

Intro

<AppWeb/>

2022

# Designing for the Web

**Information Architecture and Visual Design**

Luigi De Russis

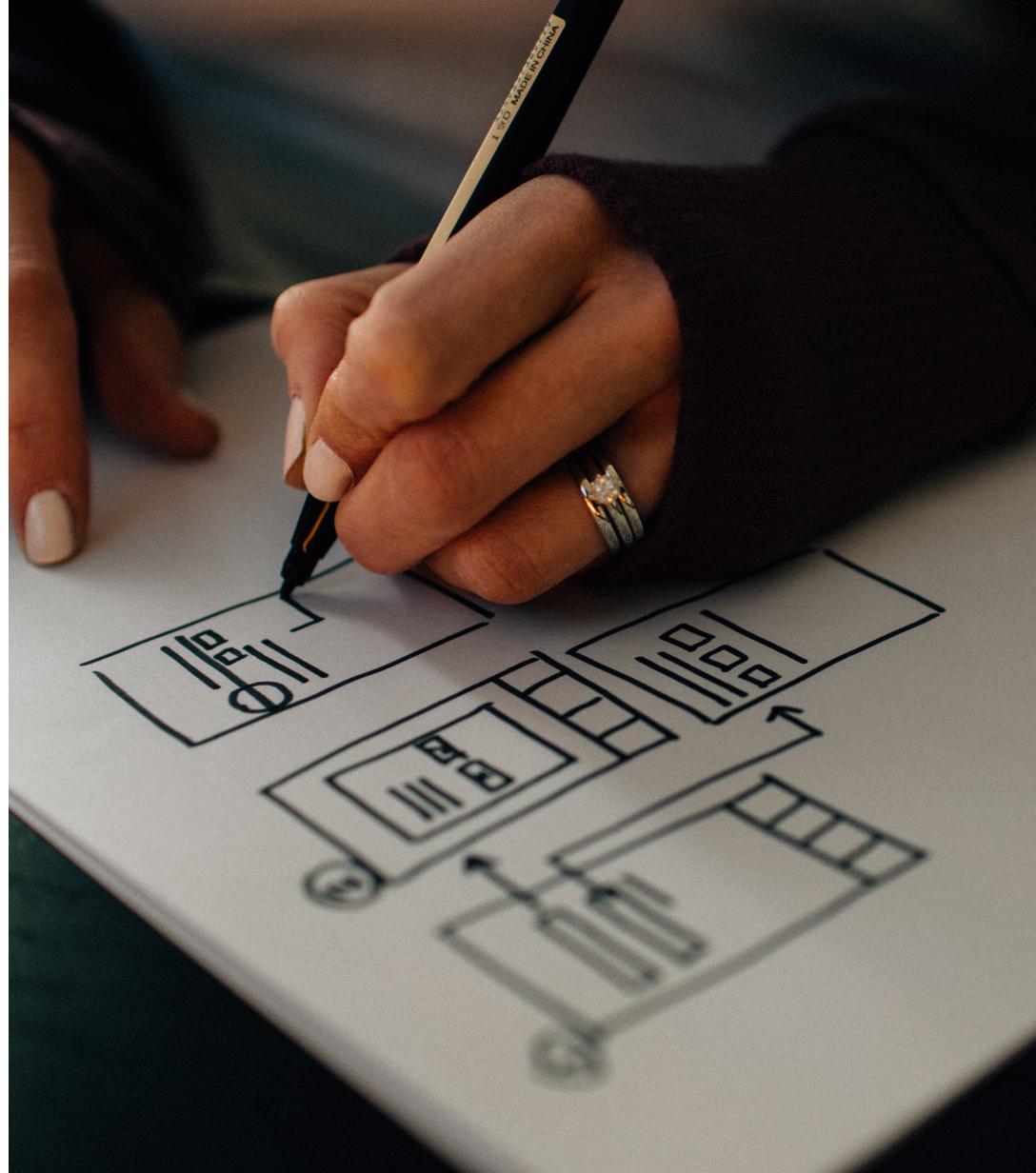


Photo by [Kelly Sikkema](#) on [Unsplash](#)

# Goal

- To introduce the main concept behind
  - Information Architecture
  - Visual Design
- To design effective web applications

