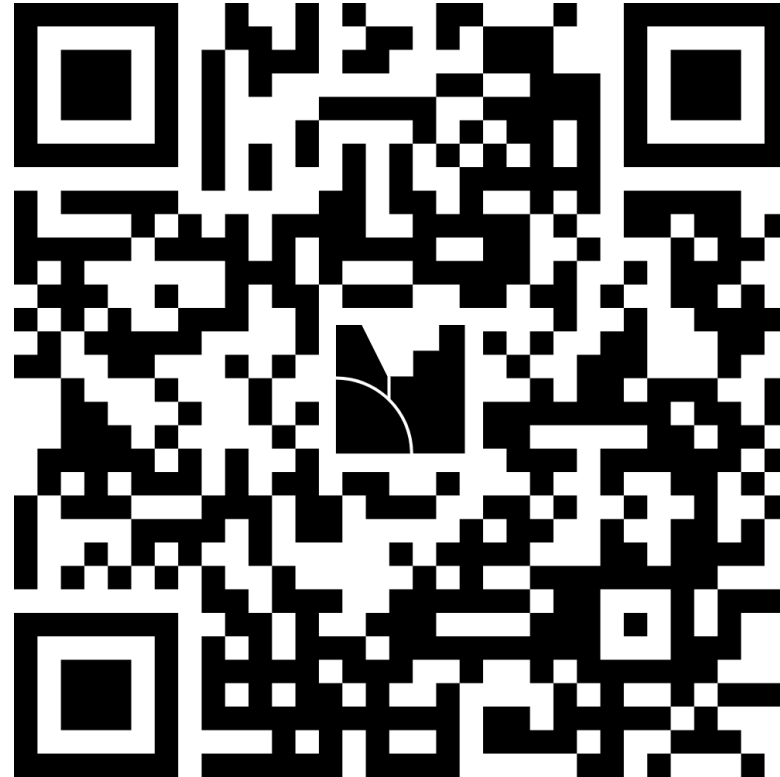


Introduction to Usability Engineering

Perpared by:

Dr. Fahad Ahmed

What do you expect to learn from this module?



Menti Link:

<https://www.menti.com/alb7ec99p6dd>

Code: **4479 5603**

Module Aims

- Develop interface design skills
- Apply and analyse usability engineering techniques
- Evaluate interface effectiveness and user experience

Learning Outcomes

- Research cognitive and social information processing
- Apply interface evaluation techniques
- Design solutions using usability engineering principles
- Analyse specialised interfaces and accessibility needs

What is Usability Engineering?

- A discipline focused on designing *effective, efficient, and satisfying* interfaces
- Combines *psychology, design, and software engineering*
- It bridges the gap between *software engineering* and *human behaviour*
- Ensures systems are usable for real users in *real contexts*

How to make things more Usable?

According to Nielsen [1], we can make things more usable by making them:

- **Learnable:** How easy is it for users to accomplish basic tasks the first time they encounter the design?
- **Efficient:** Once users have learned the design, how quickly can they perform tasks?
- **Memorable:** When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- **Reducing Errors:** How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- **Increasing Satisfaction:** How pleasant is it to use the design?

How to make things more Usable?

Case in point:



