

The background of the slide features a close-up of several interlocking puzzle pieces in various shades of blue. A bright, warm light source, possibly a lamp, is positioned at the bottom center, casting a strong glow that illuminates the puzzle pieces and creates a lens flare effect. The text is overlaid on this background.

**LAB 01**

# **Heuristic evaluation**

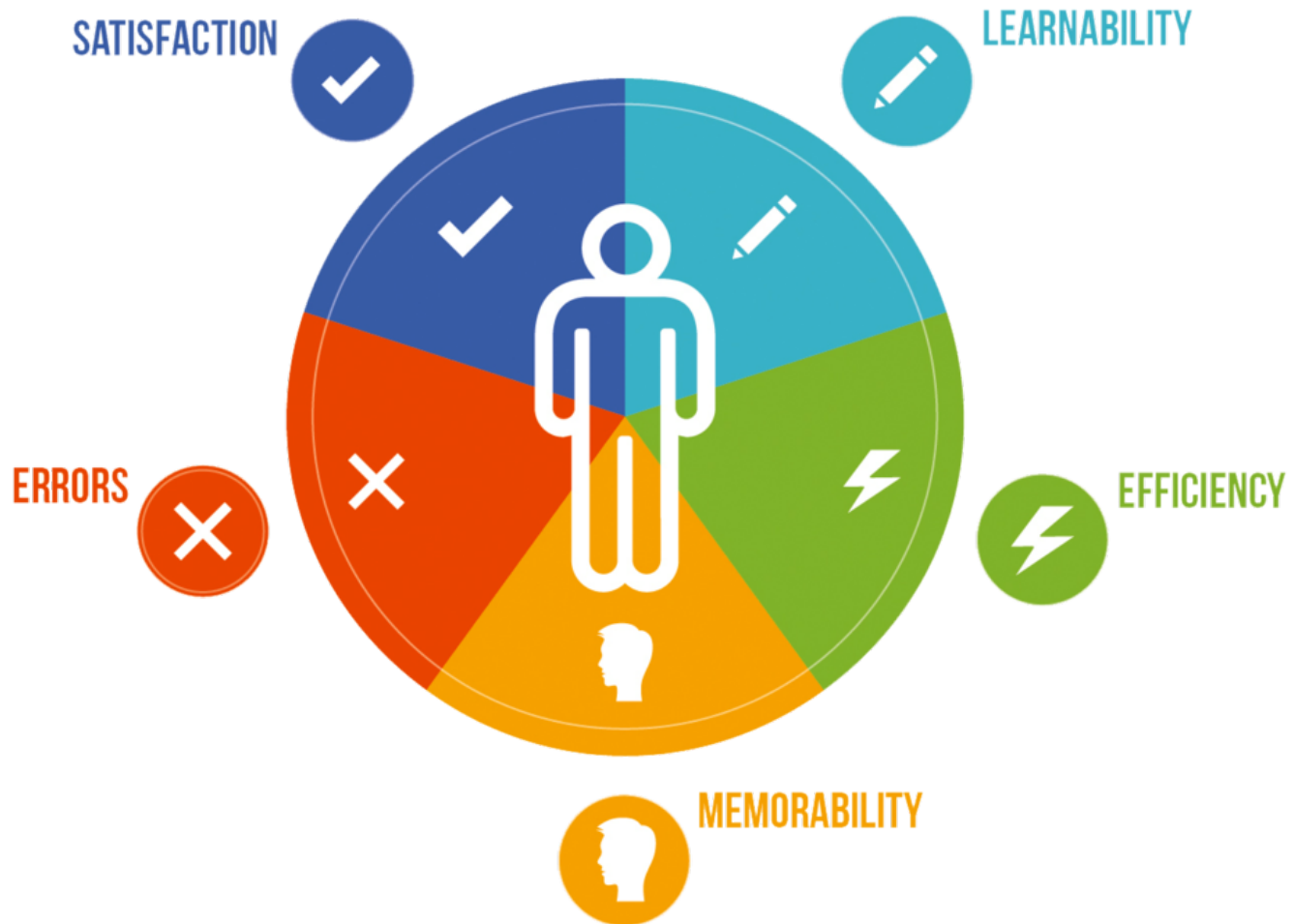
# Usability

- **Usability** is the area that deals with how easy something is to recognize, understand, and ultimately use.
- It has **5 major factors**:

# Usability

1. **Learnability:** How quickly something can be understood and put into operation.
2. **Efficiency:** How quickly something can be used once understood.
3. **Memorability:** How easily something can be put down, left for some time, picked up, and reused effectively.
4. **Errors:** How many errors are created during use, and how quickly the user can recover from those errors.
5. **Satisfaction:** How pleasing the object is to use.

