

Rekayasa Web

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Usability, Accessibility, Writing for The Web & Preparing Images

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Web Usability

- membuat sebuah situs/aplikasi web
 - yang mudah digunakan
 - agar pengguna dapat memanfaatkannya
 - tanpa perlu pelatihan!

Jangan membuat pengguna berpikir

NOT THINKING

OK. This looks like the product categories...



Memory, Modems... There it is: Monitors. **Click**



...and these are today's special deals.



Jangan membuat pengguna berpikir

THINKING

Hmm. Pretty busy. Where should I start?



Hmm. Why did they call it that?



Can I click on that?



Is that the navigation? Or is *that* it over there?



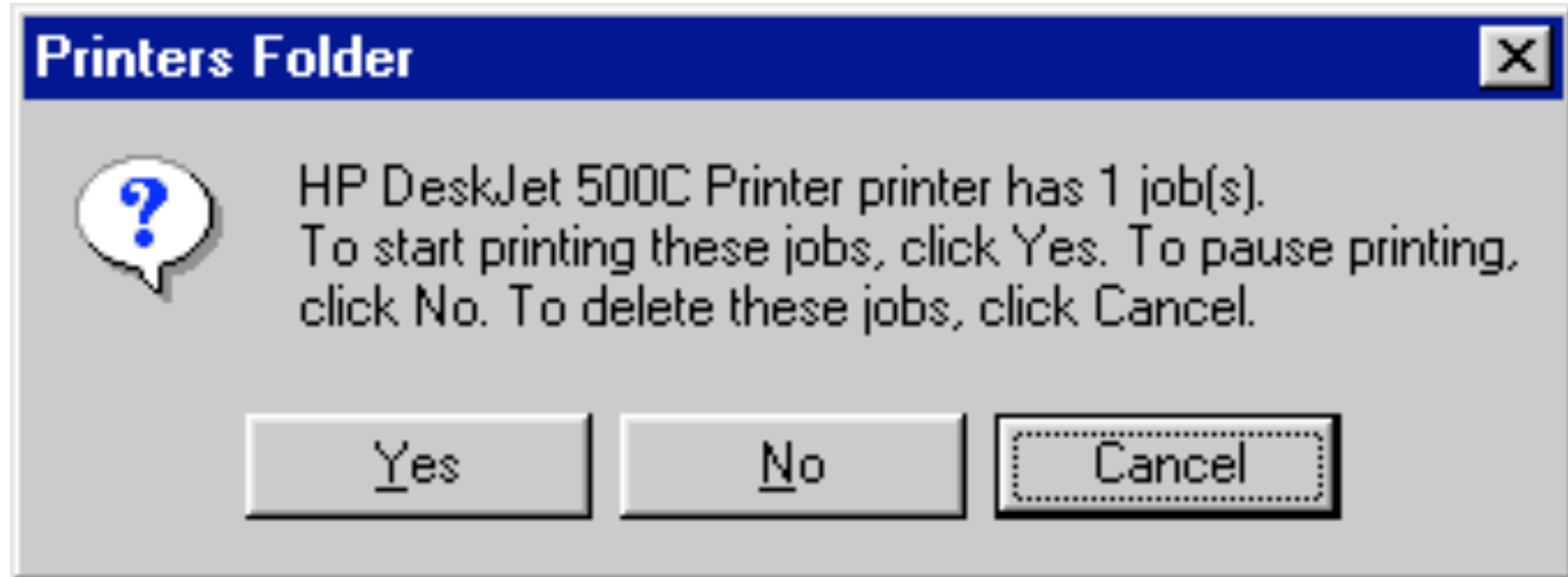
Why did they put that *there*?



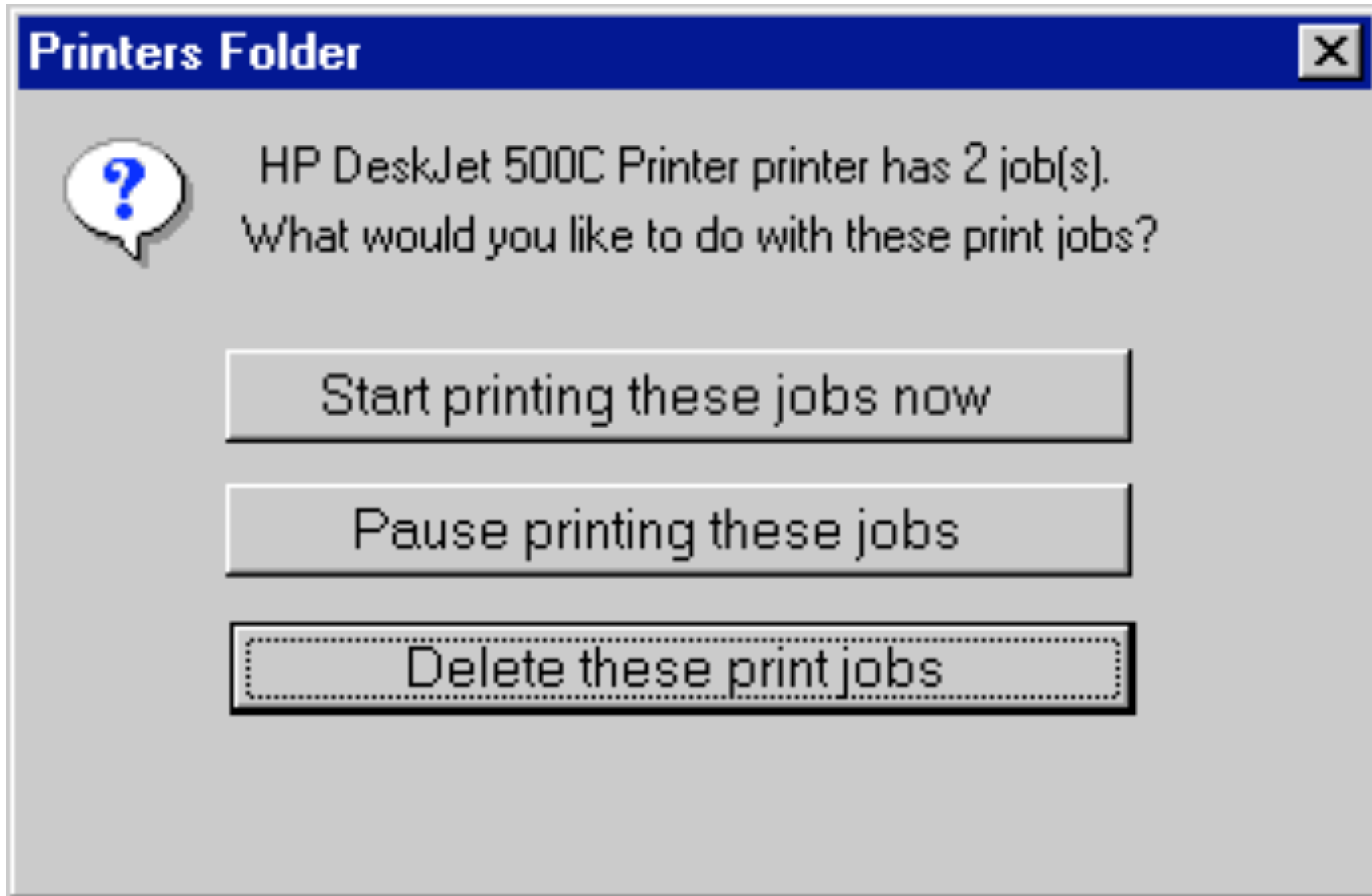
Those two links seem like they're the same thing. Are they really?