# INFORMATION ARCHITECTURE

27/10/22

3

# Information Architecture

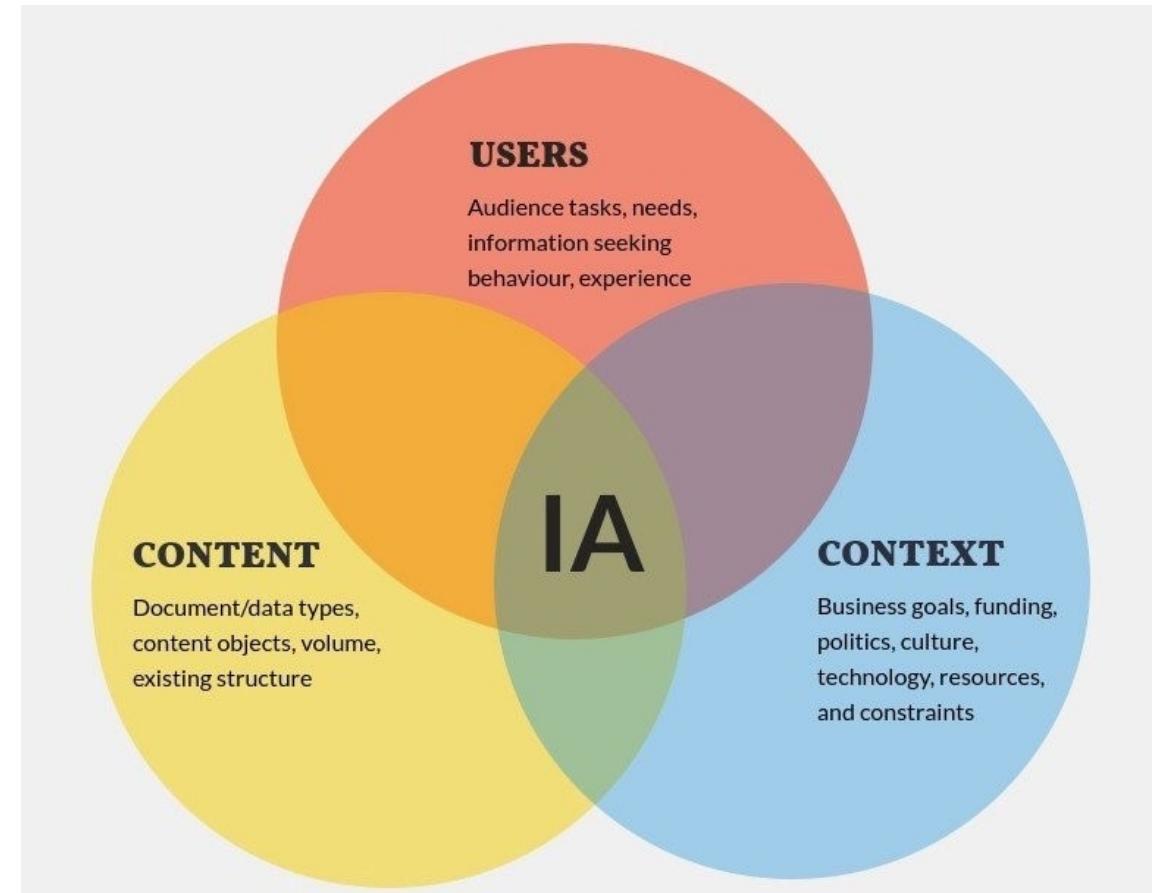
- “*The structural design of shared information environments*”
- The combination of organisation, labelling, search, and navigation systems within web sites and applications
- A discipline focused on making information **findable** and **understandable**

# Information

- Information architecture is not data and knowledge management
- Data is facts and figures
  - Relational databases are highly structured and produce specific answers to specific questions
- Knowledge is the “stuff in people’s heads”
  - Knowledge managers develop tools, processes, and incentives to encourage people to share that stuff
- Information is in the *middle*
  - With information systems, there is often no single “right” answer to a given question
  - Information can be of all shapes and sizes: websites, documents, software applications, images, and more
  - Metadata: terms used to describe and represent content objects such as documents, people, processes, and organizations

