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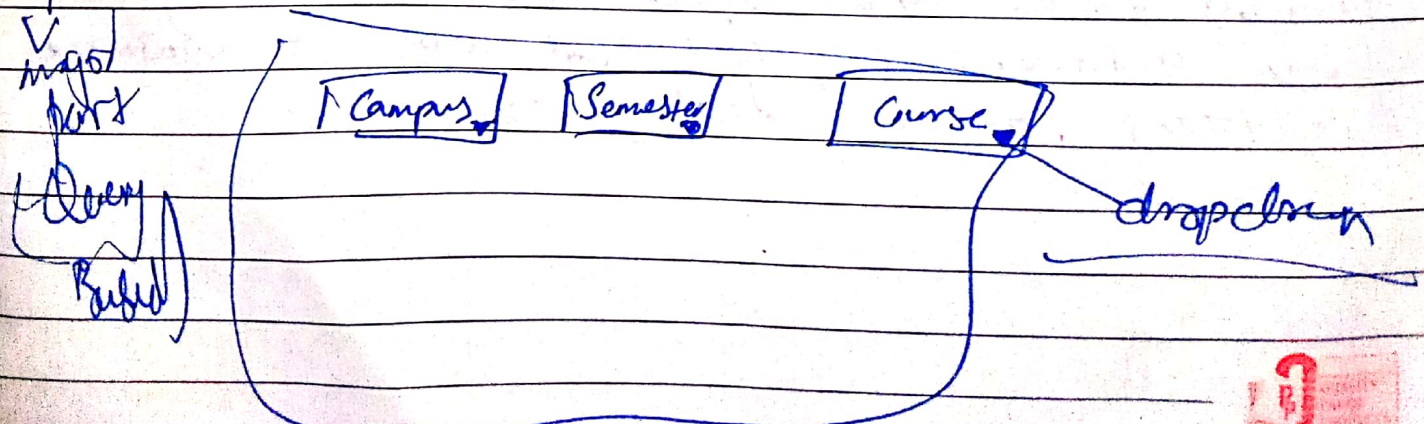
Interaction Styles (Study Extensively From Book & Google)

→ Yashal makes project of data-entry for Tahir Bhai.
→ Amna makes project of network security.
→ One is used by novice users while other is used by expertise users.
→ Amna project (Command Line Interface)
→ Yashal project (Forms Filling)
→ Google windows eg, where voice command generates outputs on screen or searching done using typing is called natural language.
→ A mixture of all three above is called wimp.

→ Menu is also a type of interaction style Umer makes project of typing in document. All options can be provided in menu for example, avoid plagiarism, print document. A dropdown menu can be provided to cater all these needs.

→ WIMP also has an additional feature of CLI involved in it.
→ Feedback filling form is an example of form-filling and natural language options
description form
→ Notepad is menu interaction style.
→ Pen is also menu style interaction. (Teacher's Free)



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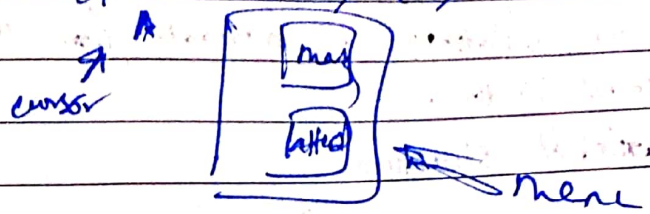
→ WIMP is a category of interaction styles and can include menu interaction styles or others in it.

Scenario: Opening Flex

1) Open windows screen (W)
2) Click on google
3) Find Flex Browser (will come as icon on google) (I)
4) Fill log in
5) Flex has opened. (M) (A)



→ Read/ Have a know how of all examples of interaction styles.

Interaction design basics

to achieve goal within constraints. (Book definition)

→ Why went on google? Wanted to learn dS - In search box, whatever you want to search through query. Can search query feature going through Google. Hence, we can say natural language is written on query search box after converting your thoughts. Hence, Interaction style is natural language style

→ Constraints on no eating in classroom by department. Sir has no constraints imposed on us (no attendance no eating constraints as can bring food in class).

