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SUBJECT **HCI**

Question 1: Consider the chair given below. Your Employees want to use it as a computer chair. Your task is to write any As HCI Specialist, your job is point out any Five issues in the design of this chair.

Ans:

1. This chair is not in 90 angles.
2. This is not a movable chair.
3. It is wooden chair which is not comfortable.
4. These are no handles in it.
5. No back support.

Question 2: What is Paradigm, and what do you mean by paradigm shift?

Ans:

Predominant theoretical frameworks or scientific world view s

e.g, Aristotelian, Newtonian, Einsteinian (Relativistic) paradigms in physics

Understanding HCI history is largely about understanding a series of paradigm shifts,

Not all listed here are necessarily “paradigm” shifts, but are at least candidates

History will judge which are true shifts.

A paradigm shift is a major change in the concepts and practices of how something Works or is accomplished. A paradigm shift can happen within a wide variety of contexts. They very often happen when new technology is introduced that radically alters he production process of a good or service. For example the

assembly line created a substantial paradigm shift not only in the auto industry but in all other areas of manufacturing as well.

Question3: Explain Design Rationale. Write and explain the types of design rationale.

There are many definitions of Design Rationale:

"Design rationale expresses elements of the reasoning which has been invested behind the design of an artifact" [Shum & Hammond, 1993].

"Design rationale is the reasoning and argument that leads to the final decision of how the design intent is achieved." "Design intent is the `expected' effect or behavior that the designer intended the design object should achieve to fulfil the required function." [Sim & Duffy, 1994]

"Design rationale means statements of reasoning underlying the design process that explain, derive, and justify design decisions" [Fischer, et. a., 1995]

Types of Rationale

The following types of rationale are discussed in this document:

- *Argumentation based* - the design rationale is primarily used to represent the arguments that define a design [Garcia, 1993]. These arguments consist of issues raised, alternative responses to these issues, and arguments for and against each alternative.

- *History-based* - the rationale consists of the design history – the sequence of events that occurred while performing the design [Garcia, 1993]. This information can be stored in many forms. It could be in the form of entries in a design notebook, an archive of e-mail messages,

- *Device-based* - a model of the device itself is used to both obtain and present rationale [Gruber, 1990]. The explanations of the design would be produced by using the model to simulate the behavior of the device.

- *Process-based* -- the DR capture is integrated into the design process itself which guides the format of the rationale. In Ganeshan, et. al. [1994], the design description is modified only by changes to and refinements of the design objectives, thus capturing the rationale as part of the design process.

- *Active document-based* - the DR is pre-generated and stored in the system. In these systems, the designer creates the design and the DR system generates the rationale for it based on the system's stored knowledge.

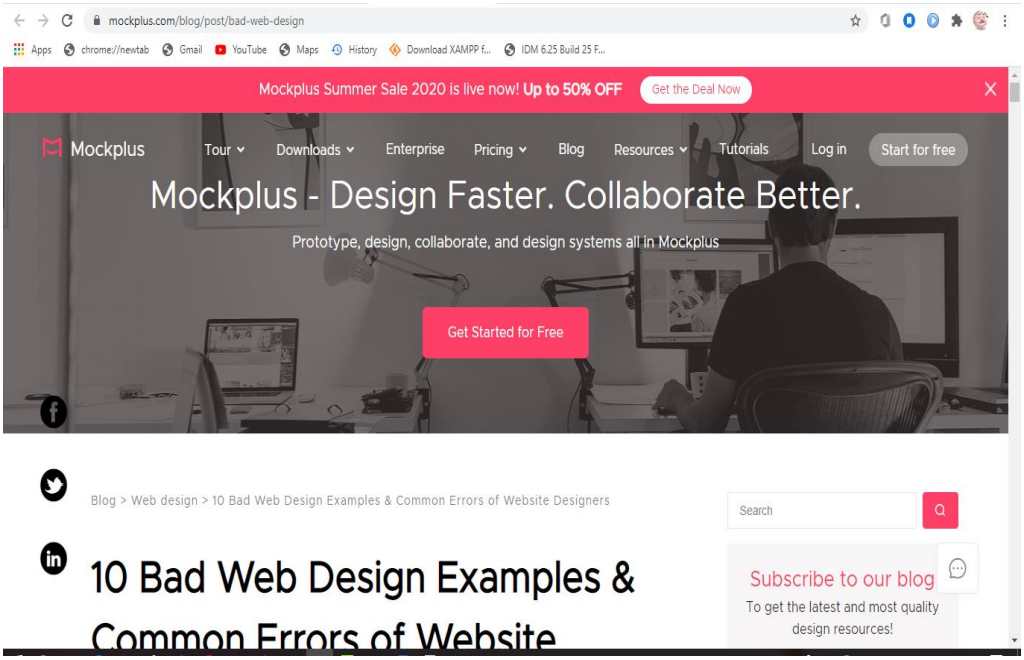
Question 4:

Good Consistency

https://www.teach-nology.com/teachers/educational_technology/evaluation/web_site/

Bad Consistency

https://www.mockplus.com/blog/post/bad-web-design



A layout where everything is the same size, shape, or color is going to look pretty boring—but contrast spices things up. However, as with most design concepts, contrast should be applied in a balanced way; too much contrast can be just as **bad** as none at all and may result in a confusing or visually jarring design.

Contrast helps organize your design and establish a hierarchy—which simply shows which parts of your design are most important (and signals viewers to focus on those). But more than emphasizing the focal point of your design, **good** use of contrast adds visual interest

Question 5: Write the Shneiderman's 8 Golden Rules

Shneiderman's "Eight Golden Rules of Interface Design" are a guide to good interaction design.

1 Strive for consistency.
Consistent sequences of actions should be required in similar situations; identical terminology should be used in prompts, menus, and help screens; and consistent commands should be employed throughout.

2 Enable frequent users to use shortcuts.
As the frequency of use increases, so do the user's desires to reduce the number of interactions and to increase the pace of interaction. Abbreviations, function keys, hidden commands, and macro facilities are very helpful to an expert user.

3 Offer informative feedback.
For every operator action, there should be some system feedback. For frequent and minor actions, the response can be modest, while for infrequent and major actions, the response should be more substantial.

4 Design dialog to yield closure.
Sequences of actions should be organized into groups with a beginning, middle, and end. The informative feedback at the completion of a group of actions gives the operators the satisfaction of accomplishment, a sense of relief, the signal to drop contingency plans and options from their minds, and an indication that the way is clear to prepare for the next group of actions.

5 Offer simple error handling.
As much as possible, design the system so the user cannot make a serious error. If an error is made, the system should be able to detect the error and offer simple, comprehensible mechanisms for handling the error.

6 Permit easy reversal of actions.
This feature relieves anxiety, since the user knows that errors can be undone; it thus encourages exploration of unfamiliar options. The units of reversibility may be a single action, a data entry, or a complete group of actions.

7 Support internal locus of control.
Experienced operators strongly desire the sense that they are in charge of the system and that the system responds to their actions. Design the system to make users the initiators of actions rather than the responders.

8 Reduce short-term memory load.
The limitation of human information processing in short-term memory requires that displays be kept simple, multiple page displays be consolidated, window-motion frequency be reduced, and sufficient training time be allotted for codes, mnemonics, and sequences of actions.

Question 6: You are familiar with internet explorer. Explain any five usability goals in terms of internet explorer. Justify each goal with example

Answer:-

Usability is broken down into the following goals:

1. Effective to use (effectiveness)
2. Efficient to use (efficiency)
3. Safe to use(safety)
4. Have good utility (utility)
5. Easy to learn (learnability)

1. Effectiveness

It is a very general goal and refers to how good a system at doing what it is suppose to do.

2. Efficiency

It refers to the way a system supports users in carrying out their tasks.

3. Safety

It involves protecting the users from dangerous conditions and undesirable situations. In relation to the first ergonomics aspect, it refers to the external conditions where people work.

4. Utility

It refers to the extent to which the system provides the right kind of functionality so that user can do what they need or want to do

5. Learnability

It refers to how easy a system is to learn to use. It is well known that people do not like spending a long time learning how to use a system