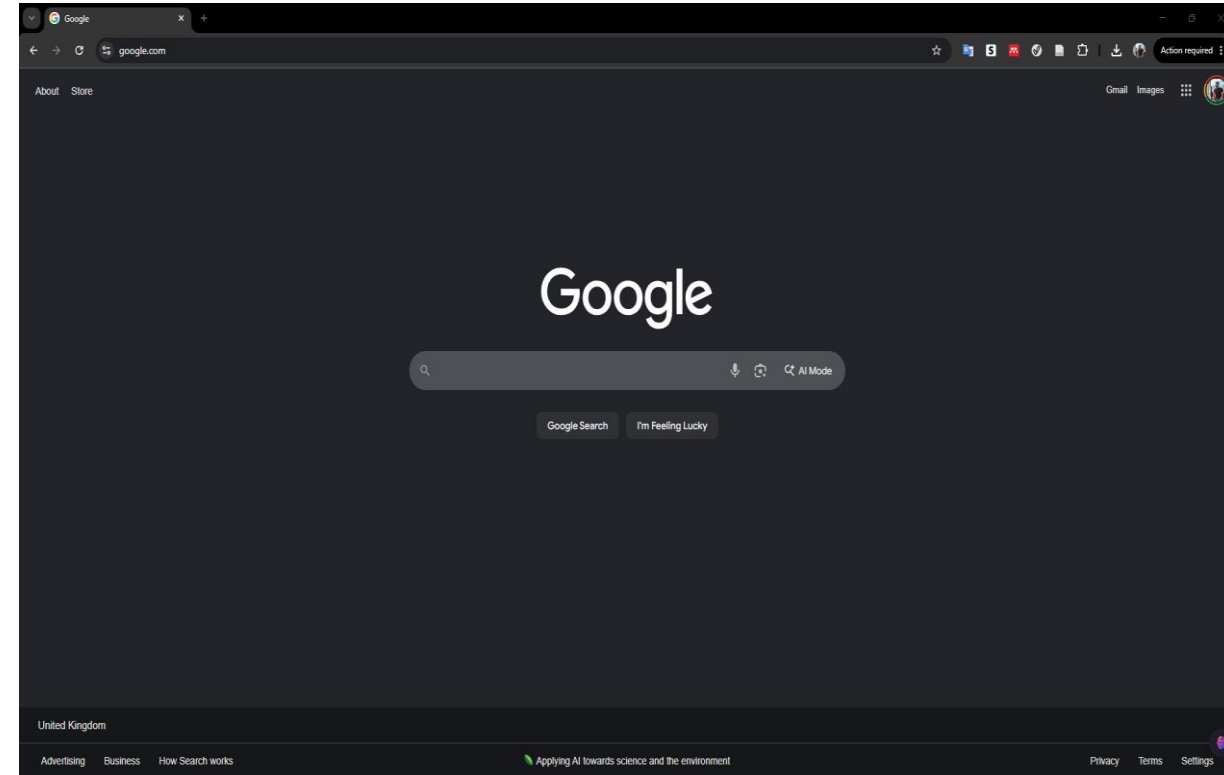
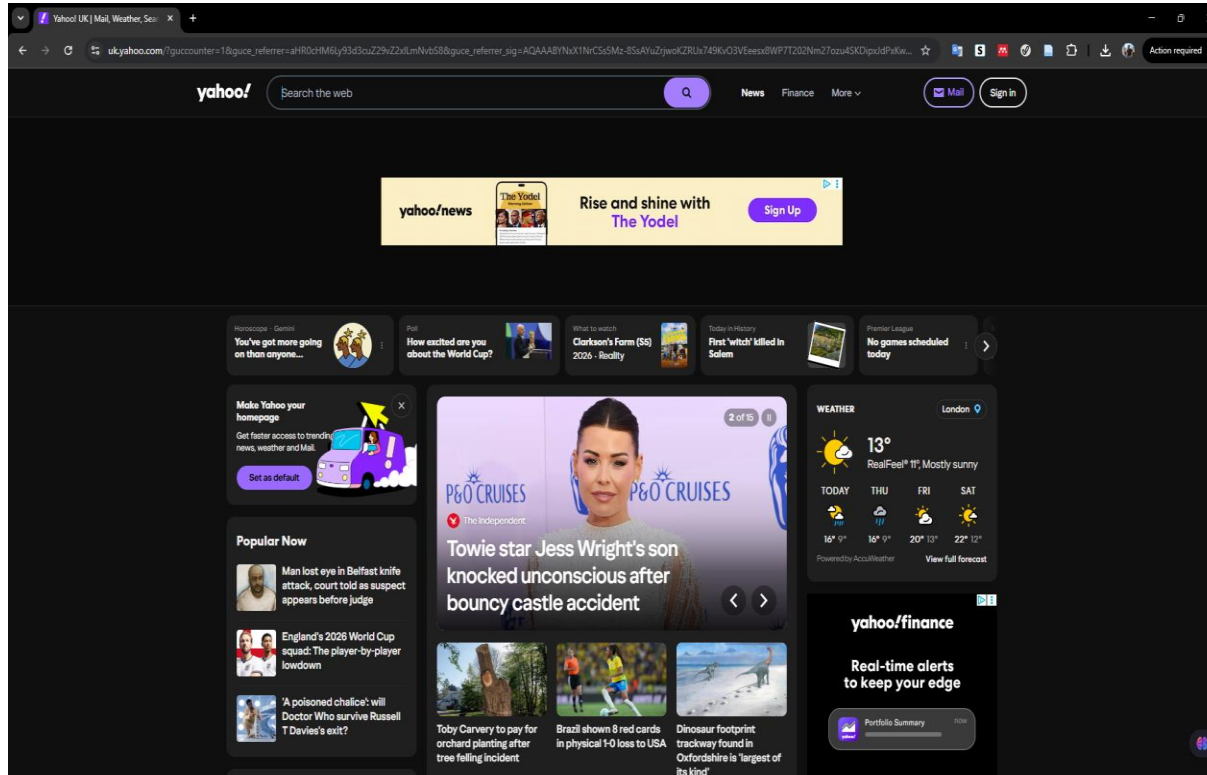
How to make things more Usable?