→ Take an example of having a constraint on us imposed that you have to do dS project on big Data (minimum size 1GB, let's assume). Deadlines are also constraints.

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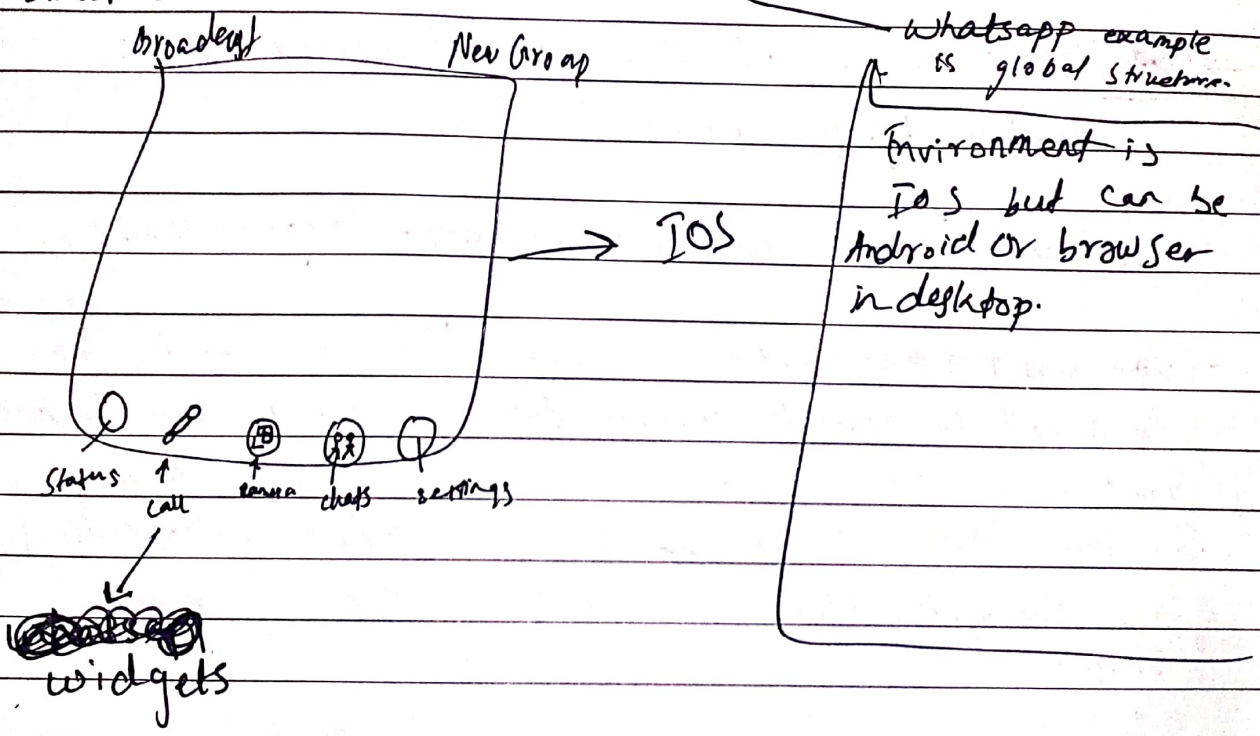
→ Android application won't run on Apple (IOS).

→ Humans can be considered as a constraint. Why? When developing application, we are making it for user and so we have to keep user in mind as constraint while developing the application.

New class:

→ To upload picture on whatsapp we navigate from whatsapp to gallery and then upload picture.

→ navigation → Global structure
local structure



→ Clicking on any widget will direct to a new windows. This is navigating.

→ If you navigate thru multiple windows this is global structure.

→ If you navigate within a single window it is called local structure.

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→ Physical devices have a physical layout.
→ Web applications, mobile, desktop all have different environments and hence their look and feels icons placement, widgets, etc all will be different in each environment.

