

HCI

-> Hci is about how people interact with computers and other digital devices

8 reasons why
A good design is essential

1. User satisfaction.

2. Usability and efficiency

3. Brand perception

4. Competitive Advantage.
competitors.

5. Accessibility and Inclusivity

6. User engagement and Retention

7. Innovation and Creativity

8. Cost Efficiency.

History

1. 1960 - Text based Interfaces;

2. 1970 - GUI Xerox PARC developed the GUI, introducing icons, windows, menus.

3. 1980 - Apple Macintosh

↓
Mac
The Mac popularized GUIs with
first commercially successful
personal computers featuring a
mouse-driven interface.

4. ^{1990s} Web Design! - The rise of 'Internet'
to web design with HTML
(websites, links)

5. 2000s - Mobile Interface
The advent of smartphones brought
mobile interface design and
touchscreen.

6. 2010s: Flat Design and Minimalism
Interface embraced flat design,
focusing on simplicity and clarity.

7. Present: Responsive Design! -
Screen design adapts to various
devices, catering to mobile, tablet
and desktop users.

8. Future - Immersive Experiences
Virtual Reality (VR) and
augmented reality (AR)

KLM - keystroke level model

KLM model used to predict how long user take to complete a task on a interactive computer system.

KLM operators -

B = mouse button press

K = key button press

P → point to target with mouse

H → Home hand to ^{moving hand to} keyboard or mouse

M → Mental preparation (pause)

D → Draw line with mouse

R → system Response Time

Time are empirically determined.

$T_{execute} = T_K + T_P + T_H + T_M + T_D + T_R$

operation remarks time (s)

1a press key
 good typist (40 wpm) 0.12
 poor typist (10 wpm) 0.28
 non-typist 1.20

B Mouse button
 press 0.10
 down or up
 click 0.20

P pt with mouse $0.1 \log (P/s + 0.5)$
 Fitt's law

H Home hands to and
 from keyboard 0.40

D Drawing domain

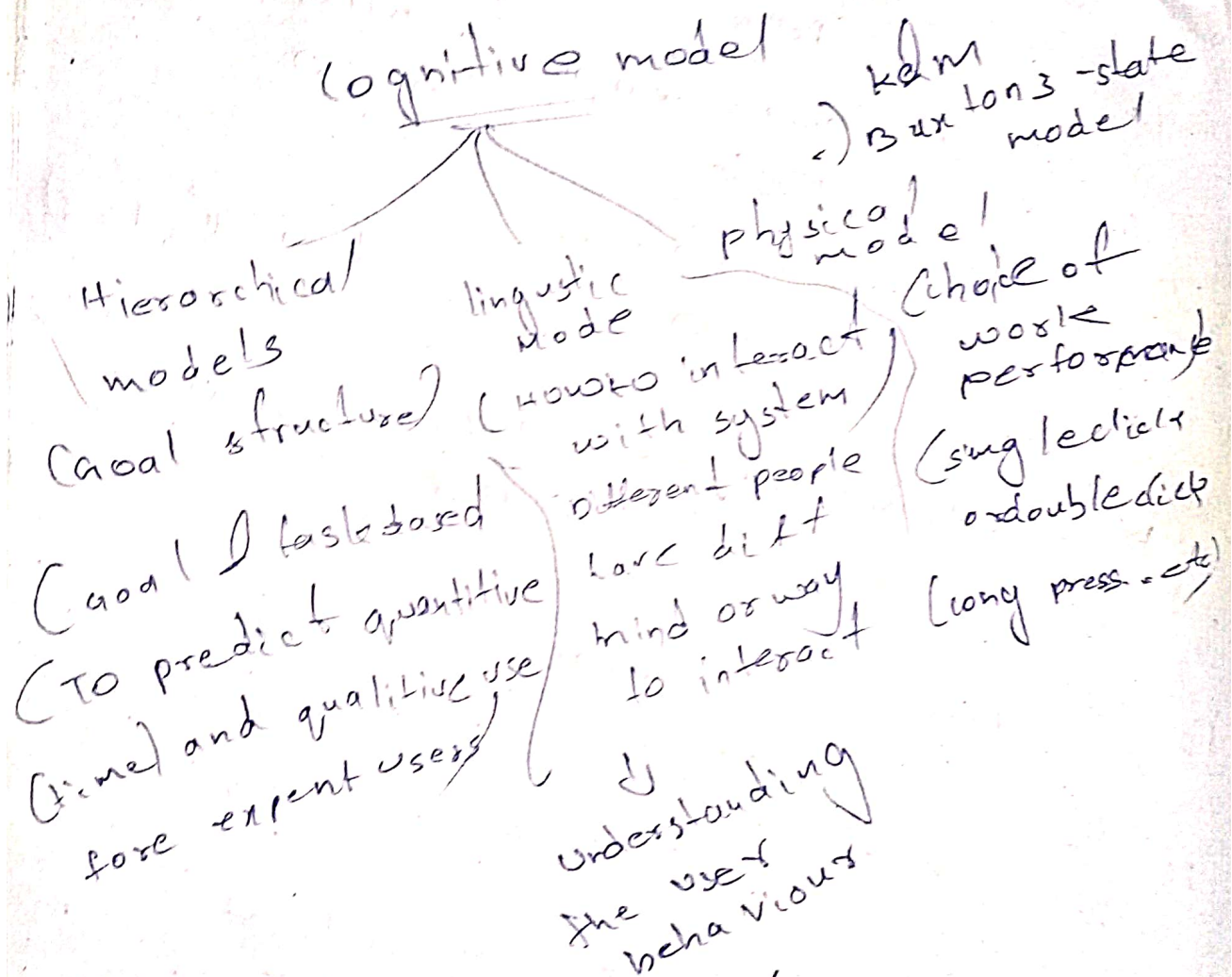
M Mentally pre-prepare 1.35

R Response from system -

Cognitive models

Cognitive models represent users of interactive systems, thinking like human.

=> Based on three things.



→ architectural model

→ All these cognitive models make assumptions about the architecture of human mind.