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| Subject | Human Computer Interaction |

Lab#02

Lab Report: HCI Design Observations, Analysis, and Redesign

Purpose of the Lab

The purpose of this lab was to observe real-world examples of good and bad designs, critically evaluate website usability based on HCI principles, practice redesigning poor interfaces, and present findings to improve our understanding of user-centered design.

Activity 1: Observing Real-World Designs

Table Comparing Good and Bad Designs

| Aspect | Good Design Example | Bad Design Example |
|-------------------|---|---|
| Device/Interface | iPhone Home Screen | Overly Complex TV Remote |
| Positive Features | Simple icons, consistent layout, intuitive gestures | Too many buttons, unclear labeling, hard to operate |
| Device/Interface | Google Search Website | Confusing Elevator Button Panel |

| | | |
|-------------------|--|---|
| Positive Features | Minimalist interface, clear search focus, quick feedback | No clear labeling, confusing floor numbers |
| Device/Interface | ATM at Modern Bank | ATM at Old Train Station |
| Positive Features | Touchscreen with step-by-step guidance | Poorly labeled buttons, slow response times |

Activity 2: Analyzing Website Usability

Selected Websites

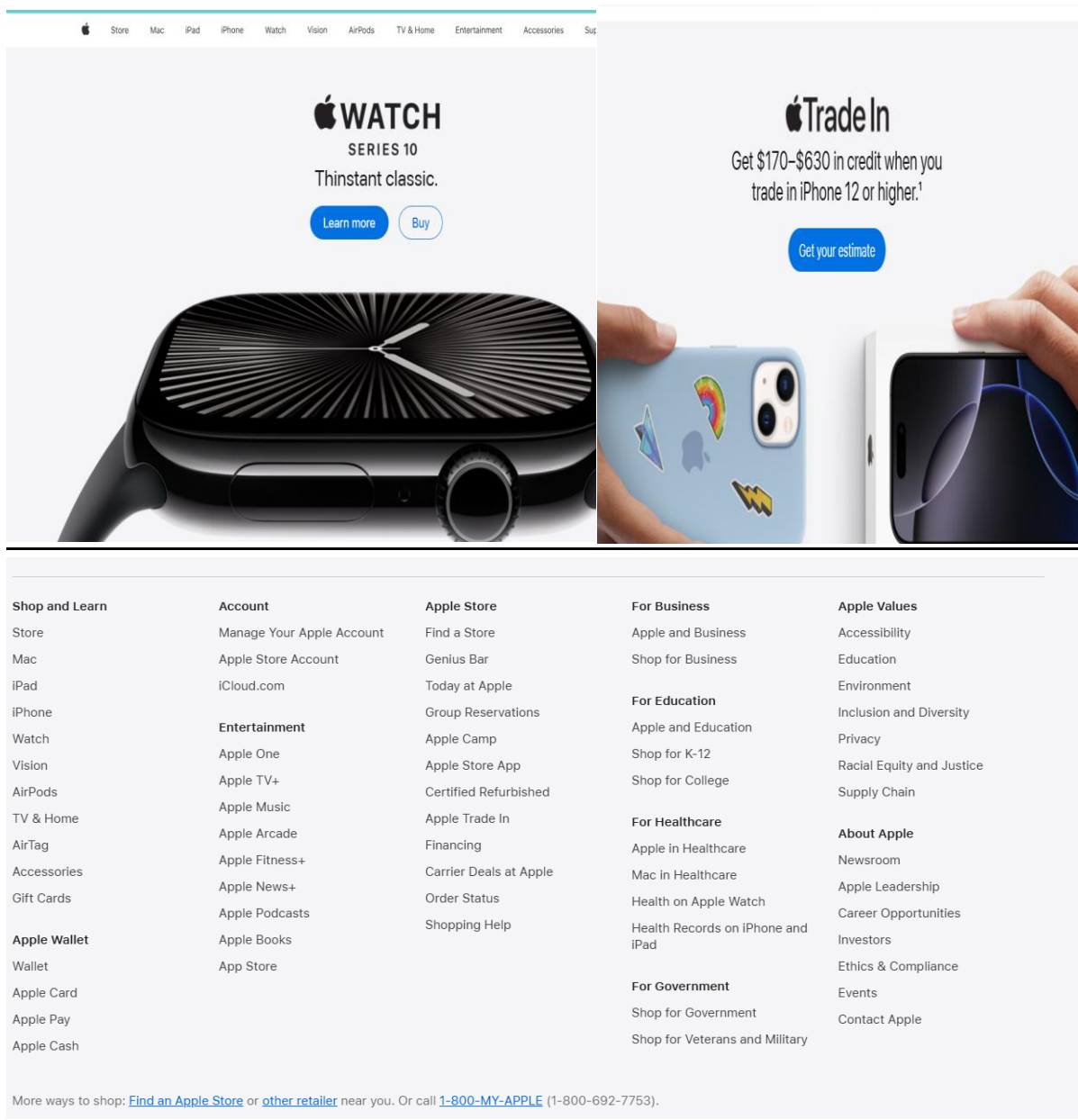
- Good Website: [Apple](#)
- Bad Website: [Arngren.net](#)

Analysis Report

Apple Website (Good Design):

- **Navigation:** Clean and easy to navigate, menus are simple and logical.
- **Visual Design:** Minimalist aesthetic, strong use of white space.
- **Responsiveness:** Optimized for both mobile and desktop.
- **Feedback:** Quick responses to user actions like clicking a product.
- **Accessibility:** Good use of alt text, color contrast, and readability.

