

## Humab Computer Interaction

**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.**

Answer: The issues with this chair are as follows:

- **Hard and Stiff:** The first thing to be noticed about the design flaw of this chair is that it's a wood chair and it is not suitable for office use where an employee would spend 4 – 5 hours sitting in front of a computer which would be terribly uncomfortable.
- **Unmovable while Sitting:** A conventional Computer chair comes with small movable tires which helps a person to adjust the position of the chair according to their comfort.
- **Non Adjustable to varying postures:** Another flaw in the design of this chair is that the back part of the chair is nonadjustable. An office chair should have a slightly flexible back to be able to adjust to varying postures
- **Lack of Chair Mechanism:** This Chair lacks the Mechanisms of a good Office chair. An office chair should have mechanisms like knee-tilt, synchro-tilt or full-swing.
- **Nonadjustable Seat Height & Armrests:** A good office chair should most definitely have these two features, an employee must have the option of adjusting the height of the chair according to their liking and also it should have armrests to provide a good comfortable position to use the mouse while resting the elbow.

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

**Ans:** In general A paradigm is a distinct set of concepts or thought patterns, including theories, research, e.t.c and standards for what constitutes legitimate contributions to a field.

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 the production process of a good or service.

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

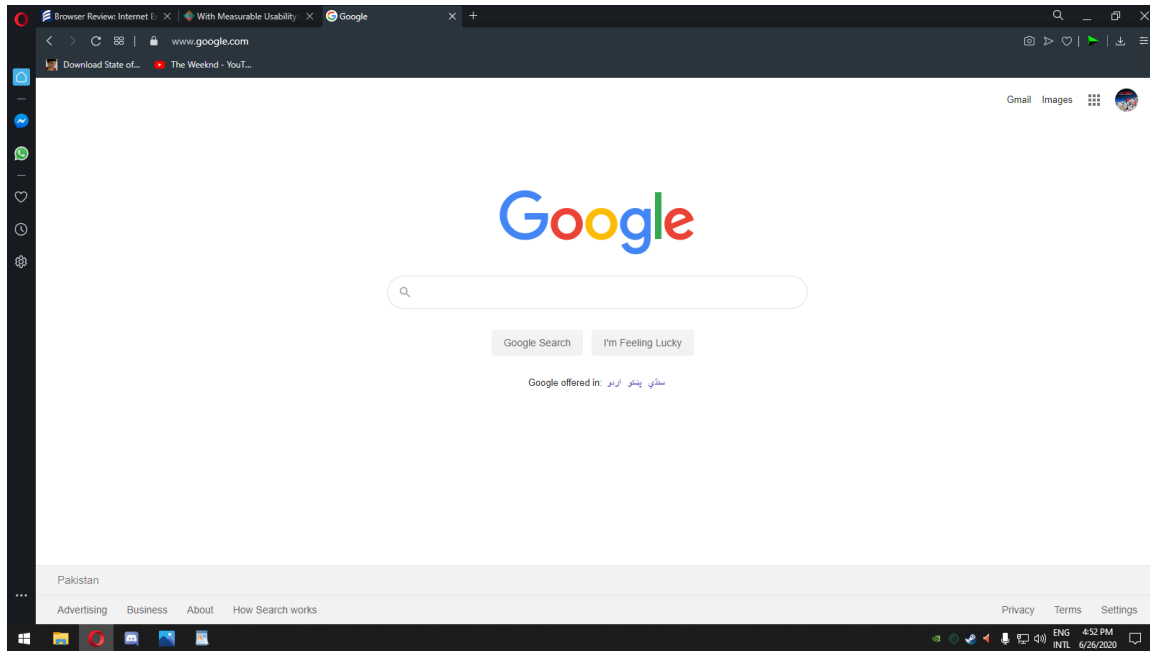
**Ans:** A design rationale is the explicit listing of decisions made during a design process, and the reasons why those decisions were made. Its primary goal is to support designers by providing a means to record and communicate the argumentation and reasoning behind the design process.

**Types of design rationale are:**

- **Argumentation based:** the design rationale is primarily used to represent the arguments that define a design. 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. This information can be stored in many forms. Like: emails, entry in books etc.
- **Device based:** A model of the device itself is used to both obtain and present rationale. 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. 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 the systems the designer creates the design and the DR system generates the rationale for it based on the system stored knowledge.