# Usability



# 10 Usability Heuristics

- Jakob Nielsen, of the Nielsen Norman Group, outlined 10 **usability heuristics**, or general rules\* that serve as a guide to usability <https://www.nngroup.com/articles/ten-usability-heuristics/>

\* See lecture UX/UI Principles



1



Visibility of  
system status

2



Match between  
system + real world

3



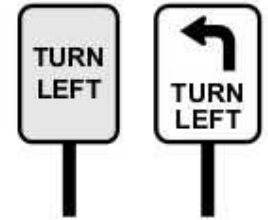
User control  
and freedom

4



Consistency  
and standards

5



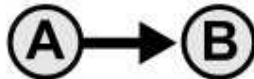
Recognition  
rather than recall

6



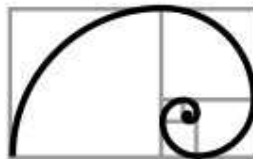
Error prevention

7



Flexibility and  
efficiency of use

8



Aesthetic and  
minimalist design

9



Help users with  
errors

10



Help and  
documentation

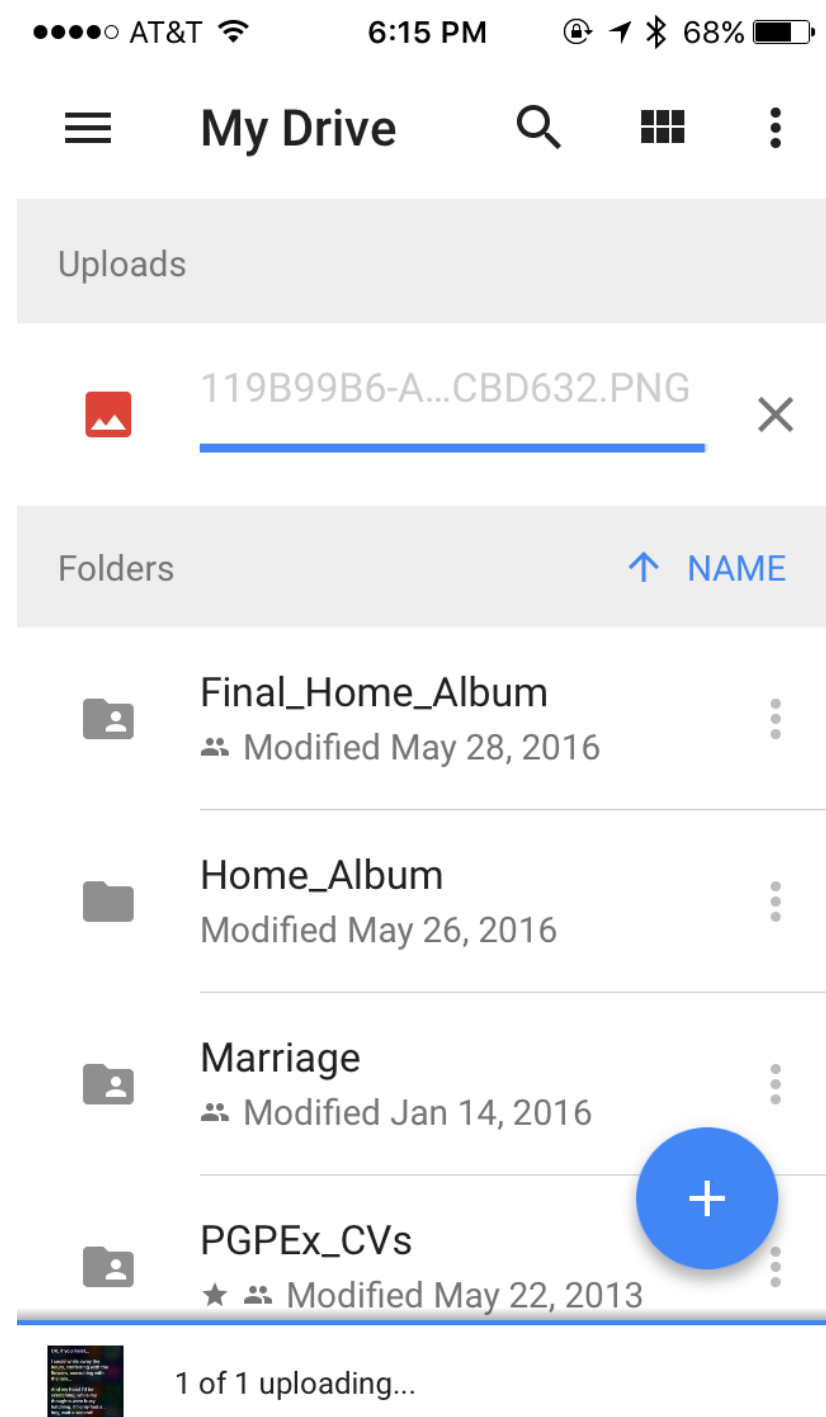
## 10 Usability Heuristics

# **1. Visibility of System Status**

- The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

One example is twitter making a swoosh sound when a tweet is being posted.

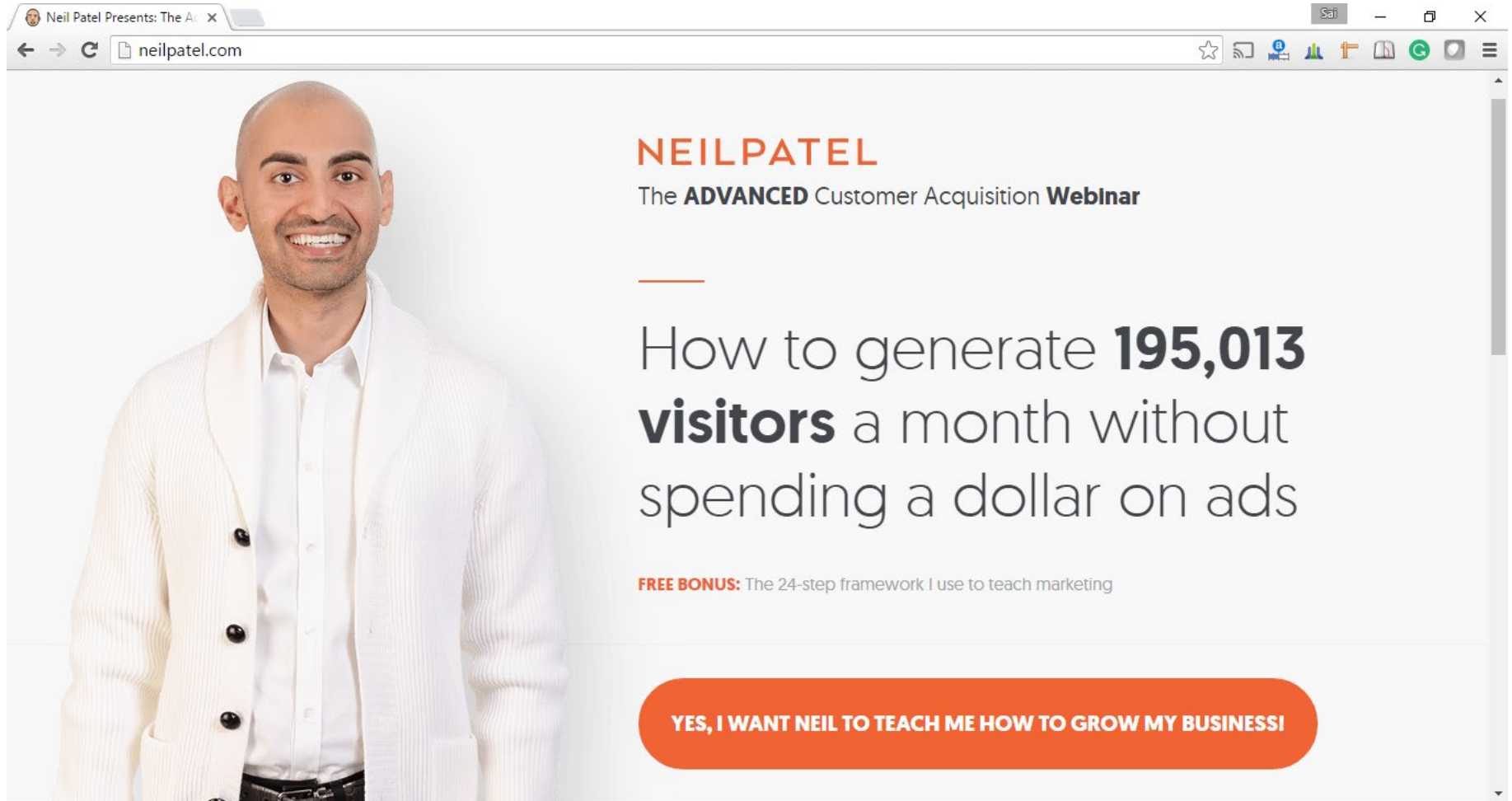
Another example is Google Drive showing the status of a document upload. >>





