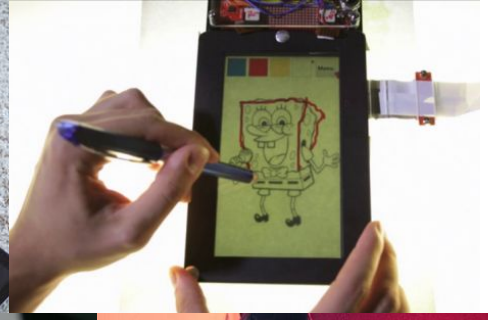

Heuristic Evaluation

Hi!

I am your instructor for the day :)

Anupriya Tuli
PhD Scholar in HCD
Women's Health & HCI
anupriyat@iiitd.ac.in |https://anupriyatuli.github.io/

Q. What is Human Computer Interaction?

- The study of how humans interact with computers, and interact with other humans through computers.
- A discipline concerned with the design, evaluation, and implementation of interactive computing systems for human use

Q. What is the goal of HCI?

- To design computing systems* that support people so that they can carry out their activities productively, safely… and happily**!**
  - **Positive user experience!!!**

"User-experience is not like usability - it is about feelings. The aim here is to create happiness."

myth

We can just go with “our gut”.

myth

~~We can just go with “our gut”.~~

fact

Design is a science, based on analytics and observing user behavior.

myth

Users are just like us designers.

myth

~~Users are just like us designers.~~

fact

Users are not designers, and designers are not users!

What is Usability Testing?

Watching someone who's never used your product to see if it works as intended.

Developer watching videotape of usability test.

Usability Testing is seeking answer to:

"(In what circumstances) does the intervention work (well enough)?"

Q. How to usability test?

Q. How to usability test?

- User-based testing
- Automated testing (software tools)
- Usability Inspection Methods
  - Pluralistic walkthrough
  - Heuristic inspections

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Heuristic Evaluation

10 Usability Heuristics for User Interface Design

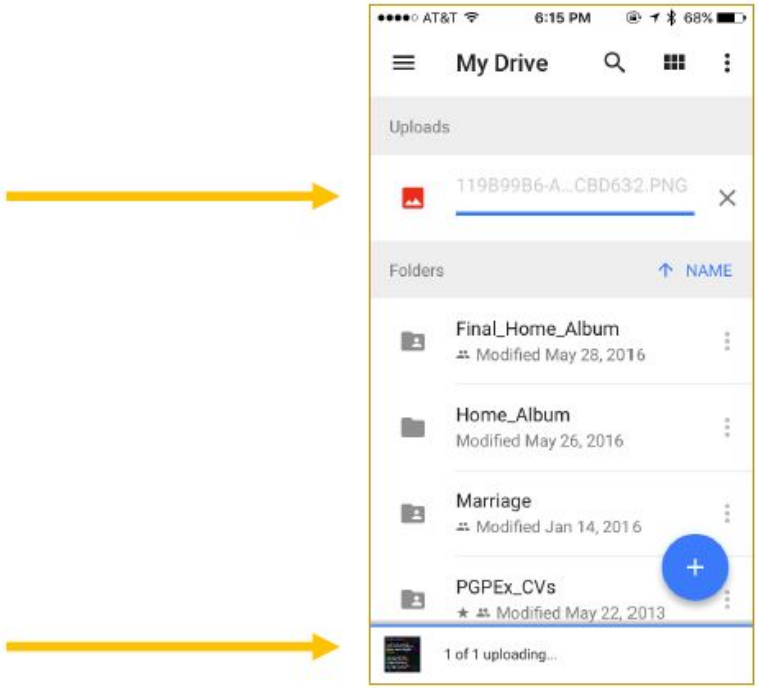
(by Jakob Nielsen on January 1, 1995)

- Nielsen and Mohlich, 1990
  - https://dl.acm.org/citation.cfm?id=97281
- Agreed usability principles known as heuristics are used to evaluate interface elements
  - e.g. layout, dialog boxes, menus, navigation structure, etc
- Heuristics resemble high-level design principles
  - e.g. making designs consistent, reducing memory load, and using terms that users understand

10 Heuristic guidelines

1. Validity of system status

- Are users kept informed about what is going on?
- Is appropriate feedback provided within reasonable time about a user's action?