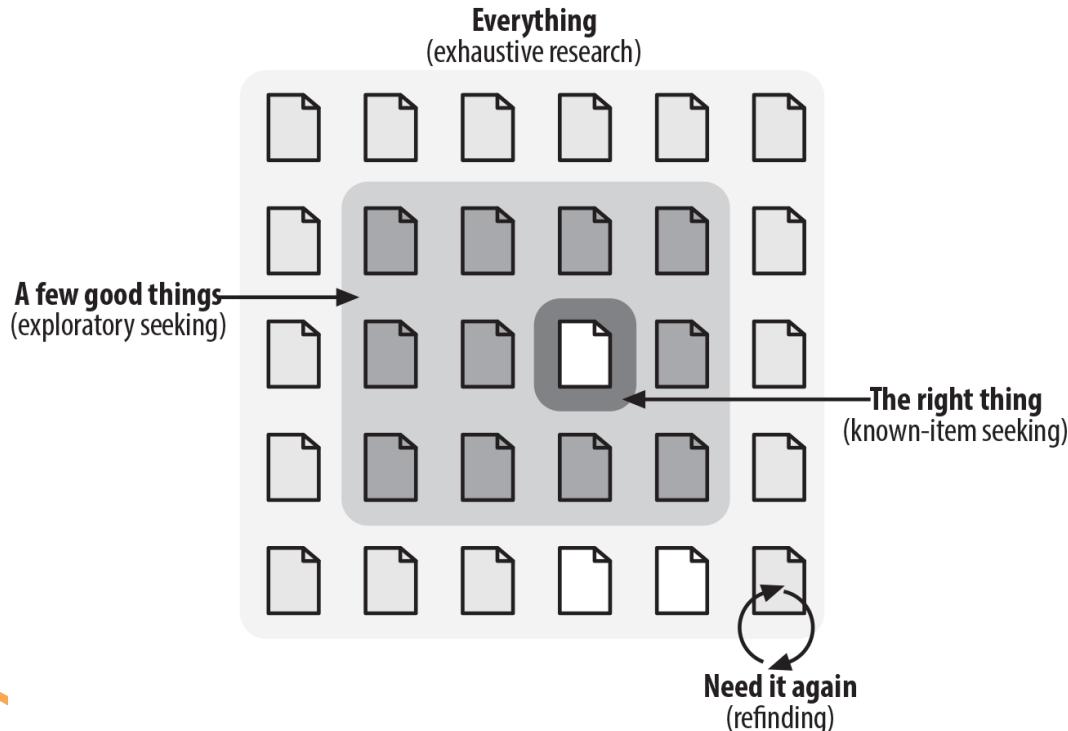
# Users, Context, and Content

- Users
  - Do you know who is using your system? Do you know how they are using it? Do you know what information they look for on your system?
- Content
  - The documents, links, media, ... that people need to use or find in the system
- Context
  - All digital system exist within a particular business or organizational context



# Finding and Understanding

Information architecture is focused on making information **findable** and **understandable**



We only *understand* things in relationship to something else

- e.g., most bank/university/... buildings are similar; their websites are similar as well



# DON'T MAKE ME THINK

Revisited

and Mobile  
A Common Sense Approach to Web Usability

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?

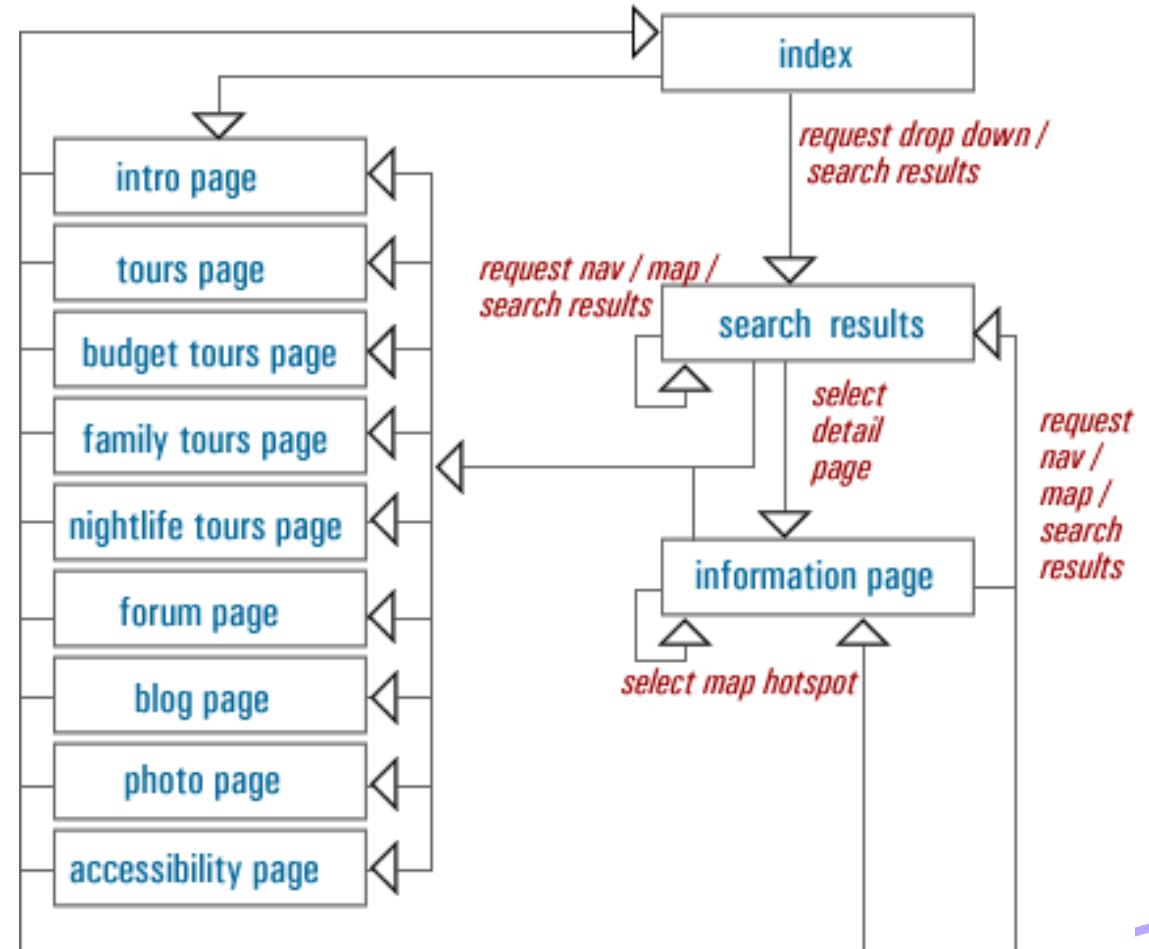
Why did they put that there?