→ Sometimes a single control/button is doing/performing multiple modes/tasks. This can be annoying for user as ambiguity can be occured.
Hence, we should try to minimize access of modes by a single control.

→ Physical device like AC has environment: real world

Design golden Rules

:→ E:/Semesters/CS2001

→ Where are you?
→ Where you have been?
→ Where you can go?
→ What you can do?

If we delete description of folder, its usability will be affected as the user will not be able to find where the content/slides we want to access are present. User will not have idea of where he is present and where he is wandering.

Evaluation Techniques

→ Assesment about the functionality of something
OR
→ assesment of usability

→ Eg, of teacher evaluation form.
→ HOD dharna for removing teacher

Chapters 1, 3, 6, 7, 14 & 15
for HCI

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→ Whatsapp example: Assessment of quality of voice after a voice call.

→ Issue gets resolved (maybe) after an update of the app occurs.

→ Field based Evaluation (Cannot happen before deployment)
→ Lab based Evaluation (if evaluation happening within industry)
→ Evaluation can occur before deployment of application.

→ A technique for evaluation is: cognitive walk through (expert user, cognitive psychology)
→ Review Base (take help from literature)
→ Heuristic Evaluation

originated from code walk through

How much time will the user take to learn the system

Calculate/Analyse time taken for multiple

Can other programs understand my code (variable naming etc)

Scenario:- Saeed ko utha ke aage bitha diya
Hypothesis: attention of the student.

→ In project, if clash of team members on how view of menu bar should be,

File edit view insert

file
edit
view
insert

→ Representation of either menubar will affect moment time and usability of it. Hence, moment time and usability (easy to use) are dependent variables whereas representation is an independent variable.

Another scenario: Change font size of slide using CTRL+A.
Here, font size is independent variable and visibility and readability are dependent variables.

If we change tool bar into pallets (static), it would be easy to use and moment time reduced.
Position of tool bar can also greatly affect usability and moment time.

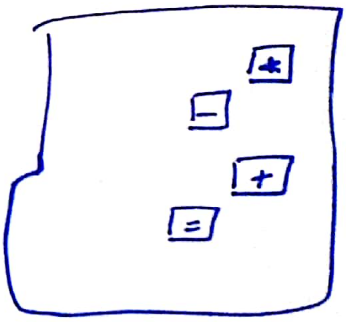
After changing position of tool bar, we evaluate our hypothesis and curiously consider independent and dependent variables in it. The three/two measures evaluate independently and then compare results of their analysis.

→ How old systems have been evaluated and using their literature/analysis is review based.
→ Providing feedback on problems on system by user (Eg new Flex developed) is heuristic evaluation.
→ Task Migration eg, is dictionary - Searching a word in dictionary and finding it. If not found, alternate word to be searched for is provided. Eg, Google search bar.
→ There is a reason for bringing any HCI concept in place in the system.

Guidelines (system evaluation) ⌐ hueristic evaluation

1. visibility of system
   → showing useful info.
2. mapping of system with real world
   → use icons, relate with real world.
3. Error prevention
   → have seen in word, that wrong spelling word gets underlined.
4. User freedom of control
   → easy reversal allowed.
5. Documentation
6. recognition rather than recall
7. asthetic
   → if buttons aligned, beautiful, etc.
8. recovery from the errors.
9. consistency
10. flexibility

→ design inertia are all bad decisions made/taken earlier on in designing a system.



→ major unsability is when very dark contrast color is placed on icon such that icon is hidden and can't be seen
→ minor usability example above.
→ disastrous when it can't be used at all as purpose not filled.

Class Activity (Last Activity HCI)

Q1) → will use persona as system being designed is for "eye cone" people and a detailed description of them will help in designing the system. (Can also be scenario)

Q2)

Persona: detailed description of users (age, name, ...

Cultural probe used where your presence is not important and you can make surveillance/observe the user without interacting with him.

Project

1) reachability
2) formality gap
3) Task Migration