COLLEGE OF
COMPUTER STUDIES

QUEZON CITY
UNIVERSITY


# WEEK 10
# HCI Design Approaches

# Learning Outcomes

- Conceptualized the different Approaches in HCI Design
- Define each HCI Designs and determine when to use these approaches.

# HCI Design Approaches

1. Anthropomorphic Approach
2. Cognitive Approach
3. Predictive Modeling Approach
4. Empirical Approach

# 1. Anthropomorphic Approach

- it involves designing a user interface to possess human-like qualities
- the interface may be designed with significant interactions with the user and the system, and communicate with users in a human-like presentation
- Example: Interface error messaging is often written this way, such as, “We’re sorry, but that page cannot be found.”

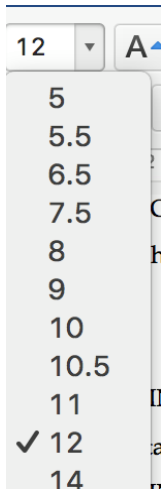
# A. Affordances

- Affordances are the perceivable potential actions that an individual may do with an object.

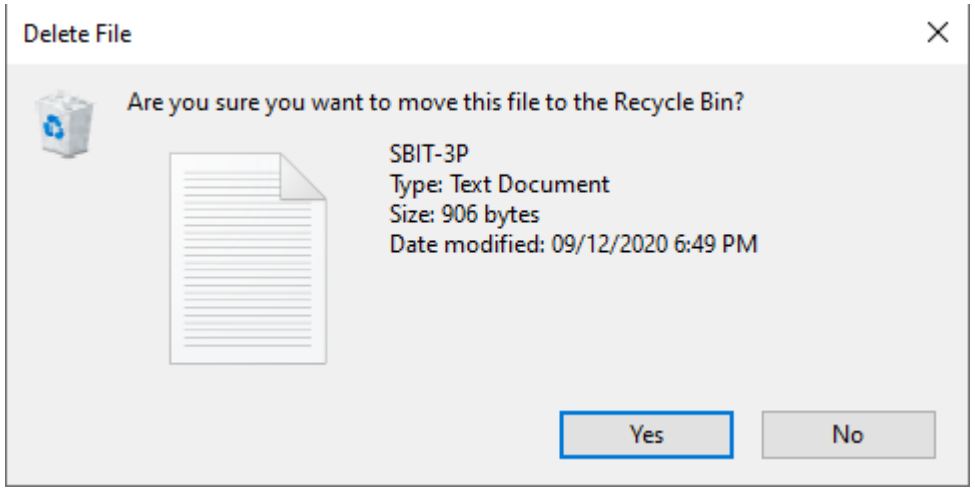
- It is the action that the design of an object suggest the users.