Apa yang terpikir?



Masih perlu berpikir?



Pemilihan Kata

- Lowongan
- Kesempatan Kerja
- PojoKarir
- Bergabunglah Bersama Kami

Klik

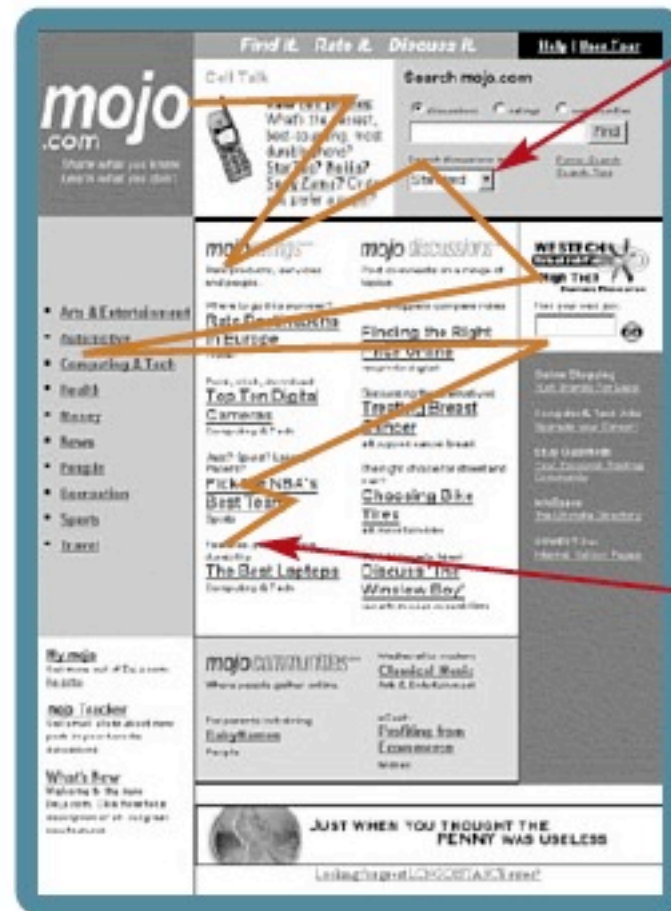
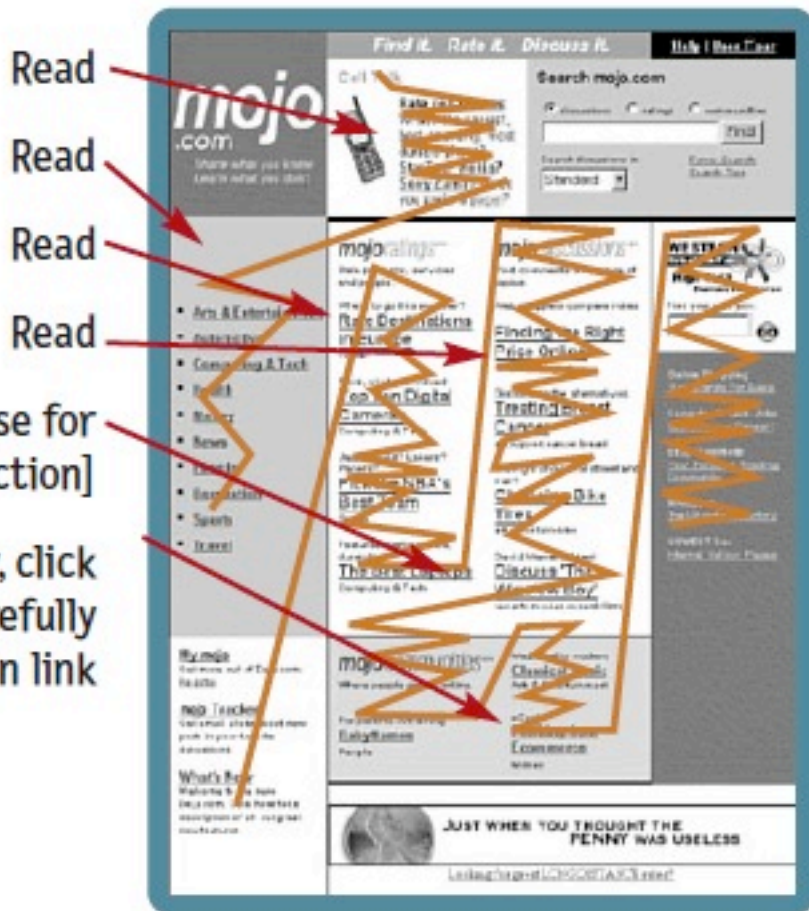
Results

Results

▶ Results

Perilaku Pengguna

WHAT WE DESIGN FOR... THE REALITY...



Look around feverishly for anything that

a) is interesting, or vaguely resembles what you're looking for, and

b) is clickable.

As soon as you find a halfway-decent match, click.

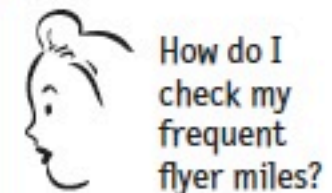
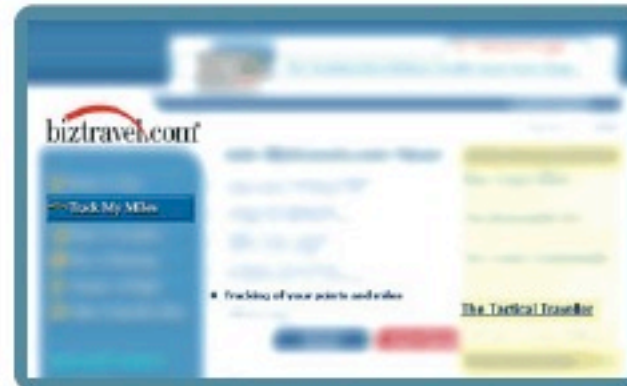
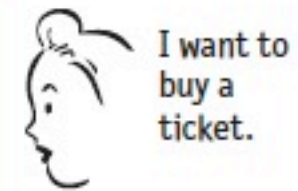
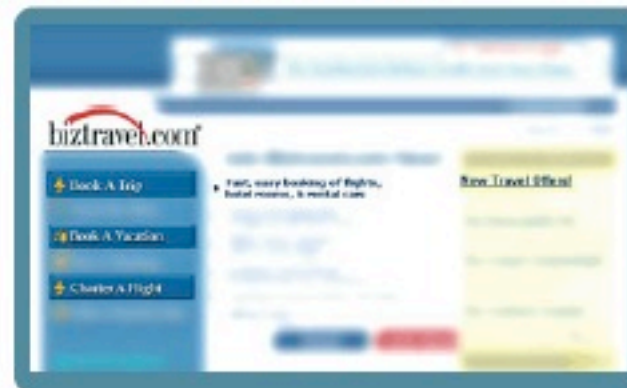
If it doesn't pan out, click the Back button and try again.

Kemampuan manusia mengolah informasi

WHAT DESIGNERS BUILD...



WHAT USERS SEE...



Accessibility

- Membuat sebuah situs/aplikasi web
 - dapat digunakan oleh **semua** orang
 - dengan memikirkan bagaimana
 - *disabilities* mempengaruhi pengalaman pengguna situs/aplikasi web Anda

Screen Readers

- JAWS
- Apple's VoiceOver

Contoh "pembacaan"

A screen reader reads text on a webpage based on the HTML markup.

