



Visual Design and Fluid Navigation

Human Computer Interaction

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Academic Year 2020/2021



POLITECNICO
DI TORINO



Visual Design

Aesthetics for helping users in understanding and navigating the UI

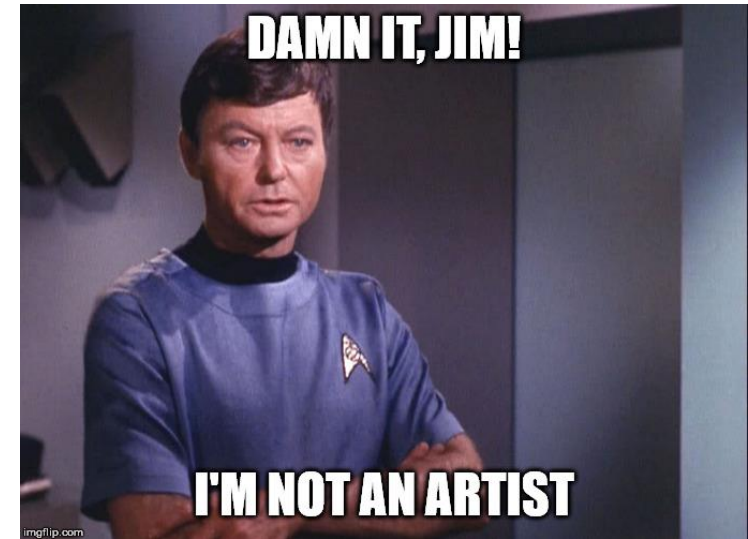
Visual Design

- **Guiding:** conveying structure, relative importance, relationships
- **Pacing:** drawing people into your app, orienting them, and showing where to go, providing hooks to dive deeper
- **Messaging:** expressing meaning and style, breathing life into your content
- Both at the conscious and sub-conscious levels

- And also...
 - Making everything look aesthetically beautiful
 - (but this is not the goal)

Visual Design vs. Art and Artistic Skills

- A.k.a. «Help, I'm not an artist!»
- Artistic skills help a bit but are neither necessary nor sufficient
- Art does not need to be practical; design does
- Real design skills take years to master
- Widely-accepted heuristics are a good and easy start



The Basics of Visual Design

Basic visual design involves text, layout, and colors. First let's start with text. Gracefully using whitespace helps separate out logical chunks of content. Next, font size and style differences convey hierarchy. Finally, alignment is crucial for helping readers scan quickly.

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The Basics of Visual Design

Basic visual design involves ...

Text

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Layout

Colors

The Basics of Visual Design

BASIC VISUAL DESIGN

Text

- **Whitespace**: helps separate out logical chunks of content
- **Font**: size and style differences convey hierarchy
- **Alignment**: crucial for helping readers scan quickly

Layout

Colors

Recognizable page structure

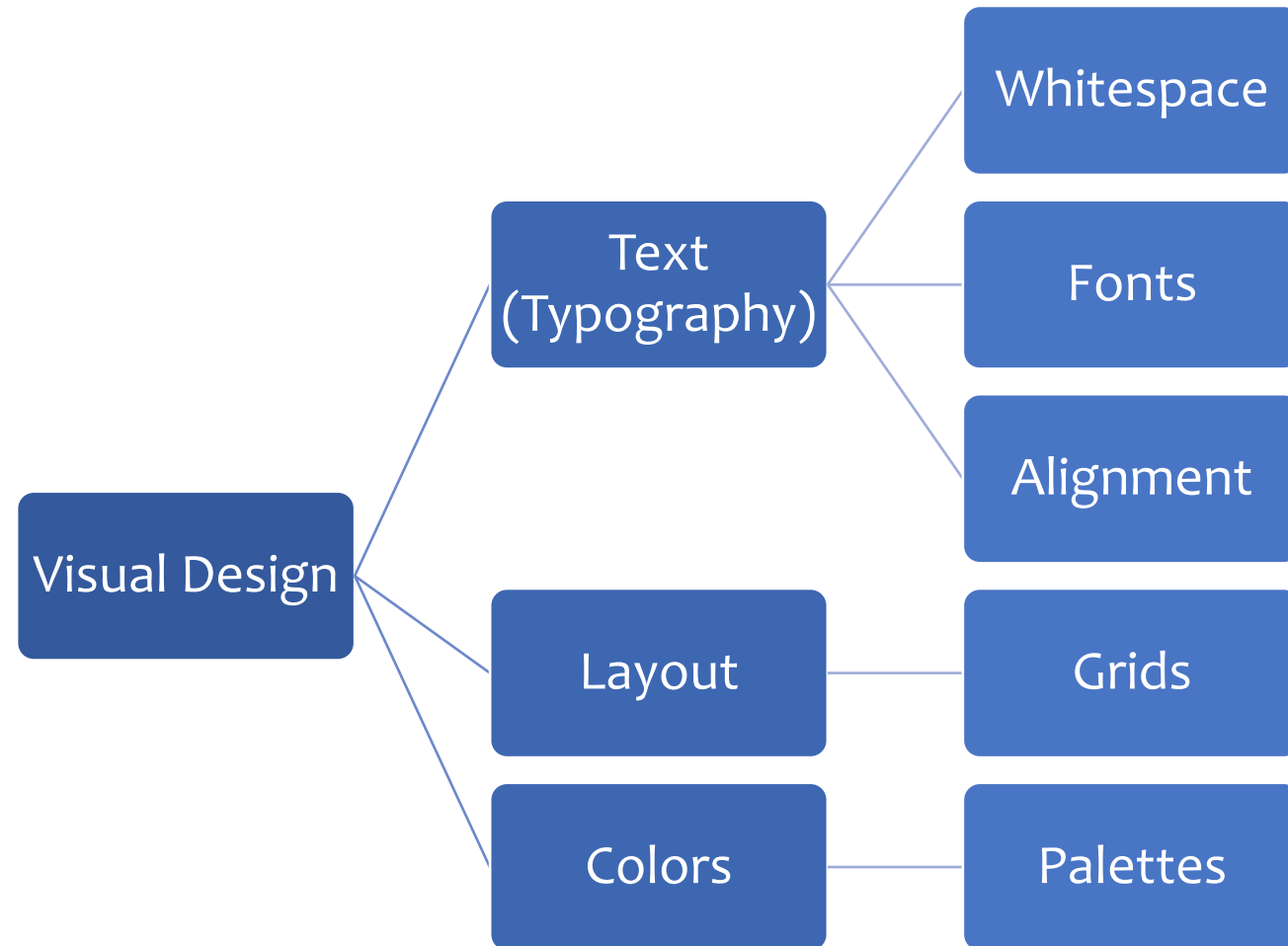


Recognizable page structure

The screenshot displays the homepage of the Italian newspaper LA STAMPA. The layout is structured as follows:

- Header:** Includes the GNN logo, a NEWSLETTER link, social media icons for Twitter and Facebook, and links for ABBONATI (Subscribers) and ACCEDI (Log In).
- Navigation:** Features the main title "LA STAMPA" in large, bold letters. Below it are links for "LEGGI IL QUOTIDIANO", "TOP NEWS", and "TUTTO LIBRI". A search icon is located on the right.
- Update and News:** A status bar shows "Aggiornato alle 22:45 - 04 novembre". Below this are navigation links for "La caduta del Muro", "Serie A", "Siria", and "Manovra". On the right, there are links for "TORINO" and "EDIZIONI LOCALI".
- Featured Articles:** A row of three article teasers with circular icons and author names: "I demoni di Hamilton: 'Non è facile come sembra, per me è durissima'" by Stefano Mancini; "Lavorare meno per rendere di più: la ricetta funziona davvero" by Emanuela Grigliè; and "Reportage Trombe d'aria, pioggia e fiumi esondati: in Liguria torna l'incubo alluvione" by Marco Menduni.
- Main Content Area:**
 - Large Article:** "ArcelorMittal abbandona Taranto e l'ex Ilva. Scoppia la polemica. L'azienda: c'era il diritto di recesso" by Paolo Baroni. It features a video player with the ArcelorMittal logo.
 - Video Teaser:** "LA STORIA DI GIOVANNI BELZONI IN UN LIBRO" by Marco Zatterin. "Da Abu Simbel a Giza, l'italiano che inventò l'egittologia".
 - Interview:** "Intervista - Calenda: sull'Ilva di Taranto distrutto il lavoro di anni" by Paolo Baroni. Includes a video player.
 - Industry News:** "ArcelorMittal si tira indietro sull'Ex Ilva, ecco quanto pesa la decisione su Taranto" and "La storia dell'acciaieria più grande d'Europa. Ecco l'Ilva dal 2012 a oggi" by Giulia Ciancaglini. Includes video players.
 - Climate Change:** "Il surriscaldamento climatico è arrivato nel profondo delle Alpi" by Nicola Pirina. Includes a video player.
 - Unemployment:** "SECONDO NOI Sud svuotato e senza lavoro: lo Svinmez lancia l'allarme recessione" by Marco Sodano. Includes a video player.

