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**Evaluation using Design Heuristics - Heuristics for Understanding**

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## Recap

- Usability, user experience goals
- Prototyping

How do we evaluate the UI of the prototype?



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In the previous video, we looked at various usability and user experience goals, and how we can create prototypes. We saw that prototypes help us quickly test on users, get feedback, iterate, and it also helps facilitate conversations.

Now, let us say that we have created a user interface for our prototype based on the usability and user experience goals. Now, how do we actually know that our UI is usable and effective? So, what are ways in which we can evaluate our UI?

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## Reflection Spot

What are ways in which you can evaluate the user interface of your prototype?



Please pause the video and written down your responses



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So, let us reflect on this question for a moment. So, what are ways in which you can evaluate the user interface of your prototype? Please pause the video and write down your responses before proceeding.

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## Evaluation of User Interface

- Assess with real users
- Critique from expert designers
  - Subjective?
  - Specific guidelines



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So, there are several ways in which you can evaluate your UI. So, some of you would have thought of assessing it with real users. So, show the UI to your clients or to your end users, make them use it, ask for feedback. Another way can be to get critique from expert designers. So, show expert designers your UI and ask them for feedback. But how do you think they will evaluate it? Well, it can be subjective based on their experiences. But it would also be

helpful if we have a checklist or a set of more specific guidelines, which will help us evaluate if our interfaces are effective, efficient, safe, etc.

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## Heuristic Evaluation

- Heuristics are the strategies derived from previous experiences with similar problems
- Rules of thumb/guidelines



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So, this is where heuristics come in. So, heuristics are the strategies which are derived from previous experiences with similar problems. Over time, designers come up with certain rules of thumb or guidelines based on their experiences.

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## Heuristic Evaluation


UNDERSTANDING	ACTION	FEEDBACK
 Consistency	 Freedom	 Show Status
 Use Familiar Metaphors & Language	 Flexibility	 Prevent Errors
 Clean & Functional Design	 Recognition Over Recall	 Support Error Recovery
		 Provide Help

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Adapted from Jacob Nielsen's heuristics - <https://www.nngroup.com/articles/ten-usability-heuristics/>



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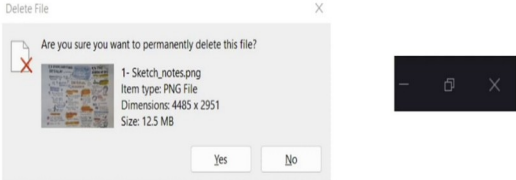
And the most widely used set of design heuristics is by Jacob Nielsen, who came up with a set of 10 design heuristics. So, this image is taken from Professor Scott Klemmer's HCI course where he has grouped these heuristics into three broad categories of understanding,

action and feedback. We will be looking at these heuristics in this and the upcoming videos. So, let us look at the consistency heuristic.


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## Heuristics for Understanding

- Consistency
  - Consistent Layout
- Consistent Name



The screenshot shows a 'Delete File' dialog box with the text 'Are you sure you want to permanently delete this file?' and a preview of a file named '1- Sketch\_notes.png'. The file details are: Item type: PNG File, Dimensions: 4485 x 2951, Size: 12.5 MB. The dialog has 'Yes' and 'No' buttons. To the right is a dark window control bar with standard minimize, maximize, and close buttons.













The bottom of the slide features the IIT Madras B.S. Degree logo on the left and a portrait of a man on the right. The text 'Software Engineering' is visible below the logo.


So, consistency can be in terms of a consistent layout and the layout across all screens should be consistent in terms of color, font, etc. So, if you look at the windows of your operating system, the placement of buttons such as the yes and no button, the minimize, restore, close. All of these are consistent across all windows. The second aspect of consistency is that you should have consistent names throughout all screens in your product. For example, the name of product, features, etc should be the same throughout your application.

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## Heuristic Evaluation

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## Heuristics for Understanding

### Use Familiar Languages and Metaphors

- Online Shopping



- Paying Online - "Mobile Wallet"

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The next heuristic is using familiar metaphors and language. So, we should use words and phrases, which are familiar to our end users and not use technical or jargon terms. So, one example is when you do online shopping. So, when you do online shopping platforms use terms which are used in physical stores, example, checkout, shopping cart. And these are terms which are familiar to users. Another example is when you pay online you use a mobile wallet. And this is similar to actions which we do with a physical wallet like adding or removing money, etc.

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## Heuristic Evaluation

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The next heuristic in understanding is a clean and functional design.

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## Heuristics for Understanding

### Clean and Functional Design



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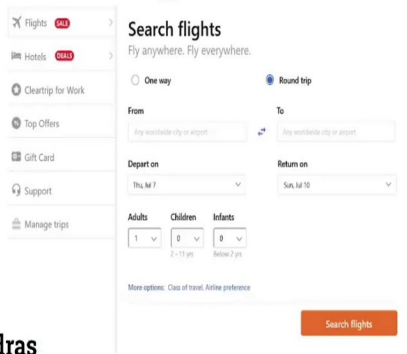


So, our application should have a clean and functional design, which is minimal and easy to understand. So, if you look at this image, so this is an extreme example of a very cluttered design, there are multiple colors, fonts, images, and there is no common theme. And hence it is difficult to find relevant information.


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## Heuristics for Understanding


### Clean and Functional Design



The screenshot shows a flight search interface. On the left, there is a vertical navigation menu with options: Flights, Hotels, Cleartrip for Work, Top Offers, Gift Card, Support, and Manage trips. The main content area is titled 'Search flights' and includes a search bar, trip type selection (One way, Round trip), origin and destination fields, departure and return date pickers, and passenger selection (Adults, Children, Infants). A 'Search flights' button is at the bottom right.

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So, let us contrast this with another UI. Here you can see that there is a clear navigation on the left, which describes the key features of the system. The colors and fonts are consistent throughout the screen.

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## Summary

UNDERSTANDING	ACTION	FEEDBACK
 Consistency	 Freedom	 Show Status
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So, in this video, we looked at an effective way to evaluate a user interface. Design heuristics can provide us with guidelines to effectively evaluate a given design. We looked at Nielsen's design heuristics and looked at heuristics related to understanding.