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

The diagram shows a central screenshot of the XYZnet.com homepage from April 25, 1999. Five black silhouette icons of a person's head are positioned around the page, each with a red arrow pointing to a specific element. The top-left head points to the left sidebar menu. The top-right head points to the top right corner of the page. The middle-left head points to a link in the left sidebar. The middle-right head points to a link in the right sidebar. The bottom-left head points to a link in the left sidebar.

# Sitemaps

- Show the relationships between information elements
- Can be used to portray organization, navigation, and labeling systems



# VISUAL DESIGN

27/10/22

10

# 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 Basic of VisualDesign

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.

# Whitespace

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.

# Hierarchy

Basic visual design involves ...

## **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.

## **Layout**

## **Colors**

# Alignment

BASIC VISUAL DESIGN

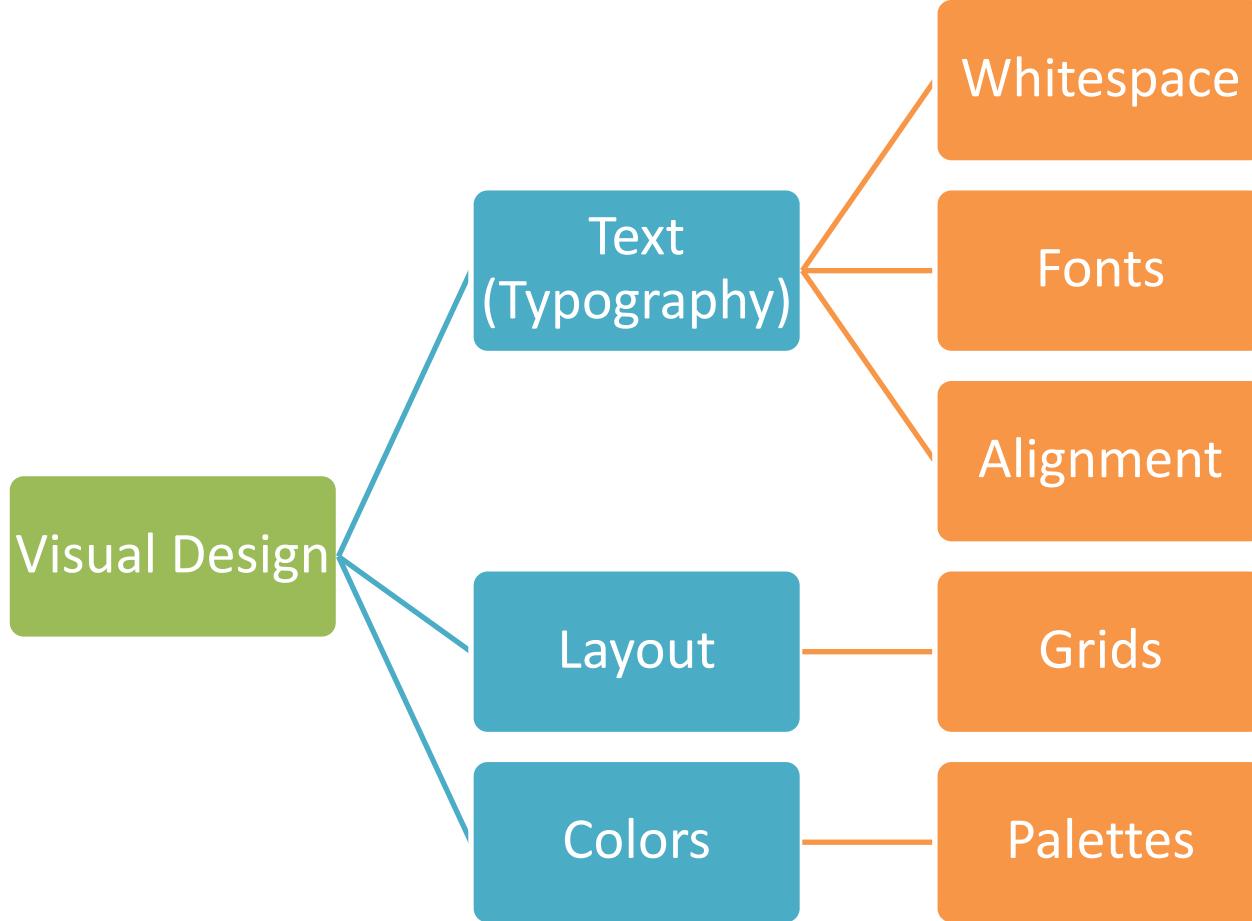
## Text

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

## Layout

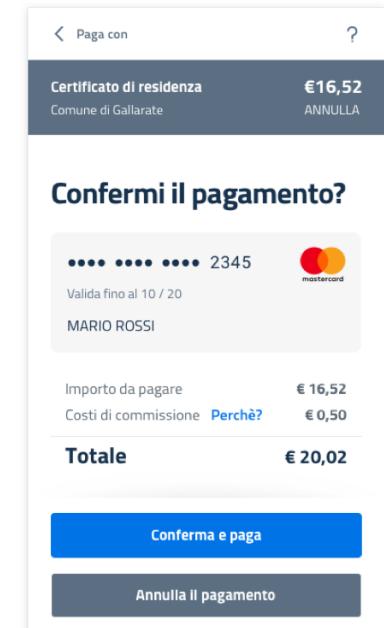
## Colors

# Key Ingredients



# Text

- Font size, color and spacing define a hierarchy of visibility and attention
- The visual hierarchy should match the relative importance of the information content



# Text and Layout Convey Meaning

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

DETACHED HOUSE • 5Y OLD  
\$750,000  
742 Evergreen Terrace

3 Bedrooms      2 Bathrooms

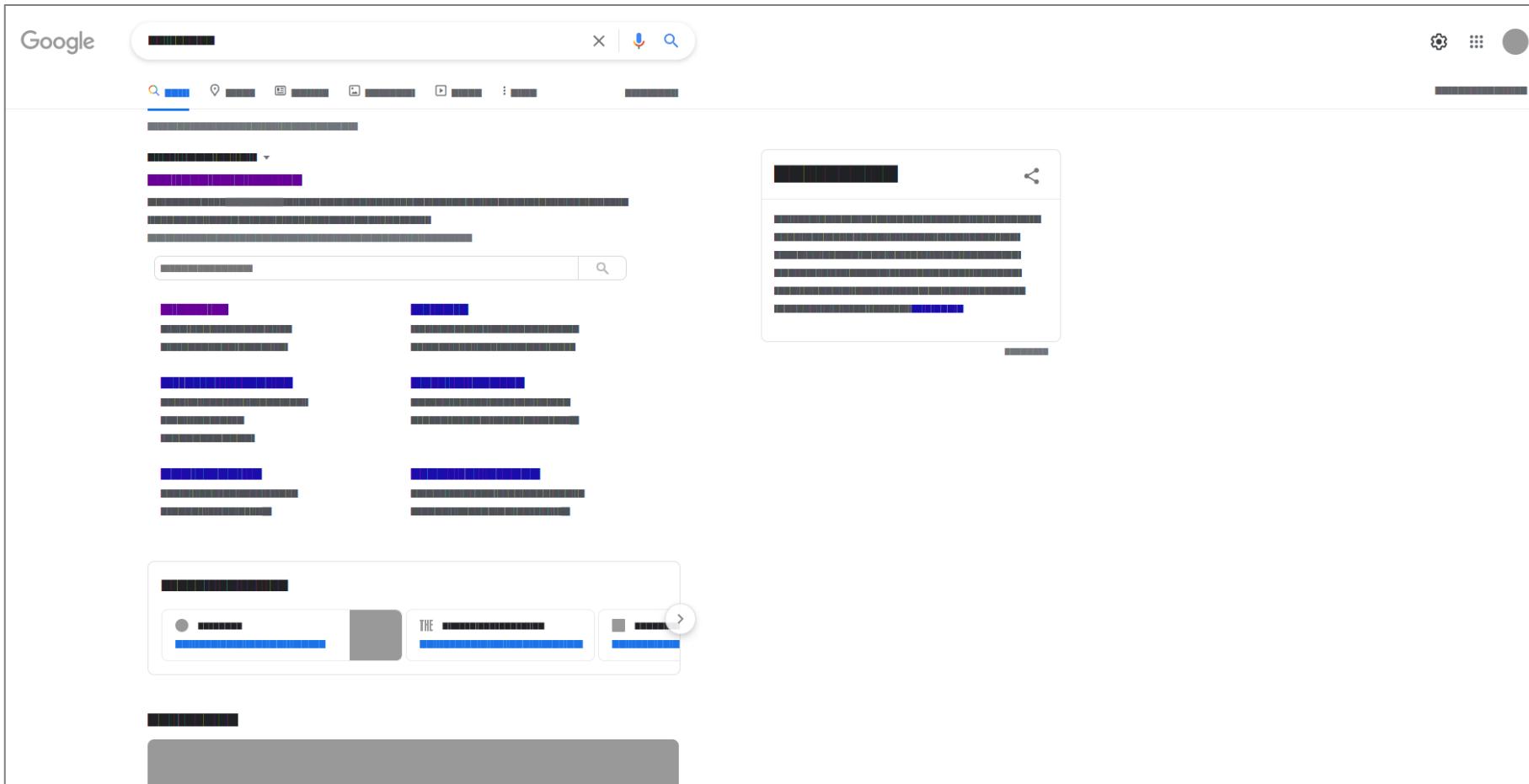
REALTOR  
Tiffany Heffner  
(555) 555-4321