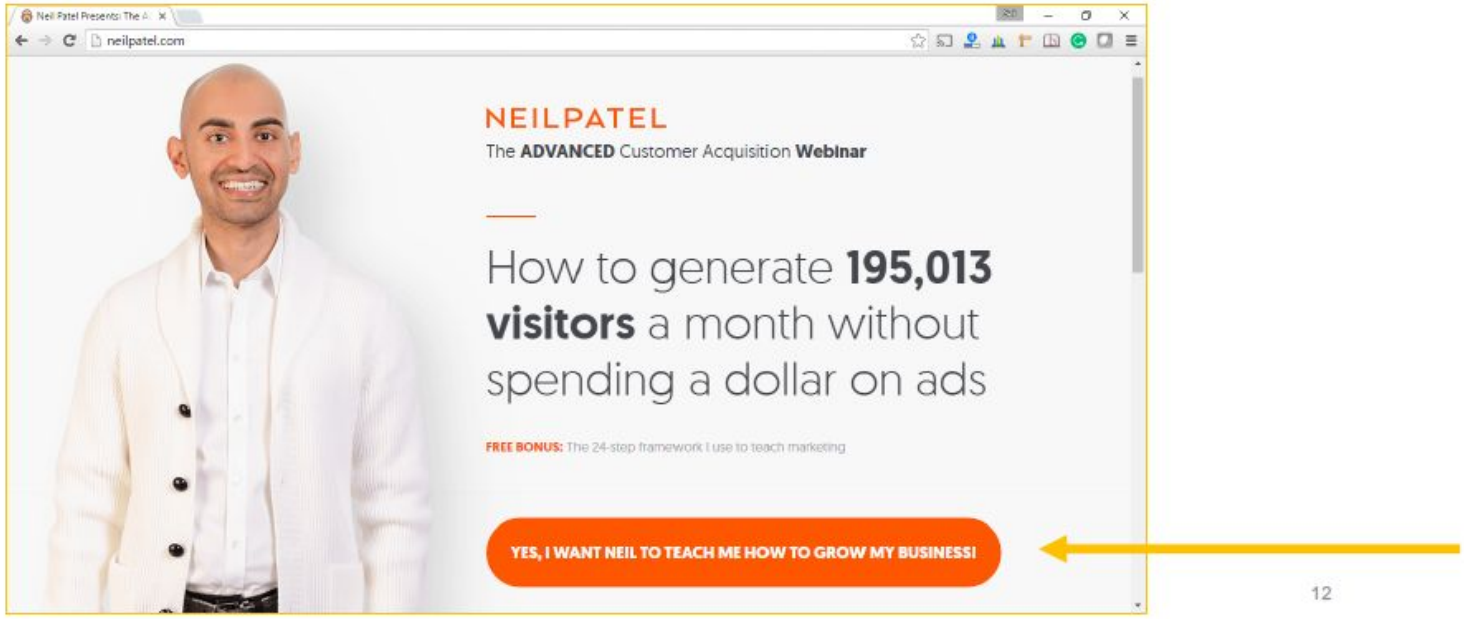


https://blog.prototypr.io/10-usability-heuristics-with-examples-4a81ada920c

10 Heuristic guidelines

2. Match between system and the real world

- Is the language at the interface simple?
- Are the words, phrases and concepts familiar to the user?