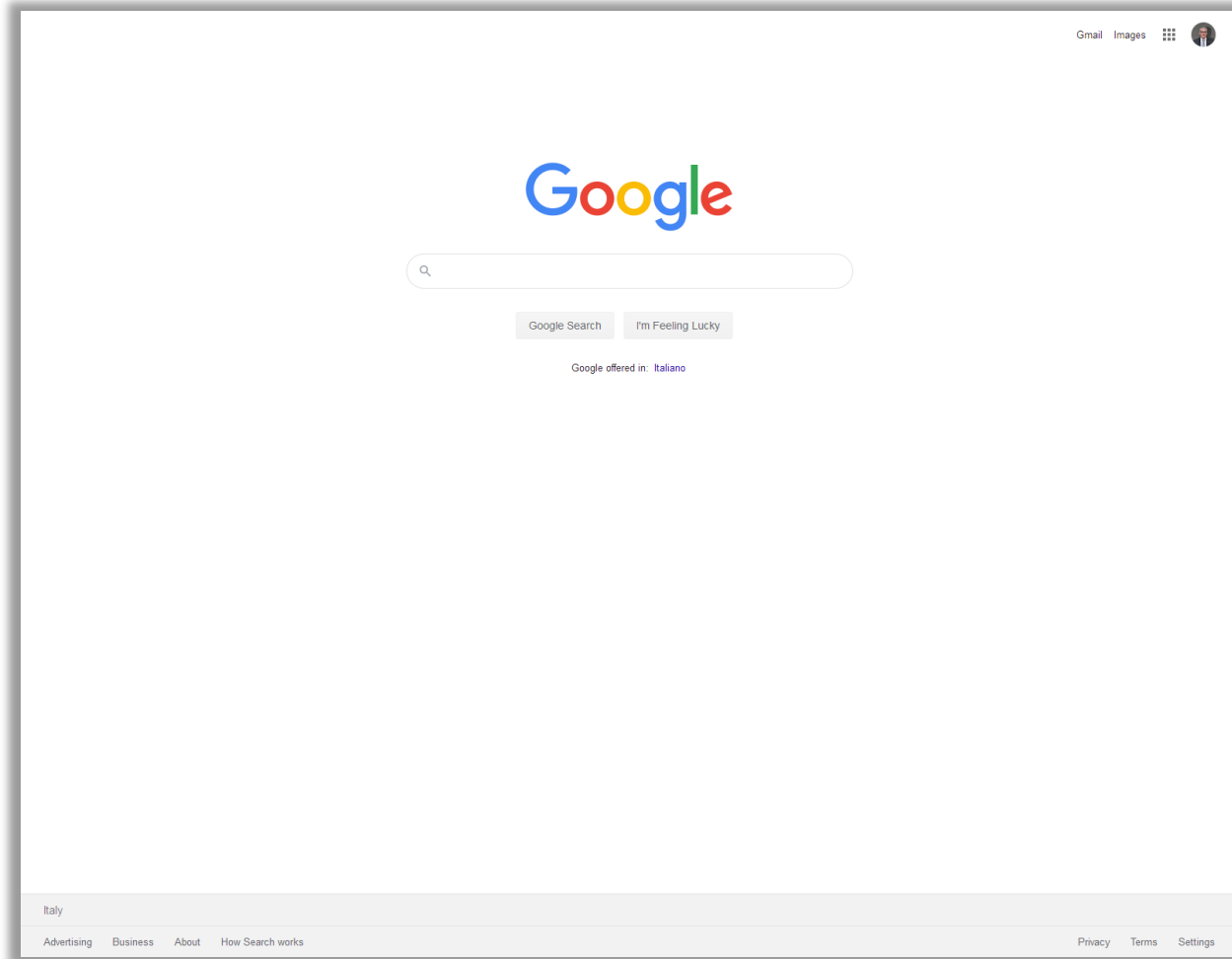
Key ingredients



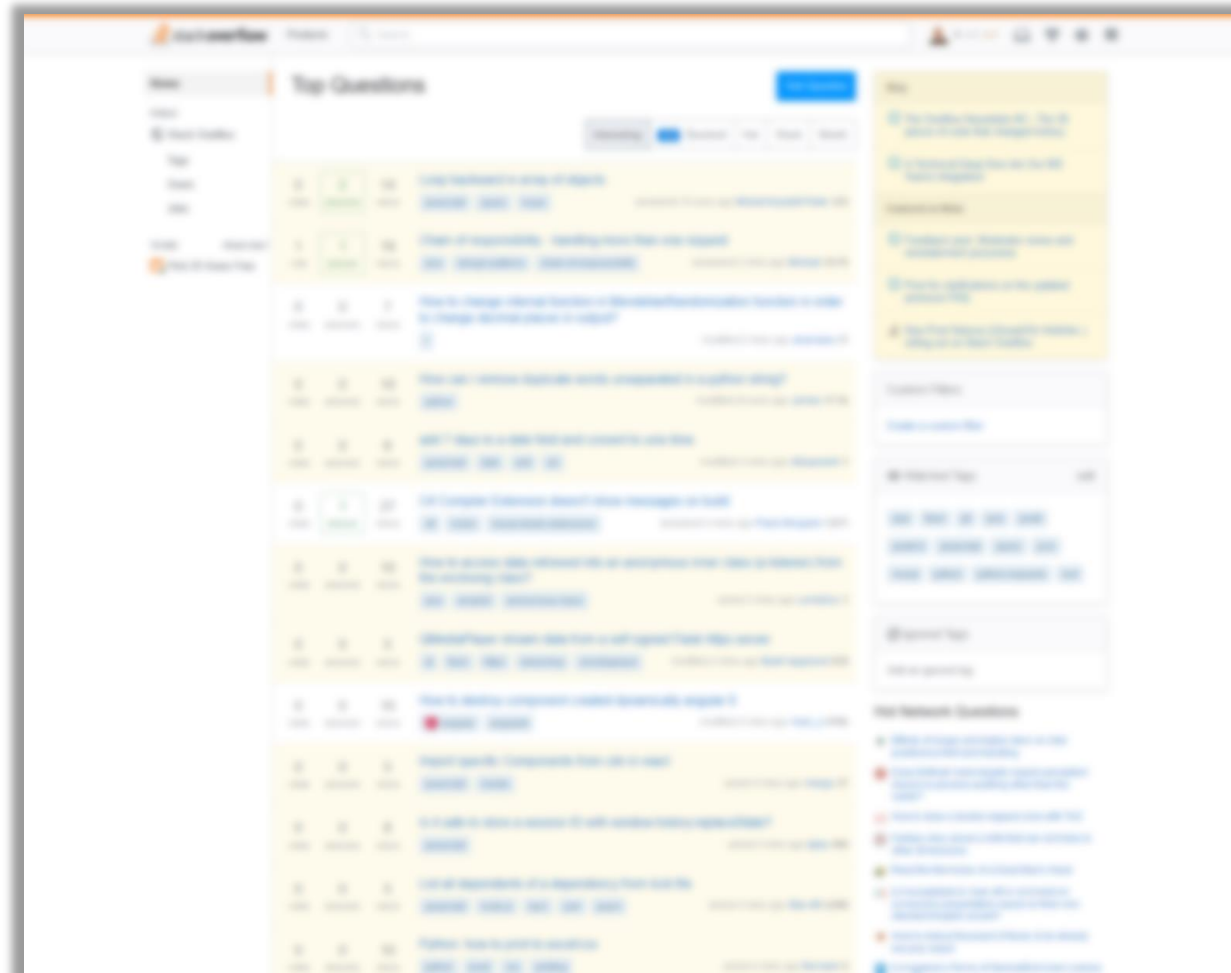
Recognizable page structure



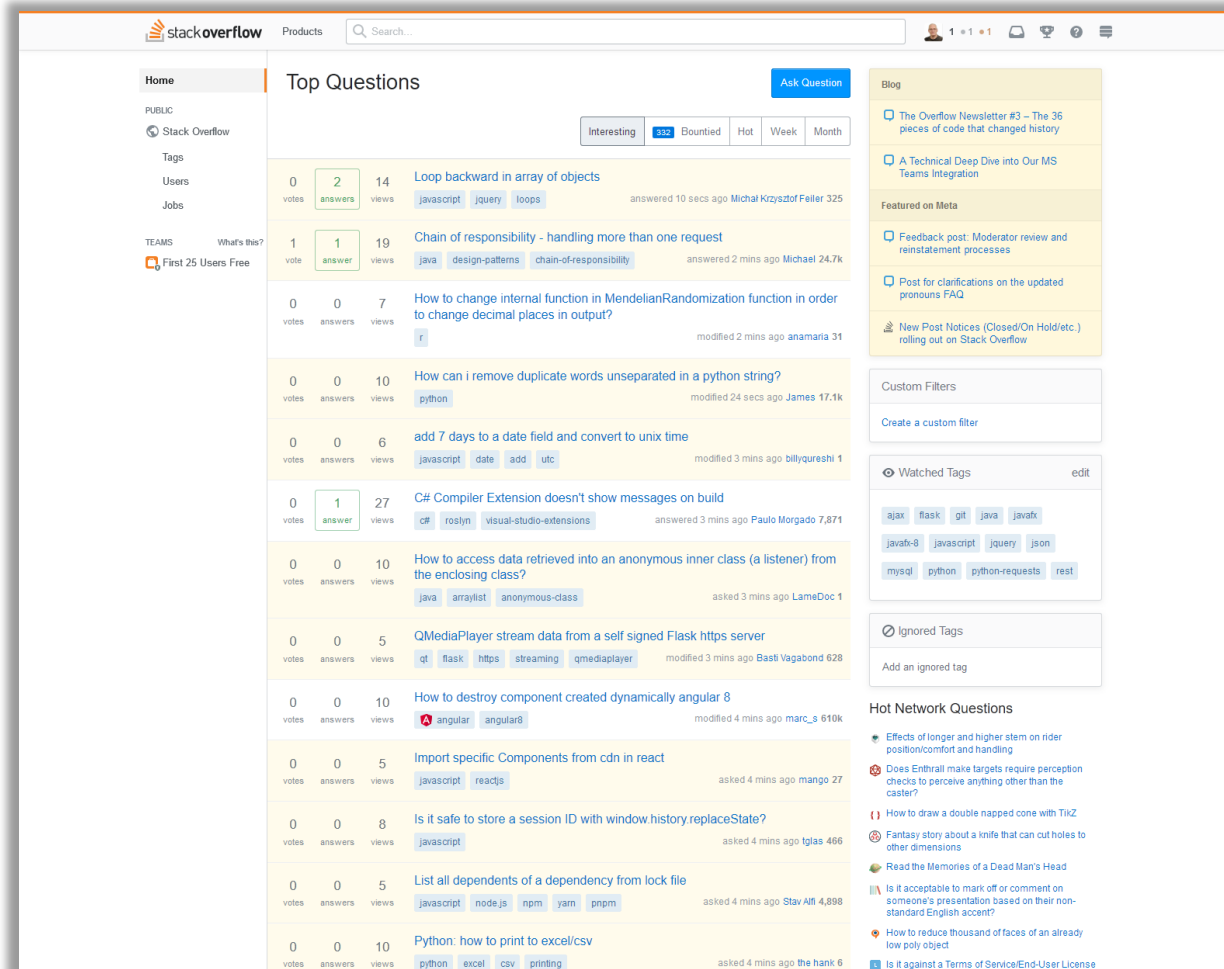
Recognizable page structure



Recognizable page structure



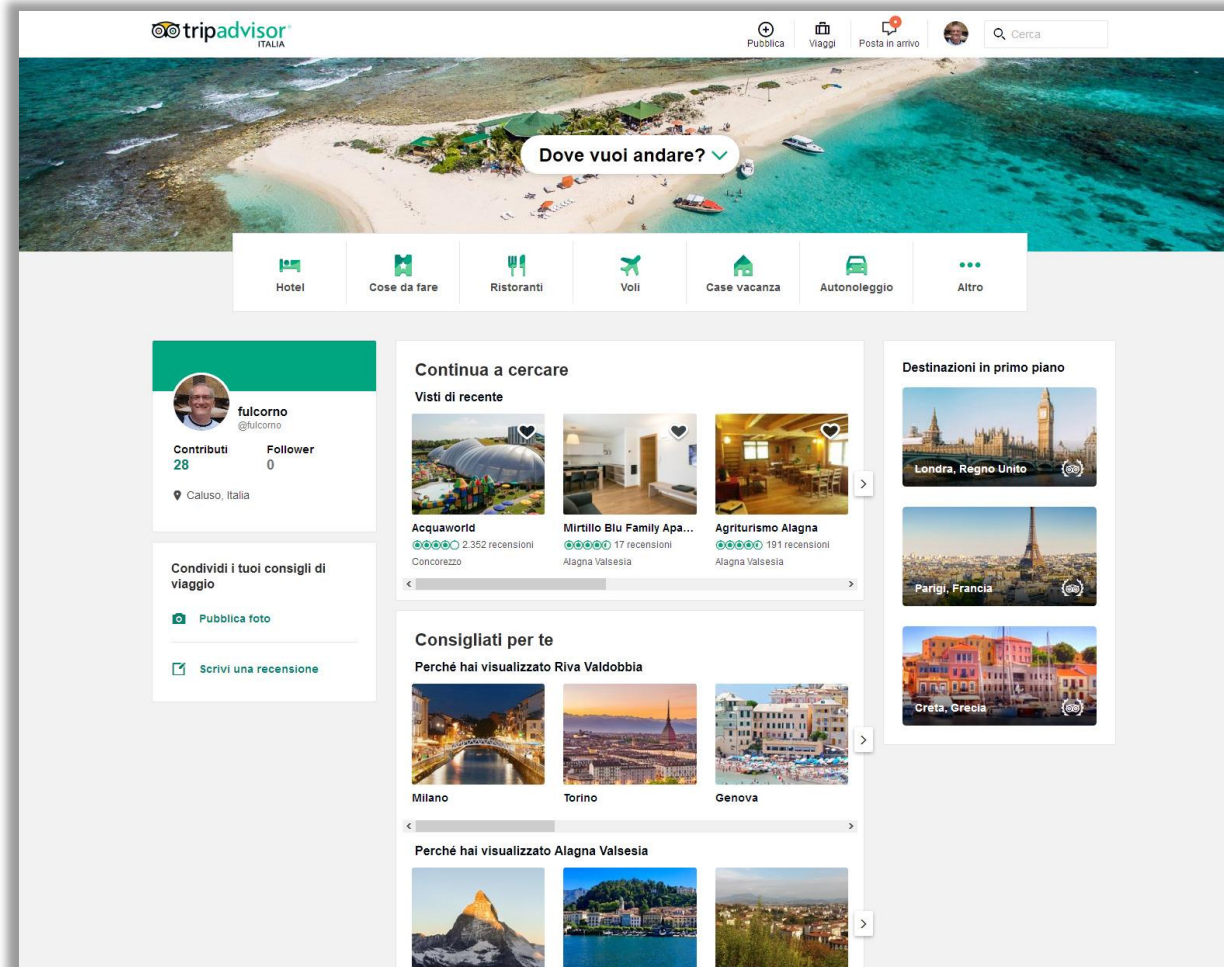
Recognizable page structure



Recognizable page structure



Recognizable page structure



Recognizable page structure

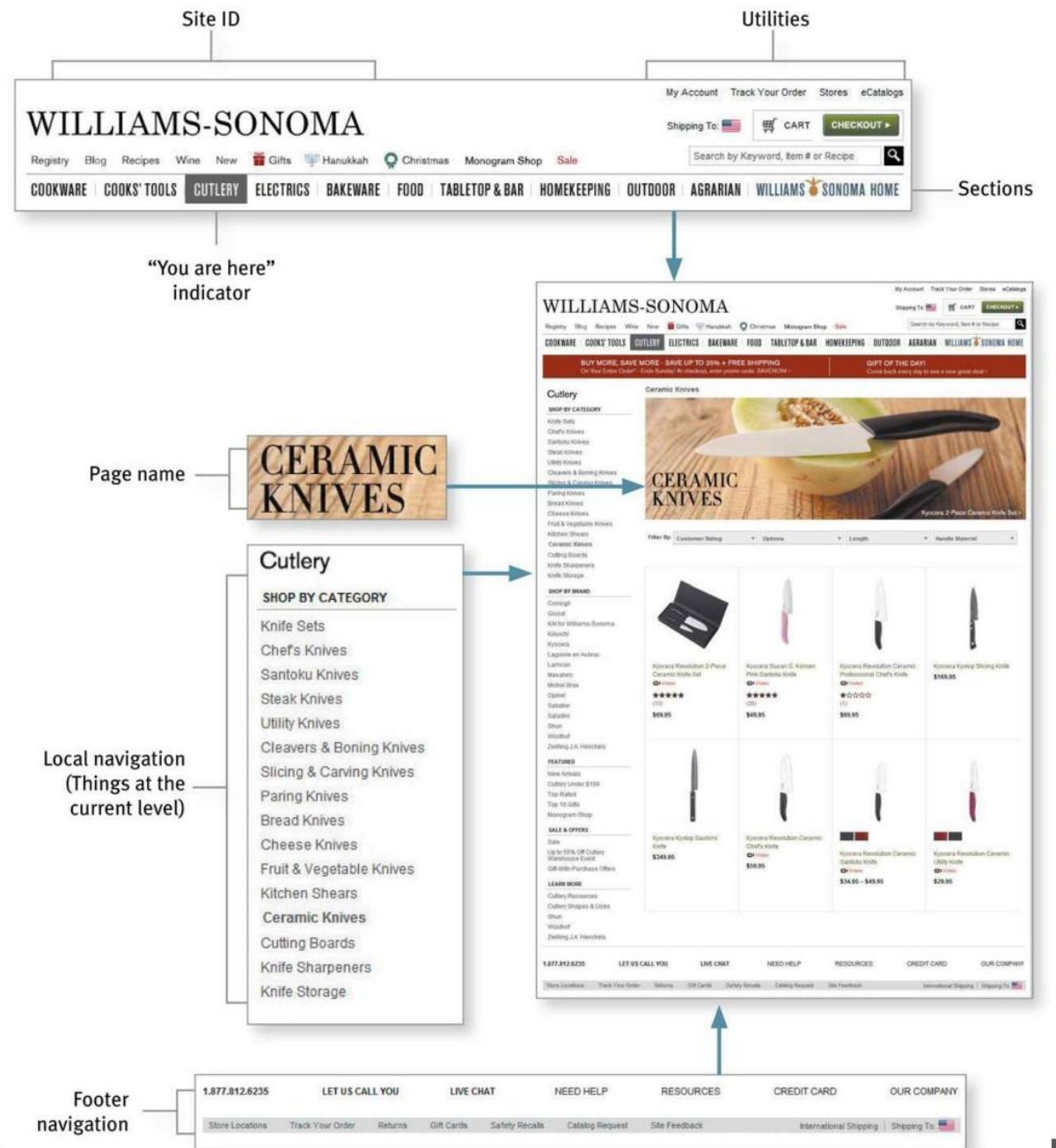
The screenshot shows the TBS News website interface. At the top, there's a header with the TBS News logo and the slogan "リアルタイム経営こそ、IT戦略" (Real-time management is the IT strategy). Below the header is a navigation bar with categories like "社会" (Society), "政治" (Politics), "経済" (Economy), "国際" (International), "スポーツ" (Sports), "列島" (Islands), "天気" (Weather), "連続動画" (Continuous Video), and "報道コラム" (Report Column). A search bar and a "ニュース検索" (News Search) button are also present.

The main content area features a large video player with a news article titled "「三越伊勢丹」も不適切表示、他の百貨店にも拡大" (Mitsukoshi Isetan also has inappropriate display, expanded to other department stores). The article text states: "大手百貨店の三越伊勢丹ホールディングスは、グループの百貨店などにあるレストラン14店で、メニューと違う食材を使った料理を提供していたことを明らかにしました。不適切な表示は、小田急、そごうなどの百貨店にも広がっています。" (The Mitsukoshi Isetan Holdings, which operates department stores, has revealed that 14 restaurants in its group department stores were serving dishes using ingredients different from the menu. The inappropriate display has also spread to department stores like Ogino and Sogo).

Below the article, there are several smaller news snippets and advertisements. On the right side, there are promotional banners for "ステップワゴン" (Step Wagon) and "家族の冒険プロジェクト" (Family Adventure Project). There are also logos for "TBSニュース" and "NEWS 23".

At the bottom, there are sections for "社会" (Society) and "政治" (Politics), each with a list of related news items. A "経済" (Economy) section is also visible. The footer contains a "関連リンク" (Related Links) section with various website links.

Uses Conventions = Recognizable Structure



'Gestalt' principles

Hints from the psychology of Shapes and of Representation

Gestalt principles

- Laws from 1920s' psychology: how humans typically see objects by grouping similar elements, recognizing patterns and simplifying complex images
- Designers use these to engage users via powerful -yet natural- “tricks” of perspective and best practice design standards
- *“The whole is other than the sum of the parts” - Kurt Koffka*



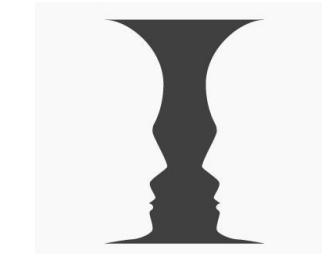
<https://www.interaction-design.org/literature/topics/gestalt-principles>

<https://www.usertesting.com/blog/gestalt-principles/>

Some Gestalt principles

- **Figure/Ground:** Disliking uncertainty, we look for solid, stable items. Foreground catches the eye first
- **Closure:** Preferring complete shapes, we automatically fill in gaps to perceive a complete image; we see the whole first
- **Common Region:** We group elements that are in the same closed region
- **Element Connectedness:** We group elements linked by other elements
- **Continuation:** We follow and “flow with” lines
- **Proximity (Emergence):** We group closer-together elements, separating them from those farther apart.
- **Good Form:** We differentiate elements that are similar in color, form, pattern, etc. and cluster them together
- **Meaningfulness (Familiarity):** We group elements if they form a meaningful or personally relevant image.
- **Prägnanz:** We perceive complex images as simple ones.
- **Convexity:** We perceive convex shapes ahead of concave ones
- **Regularity:** Sorting items, we tend to group some into larger shapes, and connect elements that form a pattern.
- **Similarity (Invariance):** We seek differences and similarities in an image and link similar elements.
- **Symmetry:** We seek balance and order in designs, struggling to do so if they aren’t readily apparent.
- **Common Fate:** We group elements that move in the same direction
- **Synchrony:** We group static visual elements that appear at the same time.

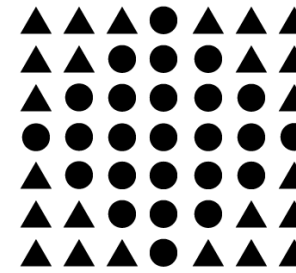
Examples: figure-ground



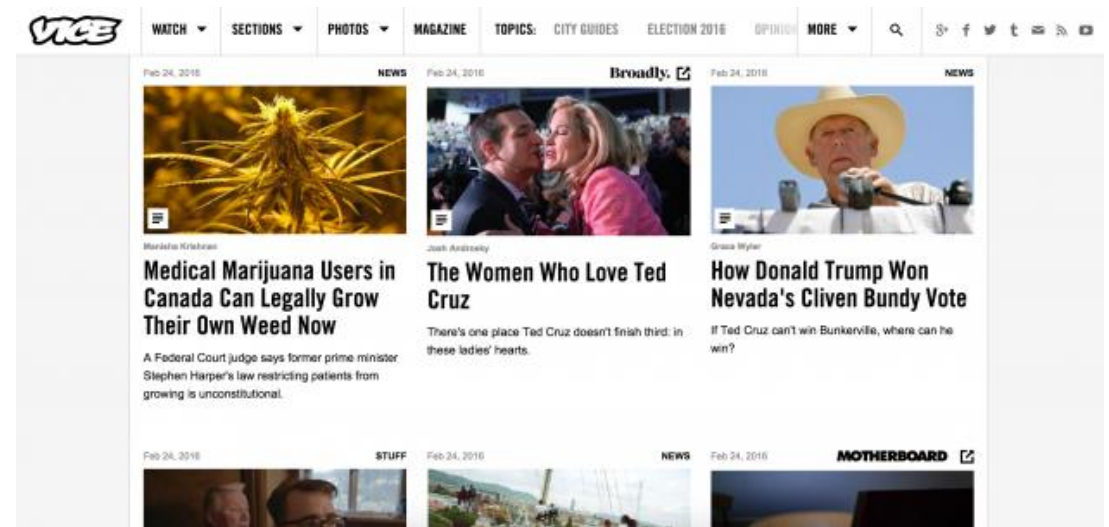
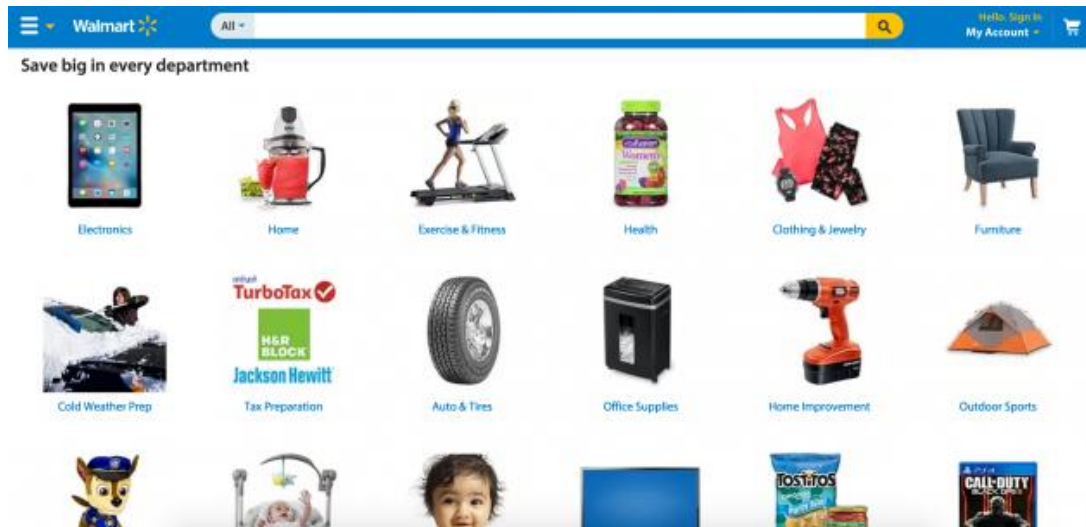
A screenshot of the Basecamp 3 website. The main content area features a large white box with a cartoon illustration of a person's head filled with various icons and text bubbles. The text bubbles contain phrases like "DID WE GET THAT DONE YET?", "WAIT, WHO MADE THAT DECISION?", "WHEN IS THIS DUE?", "WHERE DO I PUT THAT?", "NO ONE TOLD ME THAT!", "WHO SENT THIS TO THE CLIENT?", and "THIS IS EXHAUSTING!". To the right of this illustration is a sign-up form. A black arrow points from the top of the sign-up form to the text "Sign up now for free below" which is overlaid on the white background of the form, demonstrating a figure-ground effect.

A screenshot of the AngelList website. The main content area features a dark background with a view of Earth from space. The AngelList logo is prominently displayed. To the right, there is a navigation menu with several options: "Find a Startup Job", "Post a Job", "Raise Money Online", and "Invest in Startups". The menu items are white text on a dark background, creating a figure-ground effect.

Examples: similarity

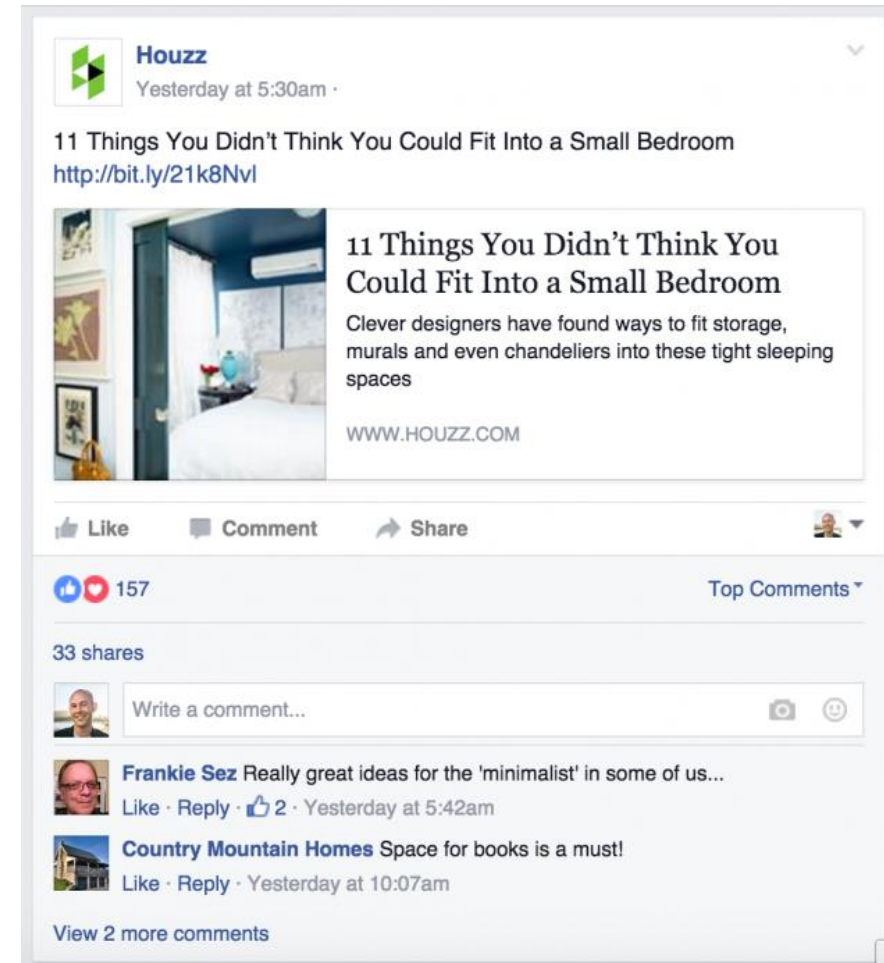
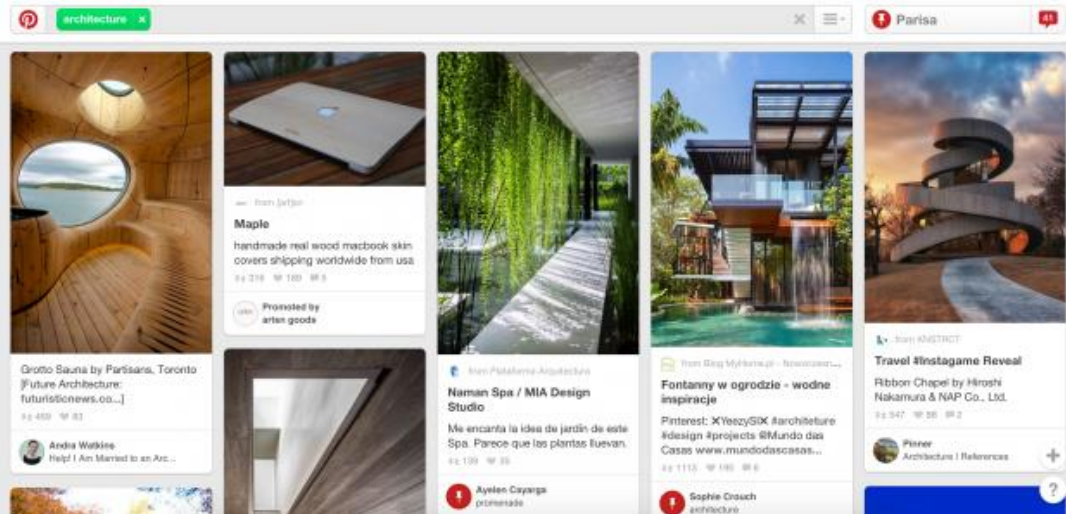
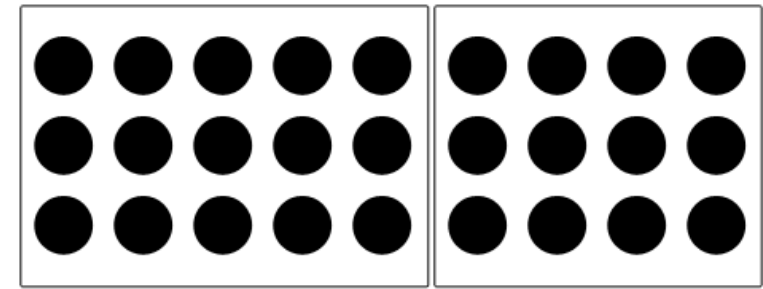


Examples: proximity

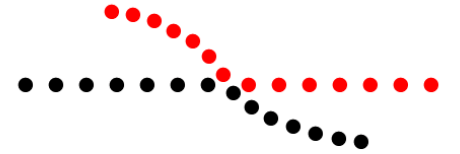


<https://www.usertesting.com/blog/gestalt-principles/>

Examples: common region



Examples: continuity



Customers Who Bought This Item Also Bought

Page 1 of 20

The screenshot shows five book recommendations with their covers, titles, authors, ratings, and prices. Navigation arrows are visible on the left and right sides of the list.

Book Title	Author	Rating	Price
Crossing the Chasm, 3rd Edition: Marketing and Selling Disruptive Products	Geoffrey A. Moore	★★★★★ 72	\$12.35 ✓Prime
The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to	Eric Ries	★★★★★ 1,062	\$16.66 ✓Prime
The Innovator's Dilemma: The Revolutionary Book That Will Change the Way	Clayton M. Christensen	★★★★★ 209	\$10.06 ✓Prime
The Innovator's Solution: Creating and Sustaining Successful Growth	Clayton M. Christensen	★★★★★ 22	\$18.33 ✓Prime
How Will You Measure Your Life?	Clayton M. Christensen	★★★★★ 583	\$15.06 ✓Prime



Step 1

Choose your meals, drinks and treats from our daily rotating menu.



Step 2

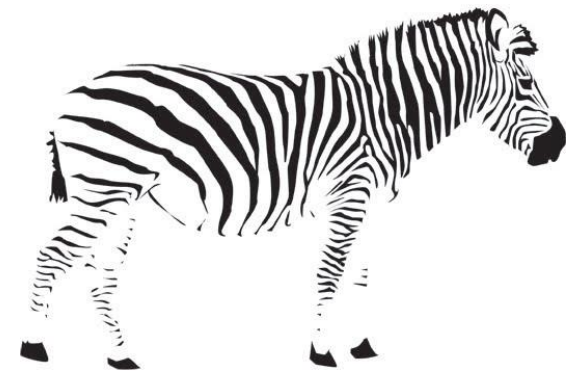
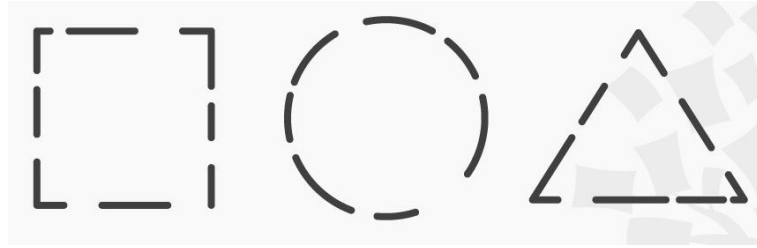
Our friendly servers organize your food for delivery - hot and ready to eat!