Case in point:



How to make things more Usable?

Case in point:



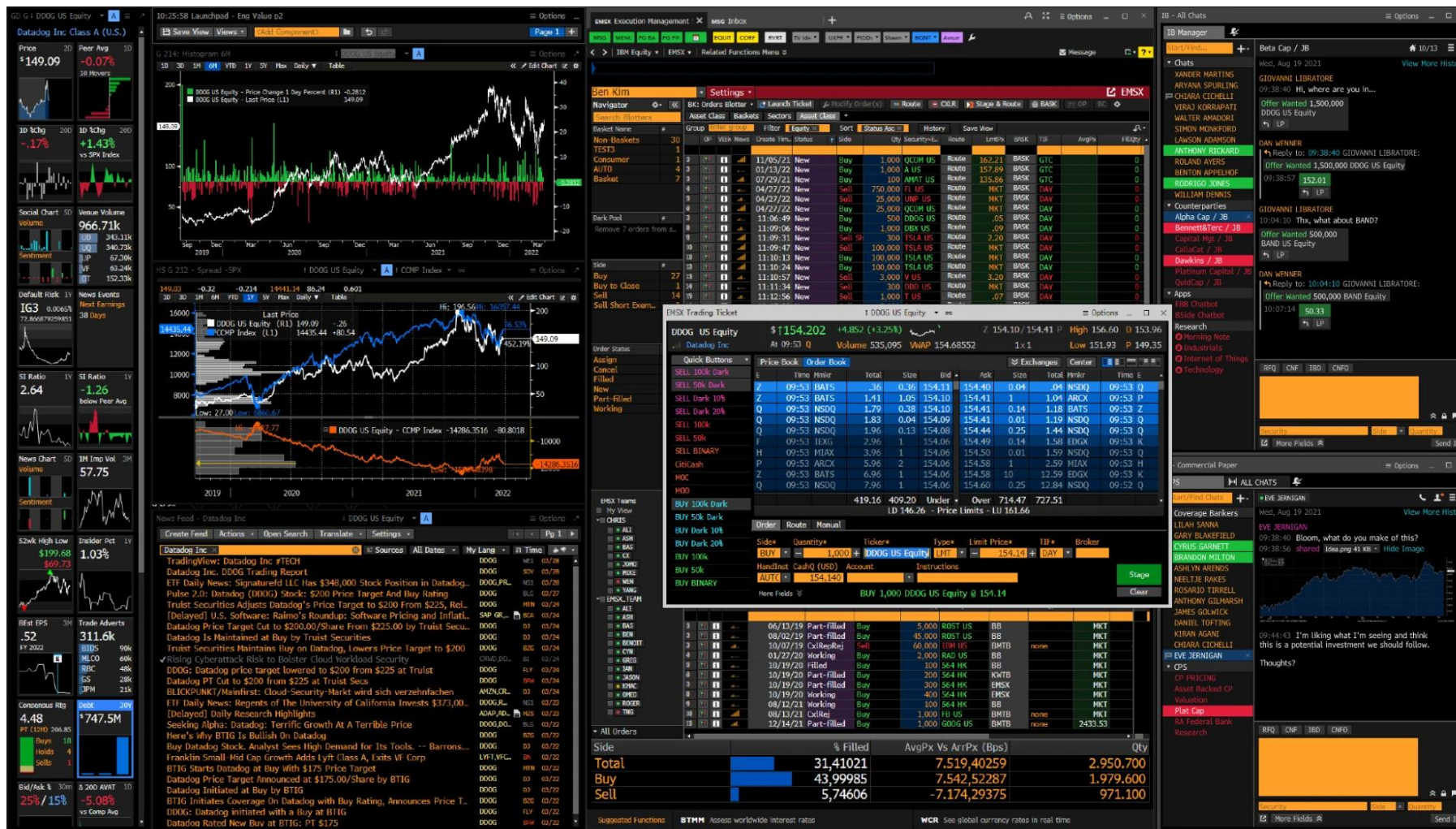
Do all interfaces have to be simple to be Usable?