## **2. Match between system and the real world**

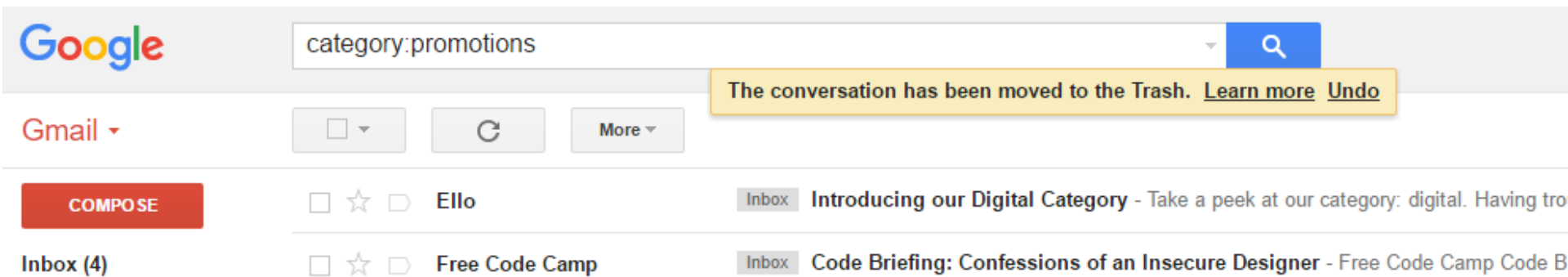
- The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.



Neil Patel could very well say “Sign Up” on his landing page. Instead, he chose to say ambitiously—“Yes, I want Neil to teach me how to grow my Business!”. It sets the context and speaks the everyday language.

