What are Paradigms in HCI?

- A paradigm is a common way or style of interaction between humans and computers.

Simply:

- How users communicate with computers.

Why Paradigms Matter

- Show evolution of technology

- Improve usability

- Help designers choose best interaction style

- Match user needs

Paradigm 1: Command Line Interface (CLI)

- Users type commands

Examples:
- Linux Terminal
- DOS

Pros:
- Fast for experts
- Powerful

Cons:
- Hard for beginners
- Must memorize commands

Paradigm 2: Graphical User Interface (GUI)

Users interact using:

- Mouse
- Icons
- Menus
- Windows

Examples:

- Windows OS
- Mac OS
- Android

- Pros:
- • Easy to learn
- • Visual

Paradigm 3: Direct Manipulation

- Users interact directly with objects

Examples:
- Drag & drop
- Resize images
- Move files

Benefits:
- Immediate feedback
- Feels natural

Paradigm 4: Touch-Based Interaction

- Users interact using fingers

Examples:
- Smartphones
- Tablets
- ATM touch screens

Actions:
- Tap
- Swipe
- Pinch

Paradigm 5: Voice-Based Interaction

- Users talk to systems

Examples:
- Siri
- Alexa
- Google Assistant

- Advantages:
- Hands-free
- Natural communication

Paradigm 6: Gesture-Based Interaction

- Users interact using body movements

Examples:
- Xbox Kinect
- VR systems

Advantages:
- Immersive
- Fun interaction

Paradigm 7: VR and AR

Virtual Reality (VR)
- Fully immersive world

Augmented Reality (AR)
- Adds digital objects to real world

Examples:
- VR gaming
- Snapchat filters

Evolution of Paradigms

- CLI → GUI → Touch → Voice → Gesture → VR/AR

- Technology becomes more human-centered