Present data in a more useful way

Emphasize the most important content

Combine labels and values into human-readable phrases

# Recognizable Page Structure



# Recognizable Page Structure

The screenshot shows a Google search results page for the query "politecnico". The top navigation bar includes the Google logo, a search bar with the query "politecnico", and various search filters like "Tutti", "Maps", "Notizie", "Immagini", "Video", and "Altri". The search results indicate approximately 33 million results found in 0.71 seconds. The first result is a link to the Politecnico di Torino website (<https://www.polito.it>). The snippet describes the institution as one of the most prestigious public universities in Italy and abroad, mentioning its 160-year history and various academic programs. Below the snippet are sections for "Didattica", "Offerta formativa", "Apply@polito", "Oriente", "Corsi di Laurea", and "Scoprire l'Ateneo". To the right of the main search results, there is a detailed sidebar box titled "Politecnico" with a description of the term's meaning in Italy and other countries, along with links to "Wikipedia" and "Feedback". At the bottom of the search results, there is a "Trova risultati su" section featuring social media links for Facebook, Timeshighereducation, and Topuniv, each with a small thumbnail image. A map of the Milan area is also displayed at the bottom.

# Recognizable Page Structure



# Recognizable Page Structure

The screenshot shows the homepage of Stack Overflow. The left sidebar includes links for Home, PUBLIC Questions, Tags, Users, COLLECTIVES, FIND A JOB, and TEAMS. A sidebar for 'Stack Overflow for Teams' promotes private groups and offers to 'Create a free Team'. The main content area displays a list of 'All Questions' with 21,855,928 entries. Each question card shows the title, number of votes, answers, and views, along with a snippet of the question text and the asker's profile. To the right, there are sections for 'The Overflow Blog', 'Featured on Meta', 'Collectives' (listing Go Language, Google Cloud, and GitLab), and 'Related Tags'.

All Questions

21,855,928 questions

Ask Question

task.json In VS Code

0 votes  
0 answers  
2 views

I am trying to debug a C program in VS Code. When I run my program from the command line it works because I can add `pthread` to the args by typing: `gcc -pthread -o Draft1 Draft1.c`. However, when I try ...  
asked 57 secs ago by RAINGUARD 1

Android: Push notification and ServerKey

0 votes  
0 answers  
2 views

So i was watching few tutorials on whatsapp or chating apps clone, and all of them are using ServerKey to implement Push notification Serverkey is used inside the app code itself. So i wanted to knew ...  
asked 1 min ago by Mini 15 6

Max profit of Woodcutters

0 votes  
0 answers  
2 views

I've got the following problem and couldn't solve it. Maybe someone could help me to find a solution. Daily woodcutters cut trees in the mountains. Every tree trunk is precise 1, 2, 3, etc blocks in ...  
asked 1 min ago by John Jonathan 41 3

Remove "randomized" and "input" values from a procedural list

0 votes  
0 answers  
3 views

first of all sorry if i make mistakes, english is not my mother tongue. I recently played the Werewolf game with some friends, in order to ease the Game Master work i wanted to create a simple Python ...  
asked 1 min ago by Kuai 1

How to merge data into azure sql database from delta lake (delta tables in data lake)?

0 votes  
0 answers  
3 views

I have a delta table in azure data lake. The table has a business key. I want to write data from this delta table to an external sql server (that is not hosted in a synapse sql dedicated pool). What ...  
asked 1 min ago by Crow59 188 1 13