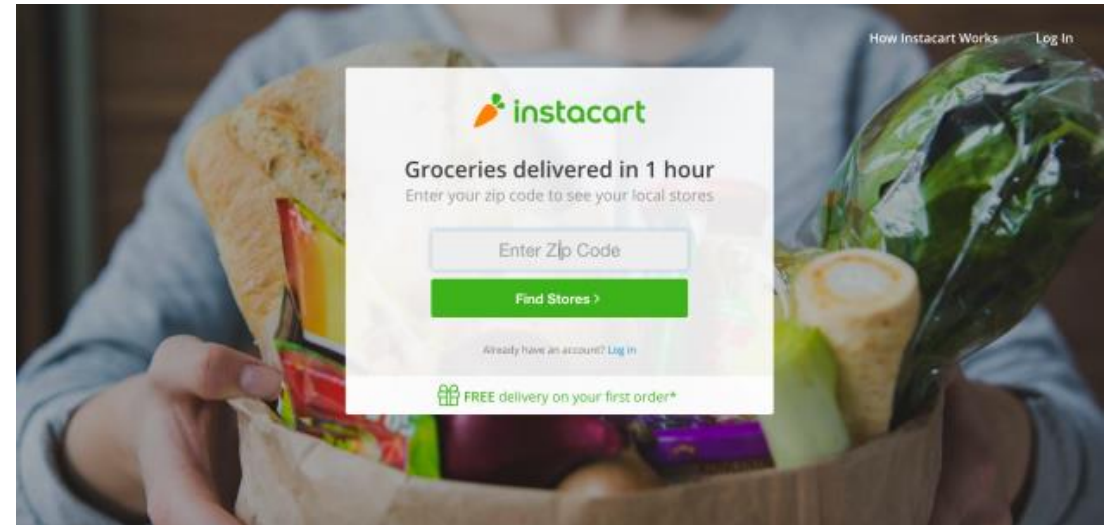
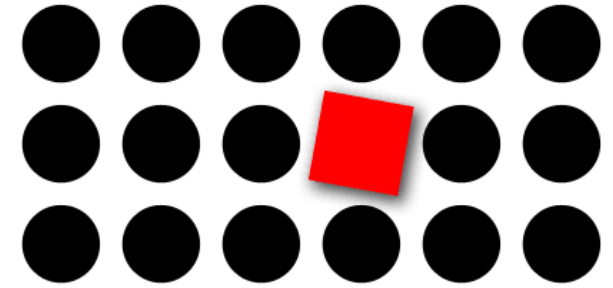
Step 3

Your meal arrives in around 20 minutes - like a home-cooked meal without the effort!

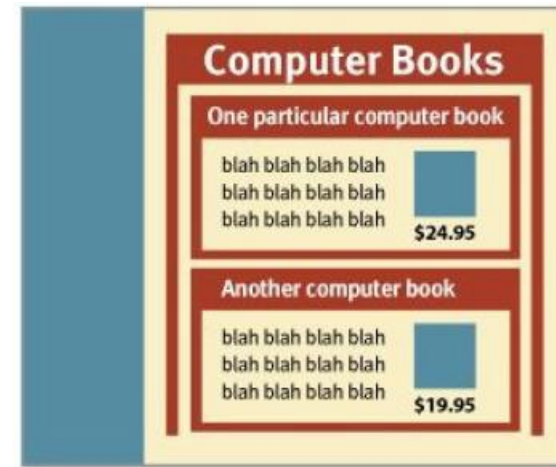
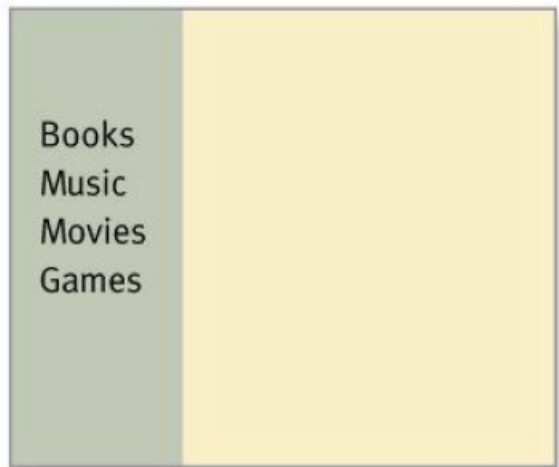
Examples: closure



Examples: focal point



Examples (applying Gestalt)

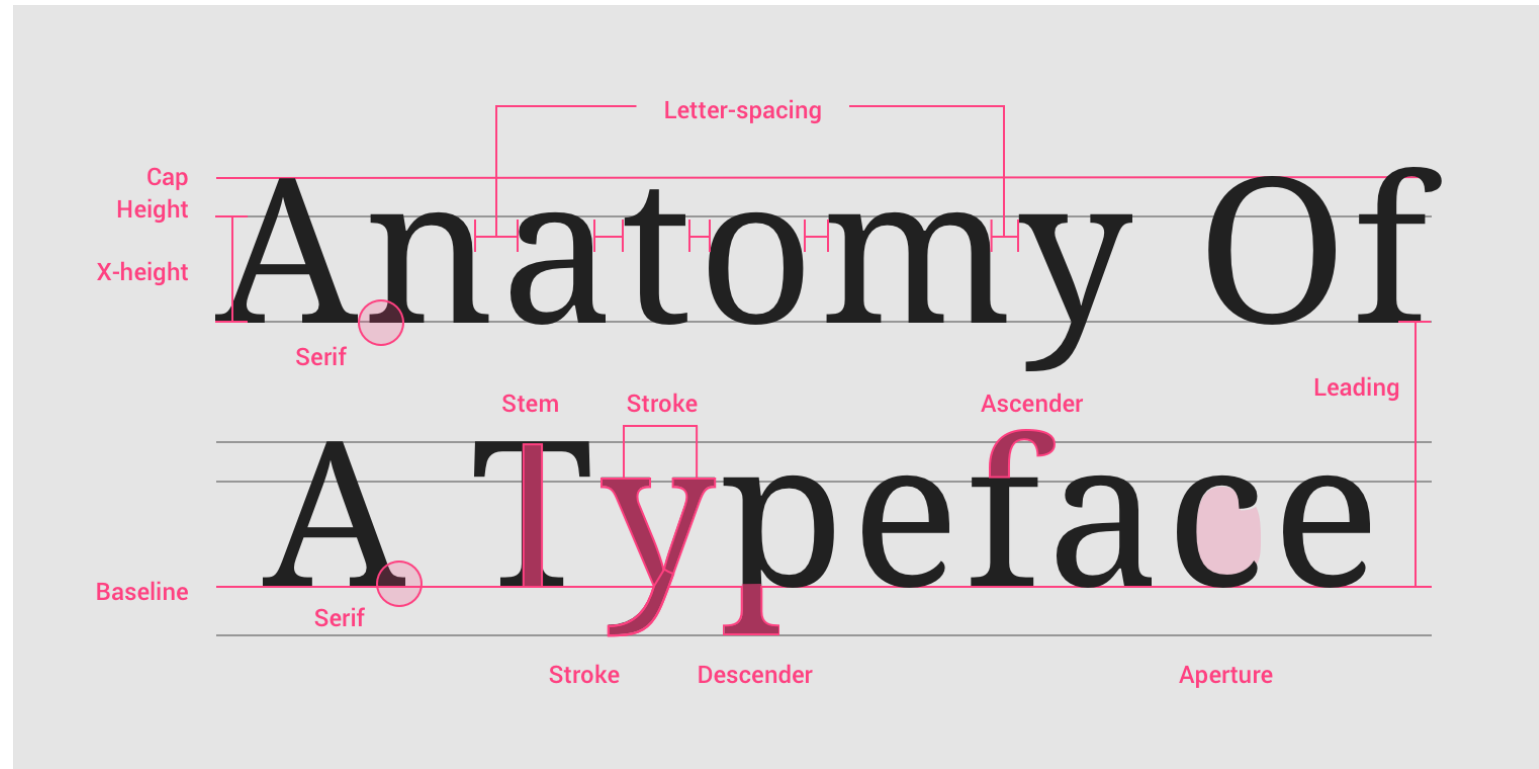


Typography

Property of text

Characteristics of text

- Point Size
- Leading
- Cap Height, x-height
- Ascenders, Descenders
- Weight
- Serifs



<https://material.io/design/typography/understanding-typography.html>

Example: Material Design type scale

A combination of 13 styles that are supported by the type system

Reusable categories of text, each with an intended application and meaning

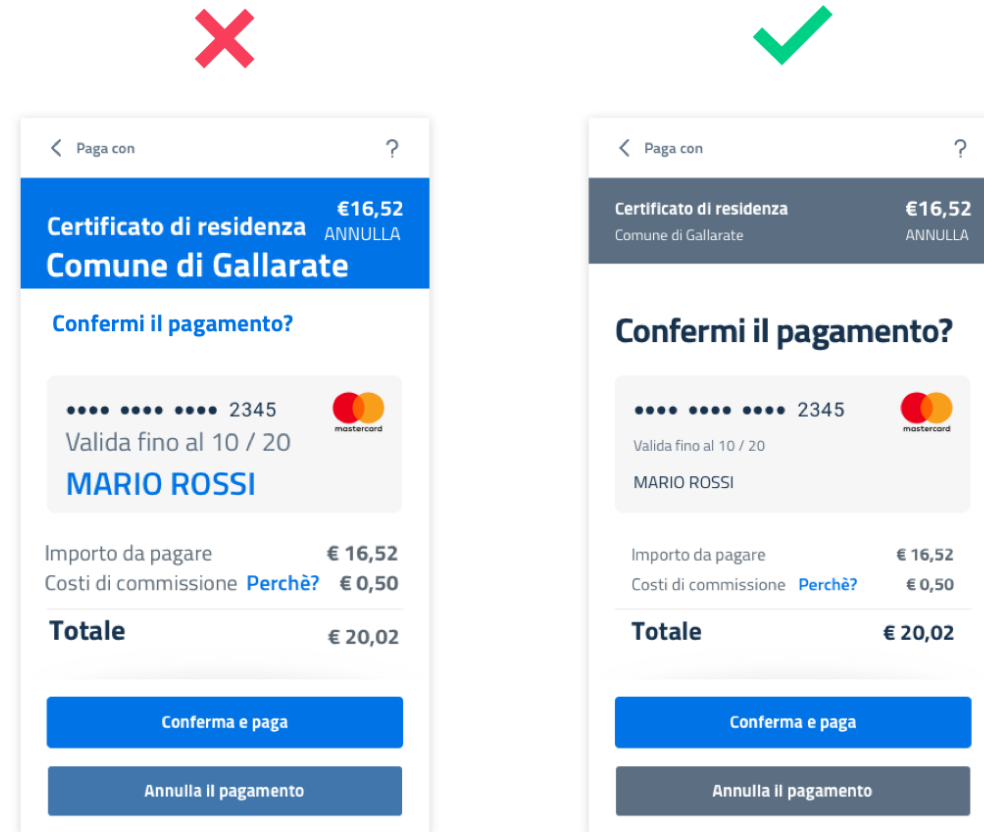
Scale Category	Typeface	Font	Size	Case	Letter spacing
H1	Roboto	Light	96	Sentence	-1.5
H2	Roboto	Light	60	Sentence	-0.5
H3	Roboto	Regular	48	Sentence	0
H4	Roboto	Regular	34	Sentence	0.25
H5	Roboto	Regular	24	Sentence	0
H6	Roboto	Medium	20	Sentence	0.15
Subtitle 1	Roboto	Regular	16	Sentence	0.15
Subtitle 2	Roboto	Medium	14	Sentence	0.1
Body 1	Roboto	Regular	16	Sentence	0.5
Body 2	Roboto	Regular	14	Sentence	0.25
BUTTON	Roboto	Medium	14	All caps	1.25
Caption	Roboto	Regular	12	Sentence	0.4
OVERLINE	Roboto	Regular	10	All caps	1.5

<https://material.io/design/typography/the-type-system.html#type-scale>

Example: Text conveys hierarchy

Font size, color and spacing define a hierarchy of visibility and attention

The visual hierarchy should match the relative importance of the information content



<https://docs.italia.it/italia/designers-italia/design-linee-guida-docs/it/stabile/doc/user-interface/il-disegno-di-un-interfaccia-e-lo-ui-kit.html>

Example: Text and Layout convey meaning

The image compares two real estate listing UI designs. The left design is marked with a red 'X' and the right with a green checkmark. Annotations on the right design highlight improvements in data presentation, emphasis of key content, and readability.

Left Design (Red X):

Building Type:	Detached House
Year Of Construction:	2012
Listing Price:	\$750,000
Address:	742 Evergreen Terrace
Bedrooms:	3
Bathrooms:	2
Real Estate Agent:	Tiffany Heffner
Contact:	(555) 555-4321

Right Design (Green Checkmark):

DETACHED HOUSE • 5Y OLD

\$750,000

742 Evergreen Terrace

3 Bedrooms 2 Bathrooms

REALTOR

Tiffany Heffner
(555) 555-4321

Annotations:

- Present data in a more useful way (points to 'DETACHED HOUSE • 5Y OLD')
- Emphasize the most important content (points to '\$750,000')
- Combine labels and values into human-readable phrases (points to '3 Bedrooms 2 Bathrooms')

www.refactoringui.com

Refactoring UI

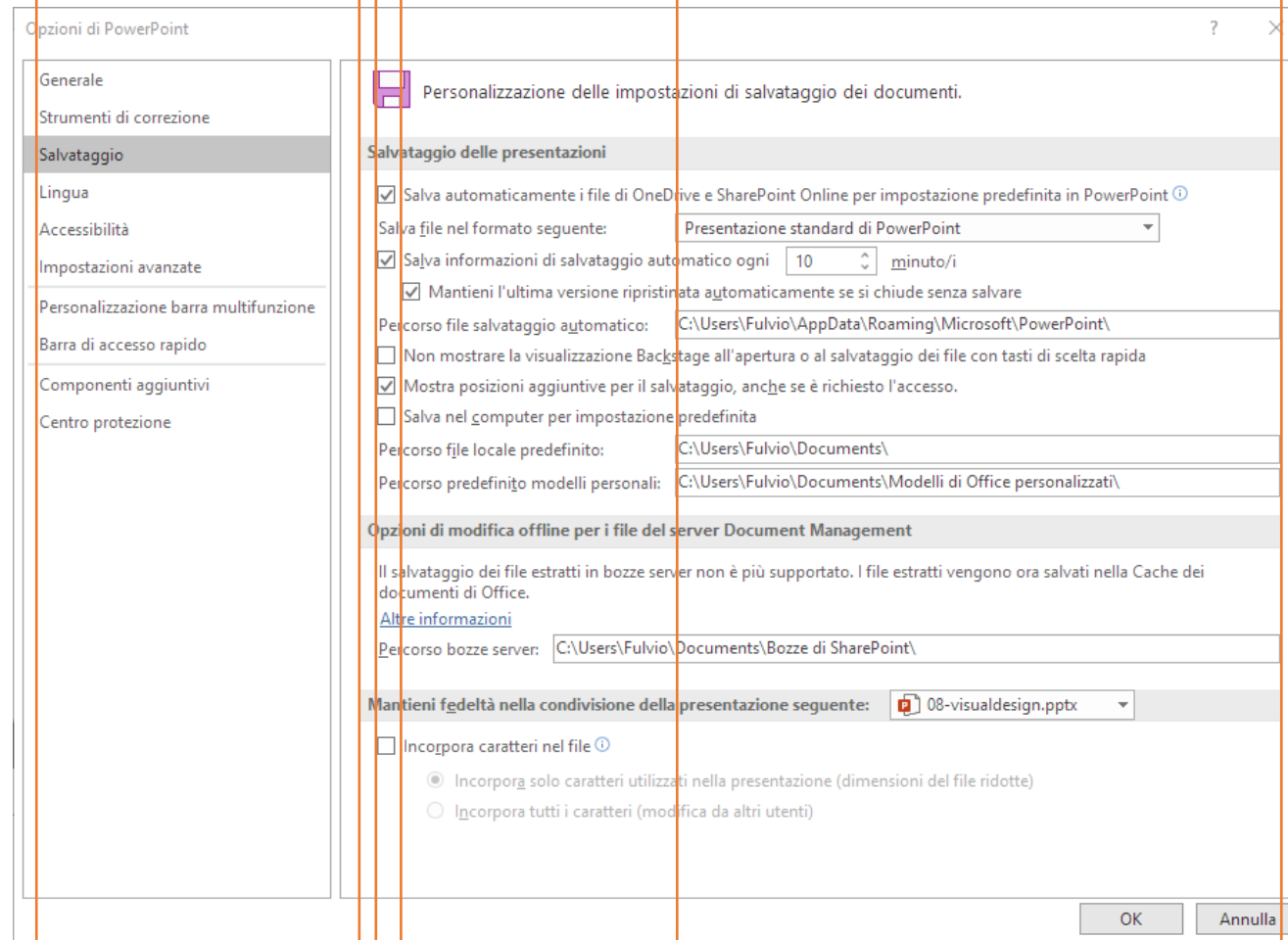
Grids and Alignment

Exploiting grouping and alignment to convey content, at different levels

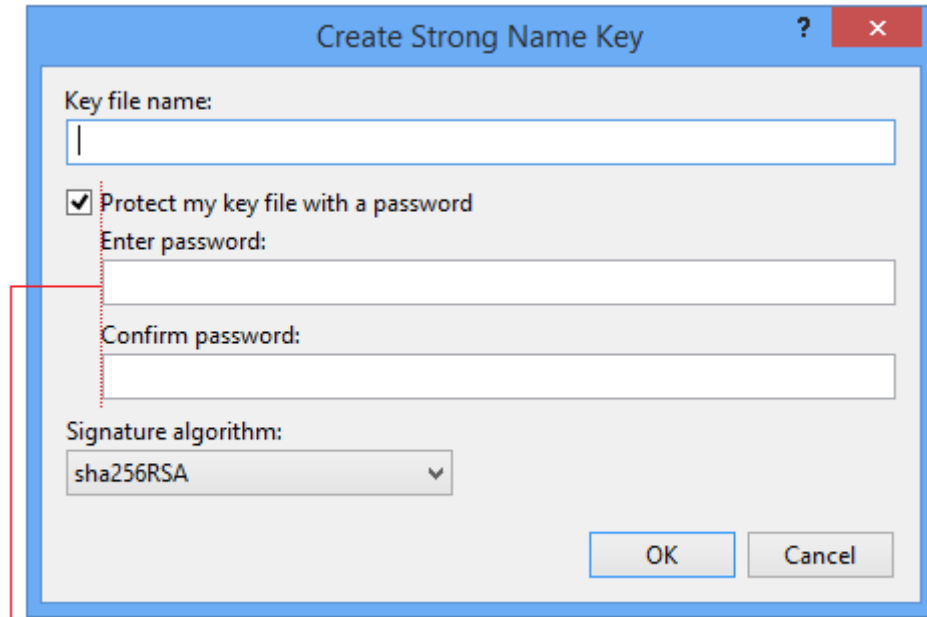
Alignment

- Invisible lines that run through the interface and “attract” the left- or right-edge of a widget control
 - Vertical
 - Horizontal