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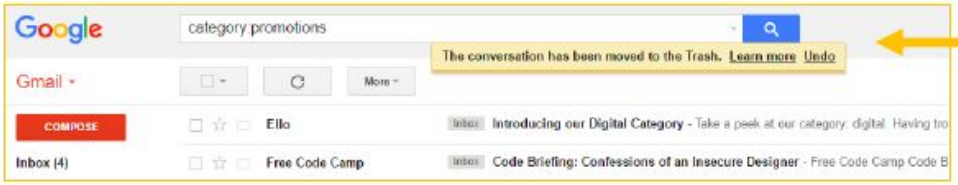
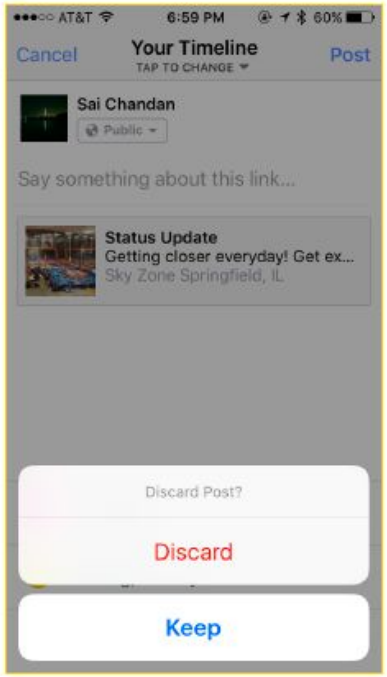
3. User control and freedom

- Are there ways of allowing users to easily leave 'places' they unexpectedly find themselves in?





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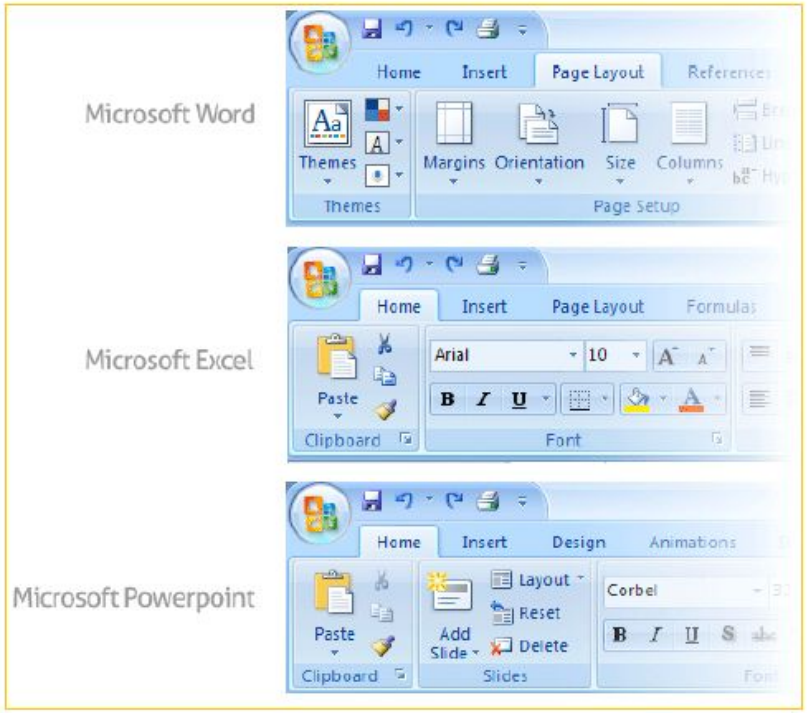
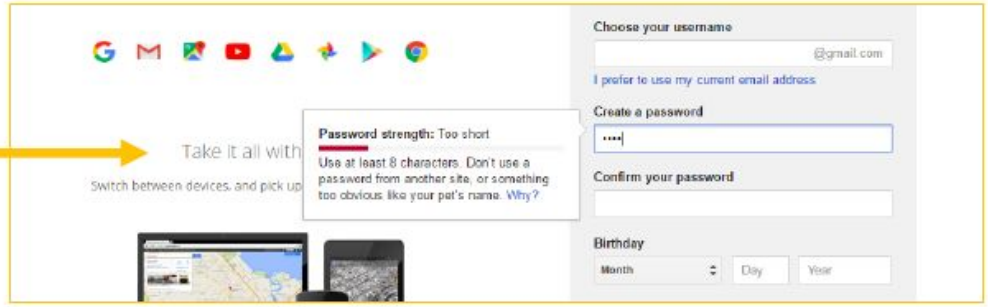
4. Consistency and standards

- Are the ways of performing similar actions consistent?



5. Error prevention

- Where and why do errors occur?