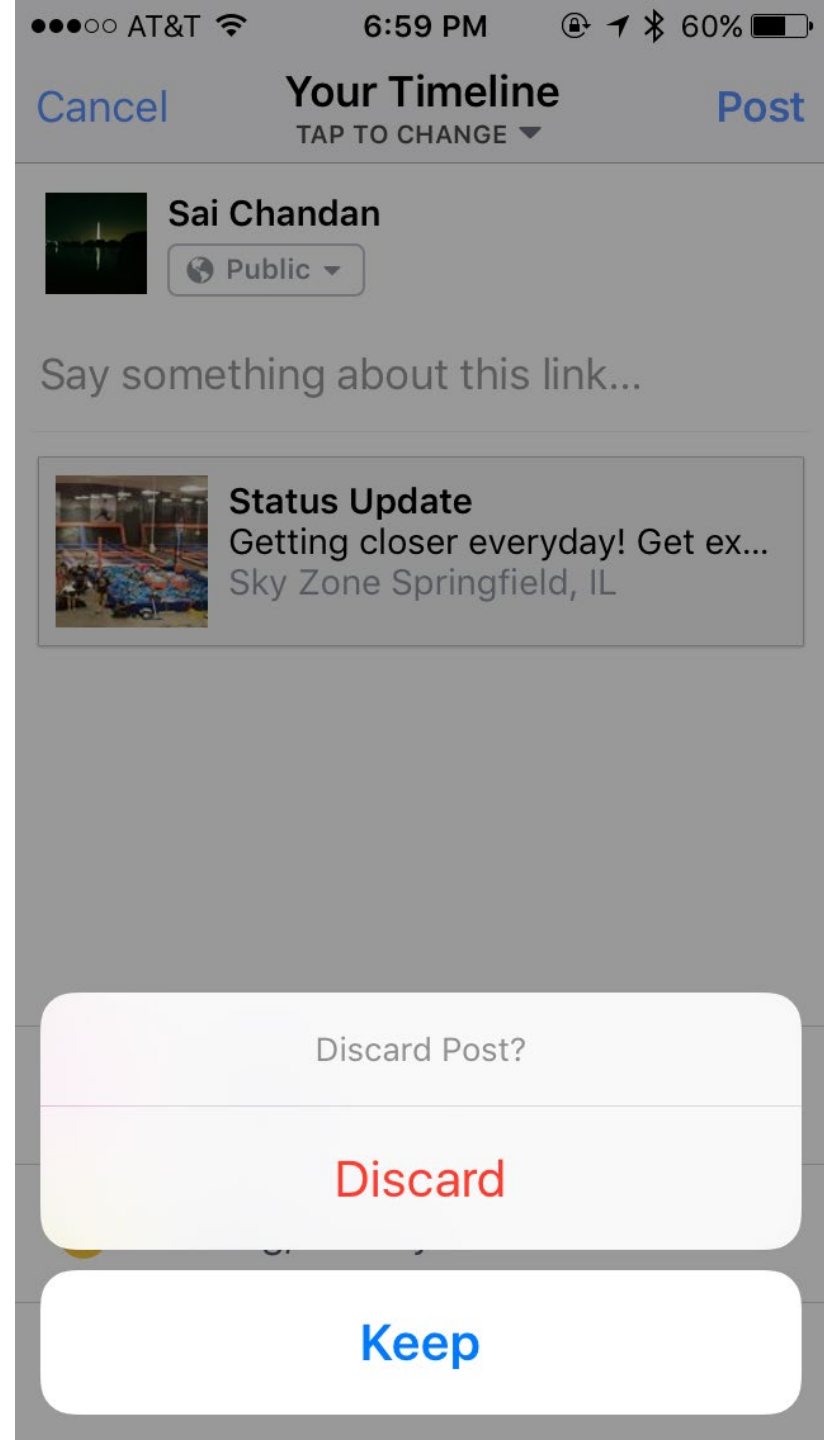
## **3. User Control and Freedom**

- Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.



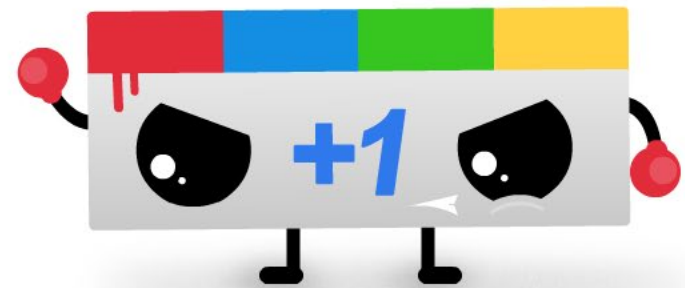
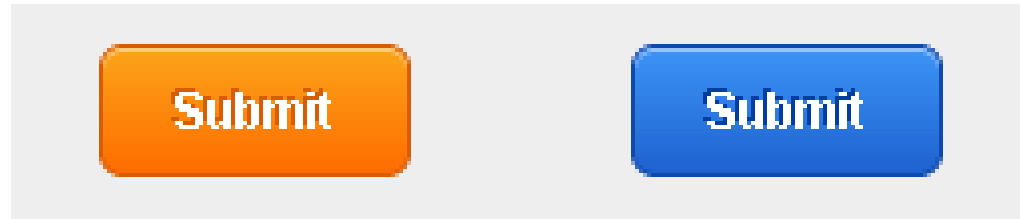
The freedom to undo any accidental actions can be best illustrated by the Gmail's flash message with undo action when we accidentally delete an email.

Facebook is checking on me if I tapped "Cancel" by mistake.