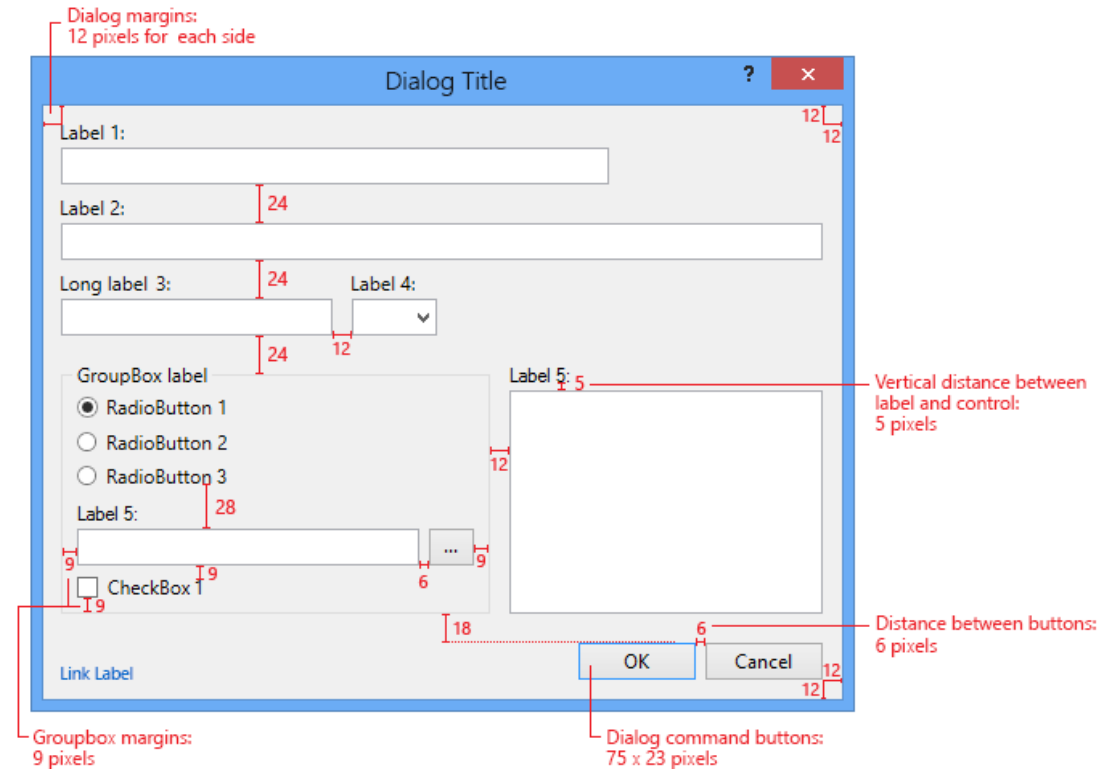
Example



Examples

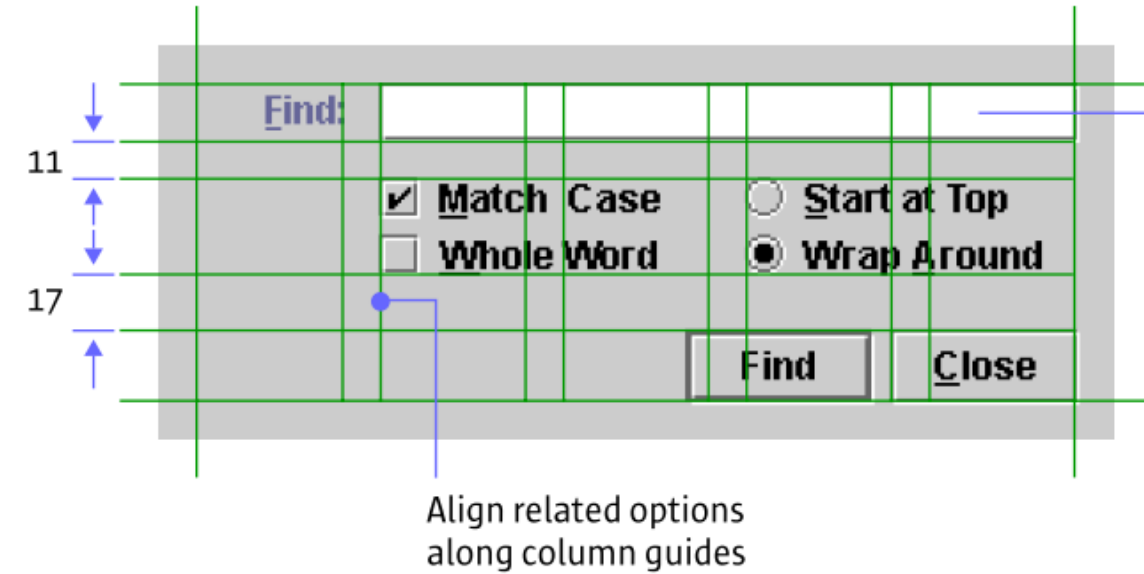


Align labels of nested controls

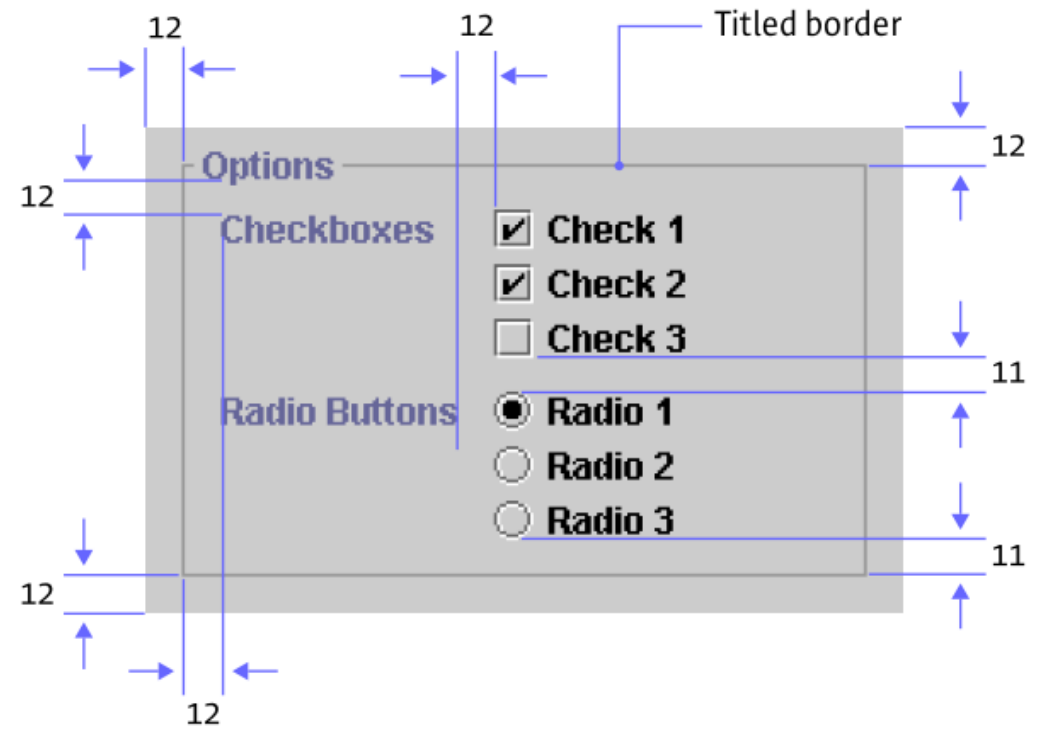


<https://docs.microsoft.com/en-us/visualstudio/extensibility/ux-guidelines/layout-for-visual-studio?view=vs-2019>

Examples



Place most important option near the top

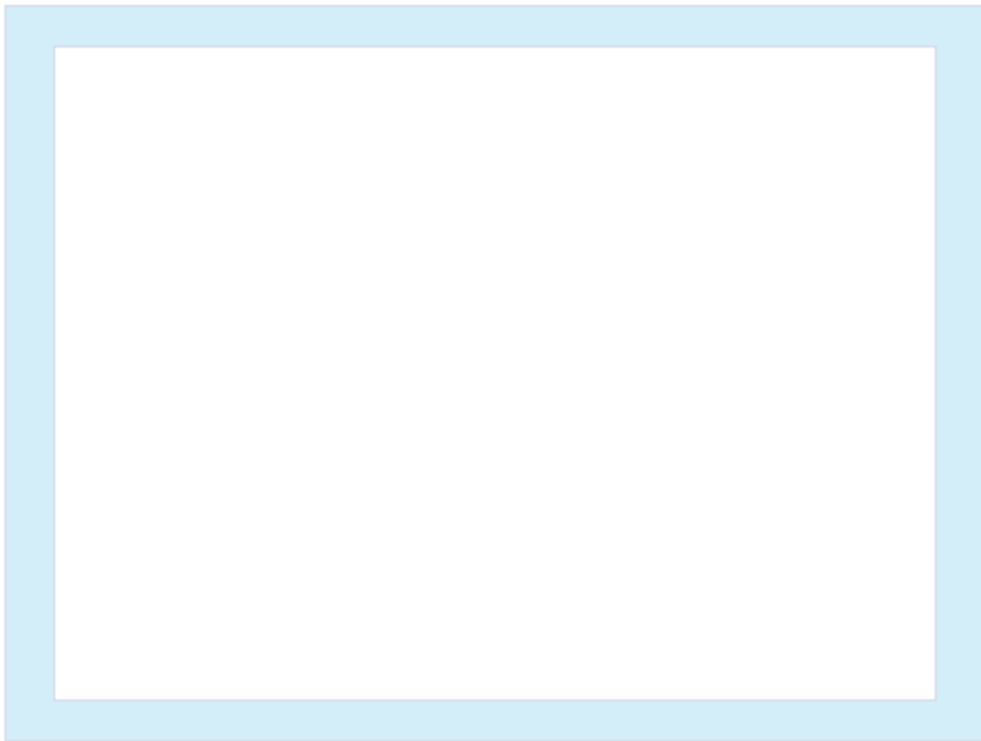


Grid Layout Ingredients

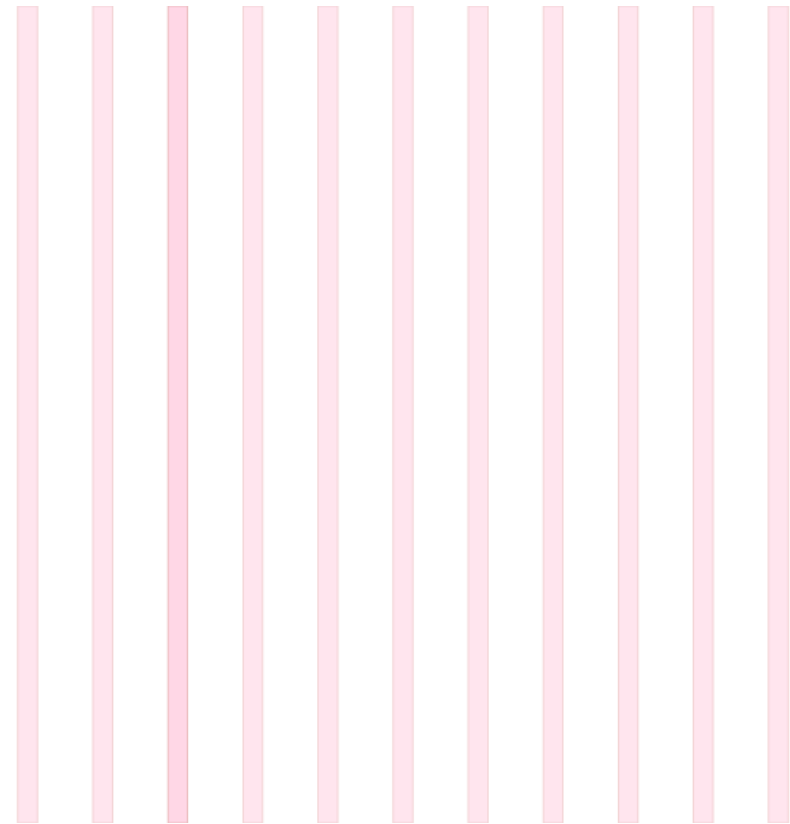
- **Guides:** The edge which you choose to align content with
- **Column:** A vertical division of content
- **Row:** A horizontal division of content
- **Margins:** The area surrounding your content
- **Gutters:** The margins between columns
- **Hang-line:** A horizontal guide to align content to hang off of
- **Baseline:** The horizontal guide for an element to sit on top of
- **Rhythm:** Proportion systems that can help define the sizing frequency and spacing of each of the above elements.

Grid Layout Ingredients

Margins

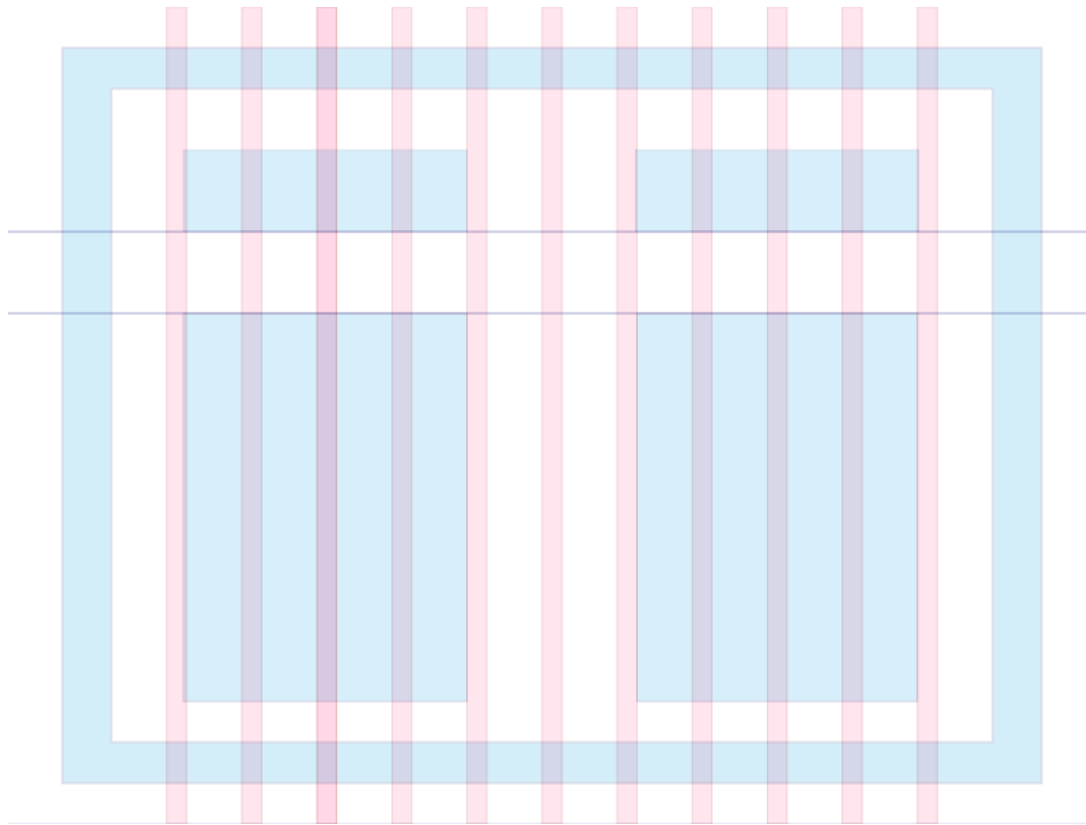


Columns & Gutters



Grid Layout Ingredients

Hanglines and Baselines

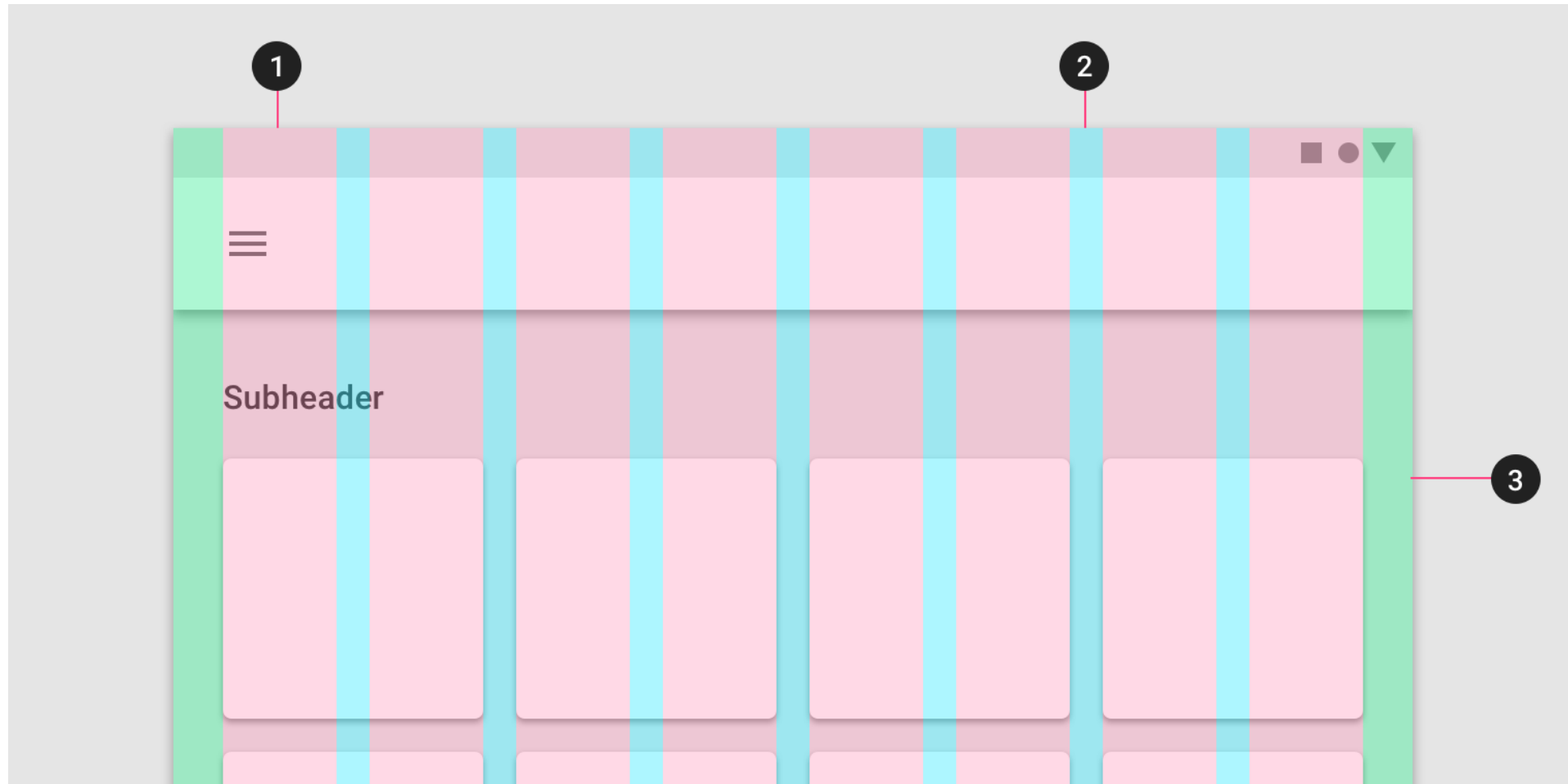


Baseline Grids



Example Grid-based layout

1. Columns
2. Gutters
3. Margins



Example: Bootstrap grid

Always 12 columns in total

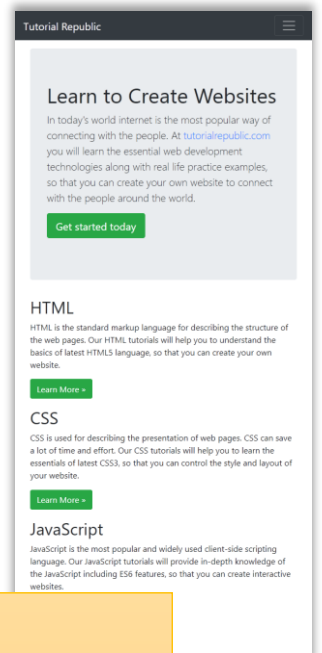
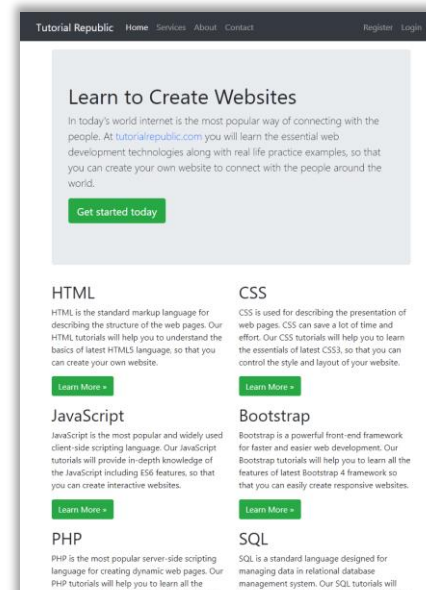
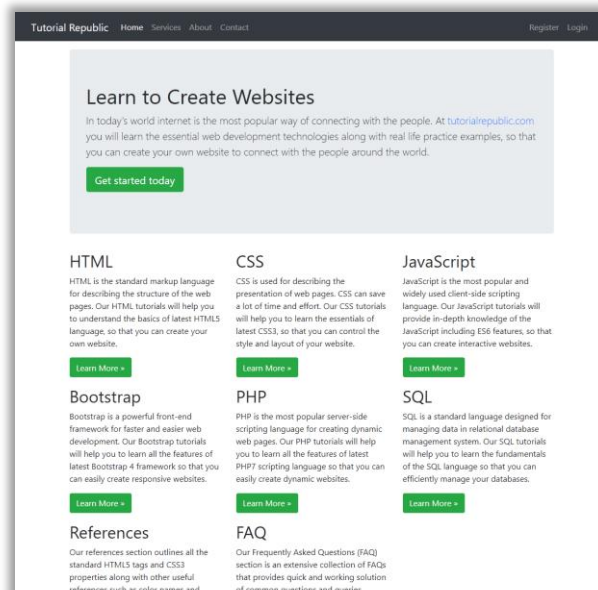
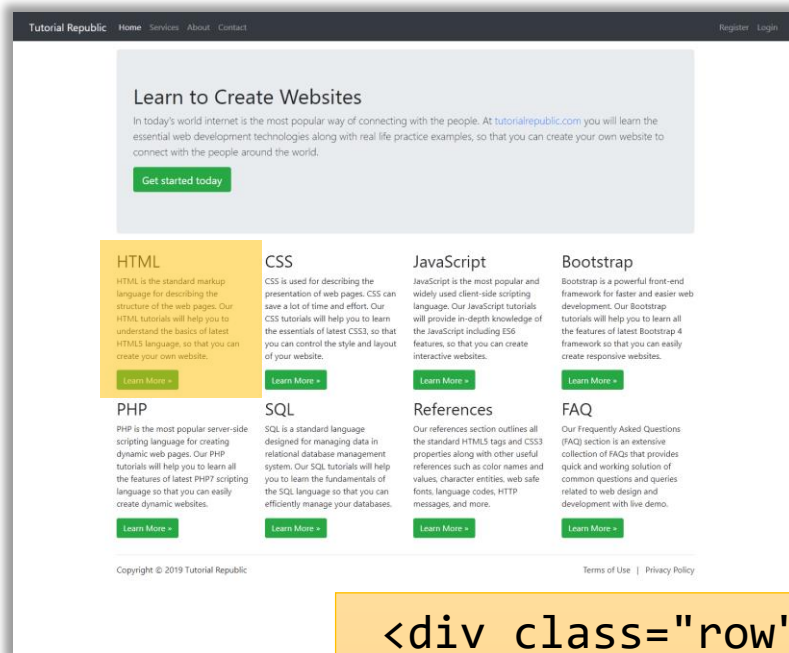
May choose to span a group of columns

Each column is tagged according to the screen size:

- xs (phones - <768px)
- sm (tablets - >=768px)
- md (small laptops - >=992px)
- lg (laptops and desktops - >1200px)

span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1
span 4				span 4				span 4			
span 4				span 8							
span 6						span 6					
span 12											

Responsive grid layout



```
<div class="row">
  <div class="col-md-6 col-lg-4 col-xl-3">
    <h2>HTML</h2>
    <p>...</p>
    <p><a href="..." class="btn btn-success">...</a></p>
  </div>
```