Case in point:



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Case in point:

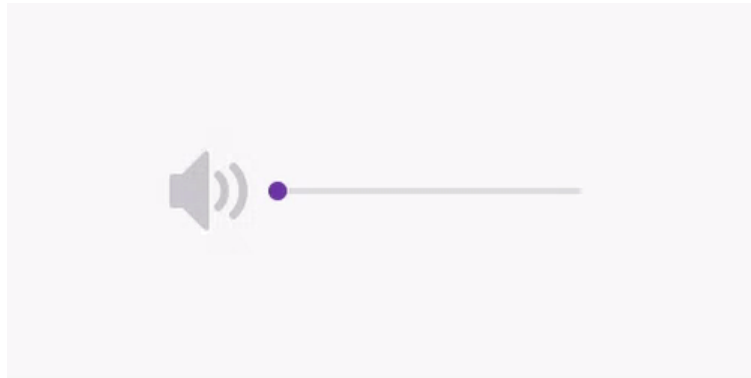


Worst audio slider designs

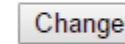
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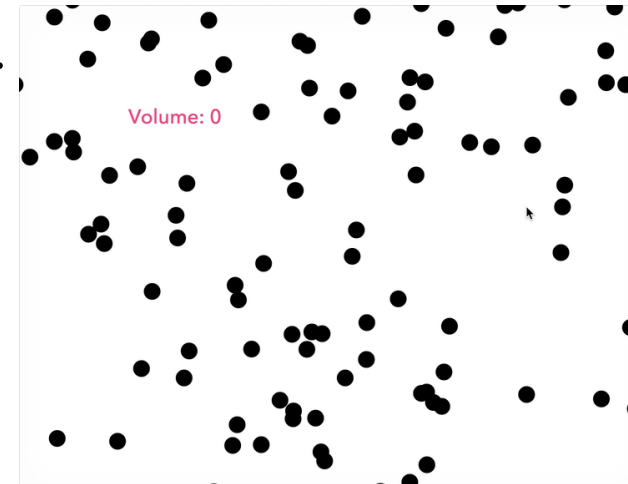
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3. **Current Volume Level: 0%**