## **4. Consistency and Standards**

- Users should not have to wonder whether different words, situations, or actions mean the same thing.



How the same button can transform across different pages of the same site. Note that this is not a change of state.

## 5. Error Prevention

- Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.





An example of Google Search trying to correct my spelling



Take it all with  
Switch between devices, and pick up



Password strength: Too short

Use at least 8 characters. Don't use a password from another site, or something too obvious like your pet's name. [Why?](#)

Choose your username

  
[I prefer to use my current email address](#)

Create a password

Confirm your password

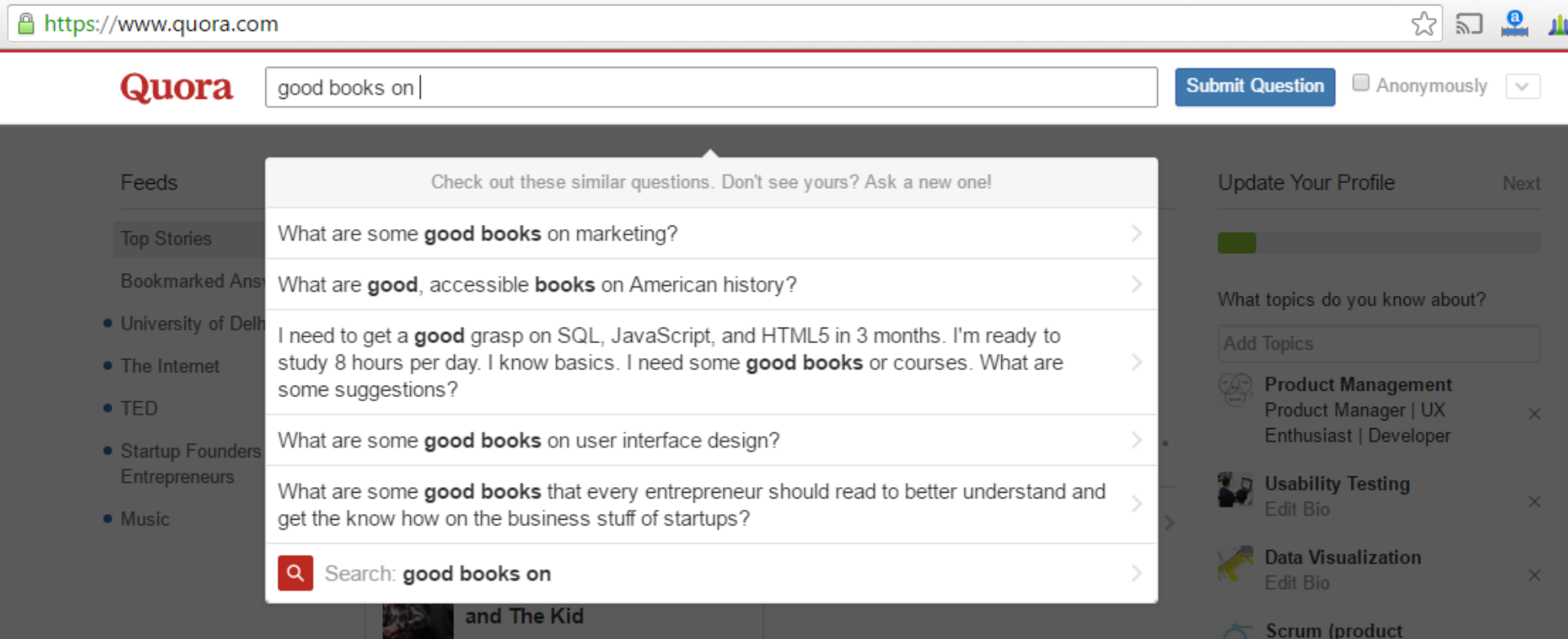
  

Birthday

If you have set some rules for the format of user password, try to validate it as the user types rather than waiting for him to click submit.

## **6. Recognition rather than recall**

- Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.



An example of Quora suggesting possible questions based on what I am trying to type.

## **7. Flexibility and Efficiency of use**

- Accelerators — unseen by the novice user — may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

# Account Setup

Enter Your Credentials

Exchange



Your Email Address

Password

Description

Sign in

Advanced Settings...