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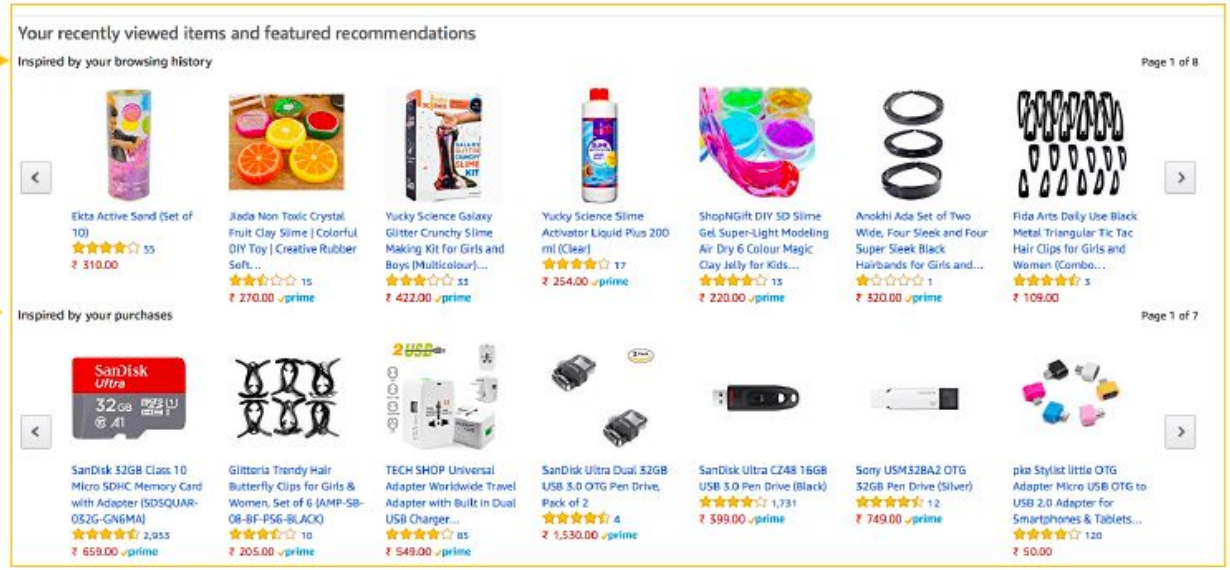
10 Heuristic guidelines

6. Recognition rather than recall

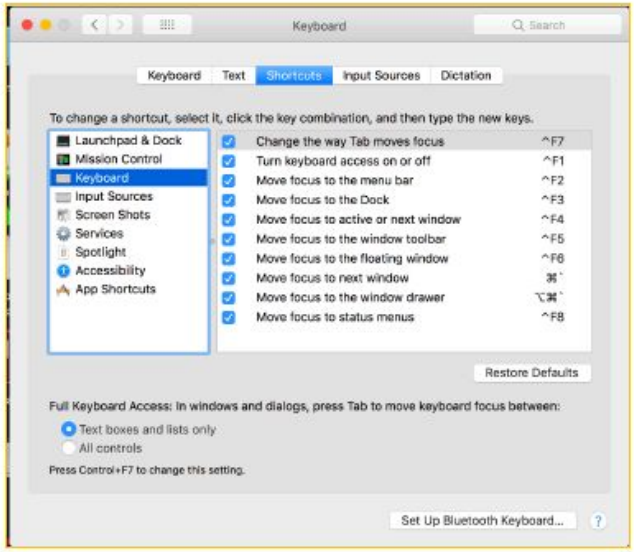
- Are objects, actions and options always visible?