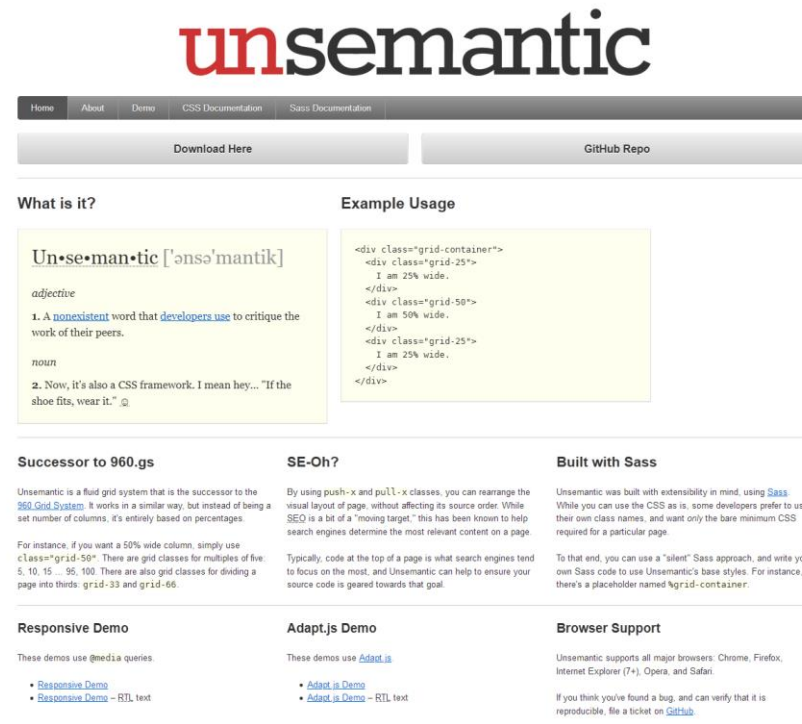
Other grid systems

960 grid (fixed width, 12 or 16 col)

Unsemantic (responsive, based on %)



<https://960.gs/>



<https://unsemantic.com/>

Grid structure

Main body:
Mix of 2x and 3x
columns

Alternating row
types



Title area outside the
grid

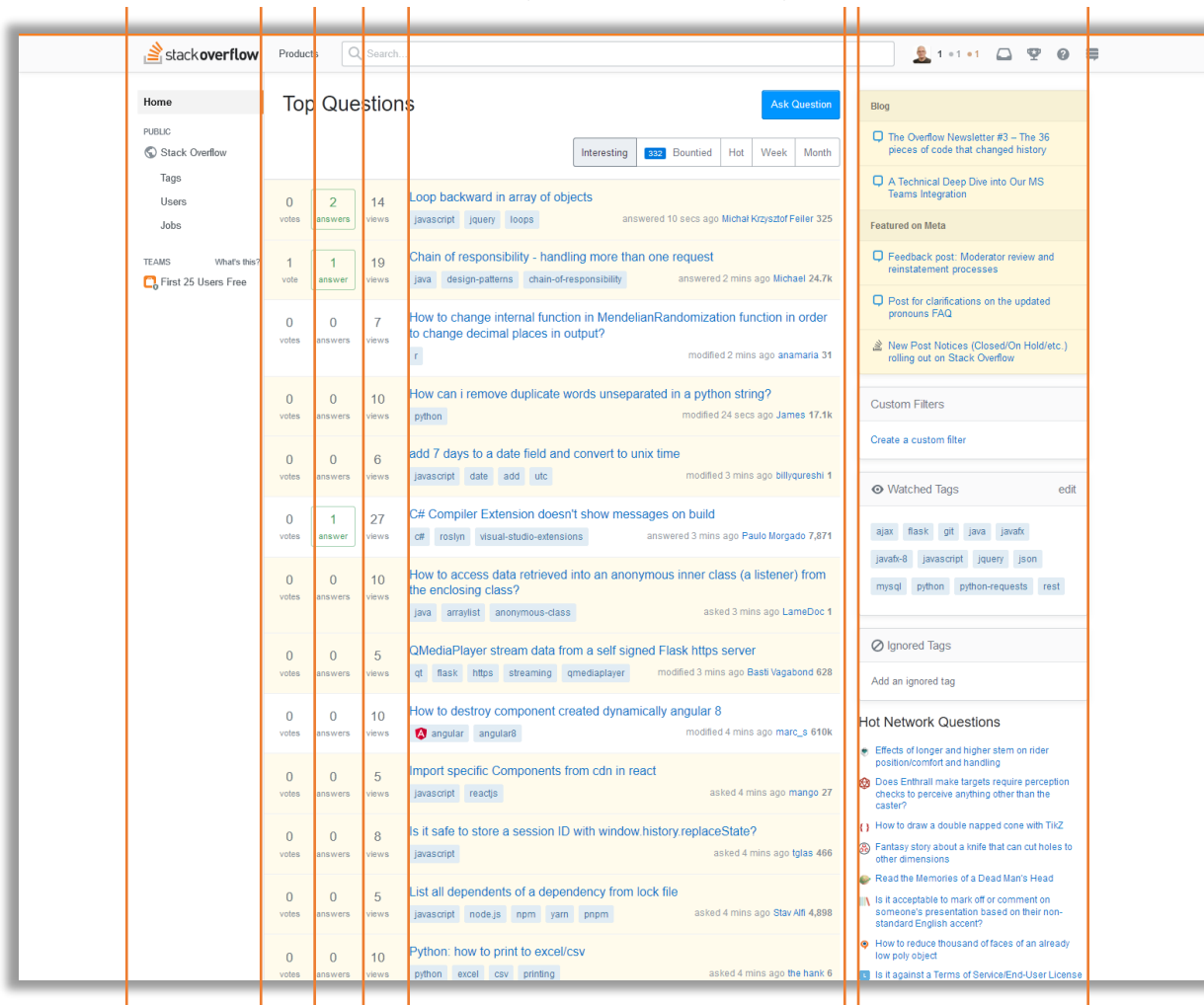
Right column for
other types of
articles

Grid structure

Main content
(center, wide)

Navigation
(left, smaller)

Related content
(right, smaller)



Example (2019)

Software									
1° anno									
Periodo	Codice	Lingua	Insegnamento	Crediti	Docente	Note	Vincoli		
1	01PDWOV	EN	Information systems ING-INF/05 (6)	6	M. Morisio				
1	02GOLOV	IT	Architetture dei sistemi di elaborazione ING-INF/05 (10) Oppure	10	P. Bernardi E. Sanchez Sanchez				
1	02LSEOV	EN	Computer architectures ING-INF/05 (10)	10	P. Montuschi				
1	01SQJOV	EN	Data Science and Database Technology ING-INF/05 (8) Oppure	8	S. Chiusano				
1	01SQMOV	IT	Data Science e Tecnologie per le Basi di Dati ING-INF/05 (8)	8	E. Baralis				
1	01OTWOV	EN	Computer network technologies and services ING-INF/05 (6) Oppure	6	M. Baldi				
1	02KPNV	IT	Tecnologie e servizi di rete ING-INF/05 (6)	6	G. Marchetto				
2	02JEUOV	EN	Formal languages and compilers ING-INF/05 (6)	6	R. Sisto				
2	05BIDOV	IT	Ingegneria del software ING-INF/05 (8) Oppure	8	G. Bruno				
2	04GSPOV	EN	Software engineering ING-INF/05 (8)	8	M. Morisio				
2	01UDFOV	IT	Applicazioni Web I ING-INF/05 (6) Oppure	6	E. Masala				
2	01TXYOV	EN	Web Applications I ING-INF/05 (6)	6	F. Corno				
2	02GRSOV	IT	Programmazione di sistema ING-INF/05 (10) Oppure	10	G. Cabodi				
2	01NYHOV	EN	System and device programming ING-INF/05 (10)	10	S. Quer				
2° anno									
Periodo	Codice	Lingua	Insegnamento	Crediti	Docente	Note	Vincoli		
1			Insegnamento a scelta 1	6					
1	01TYMOV	EN	Information systems security ING-INF/05 (6) Oppure	6					
1	01UDUOV	IT	Sicurezza dei sistemi informativi ING-INF/05 (6)	6					
1	01SQNOV	EN	Software Engineering II ING-INF/05 (6)	6					
1,2			Crediti liberi	6					
1,2	29EBHOV		Tesi	30					
2			Insegnamento a scelta 2	6					
Insegnamento a scelta 1									
Periodo	Codice	Lingua	Insegnamento	Crediti	Docente	Note	Vincoli		
1	01TYDOV	EN	Cloud Computing ING-INF/05 (6)	6					
1	01PDCOV	EN	Digital control technologies and architectures ING-INF/04 (6)	6					
1	01TXZOV	EN	Distributed systems programming ING-INF/05 (6)	6					Si
1	01NWPOV	IT	Elaborazione dell'audio digitale ING-INF/05 (6)	6					
1	01UDGOV	EN	Energy management for IoT ING-INF/05 (6)	6					Si
1	02JSKOV	EN	Human Computer Interaction ING-INF/05 (6)	6		★			
1	01SQIOV	EN	Machine Learning and Artificial Intelligence ING-INF/05 (6)	6					
1	01PDXOV	EN	Modern design of control systems ING-INF/04 (6)	6					
1	01OUVOV	EN	Optimization methods and algorithms MAT/09 (6)	6					
1	04CFPOV	IT	...	6					

Example (same page in 2020)

Software

1° anno 2020/2021

Periodo	Codice	SSD	Insegnamento	Lingua	Crediti	Docente	Note	Orario
1	01PDWVOV	ING-INF/05 (6)	Information systems	🇪🇺	6	M. Morisio (118 iscr.)	🟢	🕒
1	02GLOV	ING-INF/05 (10)	Architetture dei sistemi di elaborazione	🇮🇹	10	P. Bernardi (150 iscr.) E. Sanchez Sanchez (159 iscr.)	🟢 🟢	🕒
oppure								
1	02LSEOV	ING-INF/05 (10)	Computer architectures	🇪🇺	10	P. Montuschi (207 iscr.)	🔴 🟢	🕒
1	015QJOV	ING-INF/05 (8)	Data Science and Database Technology	🇪🇺	8	S. Chiusano (172 iscr.)	🟢 🟢	🕒
oppure								
1	015QMOV	ING-INF/05 (8)	Data Science e Tecnologie per le Basi di Dati	🇮🇹	8	E. Baralis (254 iscr.)	🟢 🟢	🕒
1	01OTWVOV	ING-INF/05 (6)	Computer network technologies and services	🇪🇺	6	G. Marchetto (161 iscr.)	🟢 🟢	🕒
oppure								
1	02KPNOV	ING-INF/05 (6)	Tecnologie e servizi di rete	🇮🇹	6	G. Marchetto (253 iscr.)	🟢 🟢	🕒
2	02EUOV	ING-INF/05 (6)	Formal languages and compilers	🇪🇺	6	R. Sisto (60 iscr.)	🔴 🟢	🕒
2	05BIDOV	ING-INF/05 (8)	Ingegneria del software	🇮🇹	8	G. Bruno (132 iscr.)	🟢 🟢	🕒
oppure								
2	04G5POV	ING-INF/05 (8)	Software engineering	🇪🇺	8	M. Morisio (202 iscr.)	🟢 🟢	🕒
2	01UDFOV	ING-INF/05 (6)	Applicazioni Web I	🇮🇹	6	E. Masala (91 iscr.) L. De Russis (57 iscr.)	🟢	🕒
oppure								
2	01TXYOV	ING-INF/05 (6)	Web Applications I	🇪🇺	6	F. Corno (185 iscr.)	🟢	🕒
2	02GRSOV	ING-INF/05 (10)	Programmazione di sistema	🇮🇹	10	G. Cabodi (100 iscr.) A. Savino (112 iscr.)	🔴 🟢	🕒
oppure								
2	01NYHOV	ING-INF/05 (10)	System and device programming	🇪🇺	10	S. Quer (108 iscr.)	🟢	🕒

2° anno 2021/2022

Periodo	Codice	SSD	Insegnamento	Lingua	Crediti	Docente	Note	Orario
1			Insegnamento a scelta 1		6		🔴	
1	01TYMOV	ING-INF/05 (6)	Information systems security	🇪🇺	6		🟢	🕒
oppure								
1	01UDUOV	ING-INF/05 (6)	Sicurezza dei sistemi informativi	🇮🇹	6		🟢	🕒
1	015QNOV	ING-INF/05 (6)	Software Engineering II	🇪🇺	6		🟢	🕒
1,2			Crediti liberi		6		🔴	
1,2	29EBHOV		Tesi		30		🔴	
2			Insegnamento a scelta 2		6		🔴	

Example (2015 vs 2019)

Add an address

Full Name:

Address Line 1:
Street address, P.O. box, company name, c/o

Address line 2:
Apartment, suite, unit, building, floor, etc.

City:

State/Province/Region:

ZIP:

Country:

Phone Number: [Learn more](#)

Optional Delivery Preferences [\(What's this?\)](#)

Weekend Delivery:

Security Access Code:
For buildings or gated communities

Save & Add Payment Method

Save & Continue

Il tuo account > I tuoi indirizzi > [Nuovo indirizzo](#)

Aggiungi un nuovo indirizzo

Oppure ritira i tuoi colli quando desideri, presso i nostri punti self-service. Per aggiungere un punto di ritiro o un Amazon Locker, clicca [qui](#).

Paese/Regione

Nome e cognome

Indirizzo

Città

Provincia

Codice postale

Numero di telefono

Può essere utilizzato per aiutare consegna

Aggiungi istruzioni di consegna
Consegna nel fine settimana

[Aggiungi indirizzo](#)

Some guidelines

- When designing a template, start from the longest block of text
- Left-aligned text is (usually) faster to skim
- Alignment guides the eye and reduces clutter
 - Avoid slight misalignments
 - Patterns and deviations are “automatically” detected
 - Deviate from a pattern for strategic reasons
 - Use visual proximity and scale to convey semantic information

Colors

The most dangerous weapon in your toolset

Colors...



I AM LING YOU CAN TRUST ME

Menu

- Home
- Cars
- Vans
- Customers
- About Ling
- Fun stuff
- Free stuff
- Live staff

CARS A-Z





ABARTH

124 Spider
Convertible
595 Convertible
595 Hatchback
695 Convertible



ALFA ROMEO

Giulia Saloon
Giulietta
Stelvio Estate



AUDI



Leader of the Pack - The UK's favorite car leasing website!
Contract hire cars from Ling Valentine. LINGS CARS is the UK's favourite car leasing website - On 2016 I leased over £85 million in cars.



Stop

"Believe it or not, this Gateshead-based website, featuring Mrs Ling jiggling on her motorbike, is one of the biggest online drivers of car sales in Great Britain" **25th July 2017**

Leader of the Pack

"[Ling Valentine is] Britain's **BIGGEST** individual seller of new cars."

BREXIT RISK FREE! February 2017 **theguardian**

LING'S BREXIT BORIS PROMISE: If the UK leaves the EU with "no deal", tariffs may apply to EU built cars landing in the UK after Brexit day (31st Jan 7). If this is the case with YOUR car, and IF the price increases due to tariffs, YOU will be able to cancel the car order at **NO COST** to you. **YOU can order a new car from me, with NO BREXIT RISK.** - Ling

MY BEST SELLING CAR LEASING DEALS!

500 IDEAS!



Fiat 500

1.2 Pop 8v (69bhp) (4 seats)
Hatchback 3dr 1242cc Petrol Manual (5 Speed)

RENT NEW
£127/mth including VAT

3 year cheap car leasing **9+35**

NICOLE...PAPA!



Renault Clio

0.9 TCE Iconic 12v (90bhp)
Hatchback 5dr 898cc Petrol Manual (5 Speed)

RENT NEW
£152/mth including VAT

3 year cheap car leasing **6+35**

MEGA-HATCH!



Citroen C3

1.2 PureTech 12v (83bhp) Flair
Hatchback 5dr Manual 1199cc

RENT NEW
£157/mth including VAT

2 year cheap car leasing **6+23**

1 DELIVERY TODAY

Ford Ka+
Arthur
ATTLEBOROUGH, NR17

21 DELIVERIES IN LAST WEEK

Renault Captur
Cath
PONTEFRAC, WF81

Mercedes GLC Coupe
Bill
BEDLINGTON, NE22

BMW 2 Series Convert...
Pingu
DERBY, DE56

Nissan Qashqai
Arlene
GLASGOW, G11

Volvo XC60 Estate
Saif
MILTON KEYNES, MK8

Seat Leon
Ben
BARNSELY, S70

Skoda Kodiaq Estate
Hannah
HAY-ON-WYE, HR3

Renault Clio
Paul
MIDDLEBROUGH, TS7

Renault Clio
Paul
MIDDLEBROUGH, TS7

Seat Arona
Steve
LONDON, SE18

Seat Leon
Adam
HATFIELD, AL10

Audi A3 Sportback
Chris
WYMONDHAM, NR18

Car Leasing Online Service Response Times

Quote > Proposal > Order > Delivery

75 CUSTOMERS IN 'PROPOSAL'

Ling replies in... **0:03:07**

129 CUSTOMERS IN 'ORDER'

Ling replies in... **0:05:03**

55

Colors

- Be careful, don't exaggerate
- Design in grayscale, first
 - Ensure information is conveyed by text and layout
- When adding colors, try to conserve the same luminance of the grayscale design
- Assign meaning to color
- Use a limited and consistent palette and use slight variations

Example

The screenshot shows the Stack Overflow homepage with the following elements:

- Header:** Stack Overflow logo, search bar, and user profile icons.
- Left Sidebar:** Home button, PUBLIC Stack Overflow, Tags, Users, Jobs, TEAMS, and First 25 Users Free.
- Main Content:** "Top Questions" section with a list of questions. Each question entry includes the number of votes, answers, and views, the question title, tags, and the user who asked it. The top question is "Loop backward in array of objects" with 2 answers and 14 views.
- Right Sidebar:** "Blog" section with a list of articles, "Featured on Meta" section with a list of posts, "Custom Filters" section, "Watched Tags" section with a list of tags (ajax, flask, git, java, javafx, javascript, jquery, json, mysql, python, python-requests, rest), "Ignored Tags" section, and "Hot Network Questions" section with a list of trending questions.

This screenshot is identical to the one on the left, showing the Stack Overflow homepage with the same layout and content.

Example

ITA | ENG | Login | argomenti o persona

SCOPRIRE L'ATENEO | DIDATTICA E STUDENTI | IL MONDO DELLA RICERCA | INNOVAZIONE PER LE IMPRESE | CAMPUS INTERNAZIONALE

festival della TECNOLOGIA

TORINO, 7-10 NOV 2019

Tecnologia è Umanità

È online il programma del Festival della Tecnologia

EVENTI Tutti gli eventi

Dal 14.06	Walking Beyond: camminate urbane attraverso la città contemporanea <small>Giugno - Dicembre 2019</small>	Dal 23.10	The Polar oceans and global climate change <small>23 October - 18 November 2019</small>
Dal 04.11	Network dynamics in the social, economic and financial sciences <small>4-8 November 2019</small>	Dal 05.11	OptArch2019 <small>5 - 7 November 2019</small>

ACCESSO RAPIDO

- Apply@Polito iscrizioni online
- Orientamento
- Corsi di studio
- Orario delle lezioni
- Tasse e riduzioni
- Dottorato di ricerca
- Dipartimenti
- Centri interdipartimentali
- Per le imprese
- Servizi web Amministrazione
- Sedi e mappe
- Concorsi e selezioni
- PoliToComunica
- Rassegna stampa
- Alumni

AVVISI E SCADENZE Tutti gli avvisi

<small>10 settembre 2019</small> Comitato Leonardo: nuovi bandi per i Premi di Laurea	<small>Scadenza presentazione abstract 15 novembre 2019</small> AI4CH - Artificial Intelligence in geomatics for cultural heritage
<small>Scadenza Call for participation: 15 novembre 2019</small> Progetti resilienti di natura in città in Francia e in Italia	<small>Deadline online registration: 18 November 2019</small> Wireless charging of vehicles (WCV2019)

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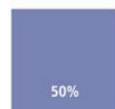
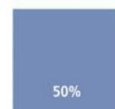
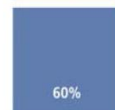
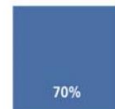
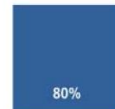
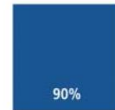
Palettes



BLU

PANTONE

CMYK



ARANCIO

PANTONE

CMYK



COMBINAZIONI

CMYK



ColourLovers



Share Your Color Ideas & Inspiration.

COLOURLovers is a creative community where people from around the world create and share colors, palettes and patterns, discuss the latest trends and explore colorful articles... All in the spirit of love.

Join the Community!