Screenshot Example:



Arngren.net (Bad Design)

- **Navigation:** Extremely cluttered; too many links without organization.
- **Visual Design:** Chaotic layout, no clear visual hierarchy.
- **Responsiveness:** Not optimized for modern devices, difficult to read on mobile.
- **Feedback:** Clicking links often results in confusing behavior.

- **Accessibility:** Poor text contrast, small font size, no structure.

Screenshot Example:



Summary

Apple's website follows HCI principles by making interaction clear, simple, and satisfying, whereas Arngren.net overwhelms the user, leading to frustration and confusion.

Activity 3: Redesign Exercise

Selected Interface

- **Problematic Interface:** Confusing Microwave Control Panel

Original Design Photo:

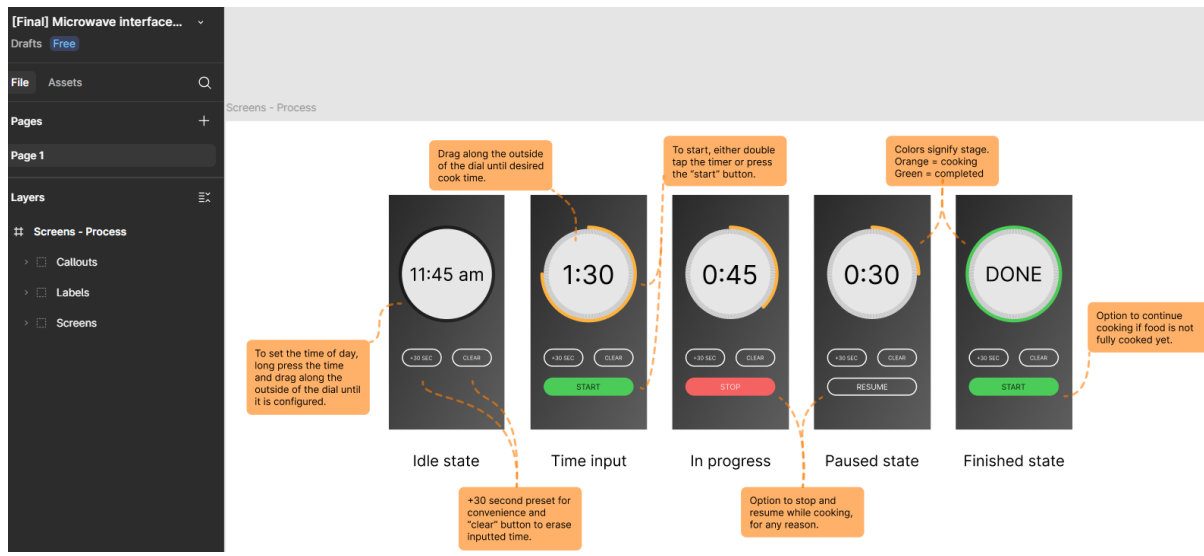


Issues Identified

- Buttons are poorly labeled (e.g., "Auto Cook 1" without explanation).
- Overwhelming number of small, similar buttons.
- Important features (e.g., Start/Stop) are not highlighted.

Redesign Proposal

Sketch/Redesigned Interface:



Redesign Improvements

- Clear labeling ("Start", "Stop", etc.).
- Group related functions (cooking presets together, timer functions separately).
- Use larger buttons for frequent actions.
- Highlight critical buttons with color or size.

HCI Principles Applied:

- **Visibility:** Important functions are easy to find.
- **Affordance:** Buttons are labeled clearly so their purpose is obvious.
- **Feedback:** Display gives immediate confirmation of input (e.g., "Cooking Started").

Activity 4: Group Discussion and Presentation

Discussion Points

- **Common Mistakes in Bad Designs:**
 - Lack of clarity.

- Overloaded interfaces.
- No clear feedback or instructions.
- **How Good Design Improves Experience:**
 - Increases user satisfaction.
 - Reduces errors and frustration.
 - Enhances speed and efficiency.
- **Trade-offs Between Simple and Feature-Rich Interfaces:**
 - **Too simple:** Might limit advanced users.
 - **Too complex:** Might overwhelm beginners.
 - **Ideal:** Balance by offering basic and advanced modes (e.g., "simple view" and "advanced settings").

References

- Don Norman, *The Design of Everyday Things*.
- Steve Krug, *Don't Make Me Think*.
- Tools used: Figma, Adobe XD.

THE END