https://uxgorilla.com/recognition-rather-than-recall/

7. Flexibility and efficiency of use

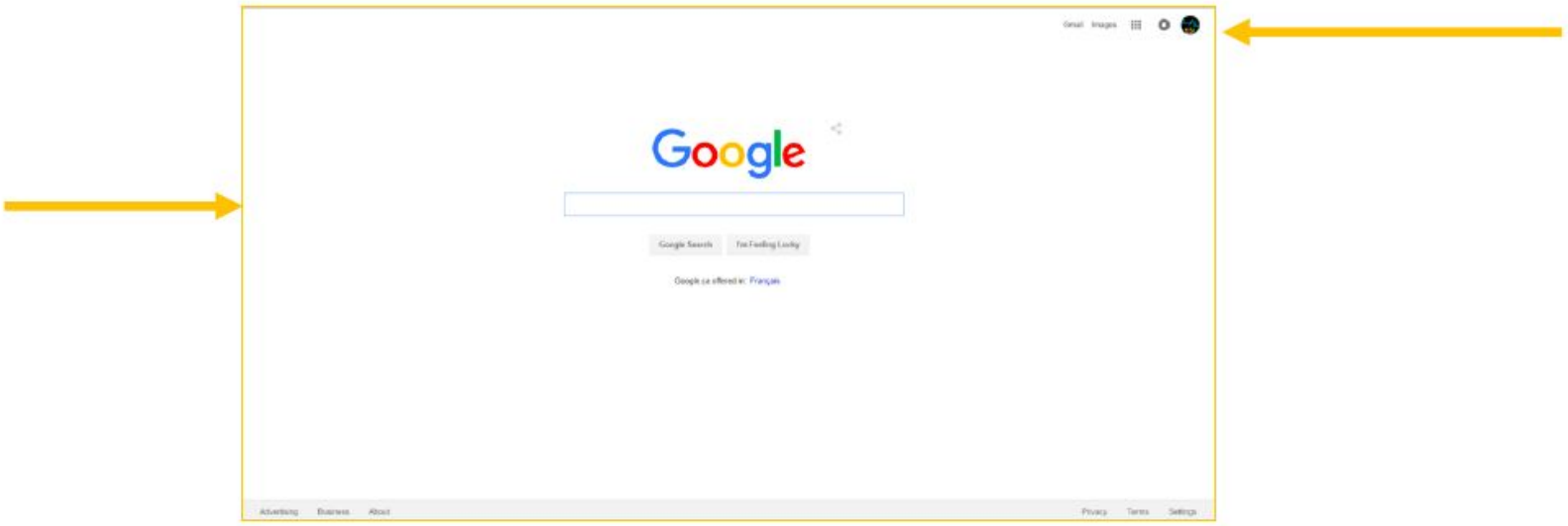
- Have accelerators (i.e. shortcuts) been provided that allow more experience users to carry out tasks more quickly?



https://uxgorilla.com/flexibility-and-efficiency-of-use/

8. Aesthetic and minimalist design

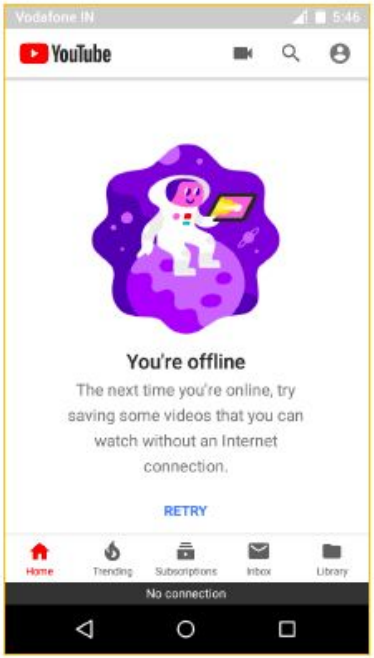
- Is any unnecessary and irrelevant information provided?