javascript × 2290823

python × 1824472

java × 1808306

Related Tags

Log in Sign up

The Overflow Blog

Podcast 388: Software for your second brain

Why SOLID principles are still the foundation for modern software architecture

Featured on Meta

Now live: A fully responsive profile

Please welcome Valued Associates #999 - Bella Blue & #1001 - Salmon of Wisdom

2021 Community Moderator Election Results

Collectives

Go Language 13k Members Join

The official Q&A channel for Google's Go Programming Language

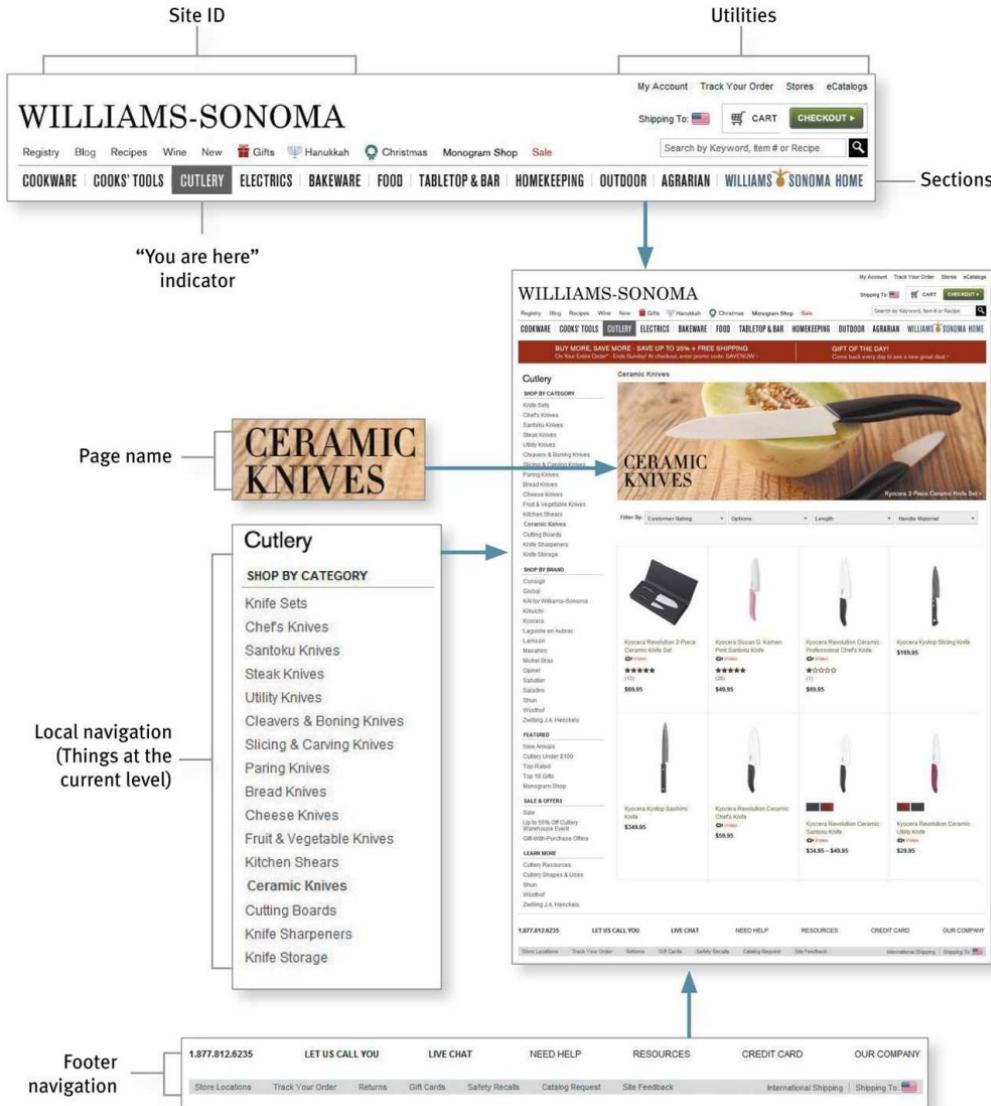
Google Cloud 11k Members Join

Google Cloud provides organizations with leading infrastructure, platform capabilities...

GitLab 3k Members Join

GitLab is the open DevOps platform, delivered as a single application. Our open source...

# Conventions Help Recognizing Structure



# 'GESTALT' PRINCIPLES

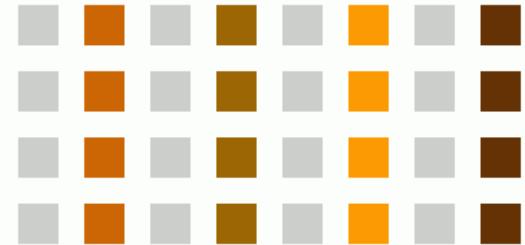
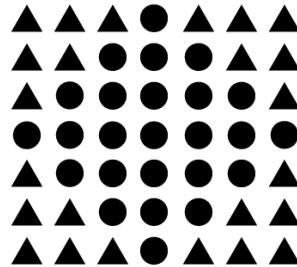
# ‘Gestalt’ principles