CONNECT WITH COLOURLOVERS

Follow @COLOURLovers 1.59M followers

LOVERS PEEK

- SadieSows on Vengeful 225**
Really nice look, with this!
- MistryMoments on CoffeeBerries**
I love your Template Design Style.. thanks
- renniecat on Cold Night**
Beautiful!
- GoldenHuasinBlue on Golden Fall**
Wow, very nice!
- TongrenGirl on Comfort**
Wow...so beautifull!!!
- TongrenGirl on Extraordinary**
I love this!!!!
- TongrenGirl on Deep Waters**
Ooooo, fantastic colors!!!!
- TongrenGirl on Race to Spring**
Very nice!!!
- TongrenGirl on Race to Spring**
Thanks so much for coloring my

ALL WEDDING HOME FASHION WEB PRINT CRAFT DIGITAL ART

LATEST BLOG POSTS

View More >



Why Marketing Automation is Rocket-Fuel for Remote Workforce
0 Comments



How to Become a Full-Time Creative and Do What You Love
0 Comments



Colors, Human Growth Hormones, and Creativity
0 Comments

PALETTES

Create +



Nineteen
by Júlia Freire

PATTERNS

Create +



try
by Anomalin

COLORS

Create +



light gray purple
by macarver



garden palette 2
by macarver



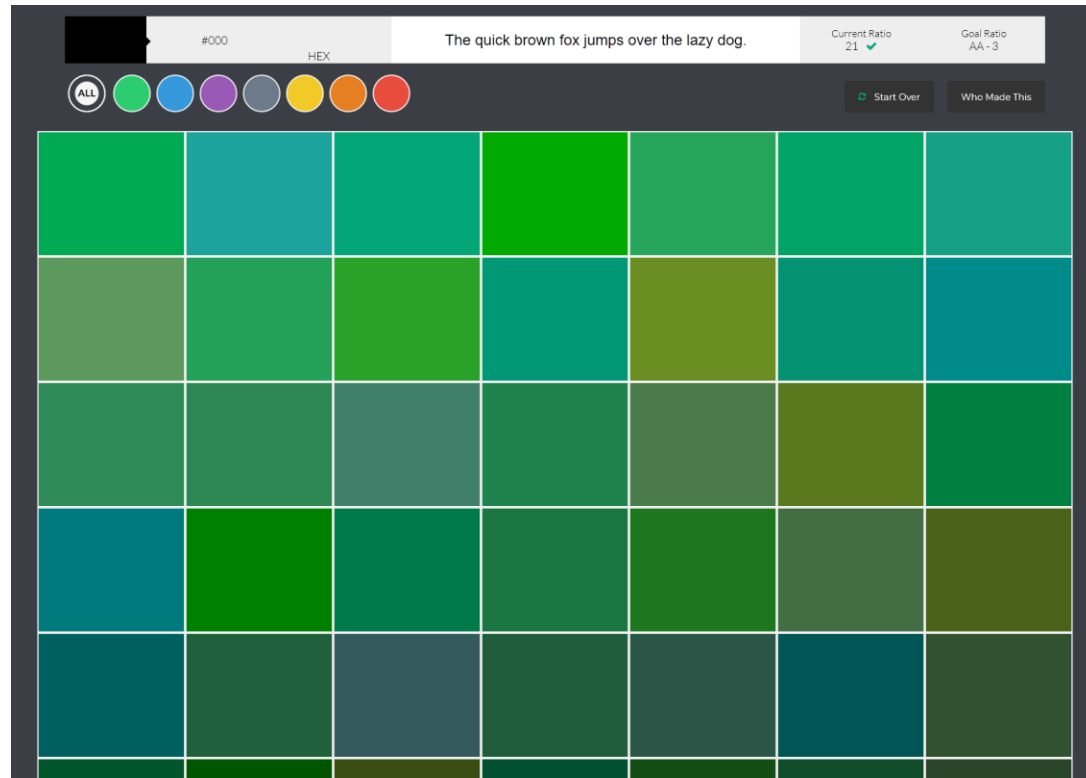
PodCasting
by Sisters



slate purple
by macarver

<https://www.colourlovers.com/>

Color contrast



<http://colorsafe.co/>

Default type color On light			Default type color On dark		
Primary	#000000	1a	Primary	#FFFFFF	1a
Secondary	#000000	0.54a	Secondary	#FFFFFF	0.54a
Disabled	#000000	0.26a	Disabled	#FFFFFF	0.26a
Link	#3367D6	1a	Link	#7BAAF7	1a
Positive	#0B8043	1a	Positive	#57BB8A	1a
Negative	#C53929	1a	Negative	#E67C73	1a
Warning	#EA6100	1a	Warning	#F7CB4D	1a

Google Chrome Palette

Example

- Colors needing an explanation legend
- Time intervals are shaded with 2 different colors
 - “why is the first hour filled with a different color?”
- No indication of the “fill level”

Turni disponibili - Aule Studio - Sala studio al Secondo Piano di C.so Castelfidardo 39

Legenda turni prenotazione

Disponibile Passato Non prenotabile Prenotazioni non attive Turno al quale sei prenotato

Tutti gli orari sono da intendersi espressi secondo il fuso orario italiano

A partire da giorno 15 luglio 2020, è consentito l'uso della seguente Sala Studio della Sede Centrale:
- Sala studio al Secondo Piano di C.so Castelfidardo 39, codice locale TO_CIT11_XP02_001

Le sale studio sono aperte dalle ore 9.00 alle ore 18.00 dal lunedì al venerdì. L'accesso sarà consentito su due turnazioni orarie, dalle ore 9.00 alle 13.00 e dalle ore 14.00 alle ore 18.00

<< Oggi >> 21 Set 2020 - 27 Set 2020 1 giorno 3 giorni Settimana lavorativa **Settimana**

	Lunedì 21 Set 2020	Martedì 22 Set 2020	Mercoledì 23 Set 2020	Giovedì 24 Set 2020	Venerdì 25 Set 2020	Sabato 26 Set 2020	Domenica 27 Set 2020
09:00	09:00 - 13:00 - prenotazioni: 36/36	09:00 - 13:00 - prenotazioni: 36/36	09:00 - 13:00 - prenotazioni: 35/36	09:00 - 13:00 - prenotazioni: 36/36	09:00 - 13:00 - prenotazioni: 34/36		
10:00							
11:00							
12:00							
13:00							
14:00	14:00 - 18:00 - prenotazioni: 36/36	14:00 - 18:00 - prenotazioni: 36/36	14:00 - 18:00 - prenotazioni: 34/36	14:00 - 18:00 - prenotazioni: 34/36	14:00 - 18:00 - prenotazioni: 26/36		
15:00							
16:00							
17:00							

Reading and Navigating

«Informavores» must quickly find the information they need

Navigation

- Enables users to know where they are and to steer themselves to their intended destination
- Is about getting work done (or having fun) through a series of actions
- May consist of
 - **Task navigation**: successfully operating interactive applications, such as installing a mobile app, completing an on-line survey, or purchasing a ticket
 - **Web navigation**: finding information on a website or browsing social media
 - **Command menu navigation**: finding the action needed in a desktop application
- Has nothing to do with visual elegance / graphic shininess

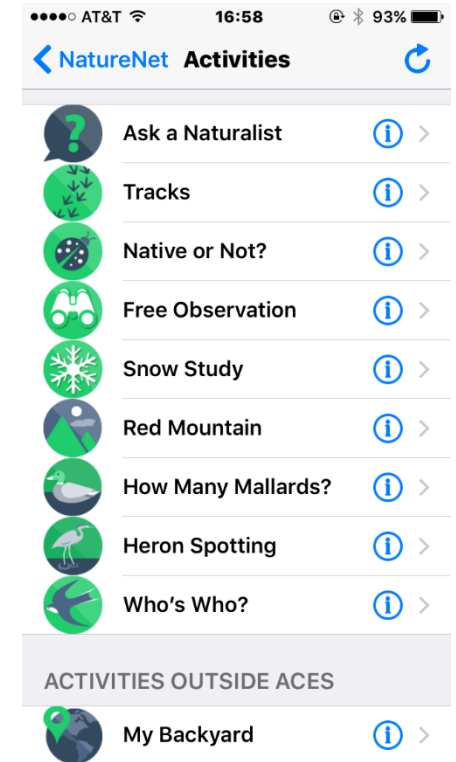
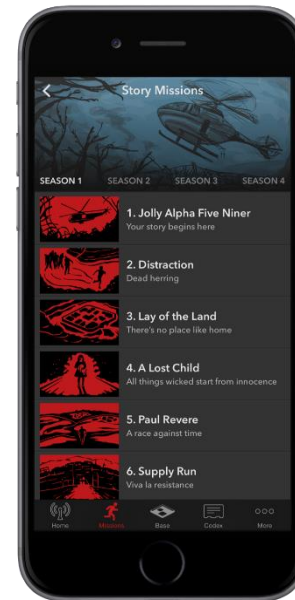
Navigation by selection

- Menu bars, pop-up menus, toolbars, palettes and ribbons
- Shortcuts and gestures for rapid interaction
- Long lists
- Linear versus simultaneous presentation

For an extra \$5
you can add a gift wrap
selected from dozens of choices

Add gift wrap

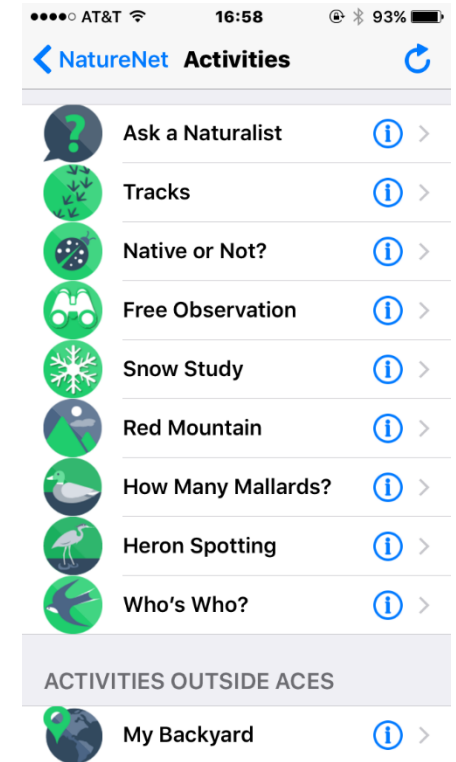
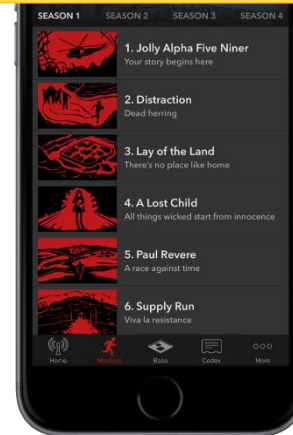
No thanks



Navigation by selection

- Menu bars, pop-up menus, toolbars, palettes and ribbons
- **Shortcuts and gestures for rapid interaction**
- Long lists
- Linear versus simultaneous presentation

- Tap
- Long press
- Double tap
- Small swipe
- Large swipe
- Rapid swipe (fling)
- Pinch and spread
- 2-finger swipe
- ...



Navigation by selection

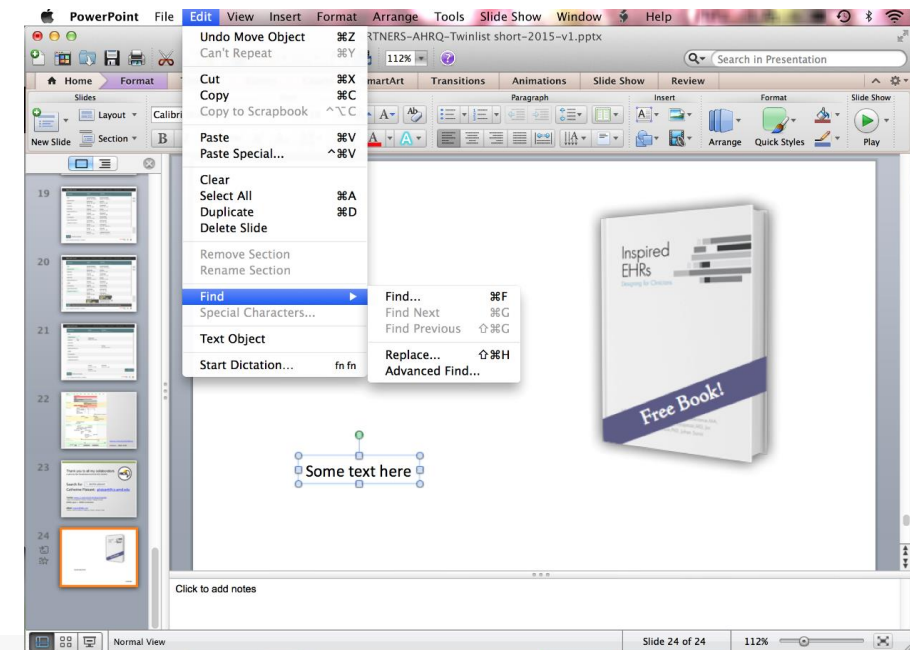
- Radio Buttons and Checkboxes
- Menu bars, pop-up menus, toolbars, palettes and ribbons

Does anyone in your household currently smoke?

- Yes, someone does
- No, no one does
- Not sure

What treatment would you like to discuss with a nurse?

- Surgery
- Physical therapy
- Medication
- Acupuncture (not available in your area)



Menus

The screenshot shows the NASA website homepage. At the top, there is a navigation menu with links for Missions, Galleries, NASA TV, Follow NASA, Downloads, About, and NASA Audiences. Below this is a secondary menu with links for International Space Station, Journey to Mars, Earth, Technology, Aeronautics, Solar System and Beyond, Education, History, and Benefits to You. The main content area is a grid of news stories. The top-left story is titled "One-Year Crew Halfway There" and features a photo of three astronauts in a space station. The top-right story is titled "The Martian' Director Ridley Scott Discusses NASA's Journey to Mars" and features a play button icon. Below these are stories about a supermoon eclipse, a tweet about 3D printed habitats, and a "Good Morning From the International Space Station" image. The bottom row includes stories about space travel milestones, a fire in California, a real martians moment, and the SDO solar mission. A "MORE STORIES" link is at the bottom of the grid. The footer contains the NASA logo, the text "National Aeronautics and Space Administration NASA Official: Brian Dunbar", and links for "No Fear Act", "FOIA", "Privacy", "Office of Inspector General", "Agency Financial Reports", and "Contact NASA".

The screenshot shows the NASA TV website. At the top, there is a search bar and a navigation menu with links for Home, NASA TV, and a search icon. Below this is a video player showing a video of three astronauts in a space station. The video title is "One-Year Crew Halfway There". Below the video player is a "Tweet to @NASA" button and a "Follow" button. The footer contains the NASA logo and the text "National Aeronautics and Space Administration NASA Official: Brian Dunbar".

Content organization

- Organizing menus in a meaningful structure results in faster selection time and higher user satisfaction
- Approaches:
 - Linear sequence (e.g. in a wizard or survey)
 - Hierarchical structure (tree) that is natural and comprehensible (e.g. a store split into departments)
 - Network structure when choices may be reachable by more than one path (e.g. websites)

Tree-like content organization

The screenshot displays the REI website's navigation and product listing structure. At the top, there is a utility bar with links for Help, Wish List, Gift Registry, Classes & Events, Store Locator, and Checkout. Below this is the REI logo, a search bar, and a promotional message: "Welcome to REI! | Log In or Register" and "FREE SHIPPING With \$50 minimum purchase."

The main navigation menu includes categories like SHOP REI, SHOP REI OUTLET, TRAVEL WITH REI, LEARN, BLOG, MEMBERSHIP, and STEWARDSHIP. A secondary menu under "SHOP REI" lists various activity-based categories such as Camp & Hike, Climb, Cycle, Fitness, Run, Paddle, Snow, Travel, Men, Women, Kids, Footwear, and More. A "Deals" link is also present.

The "Cycle" category is expanded, showing a tree-like structure of sub-categories:

- Bikes**
 - Mountain Bikes
 - Road Bikes
 - Hybrid Bikes
 - Kids' Bikes
- Bike Helmets**
 - Road Helmets
 - Mountain Bike Helmets
 - Kids Helmets
- Cycling Clothing**
 - Jerseys
 - Jackets
 - Shorts
 - Tights and Pants
 - Accessories
- Cycling Shoes**
 - Road Shoes
 - Mountain Bike Shoes
- Bike Accessories**
 - Computers
 - Lights
 - Locks
 - Pumps
 - Racks
 - Trailers
 - Trainers
 - Messengers/Backpacks
 - Panniers/Bike Bags
- Bike Components**
 - Brakes
 - Saddles/Seat Posts
 - Tires, Tubes and Wheels
 - Tools and Maintenance
 - Drivetrain Components
 - Pedals
 - Handlebars

Below the navigation is a promotional banner for REI gift cards: "GIVE THE GIFT OF GEAR ANYTIME, ANYWHERE REI gift & e-gift cards Buy now".

The main content area shows a list of products with filters on the left. The "Deals (31)" filter is selected. The "Features" filter includes options like Moisture wicking (27), Quick drying (26), Sun-protective fabric (22), Waterproof (15), Insulated (11), Earflaps (6), and Made in USA (5). The "Brand" filter shows "686 (6)".

Three product cards are visible, each with a "Compare" button and a "ONLY AT REI" badge:

- REI Rainwall Rain Jacket - Girls' (5 stars, 1 review) - Price: \$31.83 - \$64.50
- REI Rainwall Rain Pants - Kids' (4 stars, 1 review) - Price: \$49.50
- REI Sahara Convertible Pants - Girls' (5 stars, 9 reviews) - Price: \$44.50

Additional product cards for dark shorts and a purple jacket are partially visible below.

Rules for tree-like organization

- Use **task semantics** to organize menus
- Limit the **number of levels** (i.e. prefer broad–shallow to narrow–deep)
- Create groups of **logically similar** items: e.g. Level 1: countries, Level 2: states, Level 3: cities
- Form groups that **cover all possibilities**: e.g. Age ranges: [0–9] [10–19] [20–29] and [≥ 30]
- Make sure that items are **non-overlapping**: e.g. use “Concerts” and “Sports.” over “Entertainment” and “Events”
- Arrange items in each branch by **natural sequence** (not alphabetically) or **group** related items
- Keep **ordering** of items **fixed** (or possibly duplicate frequent items in dedicated section of the menu)

Example

Tool Prenotazioni

Selezionare l'ambito per il quale ci si intende prenotare

Ambiti per i quali è possibile effettuare una prenotazione

- Aule Studio
- Biblioteca
- Segreteria generale studenti

Tool Prenotazioni

Selezionare l'ambito per il quale ci si intende prenotare

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- Segreteria generale studenti

Aule Studio - Seleziona Aula Studio

- Sala studio al Secondo Piano di C.so Castelfidardo 39
- Sala studio sotto l'aula 7

Tool Prenotazioni

Selezionare l'ambito per il quale ci si intende prenotare

Ambiti per i quali è possibile effettuare una prenotazione

- Aule Studio
- Biblioteca
- Segreteria generale studenti

Aule Studio - Seleziona Aula Studio

- Sala studio al Secondo Piano di C.so Castelfidardo 39
- Sala studio sotto l'aula 7

Turni disponibili - Aule Studio - Sala studio al Secondo Piano di C.so Castelfidardo 39

Legenda turni prenotazione

Disponibile
Passato
Non prenotabile
Prenotazioni non attive
Turno al quale sei prenotato

Tutti gli orari sono da intendersi espressi secondo il fuso orario italiano

A partire da giorno 15 luglio 2020, è consentito l'uso della seguente Sala Studio della Sede Centrale:
- Sala studio al Secondo Piano di C.so Castelfidardo 39, codice locale TO_CIT11_XP02_001

Le sale studio sono aperte dalle ore 9.00 alle ore 18.00 dal lunedì al venerdì. L'accesso sarà consentito su due turnazioni orarie, dalle ore 9.00 alle 13.00 e dalle ore 14.00 alle ore 18.00

<<
🏠 Oggi
>>

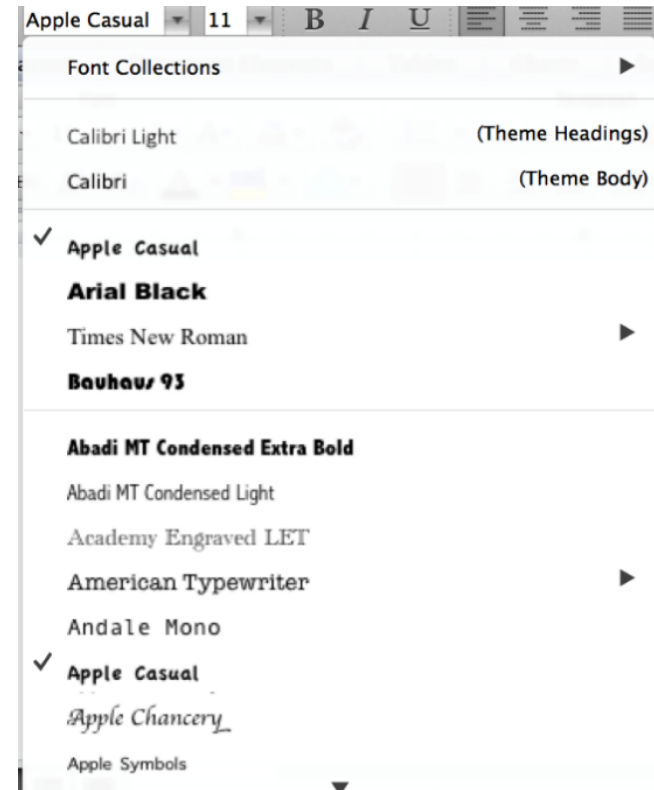
14 Set 2020 - 18 Set 2020

1 giorno
3 giorni
Settimana lavorativa
Settimana

	Lunedì 14 Set 2020	Martedì 15 Set 2020	Mercoledì 16 Set 2020	Giovedì 17 Set 2020	Venerdì 18 Set 2020
09:00	09:00 - 13:00 - prenotazioni: 36/36	09:00 - 13:00 - prenotazioni: 33/36	09:00 - 13:00 - prenotazioni: 36/36	09:00 - 13:00 - prenotazioni: 32/36	09:00 - 13:00 - prenotazioni: 35/36
10:00					
11:00					
12:00					
13:00					

Menu grouping (example)

- 3 groups
 - Template styles
 - Frequently used fonts
 - All fonts
- Alphabetical order within each group
 - Lack of a semantic ordering
- Preview for recognition
- Scrollable list



Information scent

- Informavores orient themselves using *information scent*
- How can we figure out how to get the information we want?
- Do we realize what options are available to us?
- Web pages (and UIs general) provide *cues* to suggest where to find information
 - Icons, Menus, Breadcrumbs, Color coding, ...



Informavore, an organism that consumes information

Poor information scent

- Users flailing around...
 - Don't know where to go
- Low confidence
 - Users are not sure of their actions, both before executing it and after they see its effects
- Back button
 - When it's used too often...

