Lecture # 04

learning management System for students

Psychology → Date

Artificial Intelligence →

Design →

Engineering →

ISO standards

↳ Rules

↳ high in authority.

Design Rules

↳ Principles

↳ low in authority.

Result → conclusion → find the flaw

Principle :- Date

- learnability
- flexibility
- Robustness

* heuristic approach
to explore something

noise user → object.

(2) Physical appearance ko dekh kr jo logic hmare mind mein atta uske hm ⟷ relate.
↓ learnability ↑

(3) Predictability →

Metaphors :-

Date

Mobile ⟶ Metaphors

1) Gmail
2) playstore
3) Gallery.

-. Generalization.

Principle to Support Usability
learnability. (Cont.)

Date

Principles of flexibility :-

- Interaction between teach & student.
- Visual ~~ge~~ channel se hm output dete or I. Smjna rahe logon ko
- Conveying information through toch senses.

→

Real world example in interactive system.

- input password in Computer.
  input ——→ Pass.
  Output ——→ PC will show you home screen.

⇒ Exchange of Information

Date

(ii) Dialogue Initiating

hmne input dia usne window kri.

(1) System initiated dialog:

To system show kre kch b interface pr

by

→ Popped up the System.

(2) User Initiated Dialog:

Input → file ko cross kiya
Output → screen pr Save or Cancel ka b option show hua

⇒ Q Multitasking ko system mein lana chahiye ya nhi?

⇒ Ans: Yes, we should include multitasking.

Date

Chapter: 06

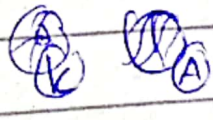
Q. Apne project ka title & group members ka naam do

Ek Robot design kardia usko kch bnana nota nai or hm usko sikha dete hain how-to complete the task

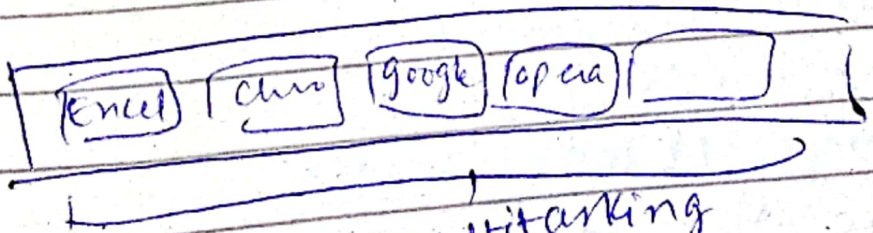
Multitasking:-
"Coding krte wqt songs sunna"

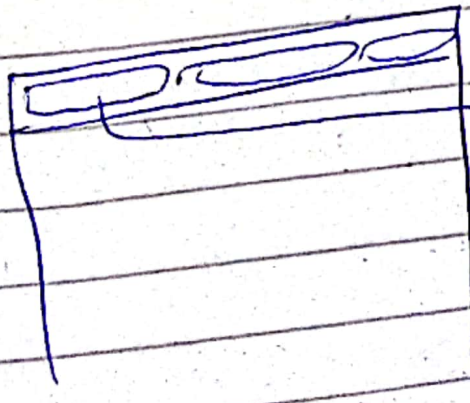
Multitasking → to perform multiple application that do multi tasking? :P

Multithreading:



Ek application





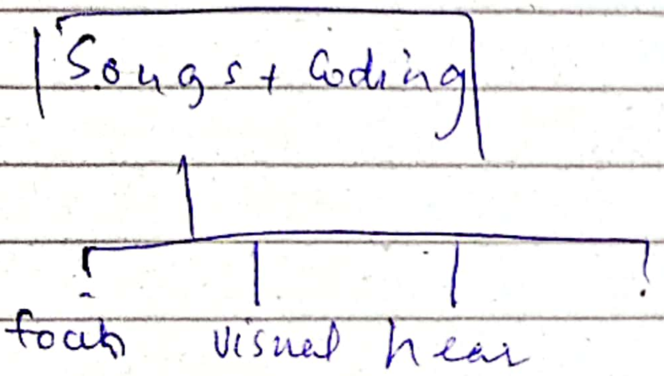
Chrome pr jo tabs khule hue wo multithreading kehlate hp.