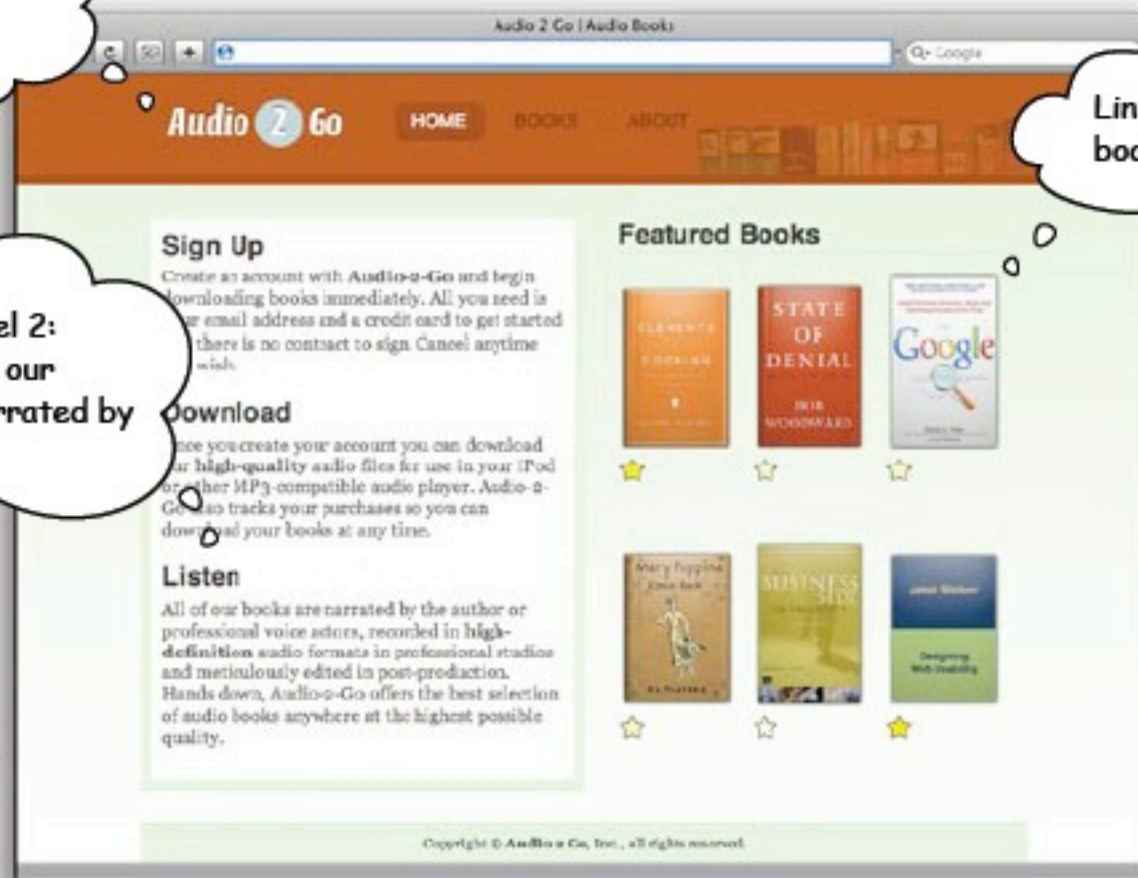
Link: a2g header logo dot jpeg...

Link: Google Search book cover dot jpeg...

Heading level 2: Listen. All of our books are narrated by the author...

Links and images are read as image names... not so great for the disabled.

Screen readers tell you what the heading level is before it reads the text.

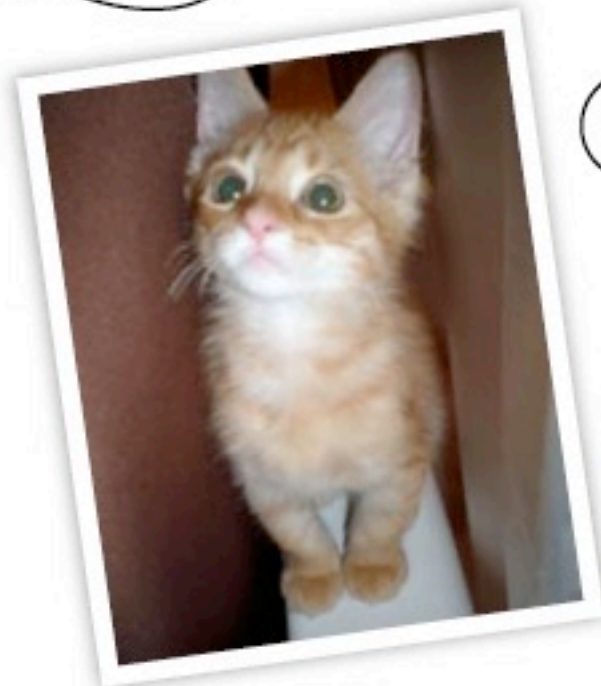


Komputer itu Bodoh

A human can look at a picture and describe what they see in clear descriptive terms.



Awww... It's a cute orange kitten with big eyes.



DCS1243.jpg...



Without any other information, all a computer sees is a filename and an extension.

atribut *alt* pada tag *img*

The alt attribute goes inside the tag and is used for short descriptions. alt is also required on all tags in order to pass XHTML validation.

```

```



Awww... It's a cute orange kitten with big eyes.