Example

The screenshot shows the 'Teaching portal' of the Politecnico di Torino. The header includes navigation links for 'The Politecnico', 'Teaching', 'Research', 'Business', and 'International Campus', along with language options 'ITA | ENG', a 'Login' button, and a search bar. The main content area is a grid of service tiles:

- Course catalogue**: Course catalogue, curricula, course syllabi. Special projects: Young Talent Project and Alta Scuola Politecnica.
- Student Guide**: Find the Student Guide of your degree programme.
- Student services**: Exam dates, course finder, lecture rooms, libraries, course timetables, Language Centre, thesis proposals, support services, cultural activities and much more.
- Notice board**: News and events from the Office of the University Registrar, the Office of Student Services and the various degree programmes.
- Apply@polito**: Politecnico di Torino online application service (all levels and programmes).
- Orientation**: Choosing your degree programme, application information and services for PoliTO and high school students.
- Fees, scholarships and prizes**: Tuition fees and reductions, IELTS payment policy, scholarships and financial aid, part-time on-campus jobs, university residences and much more.
- Study abroad**: International mobility for students, faculty and staff; calls for applications for study periods at foreign universities, thesis and internships abroad, teaching mobility, international.
- News - events - notices**: Includes a link for further information.
- Career service**: Internships and job placements for students and graduates, recruiting services for employers.
- Graduates**: State examination for professional practice, alumni, AlmaLaurea.
- Regulations / Student discipline**: Regulations, Disciplinary Board.
- Teaching Quality Assurance**: Teaching Quality Assurance, Joint Committee on Teaching, regional accreditation.

The footer contains contact information for 'Posta Studenti' (LUN-VEN 9:00-13:00, 011-997905), 'Ente Regionale per il Diritto alle Studio Universitarie', 'Contact us', 'Lezioni online demo', 'Osservatorio regionale', and the 'PoliTO App'. It also includes social media icons and the full address: '© Politecnico di Torino, Corso Duca degli Abruzzi, 24 - 10129 Torino, ITALY'.

Example

Bachelor's degree programmes	Young Talent Project
Master's degree programmes	Alta Scuola Politecnica
Specializing Master's programmes and Lifelong Learning	Ph.D. programmes
Curricula and course syllabi of current and previous years	Postgraduate School
	Summer School

Welcome to Apply@polito - the online application service of the Politecnico di Torino

Bachelor Italian students Information about Bachelor of Science for students with Italian high school Diploma.	M.S. Italian students Information about Master of Science for students with Italian degree.	Students with a foreign qualification Information about Bachelor of Science and Master of Science for students with a foreign qualification.
Ph. D. Information about Ph. D.	Specializing master Information about 2nd and 3rd level Specializing Master Programmes and Lifelong Learning courses.	Exchange programmes Online application for nominated Exchange students.
State exams Information about the state exam.		

News - Events

Online application form
Privacy - Information
Forgot your password?

STUDENT GUIDE
(2019 - 2020)

All guides

Area Course

Architecture 1st level
Bachelor's degree programme in ARCHITECTURE
Location: Torino - Class: ARCHITECTURE

Architecture 1st level
Bachelor's degree programme in ARCHITECTURE
Location: Torino - Class: ARCHITECTURE

Architecture 1st level
Bachelor's degree programme in DESIGN AND COMMUNICATION
Location: Torino - Class: INDUSTRIAL DESIGN

Architecture 1st level
Bachelor's degree programme in DESIGN AND VISUAL COMMUNICATION
Location: Torino - Class: INDUSTRIAL DESIGN

Architecture 1st level
Bachelor's degree programme in TERRITORIAL, URBAN, ENVIRONMENTAL AND LANDSCAPE PLANNING
Location: Torino - Class: TOWN, REGIONAL AND ENVIRONMENTAL PLANNING

Architecture 2nd level
Master's degree programme in ARCHITECTURE CONSTRUCTION CITY
Location: Torino - Class: ARCHITECTURE AND ARCHITECTURAL ENGINEERING

Architecture 2nd level
Master's degree programme in ARCHITECTURE FOR THE SUSTAINABILITY DESIGN
Location: Torino - Class: ARCHITECTURE AND ARCHITECTURAL ENGINEERING

Architecture 2nd level
Master's degree programme in ARCHITECTURE HERITAGE PRESERVATION AND ENHANCEMENT
Location: Torino - Class: ARCHITECTURE AND ARCHITECTURAL ENGINEERING

Architecture 2nd level
Master's degree programme in ECODESIGN
Location: Torino - Class: DESIGN

Architecture 2nd level
Master's degree programme in SYSTEMIC DESIGN
Location: Torino - Class: DESIGN

Architecture 2nd level
Master's degree programme in TERRITORIAL, URBAN, ENVIRONMENTAL AND LANDSCAPE PLANNING
Location: Torino - Class: REGIONAL, URBAN AND ENVIRONMENTAL PLANNING

Engineering 3rd level
Bachelor's degree programme in AEROSPACE ENGINEERING
Location: Torino - Class: INDUSTRIAL ENGINEERING

Teaching portal

Course catalogue
Look up the course catalogue, course syllabi, Special projects: Young Talent Project and Alta Scuola Politecnica.

Student Guide
Find the Student Guide of your degree programme.

Student services
Exam dates, course finder, lecture rooms, libraries, course timetables, Language Centre, thesis proposals, support services, cultural activities and much more.

Notice board
News and events from the Office of the University Registrar, the Office of Student Services and the various degree programmes.

Apply@polito
Politecnico di Torino online application service (degrees and programmes).

Orientation
Choosing your degree programme, application information and services for postgraduate and high school students.

Fees, scholarships and prizes
Tuition fees and reductions, IELTS payment policy, scholarships and financial aid, part-time courses, job university residences and much more.

Study abroad
International mobility for students, faculty and staff: calls for applications for study periods at foreign universities, thesis and internships abroad, teaching mobility, international

News - events - notices
For further information click here

Career service
Internships and job placements for students and graduates, recruiting services for employers.

Graduates
State examination for professional practice: Almagora, Almagora.

Regulations / Student discipline
Regulations, Disciplinary Board.

Teaching Quality Assurance
Teaching Quality Assurance, Joint Committee of Teaching, regional accreditation

Exam dates	Course finder	C.L.A. Language Center	Course Timetables
Thesis proposals	Support services	Research Labs	Campus maps
Student teams	Register of student societies	Libraries	Study rooms
Student projects	Donations (5X1000)	University residences	Free room finder
Mobility and Cultural	Sports activities	Polito Wi-Fi	

Generale	Area dell'Architettura Corsi di Laurea di 1° livello	Area dell'Architettura Corsi di Laurea Magistrale
Studenti	Area dell'Ingegneria Corsi di Laurea di 1° livello	Area dell'Ingegneria Corsi di Laurea Magistrale

Fees and Reductions University fees, exemptions and reductions.	Part-time Collaborations part-time collaborations for remunerative activities supporting education and services.	Halls of residence Accommodation solutions, services, benefits.
Researching activity announcements Scholarships willing to work in the university and in the field of researching.	Scholarships and prizes Scholarships and prizes to help deserving students financially.	External Institutions' announcements Scholarships and prizes supported by external institutions addressed to students and graduates.
News - events - notices		

Almaurea Consorzio interuniversitario per l'Università e il mondo del lavoro.	Esami di stato Presso il Politecnico di Torino è possibile conseguire l'abilitazione all'esercizio delle professioni di Architetto e Ingegnere.	Ex allievi Associazione fondata nel 1908. Accumunati dalla formazione politecnica, dall'interesse per la cultura scientifica e l'innovazione tecnologica.	Certificati e autocertificazioni Le procedure per ottenere i certificati e presentare le autocertificazioni sono disponibili nell'omonima sezione della guida dello studente.
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STUDENTS & GRADUATES
Check all the opportunities to build your career.

EMPLOYERS
Find out how to get in touch with our talents.

EVENTS

HIGHLIGHTS:

TECH TALK VISHAY
L'evoluzione della E-Mobility
07 Novembre 2019
ore 17:30 - Aula 4P

VIDEO GALLERY:

LA BELLEZZA DI FARE IMPRESA
Job Fair@PATO under 35 | La bellezza di fare impresa

Career Day 2019 | I consigli delle aziende per il colloquio di lavoro

Career Day 2019 | L'importanza delle competenze trasversali

Example

Survey@Polito

Administration -- Logged in as: **cornio**

Surveys: Smart Home Survey

Survey Smart Home Survey (ID:365355)

Question groups: Please choose...

Title: Smart Home Survey (ID 365355)

Survey URL (English): <https://survey.polito.it/365355/lang-en>

Description: This very short survey aims at exploring the future and expected user interaction between user and smart environments, in particular smart homes. The research goal is to update, and compare, the research findings of a similar survey held in year 2010 (5 years ago). The expected completion time for this survey is 5 minutes or less.

Welcome: Thank you for agreeing to take part in this survey. All the answers you give are anonymous, and the data-set will be released as open data after the survey ends. You may choose to reply in any of the supported languages, preferably your mother tongue.

End message: Thanks for completing the survey. The results will be available on the website <http://elite.polito.it> The paper describing the previous survey (in 2010) is available at: <http://porto.polito.it/2380988/>

Administrator: Fulvio Como (fulvio.corno@polito.it)

Start date/time: -

Expiry date/time: -

Template: default

Base language: English

Additional languages: French
German
Italian
Portuguese
Spanish

End URL: [e-Lite research group webpage](#)

Number of questions/groups: 11/3

Survey currently active: Yes

Survey table name: beta_survey_365355

Hints: Answers to this survey are anonymized.
It is presented group by group.
Participants can save partially finished surveys
Basic email notification is sent to: fulvio.corno@gmail.com
Regenerate question codes: [Straight] [By group]

LimeSurvey
Version 1.92+ Build 120919

Like it? Donate to LimeSurvey

Common Problems

- Unexpected categories
- Short links
- Hidden navigation
- Icons are too generic, or not easily recognizable

Icons

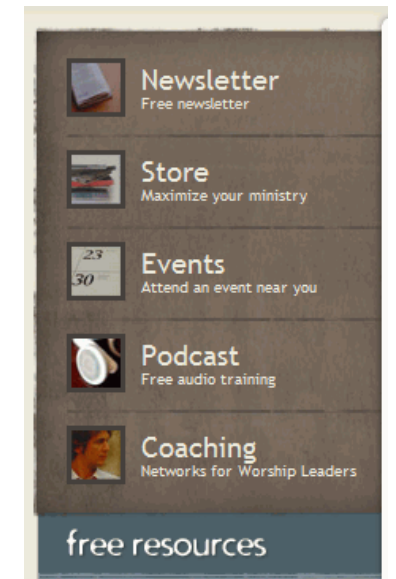
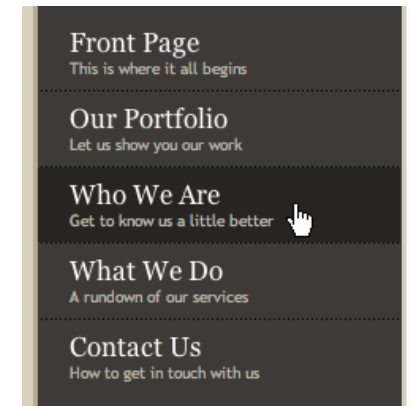
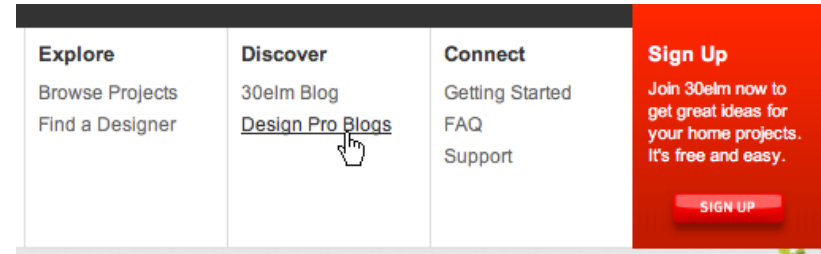
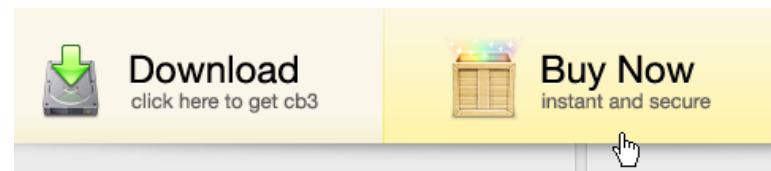
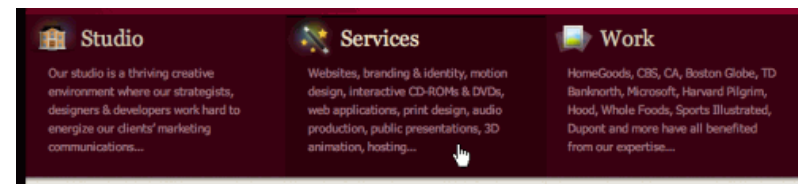
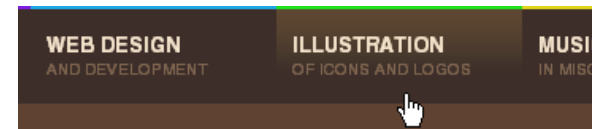
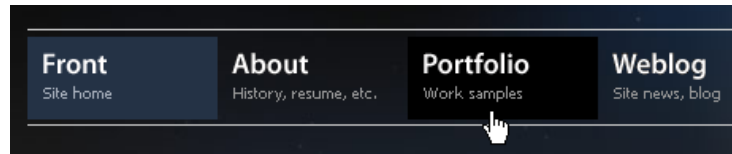
- Icons facilitate recognition over recall
 - When they are consistently used, and frequently visible
- Redundant coding helps recognition and memorization
 - Icon + Text + Tooltip + Context



Links

- Always use multi-word links
 - Download the [next assignment template](#)
 - Assignment template: click [here](#)
- Straight language, not jargon
 - [Scor-o-matic](#) download
 - Download the [spreadsheet for computing scores](#)

“Speaking” block navigation



Forms

- Logical field grouping
 - Sections
 - Dividers
 - Columns (spacing)
 - Titles
- Real-time error checking and validation feedback
 - Suggestions for correction
- Explicit submit button

The screenshot displays a web form titled "Create an IEEE Account" with a help icon. The form is organized into two main columns for logical field grouping. The left column, titled "Provide your personal information", contains three required text input fields: "Given/First name:" (filled with "Catherine"), "Middle name:" (empty), and "Last/Family/Surname:" (filled with "Plaisant"). The right column, titled "Enter e-mail address & password", includes a sub-header "The e-mail provided here will be the username of your account." and four required fields: "E-mail address:" (filled with "cplaisant@" and highlighted in red), "Re-enter e-mail address:" (empty), "Password:" (filled with "....." and highlighted in green), and "Confirm password:" (empty). A yellow warning box on the right states: "The e-mail address provided is not in a valid e-mail format (for example: j.doe@nomail.com). Please try again." Below this, a green success box says: "Your password is good" with a progress bar. A note below the password field reads: "Passwords must be between 8 and 64 characters, and include at least one number. More...". A section titled "Set security questions" follows, with a sub-header "For your security, IEEE Accounts are required to have two security questions and answers." It contains two sets of "Security question 1:" and "Security question 2:", each with a dropdown menu (filled with "Select") and a text input field for the answer. At the bottom left is a link for "Privacy & Opting Out of Cookies". At the bottom right is a prominent orange button labeled "Create Account and Continue Joining" and a blue link for "Cancel".

Form Elements and UI Elements

Text input fields let you input text

NonFederal (99)
 Federal (57)

Yes No

Find your state or... Go

List boxes
Are like dropdowns
But they let
You make
Multiple selections
Like checkboxes do

Settings menu:
General Settings
Your Profile
Sign Out

SEP 18th 2010

22 JUN

Send Post Tweet

Navigation arrows

ON OFF

Calendar: Sep, 2010

JUN 22

Grid of icons

Mobile navigation icons

Menu Item Messages About Us

This is a box
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce metus. Pellentesque sit amet velit. Phasellus non quam. Nulla diam purus, tristique quis, eleifend ac, molestie eu, sapien. Vestibulum ante ipsum primis. Vestibulum ante ipsum primis.

Navigation styles:
Navigation Crystal Clear
Navigation Menu
Navigation Soft Style
Navigation Class
Navigation Classic

Horizontal carousel with arrows

Tags:
Costs (72)
Health Conditions (54)
Improving Care (53)
Prevention (50)
Rights, Protections and Benefits (135)
Insurance Coverage (141)

Progress indicators:
1. Skills
2. Location
3. Finish

Page navigation:
1 2 3 4 5 6 7 8 9 10 next
Previous 1 2 3 4 5 6 7 8 9 10 ... 245 247 Next
Prev 1 2 3 4 5 6 ... 33 34 Next

Clean Fresh Modern
Unique x +

<https://www.usability.gov/how-to-and-tools/methods/user-interface-elements.html>

Example: redesign this

Attenzione, i seguenti insegnamenti sono in corso di spegnimento potranno essere sostenuti entro la sessione sotto indicata. Se terminata la sessione d'esame non risulteranno ancora superati, verranno sostituiti con l'insegnamento riportato in tabella.

Codice	Nome insegnamento	Crediti	Cod Ins Sostituto	Nome Ins Sostituto	Crediti sostituto	Scadenza esame
12BHDLZ	Informatica	8	14BHDLZ	Informatica	8	9/2021

Se non è ancora stato specificato un sostituto, il referente del corso provvederà in seguito a segnalare con quali esami sostituire gli spenti

Reading content

Organizing text and content for maximum visibility

Reading content

- How people read on-line?

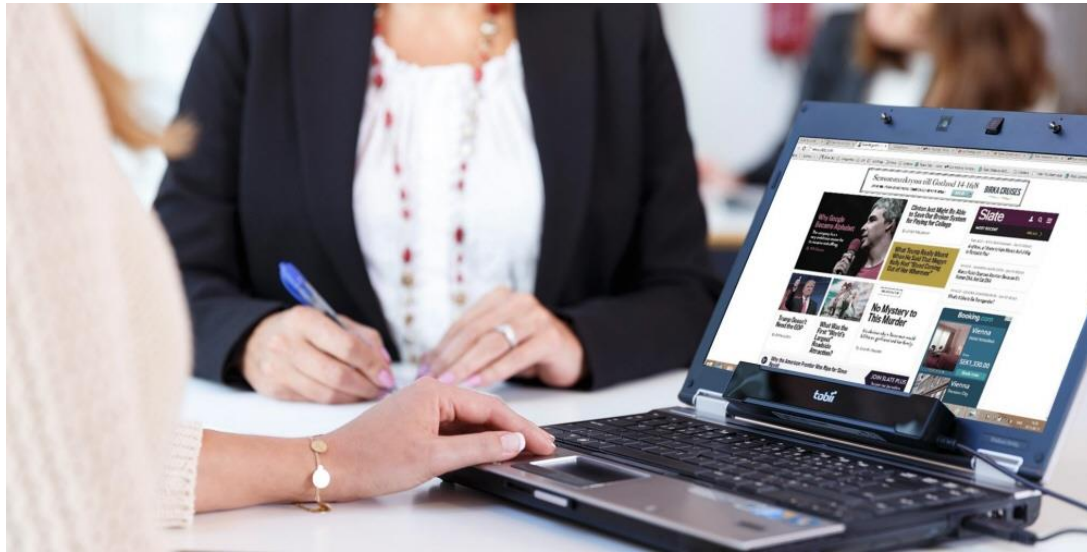
- They don't

How Users Read on the Web

by Jakob Nielsen on September 30, 1997

<https://www.nngroup.com/articles/how-users-read-on-the-web/>

Eye Tracking



- Observe eye movements
 - One or more cameras
 - Usually in infra-red
- Infer where the user was looking (on the screen)
- Record the positions where your gaze will go
- Combine observations from many users

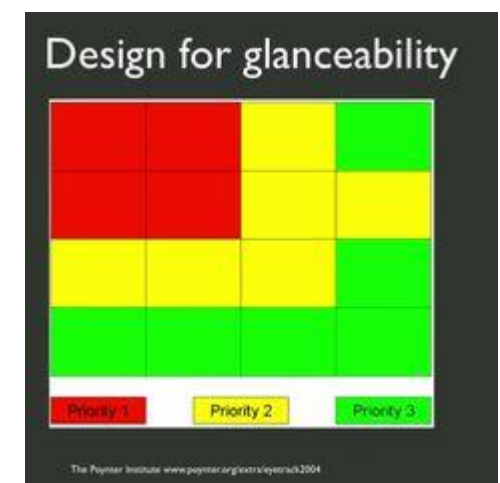
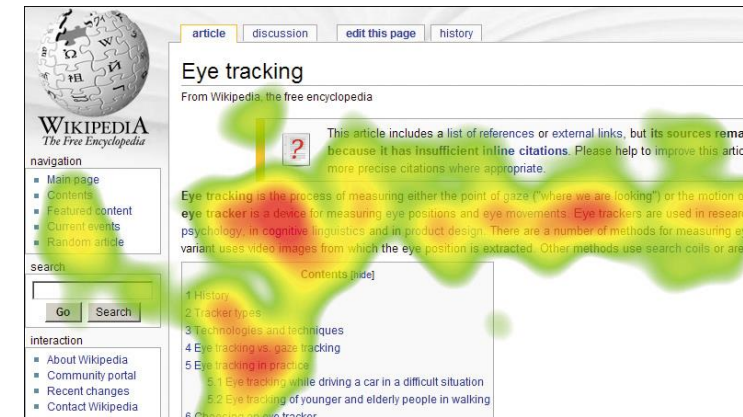
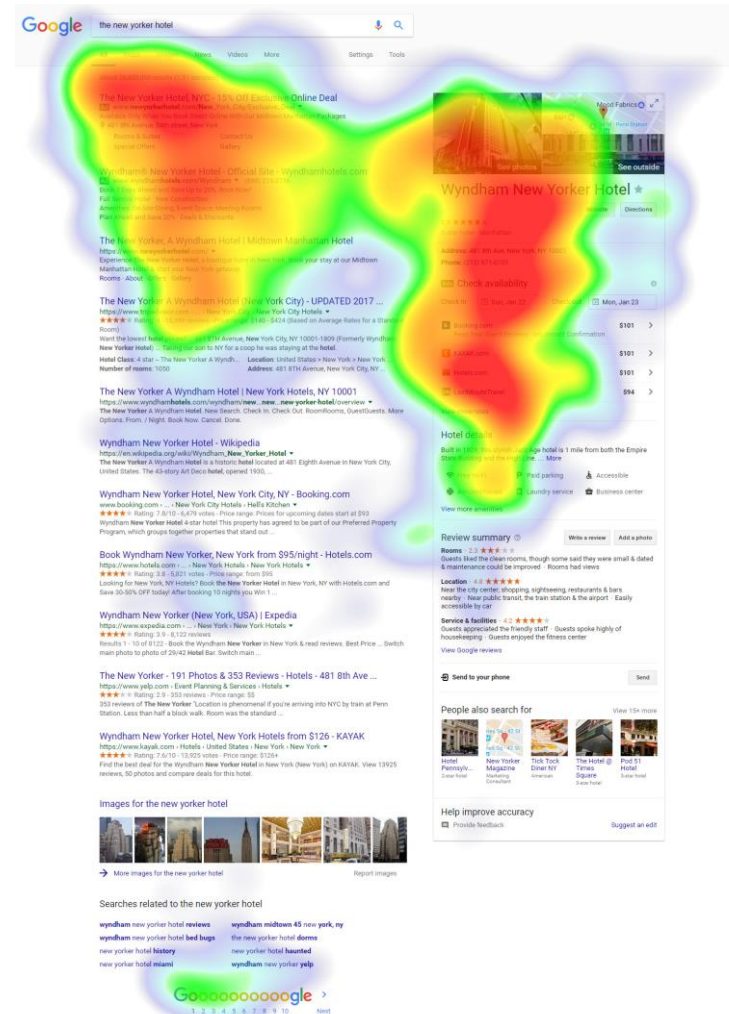
Location on the page