~~Multimodularity:~~ Date

Multimodality:-

Input & Output channels:

Input or output ke channels



Scenario:

student is using g mobile phone & teache wants to get his attention so if he ~~wo~~ wo dekh nhi rahe tw. kch or krna parega teacher ko so sb ~~not~~ multitasking ki examples hain:

Date

(9) Concurrent multitaming main bhi ata or multithreading main bhi.

Synthasisent
Predi n
flemi
Lean
Robustness
famil
Generalization
Consistency

Midterm: "Solution" Date

Question: 01

We can see the concept of Robustness in the given figure that how system is supporting the user by showing multiple icons for same functionality. we can open microsoft edge from the start menu and in windows bar as well.

flexibility can be seen in the figure by how user enter the input and how system works on it.

→ The difference between principle standards & guidelines is principles are necessary for the developer to follow while standards are set by high authority and many companies follow these standards to become certified. Other standards guidelines are not necessary to follow but it helps to perform work.

Question: 02 Date

Ans

~~The figure is~~

There are many metaphers used in the figure.

This interactive system is very clear to the user due to the use of metaphors.

- icon of Photos ~~can~~ be helping to understand the functionality without reading the name
- Weather icon
- Calender icon
- Movies & TV icon,
- Microsoft Edge icon

Date

Question : 05

Ans Slips :-

~~The~~ Slips are the action done by the user on the system unintentionally if the user get confuse between the icons or due to size of the icons and click ~~press~~ on other icon. etc
we can improve slips by resizing the icons. ~~of~~ or by improving the intefface.

Mistakes :-

Mistakes are the action perform by the user when he doesn't know that what action he ~~is~~ has to perform.
~~we can in~~ like he doesnt know that which library he has to add for perfoeming certain action.

Date

Mistakes can be improve by giving tutorials to the user.

Question: 07

There is a huge difference between reconginization. Graphical user interface is much better than cmd because we can see different icons on the interface and performes actions on it but it want to acces one file or document on cmd we have to perform particular actions on cmd and pass the arguments etc that can causes mistakes and problems so cmd is not better option as compare to user graphic interface.

Date

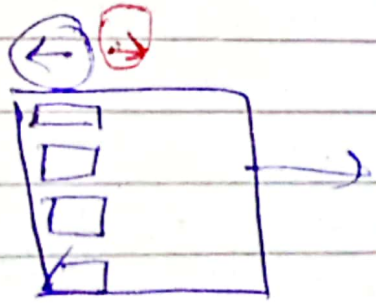
⊙ Brightness km ya zyada krna is adaptibility.

⇒ Design Principles:

Robustness:

(Auto Correct)

⇒ Error ko bd red line aati usse bd jb main sahi hojaü



migratability:

⇒ device wala option customization k andr data.

⇒ notifications kb tk home screen pr dikhengi wo tym period ya proces persistency mein hoti

comp

Date

Task performance:

-. msg deliver hone pr double tick
- sound/ ring hona msg
deliver hone pr.

Reachability:-

1) Book download.
2) click on Bookmark
3) Particular link open.

Date 1 Analysis

- Prototyping technique.

Usability specifications of E-dairy :-

Tasks :-

1) If user wants to login in the dairy, The system should help the user in case he forget to his password.
2) When user sets remainder or any task to perform the system will show notification at that particular time
3) The calendar can be integrated in E-dairy so E-dairy would be more helpful.
4) E-dairy will set a ringer to notification.
5) Bookmarks can be added in E-dairy.
6) The dairy will show the current date on opened tab.
7) The selected date or day option color will change automatically (Task confirmation)

Scanned with CamScanner

Date

(8) There will be dark & ~~blc~~ light mode in dairy and night mode as well which will be helpful to the user.
(~~For~~ interface of dairy, Robustness).

(9) If user enter the particular date the system will show the dialogue box on screen th and show the all the saved events.

(10)

HCI in

Real

Fur

-. B

-. F

Non

Date

HCI in Software Engineering :

Real world scenarios :

Functional & Nonfunctional requirements to

-. Board ki example di.
-. Bottle ki example di

↓

Non-function → melting point

Date

(ISO usability standards)

⊙ effectiveness: (correct result)
Example (irrelevent data ko slides se remove karke dikhaya)
→ table show hua.