cute orange kitten

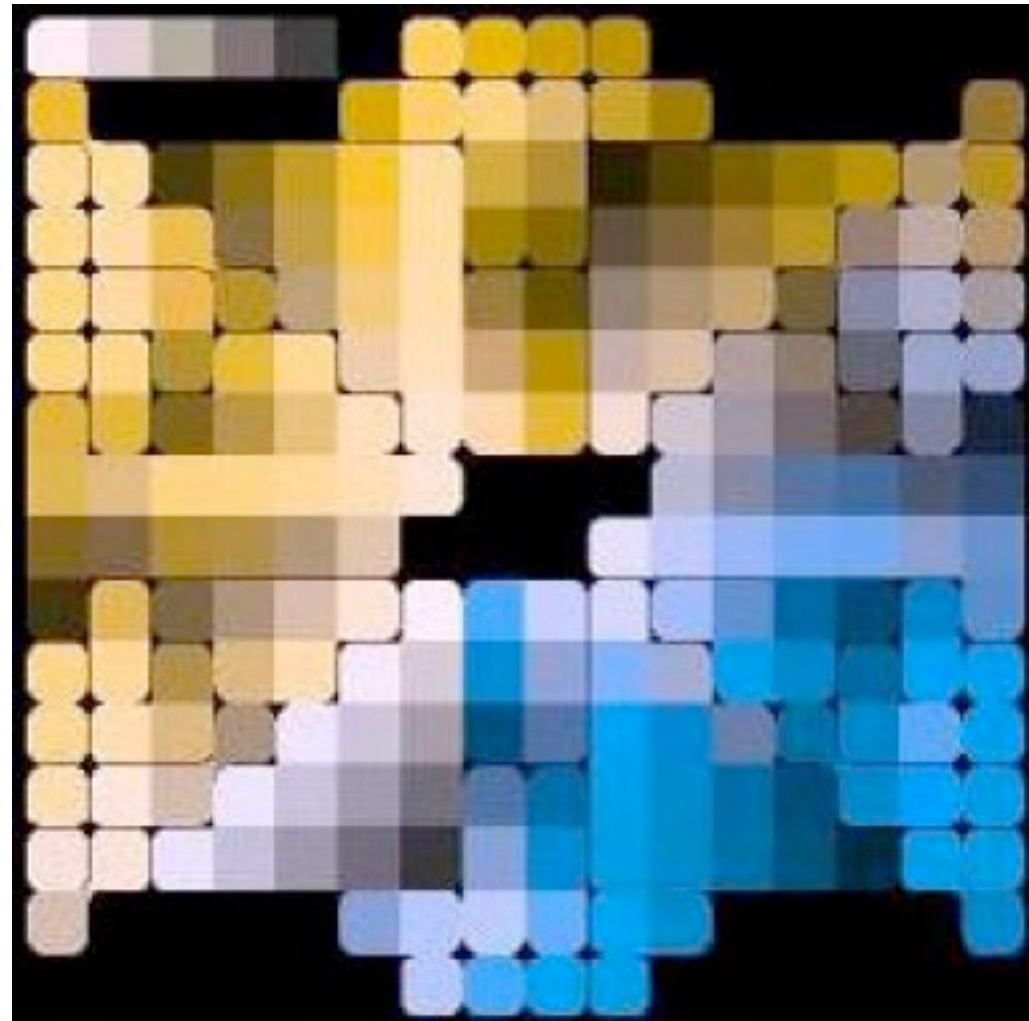


A human still sees the image of a cute orange kitten



The computer (and screen reader) now see the alt text and read that instead of the filename.

Accessible tidak hanya masalah kesulitan membaca



Desain yang dibuat



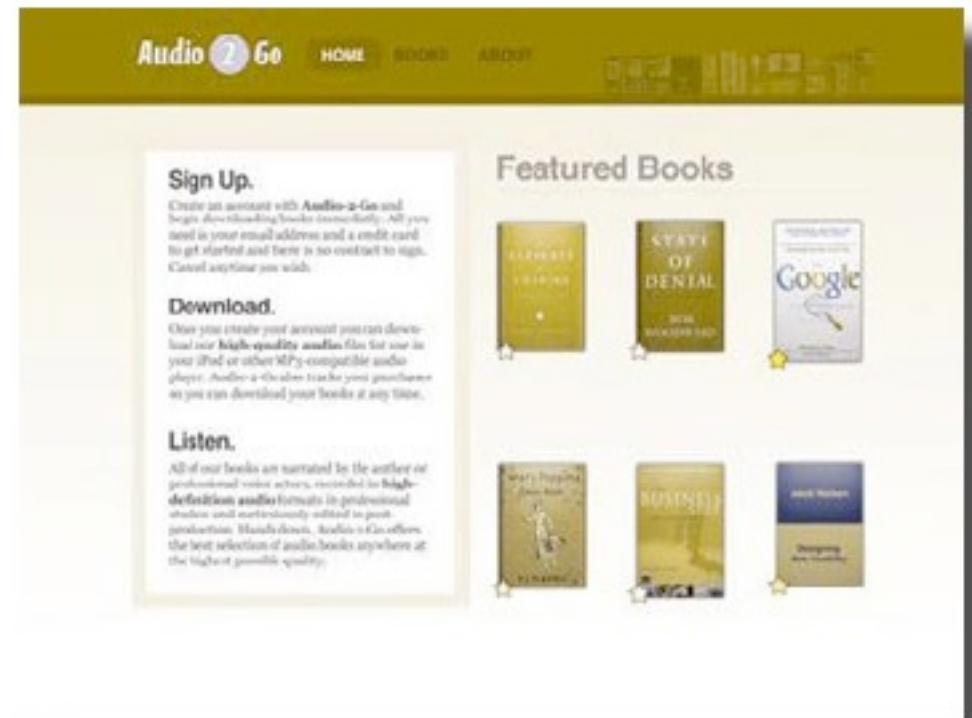
Original



Deuteranopia



Original



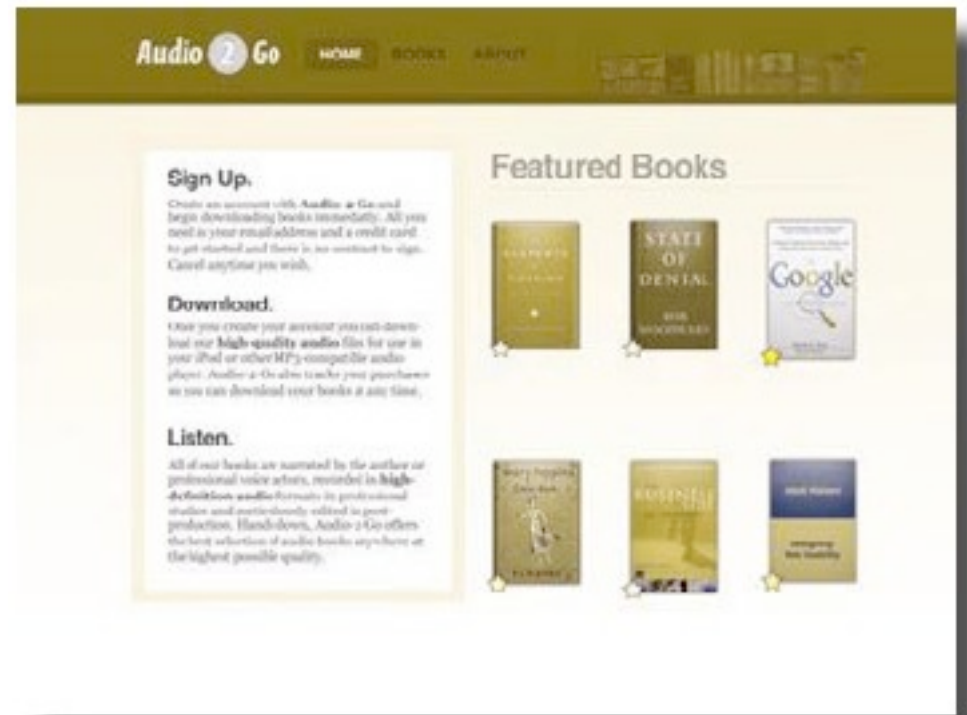
Deutanopia (no green cones)



Protanopia



Original



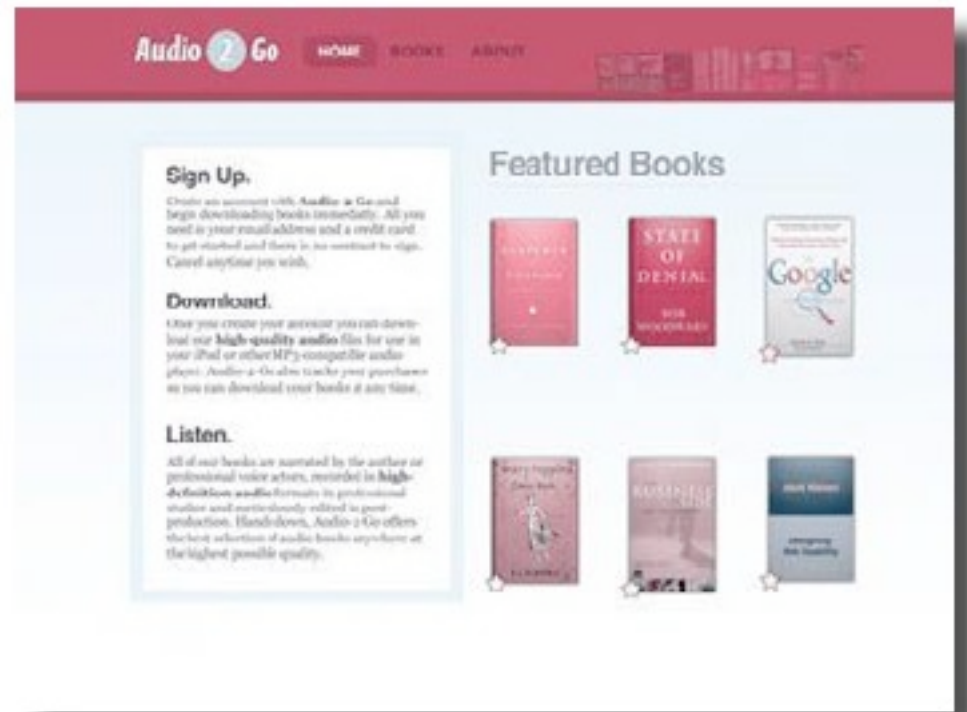
Protanopia (no red cones)



