Jakob Nielsen's Heuristics

A Framework for Evaluating User Interface Design

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What are Heuristics?

- Heuristics are practical guidelines or rules of thumb for evaluating design.
- Heuristics provide a structured approach to assessing usability and user experience.
- They serve as a checklist of principles to help identify potential usability issues during design evaluation.
- These guidelines are based on best practices and expert knowledge.
- Evaluators identify violations of heuristics and recommend improvements.
- Using heuristics can lead to improved product quality and user satisfaction.

Nielsen’s 10 Usability Heuristics

1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose, and recover from errors
10. Help and documentation

Visibility of system status

- Ensure users are always aware of the system's current state.
- Use indicators like progress bars or loading animations.
- Show feedback for completed actions to reassure users.

Let’s think of some examples…

Match between System and the Real World

- Design with language and concepts familiar to users.
- Avoid jargon or technical terms that users may not understand.
- Mimic real-world actions and objects in your interface.

Let’s think of some examples…

User Control and Freedom

- Allow users to easily undo actions or exit undesirable states.
- Implement a clear "Cancel" or "Back" option.
- Prevent irreversible actions without user confirmation

Let’s think of some examples…

Consistency and Standards

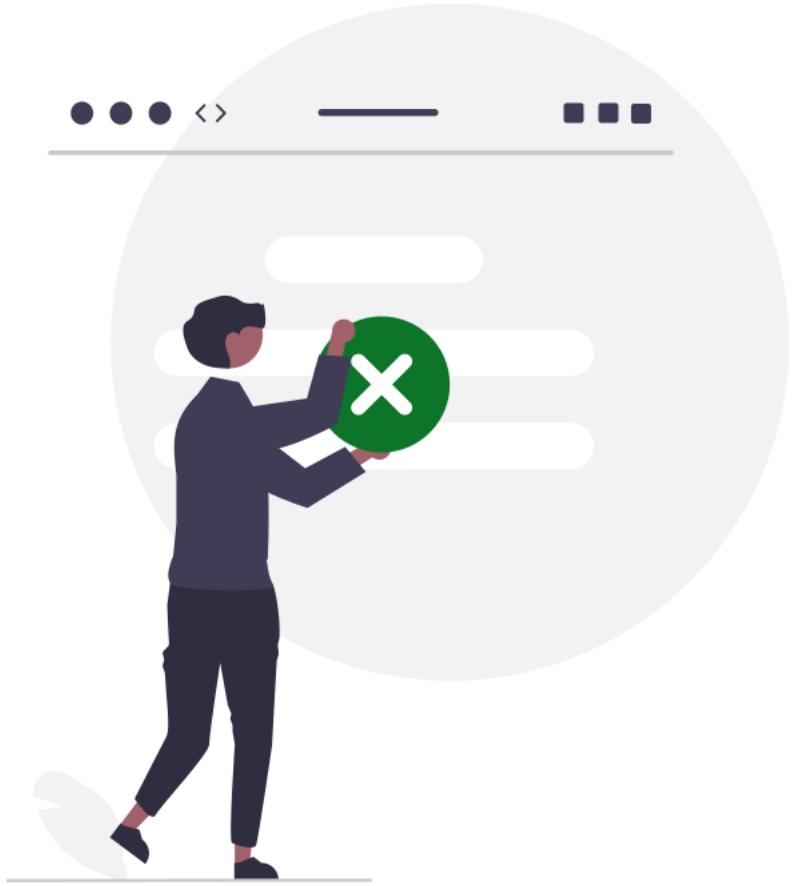
- Maintain a consistent design throughout the interface.
- Follow established conventions and design patterns.
- Ensure that similar functions look and behave the same way.

Let’s think of some examples…

Error Prevention

- Design to prevent errors whenever possible.
- Use clear labels and instructions to guide users.
- Implement confirmation dialogs for critical actions.

Let’s think of some examples…



Recognition rather than Recall

- Present information and options in a visible and easily accessible manner.
- Minimize the need for users to remember information.
- Provide cues and hints to assist users when needed.

Let’s think of some examples…

Flexibility and Efficiency of Use

- Cater to both novice and expert users.
- Offer shortcuts or advanced features for experienced users.
- Avoid forcing users into a linear path; allow for multiple approaches.

Let’s think of some examples…

Aesthetic and minimalist design

- Prioritize a clean and visually appealing design.
- Remove unnecessary clutter and distractions.
- Utilize whitespace effectively to create visual balance.

Let’s think of some examples…

Help Users Recognize, Diagnose, and Recover from Errors

- Provide clear and informative error messages.
- Offer suggestions or guidance on how to correct errors.
- Assist users in understanding the cause of the error.

Let’s think of some examples…

Help and Documentation

- While intuitive design is preferred, offer easily accessible help resources.
- Include user-friendly documentation or tooltips.
- Ensure users can find assistance when needed without disruption.

Let’s think of some examples…

Example reporting template

Use Cases	Problems	Severity	Heuristic Principle affected	
Use case#1 Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc tincidunt lacinia mauris, fringilla finibus ligula sodales in. Duis ac blandit nunc, sit amet pulvinar libero. Duis sem erat, malesuada eget nisl ut, fringilla gravida dui. Mauris mauris mi, tristique at gravida ut, feugiat vel tellus. In ac congue diam.			Primary Heuristic	Secondary Heuristic
Use case#2 Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc tincidunt lacinia mauris, fringilla finibus ligula sodales in. Duis ac blandit nunc, sit amet pulvinar libero. Duis sem erat, malesuada eget nisl ut, fringilla gravida dui. Mauris mauris mi, tristique at gravida ut, feugiat vel tellus. In ac congue diam.				

Why Heuristic Evaluations?

- **Early Identification of Usability Issues:**
  Helps identify usability problems in the design phase, saving time and resources.

- **Cost-Effective:**
  Less expensive than extensive user testing or redesign after product launch.

- **Improved User Experiences:**
  Results in interfaces that are more user-friendly and efficient.

- **Quick Feedback:**
  Provides rapid feedback to design teams, allowing for timely improvements.

Challenges & Limitations

Subjectivity:
Evaluations can be subjective, as different experts may have varying perspectives.

Skilled Evaluators Required:
Effective heuristic evaluation requires trained and experienced evaluators.

May Not Identify All Issues:
Some usability issues may remain undiscovered through this method.

Not a Replacement for User Testing:
Heuristic evaluation complements user testing but doesn't replace it for comprehensive feedback.

Limited to Expertise:
May miss issues that require domain-specific knowledge outside of the evaluators' expertise.

It is time for our in class activity!