https://blog.prototypr.io/10-usability-heuristics-with-examples-4a81ada920c

9. Help users recognize, diagnose, and recover from errors

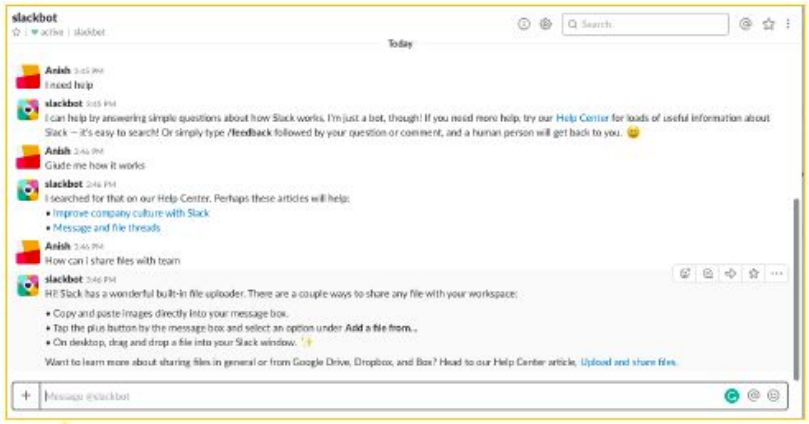
- Do user messages use plain language to describe the nature of a problem and suggest a way of solving it?

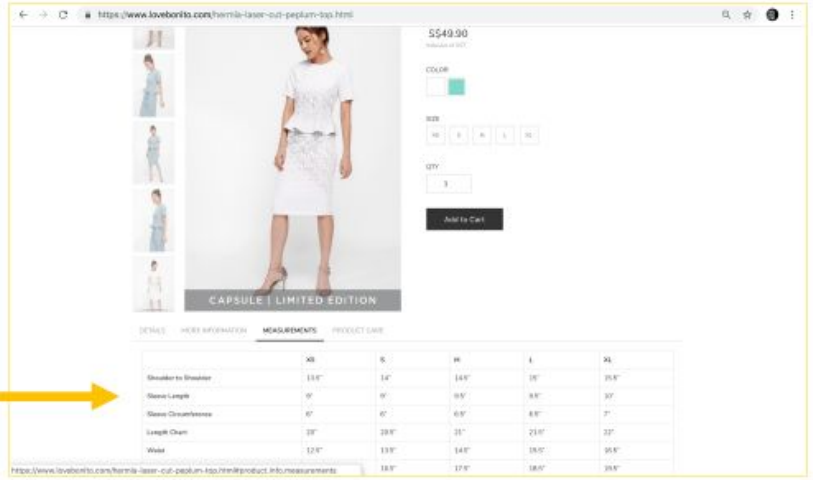


https://uxgorilla.com/help-users-recognise-diagnose-and-recover-from-errors/

10. Help and documentation

- Is help information provided that can be easily searched and easily followed?





https://uxgorilla.com/help-and-documentation/

Evaluation example

- Flexibility and efficiency of use
  - **issues**: Can't copy info from one window to another
  - **recommendation**: allow copying
- Consistency and Standards
  - **issues**: Typography uses different fonts in 3 dialog boxes could slows users down
  - **recommendation** : pick a single format for entire interface

Severity ratings

0 = I don't agree that this is a usability problem at all

1 = Cosmetic problem only: need not be fixed unless extra time is available on project

2 = Minor usability problem: fixing this should be given low priority

3 = Major usability problem: important to fix, so should be given high priority

4 = Usability catastrophe: imperative to fix this before product can be released

https://www.nngroup.com/articles/how-to-rate-the-severity-of-usability-problems/

Severity ratings example

- Consistency (Severity = 3)

The interface used the label "Save" on the first screen for saving the user's settings

Then it used the label "Store" on the second screen

Users may be confused by this different terminology for the same function.

Nielsen Heuristics

- **Visibility of system status** □ What is going on?
- **Match between system and the real world** □ What are you saying i.e. user should understand your language
- **User control and freedom** □ Ooops! Need emergency exit!
- **Consistency and standards** □ Oh I know that ☺
- **Error prevention** □ Glad I didn't do that ☺
- **Recognition rather than recall** □ What was that? ☹
- **Flexibility and efficiency of use** □ It shouldn't matter if you are an expert/naive user
- **Aesthetic and minimalist design** □ WoW!!
- **Help users recognize, diagnose, and recover from errors** □ My Bad! ☹
- **Help and documentation** □Now I get it! ☺

“Users are not designers, and designers are not users!”

If we don’t understand the users, whatever we build will not meet their needs!

"User-experience is not like usability - it is about feelings. The aim here is to create happiness."

Thank you!

If