An example of setting up Exchange on Android which hides the complex features under Advanced Settings.

## **8. Aesthetic and minimalist design**

- Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Google 

Google Search

I'm Feeling Lucky

Google.ca offered in: [Français](#)

Google could be shown as the example of the best possible minimalist design.

www.apple.com/watch/

Apple WATCH

Notifications Fitness Health Personalization More to Love Buy

Notifications

# Never miss what matters.

Because it's on your wrist, Apple Watch lets you receive notifications immediately and conveniently. The moment the people or apps you care about have something to say, you'll feel a gentle tap. Then you can send just the right response. Just like that.

Learn more about Notifications >

Halftime  
MICHST 25  
DUKE 36  
Game Detail

10:09  
MAIL  
Tiffany Frye  
Rain check  
Just saw your note. No problem. Let me know when things clear up for you and we'll reschedule.

Apple provides only the basic information of feature hiding additional information under “Learn More”.



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

- Should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

The screenshot shows a web browser window with the URL <https://www.myon.com/login/index.html>. The page has a purple header with the myON logo and a 'Login' button. The main content area features a background image of a young girl smiling while using a tablet. Overlaid on this is a purple login form with the following fields: 'School Name' (containing 'Farbe 1 Sample School'), 'Username' (containing 'sample@sample.com'), and 'Password' (empty). A green 'Sign In' button is at the bottom of the form. To the left of the form, an orange speech bubble contains the text 'Invalid username or password.' Below the form, a blue banner with a white arrow pointing left contains the text: 'The 2016/2017 school year has started! Can't log in? Try **Clever Instant Login** page.' The footer includes copyright information for 2016, links for 'Terms of Use' and 'Privacy Policy', a 'Customer Support' button with a 'System Check' link, and the 'capstone' logo.

myON® Login

School Name  
Farbe 1 Sample School

Username  
sample@sample.com

Password

Sign In

Invalid username or password.


The 2016/2017 school year has started! Can't log in? Try **Clever Instant Login** page.

© Copyright 2016  
Terms of Use | Privacy Policy

Customer Support  
System Check

capstone

I have entered a fictitious username and password and the error message I got is either the username or the password is incorrect. Here we are not informing the user if the username is invalid or if the password is wrong.



⊗ Sorry, we couldn't find an account with that username. Can we help you recover your [username](#)?


Username [I forgot](#)

Password [I forgot](#)

☐ Show

☐ Stay logged in

[Create an account](#) · [Trouble logging in?](#)



⊗ Sorry, that password isn't right. We can help you [recover your password](#).

Username [I forgot](#)

Password [I forgot](#)

☐ Show

☐ Stay logged in

[Create an account](#) · [Trouble logging in?](#)

An example of how MailChimp is handling this scenario.

# **10. Help and Documentation**

- Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.


Domain Names | The World's Largest Domain Marketplace x GoDaddy Help and Support x

GoDaddy INC. [US] https://www.godaddy.com/help


24/7 Support (480) 505-8877 Chat Offline

# GoDaddy Help


Search Help




Domains




Linux Hosting (cPanel)




Windows Hosting (Plesk)




SSL Certificates




Office 365 from GoDaddy



Workspace Email



Website Builder



Account Management

**Domain Related**

[GoDaddy Auctions](#)

**Online Marketing**

[Get Found](#)

[Search Engine Visibility](#)

**Partner Programs**

[API Reseller](#)

[Basic & Pro Reseller](#)

**Websites**

[Design Services](#)

[InstantPage](#)

An example of GoDaddy's Help page. While there is a search field, there are main categories and frequently asked queries on the same page.

# **Assessment 1 (part 1)**

## **Web heuristics**

- Individually choose a 'bad' designed website that you want to improve
- Carry out a usability test based on the 10 usability heuristics by Jacob Nielsen
- Write down points for improvement
- Make a redesign of the User Interface of the website (screenshots/Photoshop/cut and paste/...)

# **Preparation for assessment 1 (part 2)**

- Use a prototyping tool such as Adobe XD, InVision, Marvel, Axure, or Sketch to create an interactive mockup.
- Test the mockup on different users.
- Substantiate design decisions in a report (Blackboard).