⊙ Efficiency:-
↳ linked to ~~how~~ ~~the~~
⇒ jb table k option pe click kra tw kitni dair tk chalega.
⇒ algorithm kb tk run hoga.
code execute hone k bd kb tk chalega.
→ kitni dair tk hua.

Some metrics from ISO 9241:p

⇒ Effectivnes → Percentage of Goal achieved
(table menu pr click phr bones choose kiye phr select kiye etc)
(end mein hua)

⇒ Efficiency:-
Time to complete a task.

⇒ Satisfaction:-
Rating scale for satisfaction.

Date Amna Ambareen

windows mein asani hoti sb kch. Ati

Linux ko use krna is hard yd krna
(Ubuntu) prta sb commands dekni
prti.

Iterative design & prototyping :p

types :-

1) throwaway: (showing model (Building model)
user inkar krdeta phr developer
scratch se start krta sb. dubara use
nhi krta.

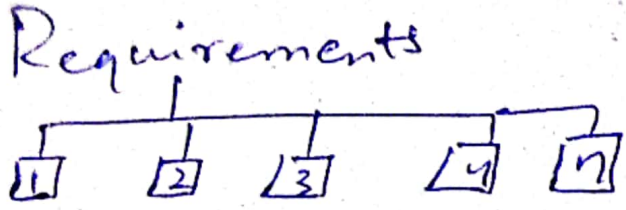
2) Incremental :
(Agile methodology.)

→ components mein divide krte
user ko dikhate if o

ok
yes

not okay
changes are mandat

evaloution ays:
revisiting all the steps



Date

→ incremental mein sth sth dikhate or sth sth change/improve krte rehte apna project.

Evalutionary:-

⇒ Agr mein hai prototype mein tw hm same processes revisit krte.

⇒ Requirement mein issues aate tw bhi sb visit krte.

Basic issue between Evalutionary & incremental is due to requirement gathering.

Management Issues:-

- Searchbar ko showhona → functional,
- Alignment of searchbar → non functional. etc

⇒

Date: ..

Techniques of Prototyping?

1) Storyboards:

- Provide snapshots of interface.

- Movies & posters (Eg.)

2) Limited functionality Simulations:

Snapshot se kam wali unka
set functionalities bhi define krna pdta

3) Warning about the creative design.

4) designing inertia.

(1) Hypercard is well known and successful prototyping tool. (simulate on card for Apple computers)

(2)

Date

Syllabus of HCI :-

Lecture: 0.0
Lecture : 0.1 (quality assurance and testing additional)
Chapter : 06 (Wizard of Oz & Design rational)
Chapter : 07

Lecture 0.0 Interdisciplinary fields

Multimodality :-

Unlocking Password / mobile

Password → Math
fingerprint → With
Pattern → Math

different task channel to target some specific

→ Sumna
→ Deepika etc
→ .

Date

task subsitivity in mobile phone:

- More than one way to perform an single task.

- Interdisplinery field:-

ways of Interaction b/w people and computer.

Immigiate honesty ↔ in comand prompt.

reachibility ↔ bookmarks.

Immigiate honesty. ↔ task confirm jo horacha hota hai loading..)

Attributes → Backward recoverability.

Measuring concept: Undo an error

recent command → undo

Measuring Method:

User jitna bhi Undo kr sakte.

Now level: no undo.

Worst Case: Many actions.

Planned level: max. of two explicit user actions.

Best Case: One explicit cancel action.

Date

learnibility in ISO Stand. 9421.
9241.

learn

Effectiveness	Efficiency	Satisfaction
- function you learned	Time to learn	Rating scale for ease in the

Prototypes:-

Scanned with CamScanner

Date

1. Hypercard.

Usability

Flexibility — Learnability — Robustness

Learnability

Predictibility — ~~Generality~~ — synthesizability (autocorrect)

visibility — familiarity (metaphors)

→ dialouge initiative
system user.

→ multithreading / multitasking

→ ~~multimio migrat~~ migratability (spell check by user)

→ substitutivity

→ customizability (adaptibility, adaptivity)

observability

recoverability

~~responsiveness~~

~~conformance~~