Tritanopia



Original



Tritanopia (no blue cones)



Writing for the Web

- People don't read websites, they scan.
 - Text should be scannable
- People always in a hurry
 - Text should be concise
- People easily get bored online
 - Simple, Informal Writing
 - Use Humor with Caution

Bahasa "marketing"

Nebraska is filled with internationally recognized attractions that draw large crowds of people every year, without fail. In 1996, some of the most popular places were Fort Robinson State Park (355,000 visitors), Scotts Bluff National Monument (132,166), Arbor Lodge State Historical Park & Museum (100,000), Carhenge (86,598), Stuhr Museum of the Prairie Pioneer (60,002), and Buffalo Bill Ranch State Historical Park (28,446).

"control" condition, 0% (relative) improvement

Mengukur Usability "membaca di web"

- Task time
- Errors
- Memory
- Time to recall site structure
- Subjective satisfaction

<http://www.useit.com/alertbox/readingmetrics.html>

Concise Text

In 1996, six of the best-attended attractions in Nebraska were Fort Robinson State Park, Scotts Bluff National Monument, Arbor Lodge State Historical Park & Museum, Carhenge, Stuhr Museum of the Prairie Pioneer, and Buffalo Bill Ranch State Historical Park.

about half the word count 58% improvement

Scannable layout

Nebraska is filled with internationally recognized attractions that draw large crowds of people every year, without fail. In 1996, some of the most popular places were:

- Fort Robinson State Park (355,000 visitors)
- Scotts Bluff National Monument (132,166)
- Arbor Lodge State Historical Park & Museum (100,000)
- Carhenge (86,598)
- Stuhr Museum of the Prairie Pioneer (60,002)
- Buffalo Bill Ranch State Historical Park (28,446).

same text, different layout 47% improvement

Objective language

Nebraska has several attractions. In 1996, some of the most-visited places were Fort Robinson State Park (355,000 visitors), Scotts Bluff National Monument (132,166), Arbor Lodge State Historical Park & Museum (100,000), Carhenge (86,598), Stuhr Museum of the Prairie Pioneer (60,002), and Buffalo Bill Ranch State Historical Park (28,446).

neutral, not boasted

27% improvement

Combined version

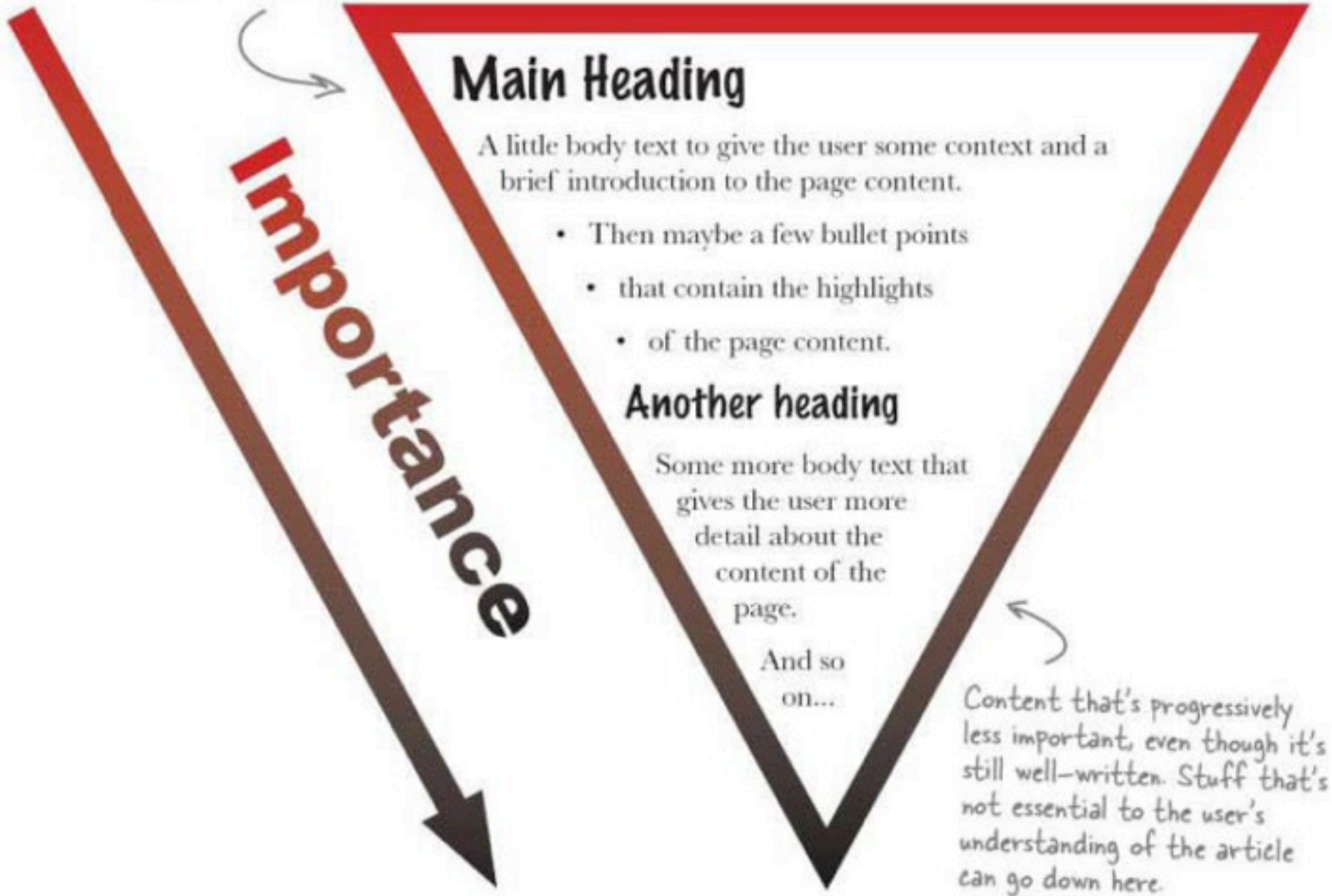
In 1996, six of the most-visited places in Nebraska were:

- Fort Robinson State Park
- Scotts Bluff National Monument
- Arbor Lodge State Historical Park & Museum
- Carhenge
- Stuhr Museum of the Prairie Pioneer
- Buffalo Bill Ranch State Historical Park

all, three improvements 124% improvement

Put the most important stuff at the top of your text. Users should be able to read your first paragraph and get the idea of the whole piece.