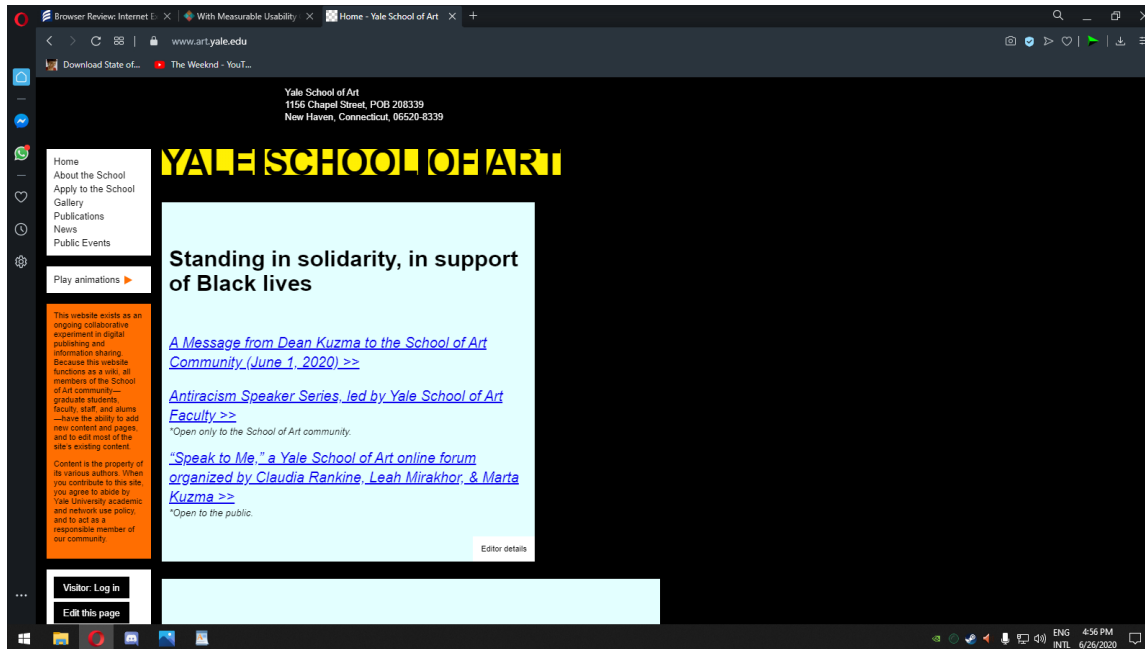
**Question 4): Find the web pages that illustrate the principle of consistency. You must provide on good and one bad example of consistency. You must provide the screen shot of web pages along with URL and the written explanation justifying your good and bad example in your answer. To provide the relevant examples browse the internet.**

**Ans:** Good example: <https://www.google.com>



- 1) The greatest thing is that the site use a grid.
- 2) believable navigational structure. Easy to use.
- 3)good typography makes it readable.
- 4) use of colors perfect.

**BAD example: <https://www.art.yale.edu/>**



- 1) The biggest problem is that the site doesn't use a grid.
- 2) Unbelievable navigational structure.
- 3) Poor typography makes it unreadable.
- 4) Random use of colors.

### Question 5: Write the Shneiderman's 8 Golden Rules.

**Ans: the following are the 8 rules of shneiderman's:**

#### **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.

#### **3 : Offer informative feedback:**

For every operator action, there should be some system feedback.

#### **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.

#### **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 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.

**7 : Support internal locus of control:**

Design the system to make users the initiators of actions rather than the responders.

**8 : Reduce short-term memory load:**

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.

**Q6: Explain Any five usability goals in terms of internet explorer with examples.**

Ans: The five usability goals are as follows:

1. Effectiveness: How long it takes to complete the task. Example for 80 % of the users internet explorer is slower than its competitors like firefox, safari, opera and chrome.
2. Efficiency: The number of attempts to complete the task. Most of the people using windows 10, 8 and vista are using the older versions of IE which means they will face issues in downloading and uploading of content due to which they will click the retry button again and again so the file would download or upload.
3. Satisfaction: How satisfied the visitor was with the process of completing the task. Example 95% of users will rate the experience of using internet explorer a 3 or 3.5 on a one to five scale where five is the best.
4. Error Rate: The number of errors the user faced completing the task. Internet Explorer has a lot of bugs. It has backward compatibility which makes a lot of sites abnormal viewing. For example some old sites png cannot load in IE. Some webpages don't even open in IE7 or IE8.
5. Overall Success: The percentage of visitors who completed the task. Example 90% of users will be able to find internet explorer an average browsing application.