# Examples of Affordances:

Zoom slider




Drop-down menus

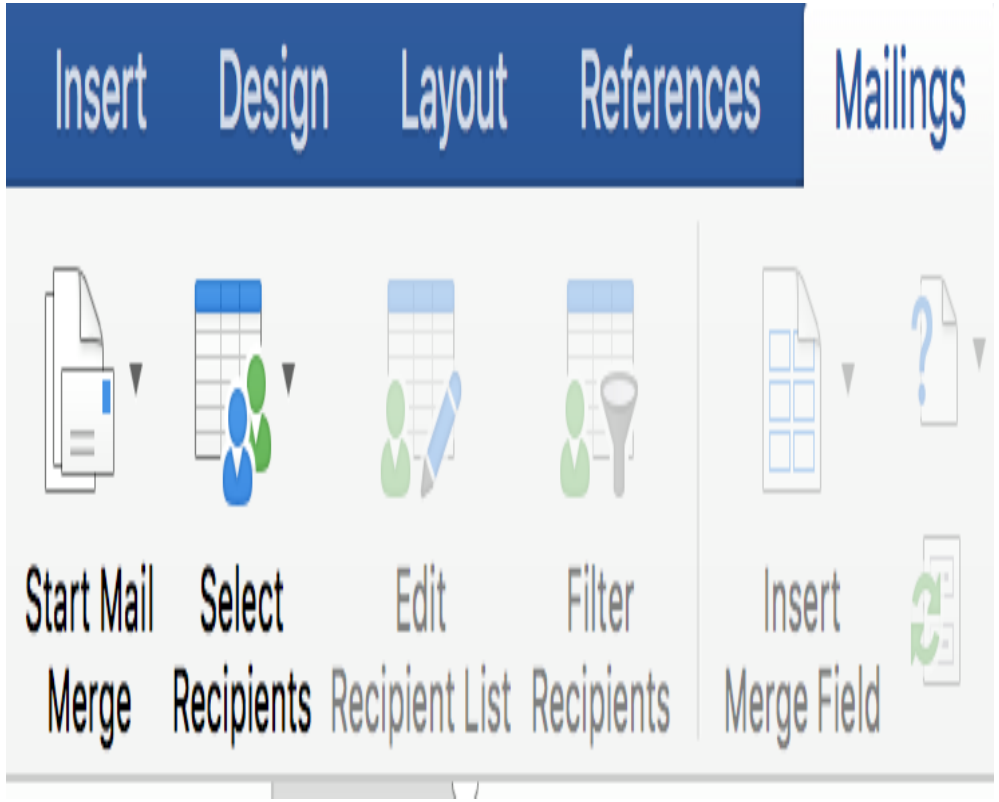



Yes or No Buttons

- Sounds may also be used to indicate the completion of a mission or the occurrence of an error such as email, notifications, file transfer notifications, calendar event notifications, etc.

# B. Constraints

- Constraints indicates limitations of user actions.
- It can be used to avoid operator errors or minimize the information to be remembered.
- Error message alerts often mean that there was an error and that the procedure could not proceed.



# 2. Cognitive Approach

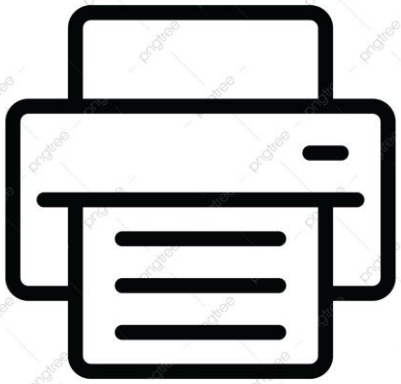
- In designing a user interface, this method takes into account the human brain's ability and sensory experience.

- In this approach, it helps ease the inability of the user to form a mental picture of the interface presented in the computer screen.

# A. Metaphoric Design

- Metaphors may be a good way to communicate a technique to people who are not familiar with it.
- It relies on the user's familiarity with another concept as well as affordances to help them understand the actions they should take.
- using metaphors in design alows the users who are already familiar with the metaphor can find it easy to learn a new system.

# Metaphoric Design



# B. Attention and Workload Models

- When designing an interface, it's important to consider the user's attention span and the mental workload involved in completing a task.
- It is important to note that certain users can only focus on one task at a time.
- The mental workload is minimized by splitting this data into individual parts or different pages.

# C. Human Information Processing (HIP) Model

- HIP describes the movement of information from the environment into the human mind and back into the world.
- By remembering or recognizing information that has been stored in long-term memory, humans may recover it.
- The quality of information recall is determined by how information was originally encoded by the senses and environmental factors.

# 3. Empirical Approach

- This approach to is useful for examining and comparing the usability of multiple conceptual designs.
- This testing may be done during pre-production by counterbalancing design concepts and conducting usability testing on each design concept.

# A. Human Task Performance Measures

- measuring users' task performance is important for determining how intuitive and user-friendly a web page is.
- Users may be given one or more conceptual designs to test in a lab setting to see which is the most user-friendly and intuitive.

# B. A/B Testing

- A/B Testing, also known as Split Testing, is a technique for comparing different versions of a template or interface to see which one gets the most conversions.
- Half of the users will use one version of the graphical user interface, and the other half will use another, all while tracking indicators to see which one is more effective at getting them to do what you want.

# 4. Predictive Modeling Approach

- Analyzes the individual components of a user interface in terms of the time it takes to effectively achieve an objective using a process called **GOMS (Goals, Operators, Methods, and Selection Rules)**.
- It is a model for evaluating the usability of an interface by eliminating unsuccessful or unnecessary interactions.

- **Goals** are the tasks assigned to users, such as sending emails to customers
- **Operators** are the user's activities that help them accomplish a task
- **Methods** are a series of operators and sub-goals that the user uses to accomplish a task
- **Selection Rules** are a user's personal decision on which method to achieve a goal in a given situation

# Thank You!!!