"Inverted Pyramid"



Create Visual Hierarchy

Very important

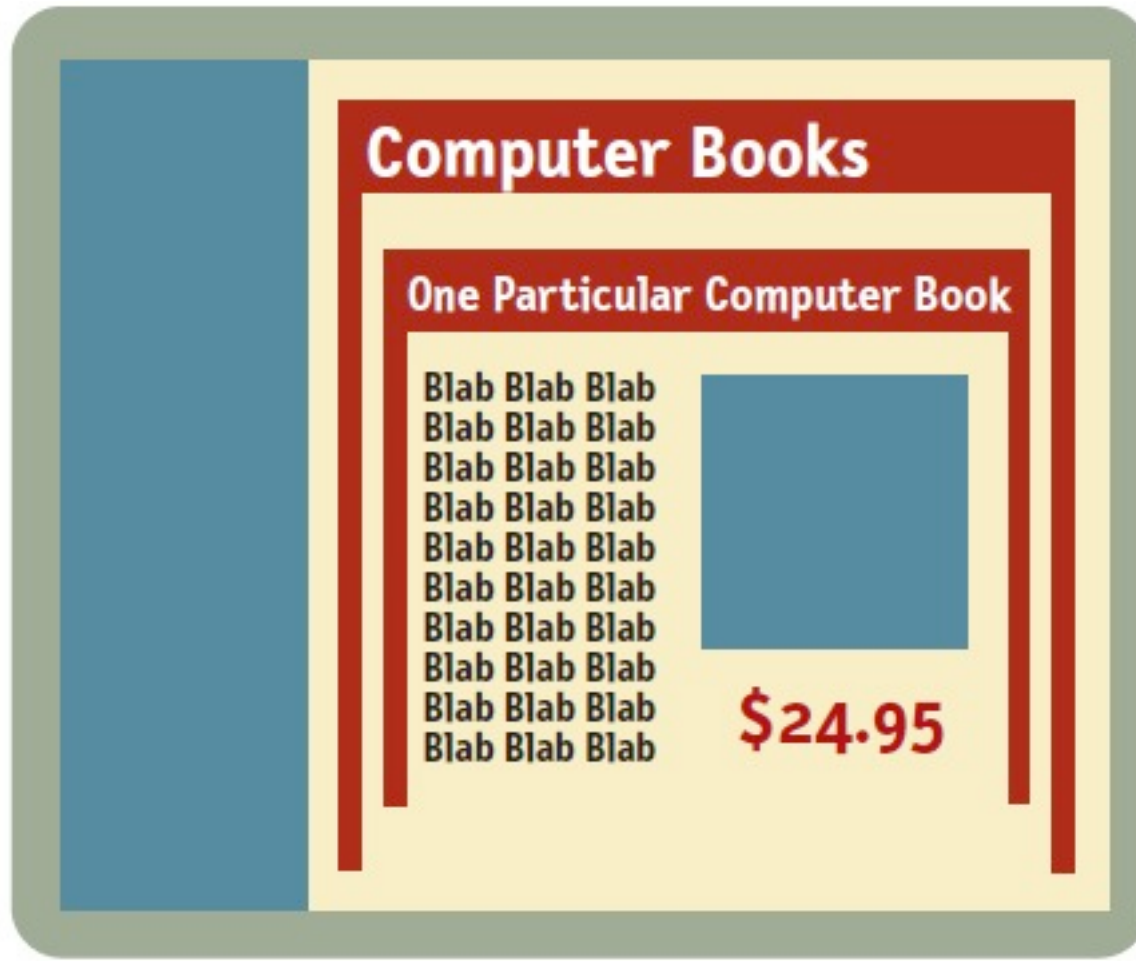
A little less important

Nowhere near as important

Related Logically, Related Visually



Nested Visually



Designing for Print vs. Web

- Magazine advertisements
- Business cards
- Logos
- Product design and packaging
- Standard HTML websites
- Flash websites
- Email newsletters
- Banner advertising

Print vs. Web

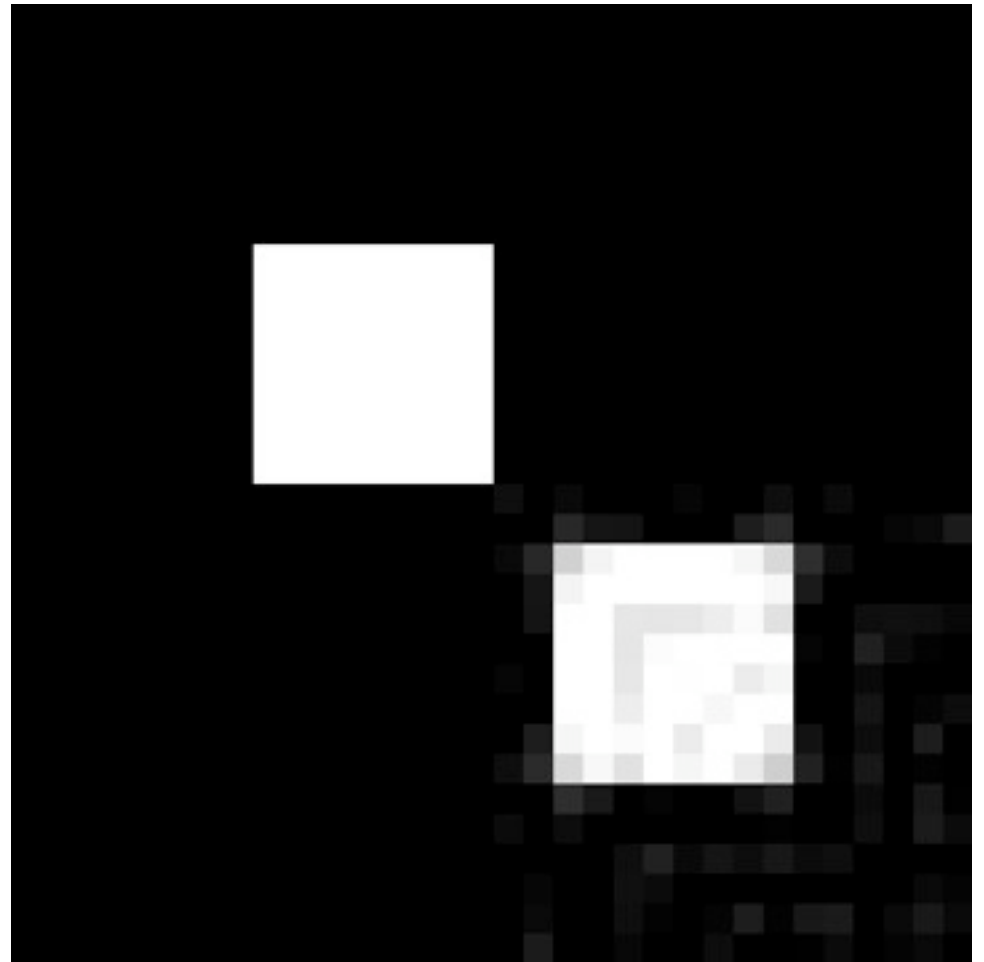
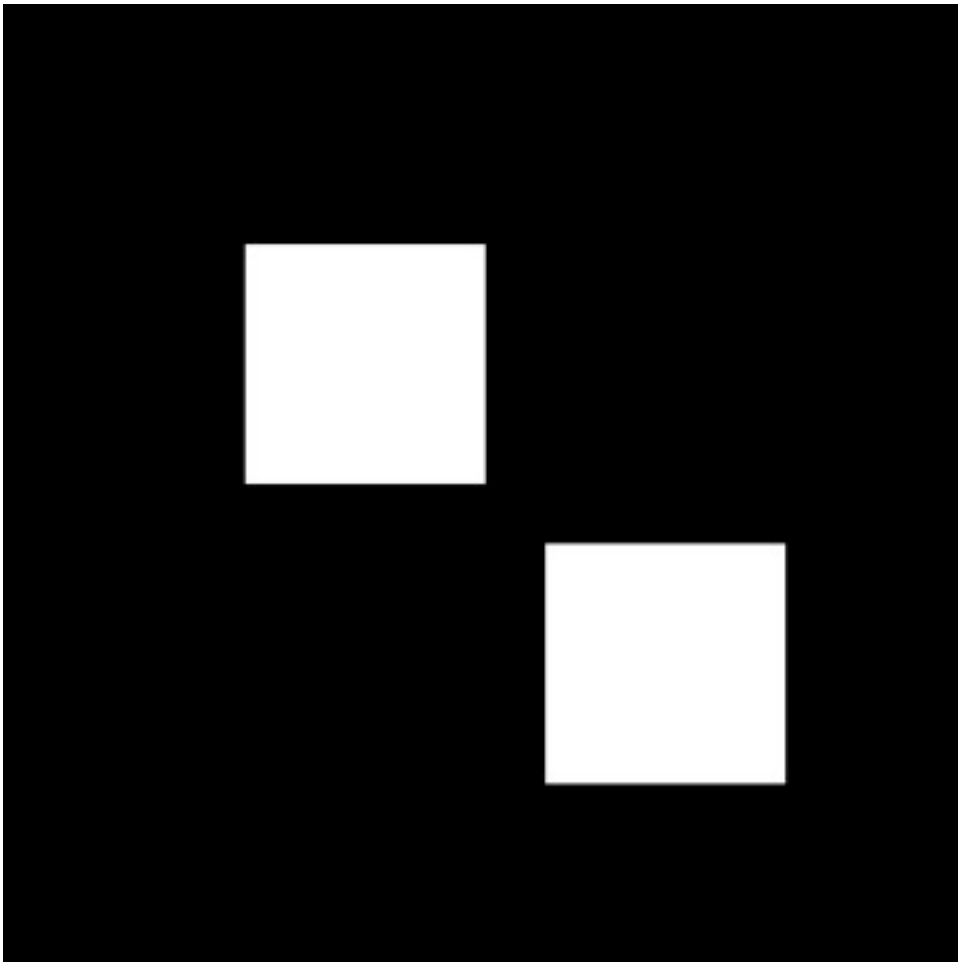
Things to ponder