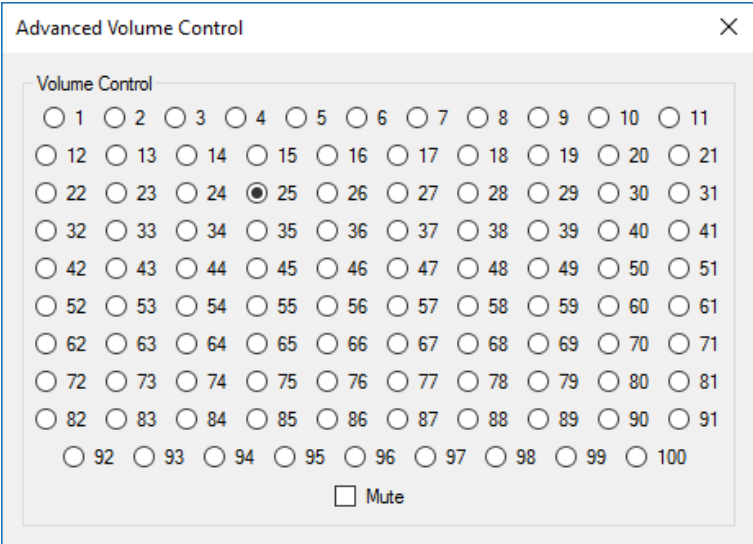


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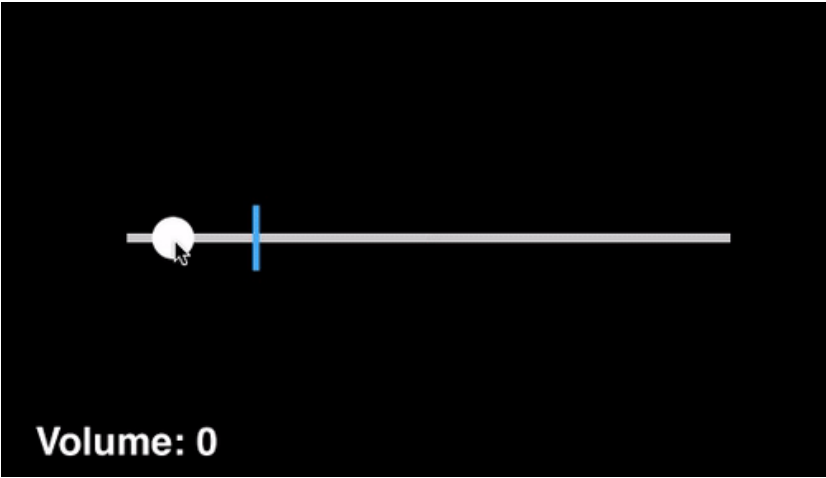


Worst audio slider designs

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8. **Current Volume Level: 0%**

Change

HCI

Usability Engineering is considered as an application of the science of HCI (Human-Computer Interaction) [2]. HCI is:

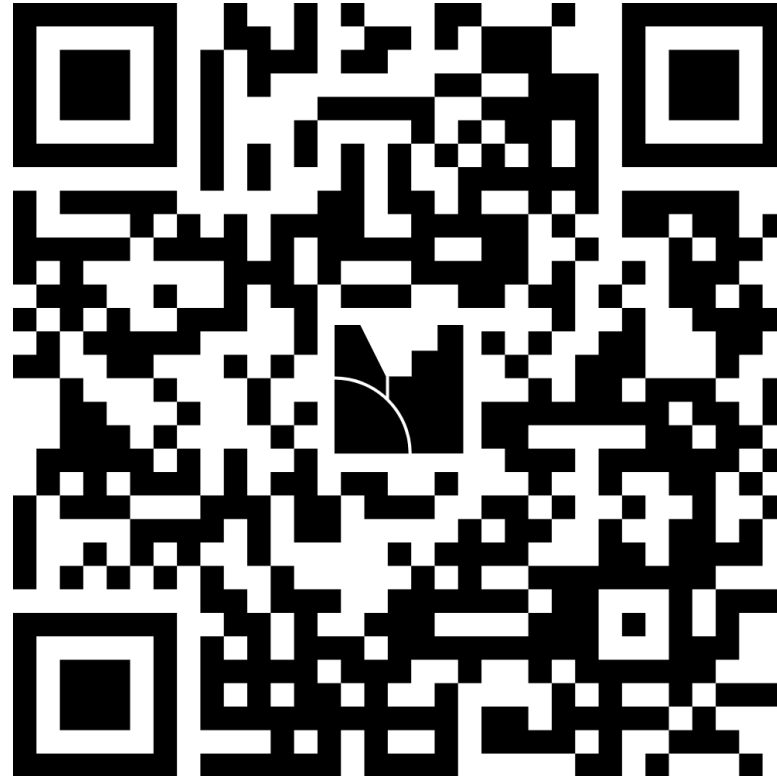
- Study of interaction between people and computers
- Focuses on usability, accessibility, efficiency, and user satisfaction
- Examples: designing for the human component of websites, mobile apps, kiosks, VR systems, etc.

Thank you for your attention!

Questions?

Session Feedback

If you had to summarise your experience in this session in 1 word, what word would it be?



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