruincards now!"
- "Hot Line" is shoved into a corner, is smaller in font size, and a different color
- In this poster, our eyes want to read **one word per line** so they ignore "Hot Line"



Notes on Door

- Is this door push or pull? **Pull**
- Handle is identical on both sides
- There are insufficient visual cues to discern whether or not the door is push or pull



Notes on Dishwasher

- So many products (i.e. dishwashers, washing machines) have an **overwhelming** amount of options
- The user has no idea what the difference between the modes "Sanitize", "Heavy", and "Glasses" is
- Most of the time, they end up always picking "Normal"
- The substantial engineering power it took to create the other modes **is lost**



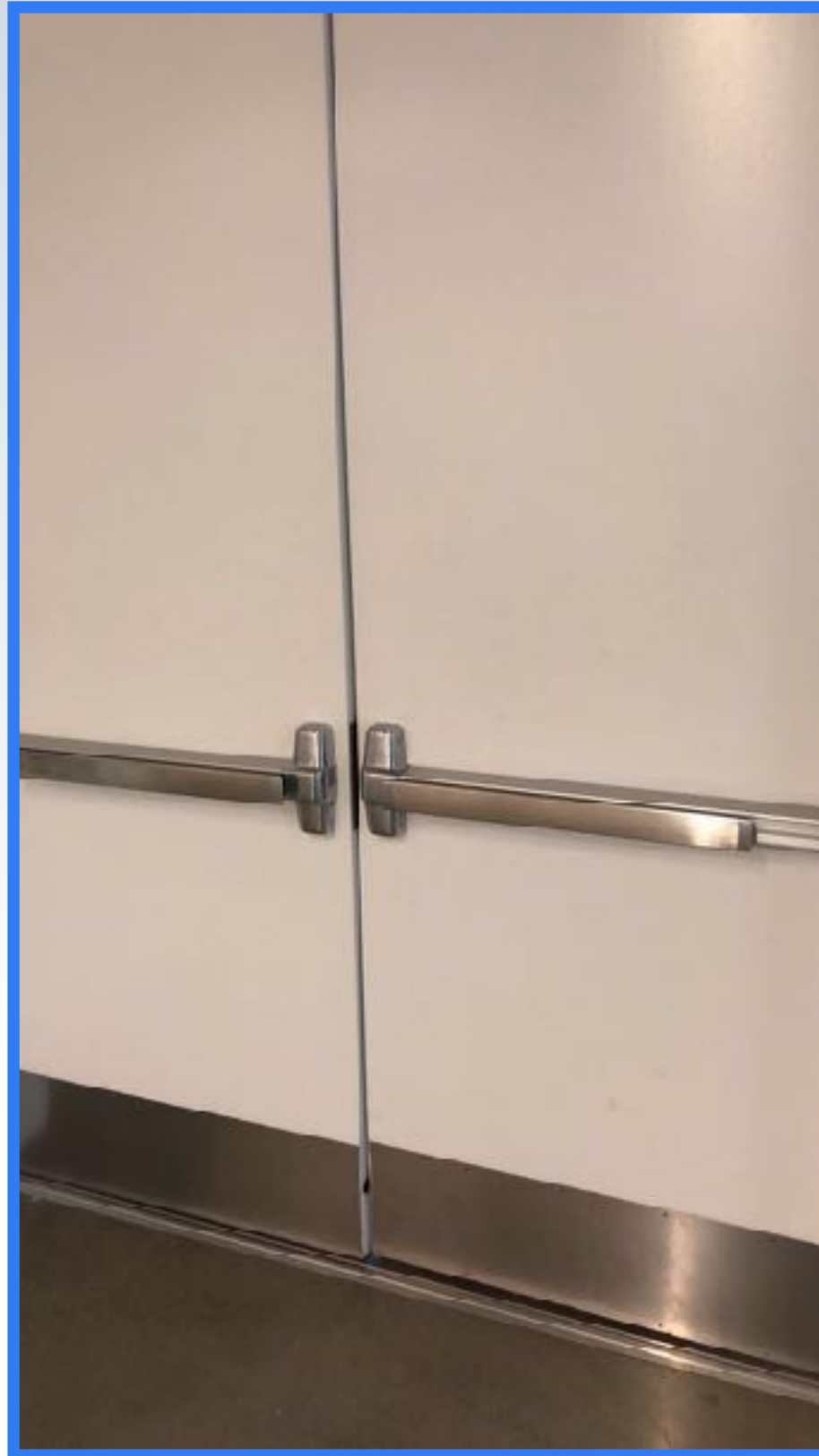
Notes on Shower

- There is no way you can tell how this shower works from just looking at it
- Four identical knobs **without any clues** as to what each one does
- Result? You will turn one, get sprayed with scalding water, turn another, get sprayed with freezing water, etc. :(

Bad Design is Dangerous!