- Audience
- Fonts, Font Size, Color
- All images are rectangular
- Pixels and Distortions
- Patience is limited

Preparing Images

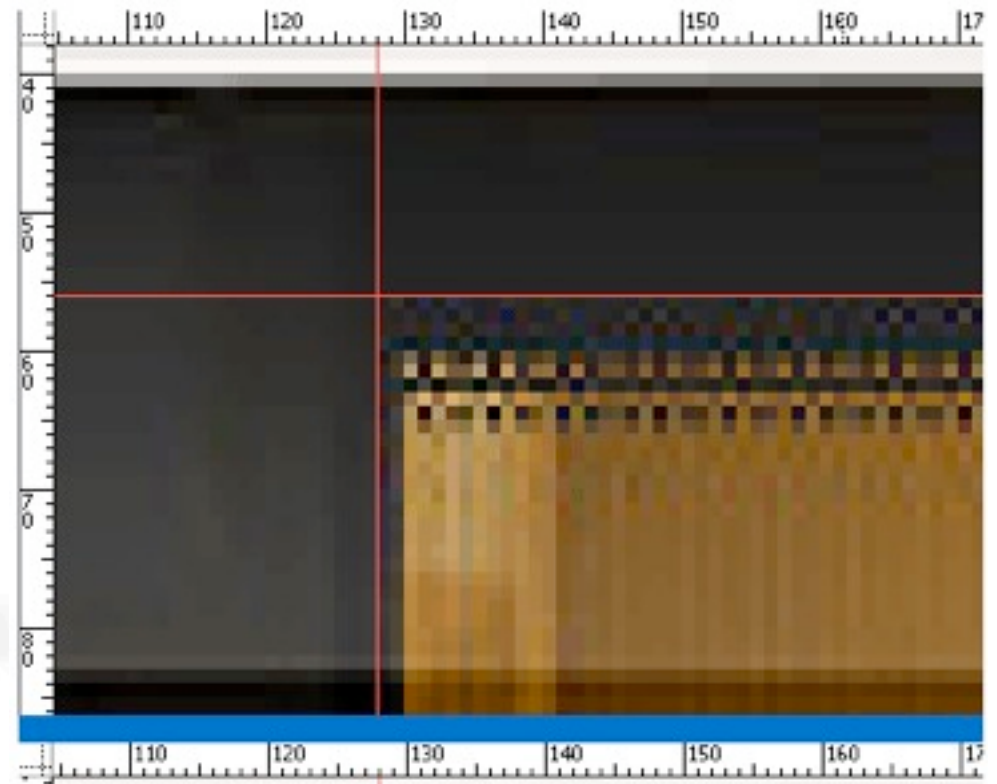
- JPG (good for photographs)
- GIF (old standard for limited-color images)
- PNG (the standard for limited-color images)
 - PNG-8 (8-bits colors)
 - PNG-24 (true color)