Eye tracking studies show where the users actually look on the page

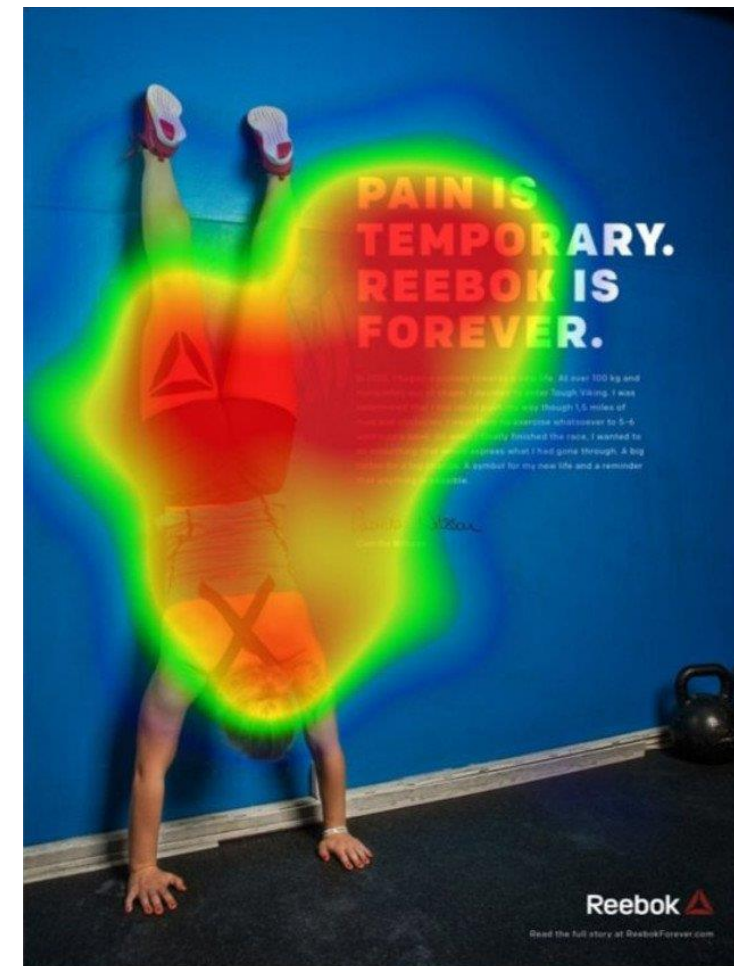
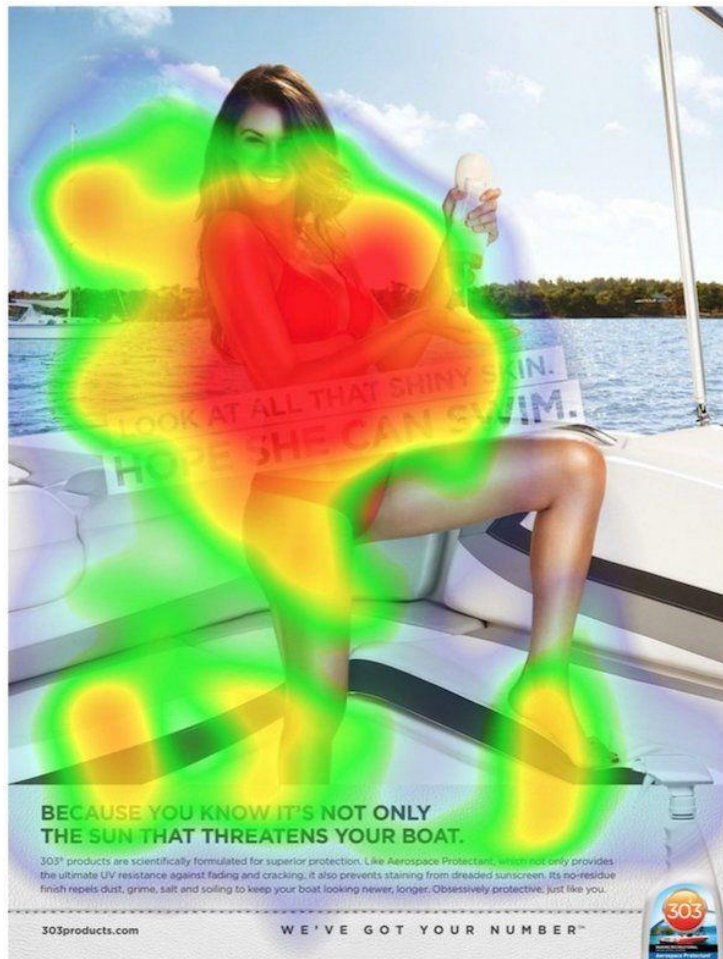
Search “eye tracking heat map” and see the major patterns

Users “glance” and spend limited amount of time on each page.

F-shaped pattern



Did anyone ever look at the product name?



Scanning

WHAT DESIGNERS BUILD...



Join Biztravel.com Now!

- ✈️ Book A Trip
- 🏠 Track My Miles
- 🏖️ Book A Vacation
- 📅 Plan A Meeting
- ✈️ Charter A Flight

- Fast, easy booking of flights, hotel rooms, & rental cars
- Automated Upgrades to help you fly First Class
- Flight status updates sent to your pager
- Exclusive travel deals for biztravel.com members
- Tracking of your points and miles

[Learn More](#) [Join Now!](#)

WHAT USERS SEE...




Join Biztravel.com Now!

- ✈️ Book A Trip
- 🏠 Book A Vacation

- Fast, easy booking of flights, hotel rooms, & rental cars
- Exclusive travel deals for biztravel.com members



I want to buy a ticket.



Track My Miles

- Tracking of your points and miles



How do I check my frequent flyer miles?

Experiment

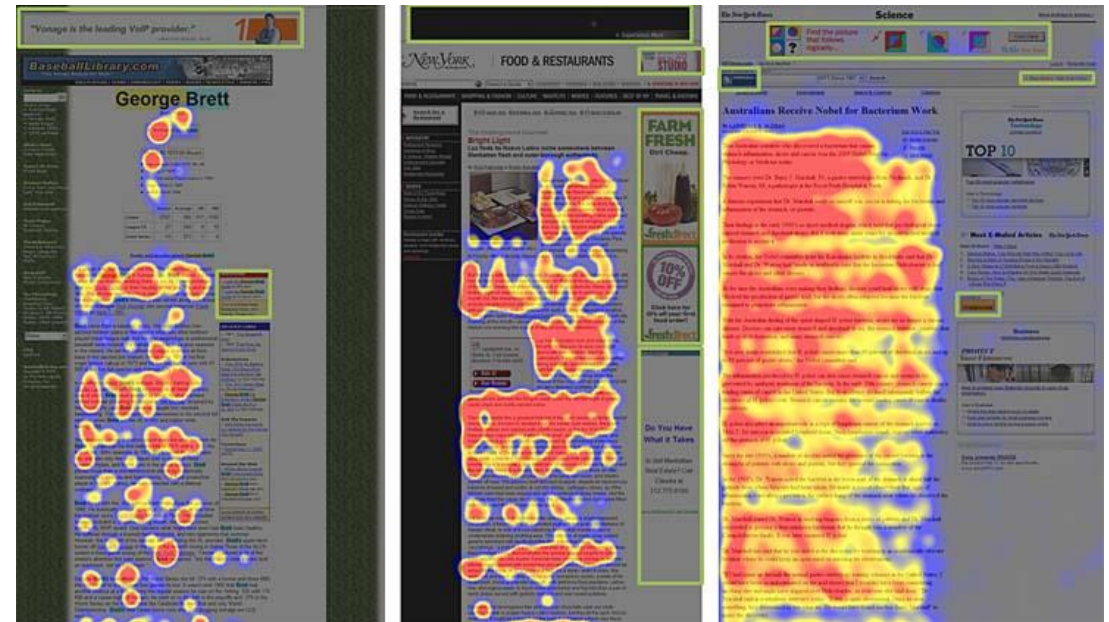
Site Version	Sample Paragraph	Usability Improvement (relative to control condition)
Promotional writing (control condition) using the "marketese" found on many commercial websites	Nebraska is filled with internationally recognized attractions that draw large crowds of people every year, without fail. 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).	0% (baseline)
Concise text with about half the word count as the control condition	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.	+58%
Scannable layout using the same text as the control condition in a layout that facilitated scanning	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: <ul style="list-style-type: none"> •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). 	+47%
Objective language using neutral rather than subjective, boastful, or exaggerated language (otherwise the same as the control condition)	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).	+27%
Combined version using all three improvements in writing style together: concise, scannable, and objective	In 1996, six of the most-visited places in Nebraska were: <ul style="list-style-type: none"> •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 	+124%

Best locations to put content

- Above the fold
 - Prioritize, don't cram
- Where people expect
 - Where other pages put similar content
 - **Not** where the ads usually go
- Users will scroll down if the first content is interesting

Banner blindness

- The brain learns to avoid uninteresting content
- Banners and Advertisements are recognized subconsciously (by their appearance) and are never considered
 - Ads also “poison” adjacent elements
- Lesson learned: never create a message / title / warning / etc. that might look like an ad. (Faux ads)



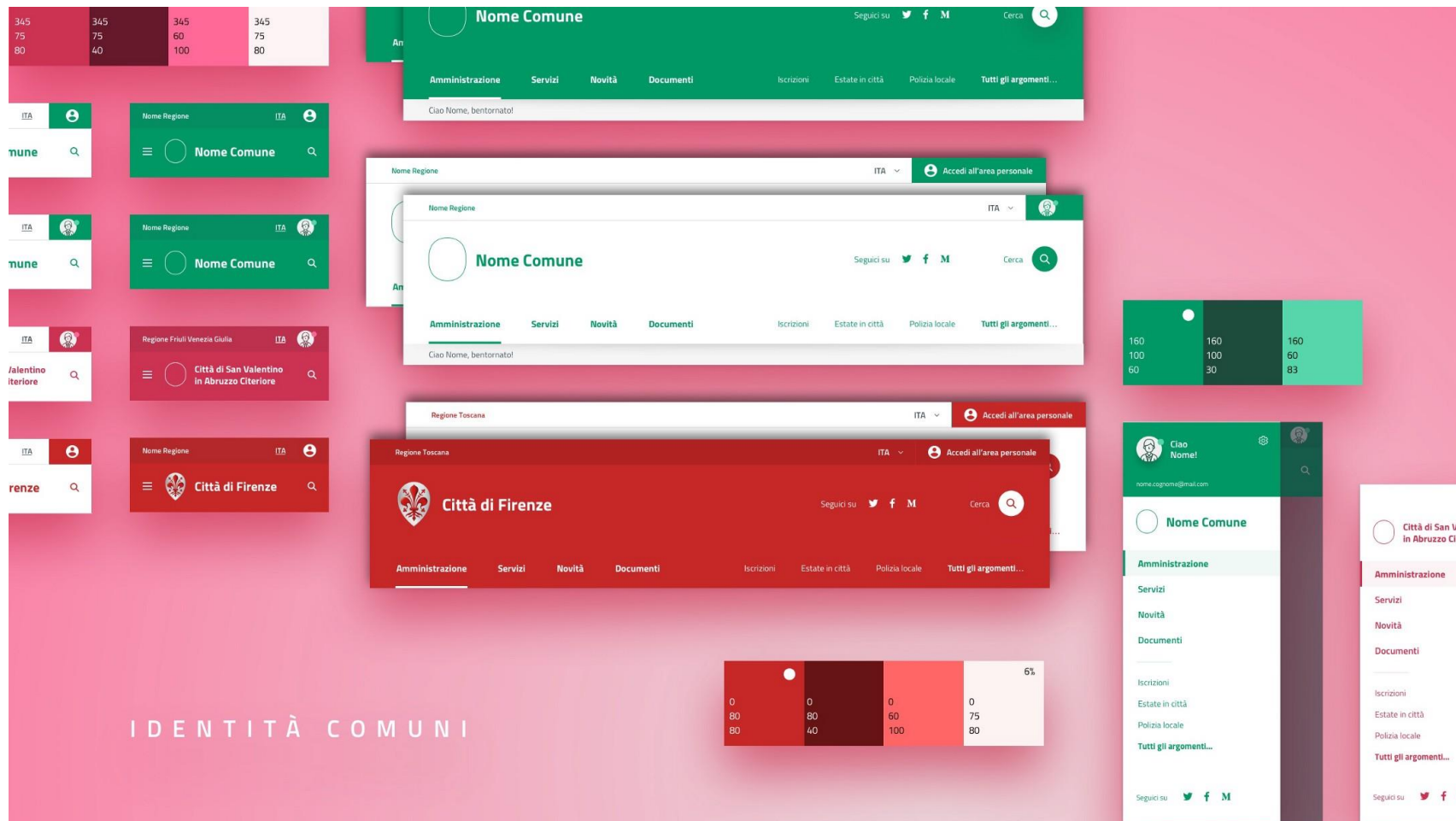
The Design System of the Italian Public Administration

An example toolkit for visual design (targeted at Public Administration websites and services, mainly)

<https://designers.italia.it/>

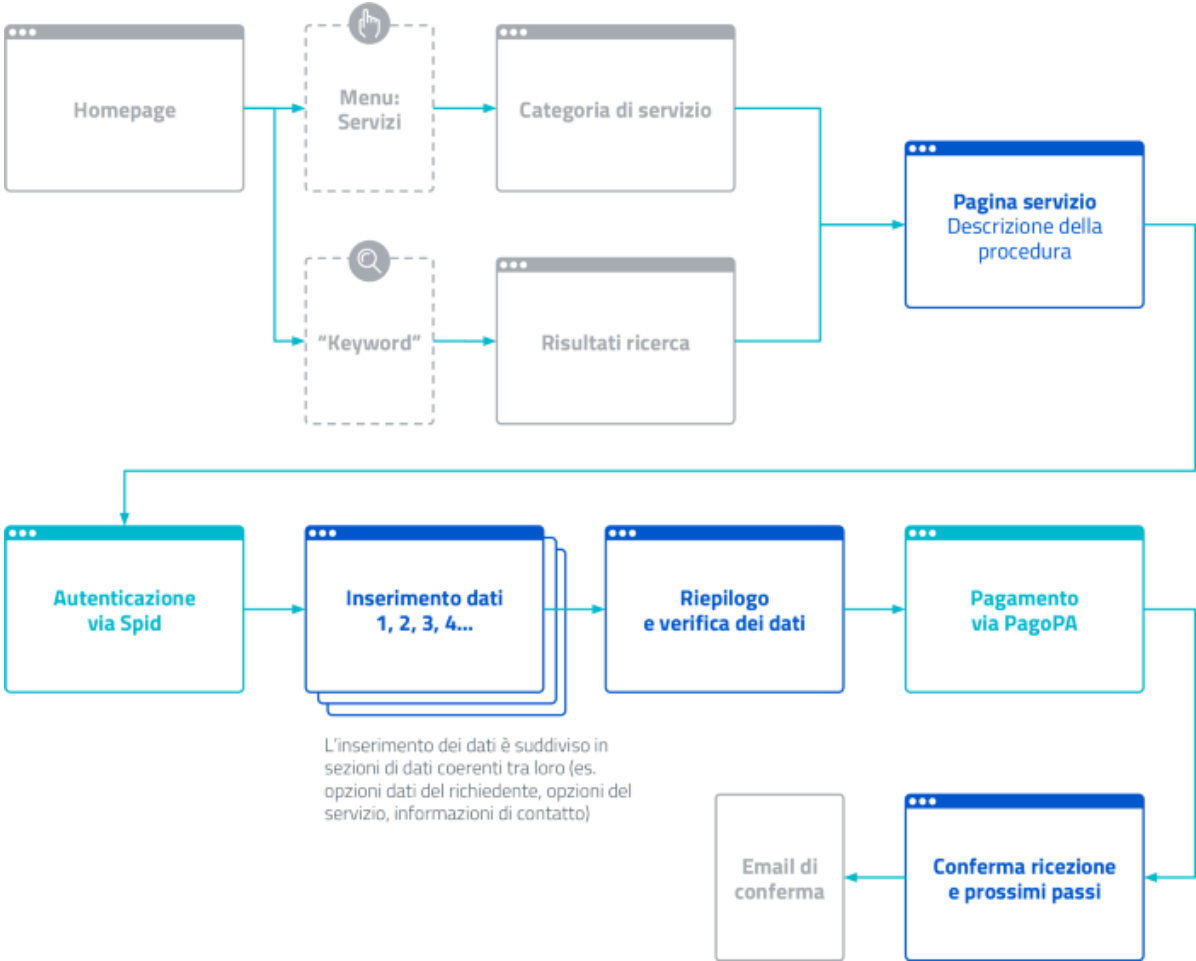
The screenshot shows the homepage of the website designers.italia.it. At the top, there is a blue navigation bar with links for 'AgID + Team Digitale', 'Piano Triennale', 'Developers', 'Designers', 'Forum', 'Docs', and 'GitHub'. Below this is a teal banner with the text 'The Design System of the Italian Public Administration' and a link to 'read on Speaker Deck'. The main header features the 'designers Italia' logo with the tagline 'dalla parte dei cittadini' and social media icons for YouTube, Facebook, Twitter, and LinkedIn. A secondary navigation bar includes links for 'Home', 'Chi siamo', 'Le guide', 'I kit', 'I progetti', 'Le storie', 'La roadmap', 'I contatti', 'Come lo uso', and 'Come partecipo'. The central content area is framed by a large blue L-shaped graphic. It contains the main headline: 'Disegniamo servizi digitali semplici per risolvere i problemi dei cittadini e restituire il buonomore ;-)' and a paper airplane illustration. Below the headline, there are two call-to-action boxes: one for 'Iscriviti alla newsletter' with an email input field and an 'ISCRIVITI' button, and another for 'Approfondisci su Medium' with a 'LEGGI IL POST' button. A short paragraph of text describes the website's mission, followed by a link 'per saperne di più >'. The footer of the page is a solid grey bar.

Application of the Design Kit: a City Website



<https://medium.com/designers-italia/un-progetto-non-comune-175f1fe8cab5>

A City Website: standard navigation path



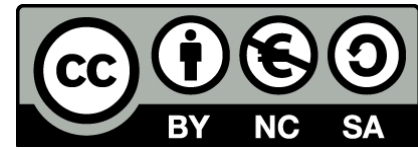
A City Website: example page

The image shows a screenshot of a city website page titled "Iscrizioni Asili Nido e Sezioni Primavera". The page is part of a larger website with a green header and a navigation menu. The main content area is white and contains the following elements:

- Header:** "Nome Comune" (City Name) and a search bar.
- Navigation:** "Amministrazione", "Servizi", "Notizie", "Documenti", "Notizie", "Stato e città", "Pubblicazioni", "Tutti gli argomenti".
- Page Title:** "Iscrizioni Asili Nido e Sezioni Primavera".
- Text:** "Come iscrivere i propri figli agli Asili Nido e alle Sezioni Primavera Comuni o nelle strutture accreditate".
- Buttons:** "Edicolazione", "Famiglia", "Inf.", "Bambini 0-36 mesi".
- Table of Contents:** "INDICE DELLA PAGINA" with links to "Introduzione", "Chi può fare richiesta", and "Come iscriversi".
- Introduction:** "Introduzione" section explaining the process of registration for nido and sections, mentioning the deadline and the need to pay the fee.
- Who can request:** "Chi può fare richiesta" section explaining that parents or legal guardians can request, and that non-residents can also request if they pay the fee.
- How to register:** "Come iscriversi" section explaining that registration can be done online through the SPID profile.
- Statistics:** A green box showing "58 Numero di servizi erogati" and "14000 Numero di richieste annue".
- Footer:** "sped" logo and "Abbonamento SPID" text.

References

- Scott MacKenzie: Human-Computer Interaction - An Empirical Research Perspective, Morgan Kaufmann
 - Chapter 3: Interaction Elements
- Ben Shneiderman, Catherine Plaisant, Maxine S. Cohen, Steven M. Jacobs, and Niklas Elmqvist, Designing the User Interface: Strategies for Effective Human-Computer Interaction
 - Chapter 8: Fluid Navigation
- COGS120/CSE170: Human-Computer Interaction Design, videos by Scott Klemmer, https://www.youtube.com/playlist?list=PLLsT5z_DsK_nusHL_Mjt87THSTlgrsyJ



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