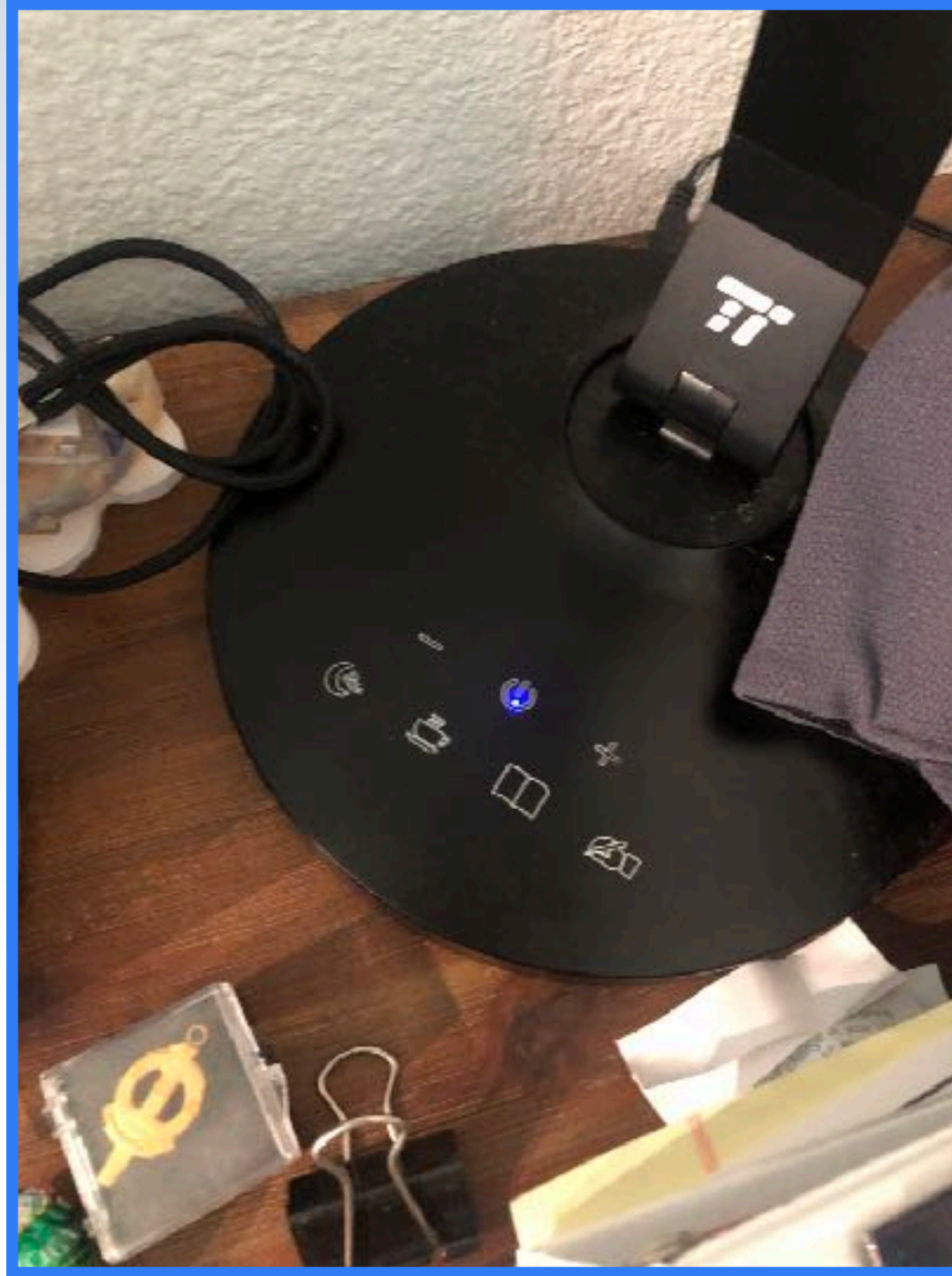
- Makes you feel like you're incompetent/stupid when really the product is just poorly designed
- Can lead to actual danger (unsafe workplaces, harm, unintended side effects)
- Products are supposed to make your life easier, not harder!