JPG: eight-pixel grid

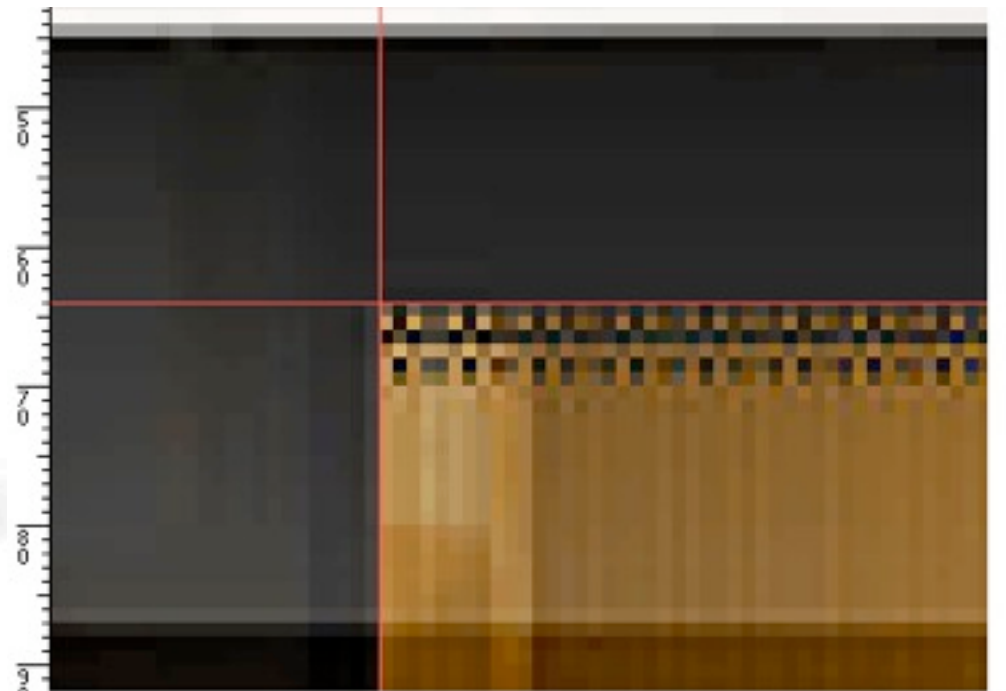




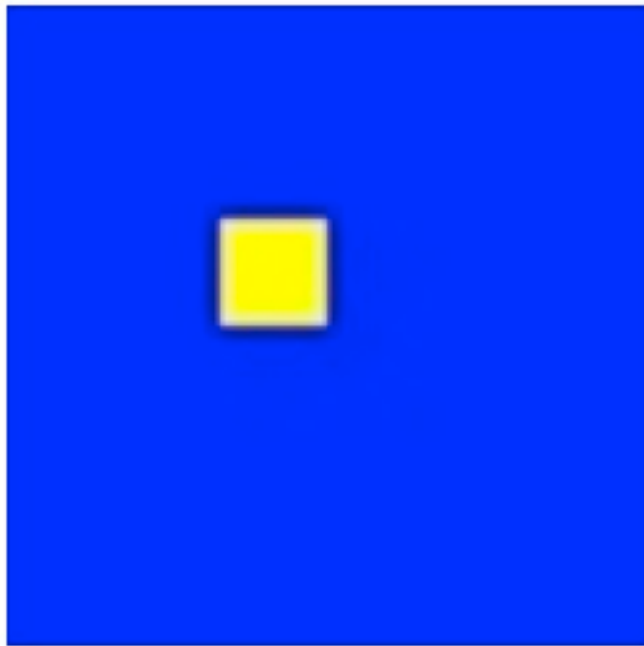
13.51KB



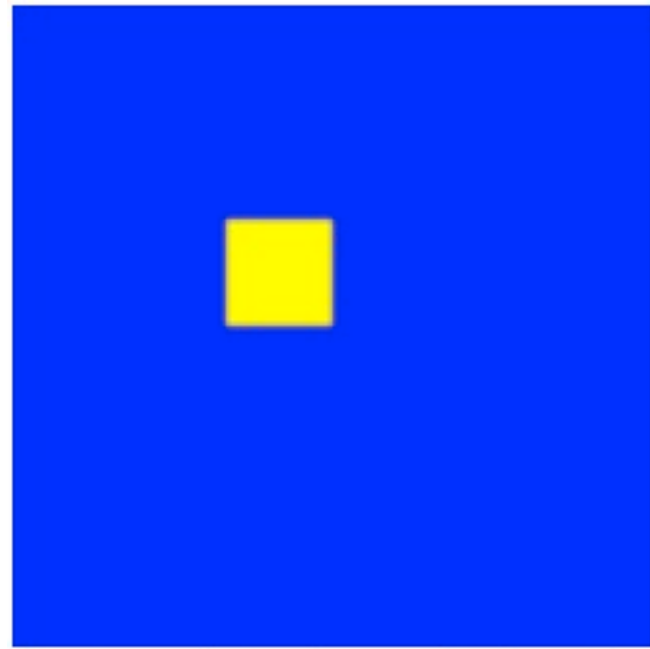
12.65KB



JPG: color down sampling ($Q \leq 50$)



48x48 pixels, Quality: 50 (in Photoshop), 530 bytes.



48x48 pixels, Quality: 51 (in Photoshop), 484 bytes.

503KB



395KB



91KB



26KB



19KB





503KB
Q=100



395KB
Q=95



91KB
Q=51



26KB
Q=10

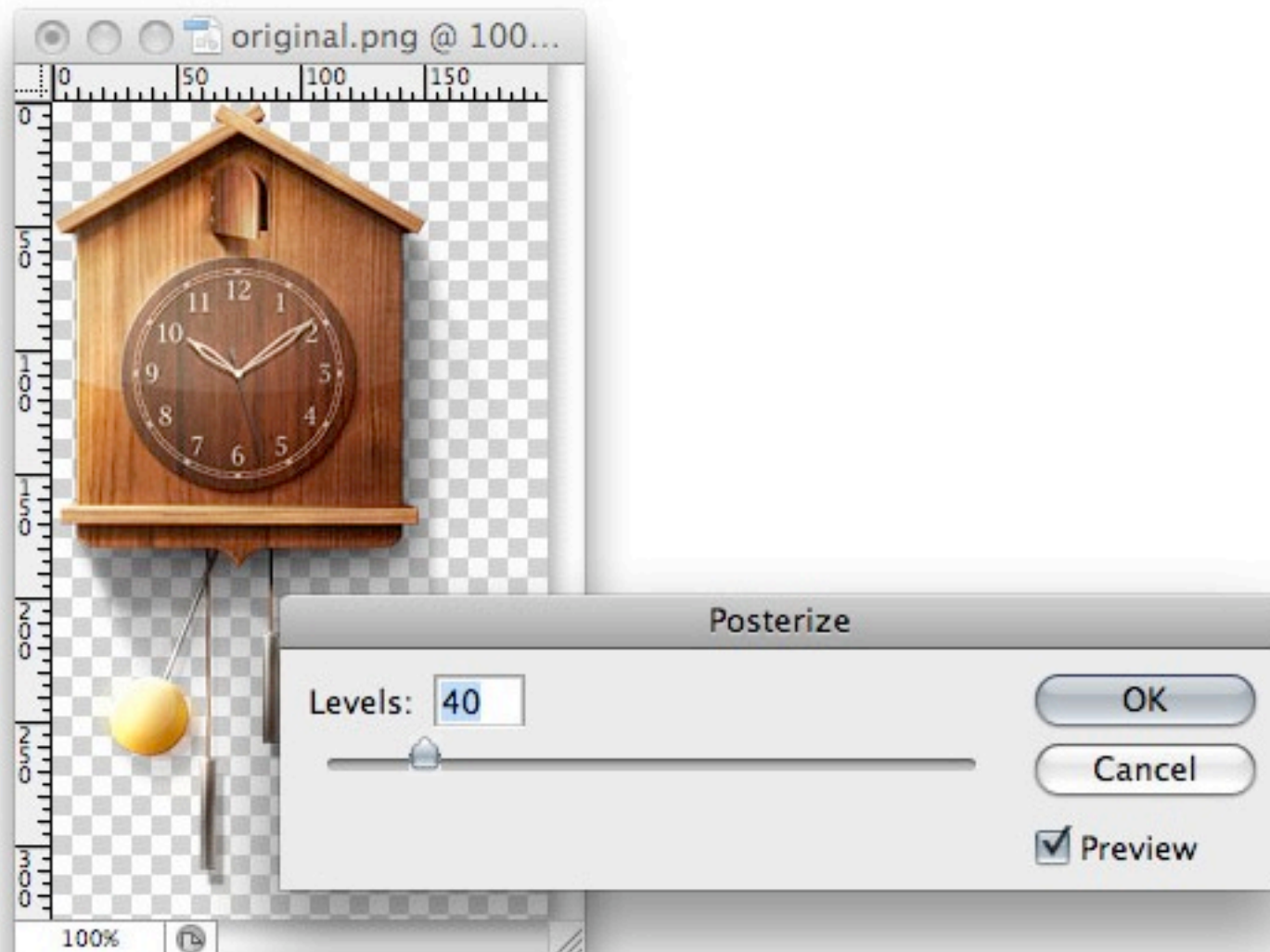


19KB
Q=0

Pilih yang mana?

PNG: Posterization

This is a well-known method of the truecolor image optimization. Open up the example image in Photoshop, press the  icon in the Layers palette and choose Posterize:



Posterization Result



Original, 84 KB



Posterized, 53 KB

PNG: Dirty Transparency



75 KB



30 KB



References

- <http://www.smashingmagazine.com/2009/07/01/clever-jpeg-optimization-techniques/>
- <http://www.smashingmagazine.com/2009/07/15/clever-png-optimization-techniques/>
- <http://www.smashingmagazine.com/2009/07/25/png-optimization-guide-more-clever-techniques/>