Good Designs



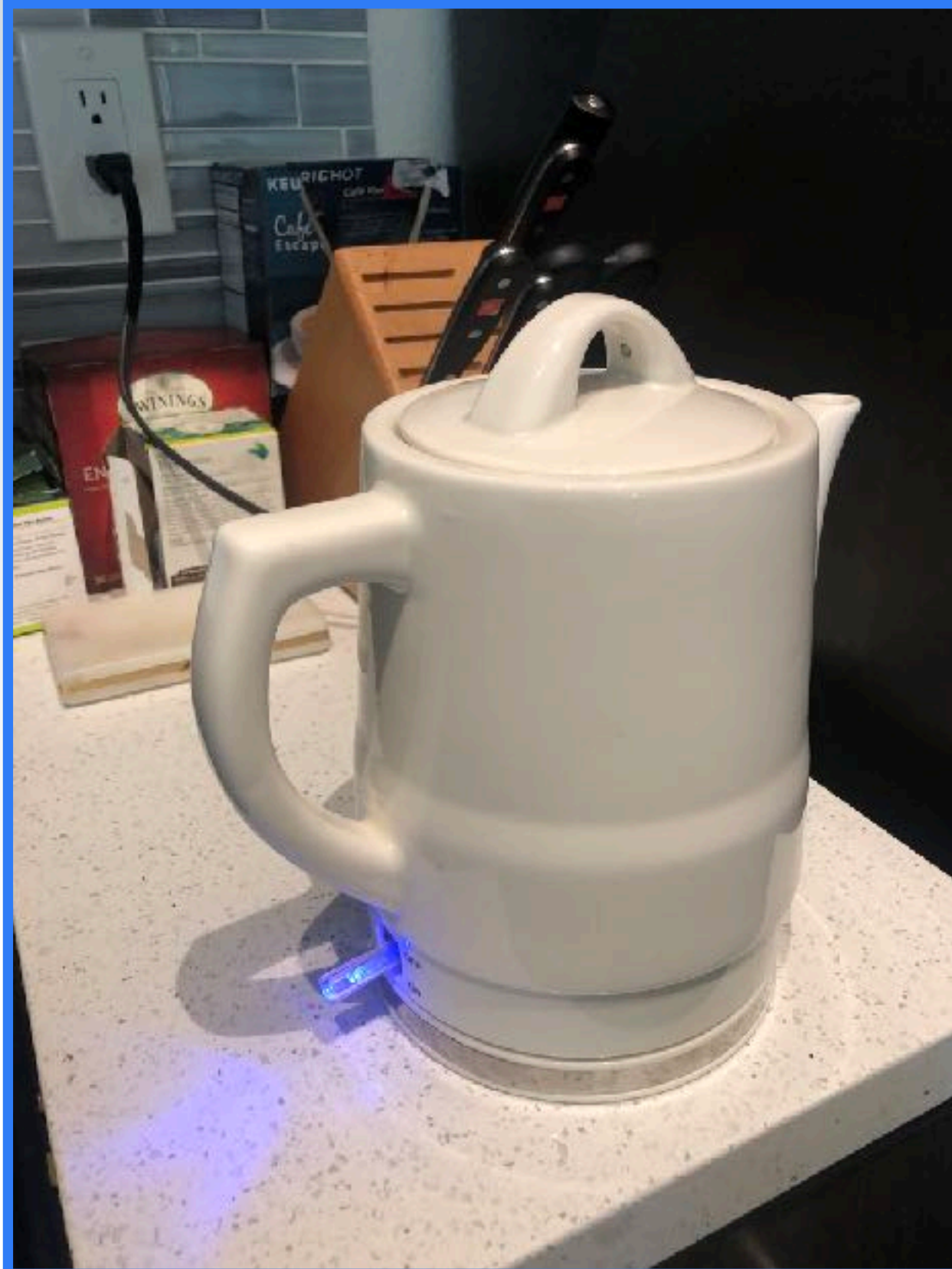
Notes on Door

- This door is obviously a push door because the only thing you can do to it is push
- Bars are called **panic bars**; in an emergency you can just fling your body weight at a door for a quick escape



Notes on Lamp

- **Simple interface** - as few buttons as possible
- Blue light indicating to tap the power button to turn on the lamp
- Expressive icons to demonstrate what each mode of the lamp is
- + and - to make the lamp brighter or dimmer



Notes on Kettle

- **Simple interface** - consists of a single switch
- Switch illuminates to indicate that the water is boiling
- When water is done boiling, the switch flips itself off.
 - The light turns off and an audible clicking noise is heard.

What is Design?

To plan the creation of a product or service with the intention of **improving human experience** with respect to a specified problem.

What makes a design
good?

Affordances

- Fundamental properties of a product that determine how it can possibly be used
- Restrict the set of actions a user can perform with a product
- What actions does the product *afford*?



Discussion Post

Write a few sentences analyzing this product's design.

- What is the purpose of the product? Is its design conducive for that purpose?
- How could the user misuse the product? Does the design take this into account?
- What do you like about the design? What does it do well?
- How could it be improved?

The iPhone Cup Holder