- 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

# 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.

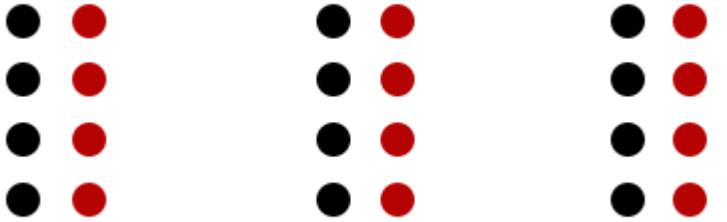
# Examples: Similarity



The GitHub sign-up page features a dark background with various software-related icons. The main heading is "Where software is built". Below it, a subtext reads: "Powerful collaboration, code review, and code management for open source and private projects. Public projects are always free. Private plans start at \$7/mo." A large green "Sign up for GitHub" button is prominently displayed. On the right side, there are input fields for "Pick a username", "Your email", and "Create a password", along with a note about character requirements. A small text at the bottom explains the terms of service and privacy policy.

The LA STAMPA news website's homepage. At the top, there are links for "GNN", "NEWSLETTER", and social media icons. The main title "LA STAMPA" is in large, bold letters. Below the header, there are several news articles with small images and titles. One article features a video thumbnail of a man speaking. Another shows an industrial facility. The layout includes a navigation bar with "MENU", "LEGGI IL QUOTIDIANO", "TOP NEWS", "TUTTOLIBRI", and "TORINO EDIZIONI LOCALI".

# Example: Proximity



Walmart

Hello, Sign In  
My Account

Save big in every department

Electronics

Home

Exercise & Fitness

Health

Clothing & Jewelry

Furniture

Cold Weather Prep

TurboTax

H&R BLOCK

Jackson Hewitt

Auto & Tires

Office Supplies

Home Improvement

Outdoor Sports

VICE

WATCH SECTIONS PHOTOS MAGAZINE TOPICS: CITY GUIDES ELECTION 2016 OPINION MORE

Feb 24, 2016 NEWS Manisha Krishnan Medical Marijuana Users in Canada Can Legally Grow Their Own Weed Now A Federal Court judge says former prime minister Stephen Harper's law restricting patients from growing is unconstitutional.

Feb 24, 2016 NEWS Joah Androsky The Women Who Love Ted Cruz There's one place Ted Cruz doesn't finish third: in these ladies' hearts.

Feb 24, 2016 NEWS Gracia Wyler How Donald Trump Won Nevada's Cliven Bundy Vote If Ted Cruz can't win Bunkerville, where can he win?

Feb 24, 2016 STUFF MOTHERBOARD

# Example: Continuity



Customers Who Bought This Item Also Bought

The screenshot shows a grid of book covers and their details. The books listed are:

- CROSSING THE CHASM, 3rd Edition: Marketing and Selling Disruptive Products by Geoffrey A. Moore
- THE LEAN STARTUP by ERIC RIES
- THE INNOVATOR'S DILEMMA by Eric Ries
- THE INNOVATOR'S SOLUTION by Clayton M. Christensen
- HOW WILL YOU MEASURE YOUR LIFE? by Clayton M. Christensen

Each book entry includes the title, author, description, rating (e.g., ★★★★☆ 72), format (e.g., Paperback), price (\$12.35 or \$16.66), and a Prime logo.

Page 1 of 20



## Step 1

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



## Step 2

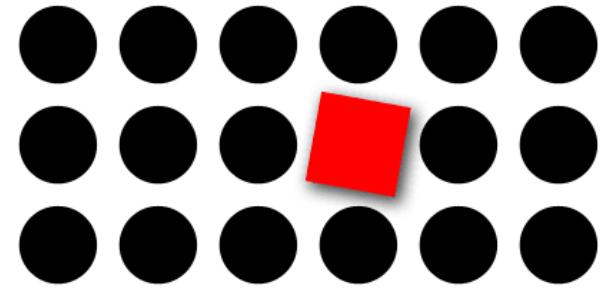
Our friendly servers organize your food for delivery - hot and ready to eat!



## Step 3

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

# Example: Focal Point



The Twilio homepage features a dark background image of a busy street scene. At the top, the Twilio logo is on the left, followed by navigation links: PRODUCTS & PRICING, USE CASES, API & DOCS, NOT A DEVELOPER?, SIGN UP, and LOG IN. Below the navigation, the main headline reads "BUILD APPS THAT COMMUNICATE WITH EVERYONE IN THE WORLD". A sub-headline below it says "A Messaging, Voice, Video and Authentication API for every application". At the bottom, there are two buttons: "See Use Cases" and "Get a free API key".

The Instacart homepage features a dark background image of a person holding a grocery bag filled with vegetables. Overlaid on the image is a white rectangular form containing the Instacart logo and the text "Groceries delivered in 1 hour". It also includes a "Enter Zip Code" input field, a green "Find Stores >" button, and a link "Already have an account? Log In". At the bottom, there is a promotional message "FREE delivery on your first order\*".

# GRID AND ALIGNMENT

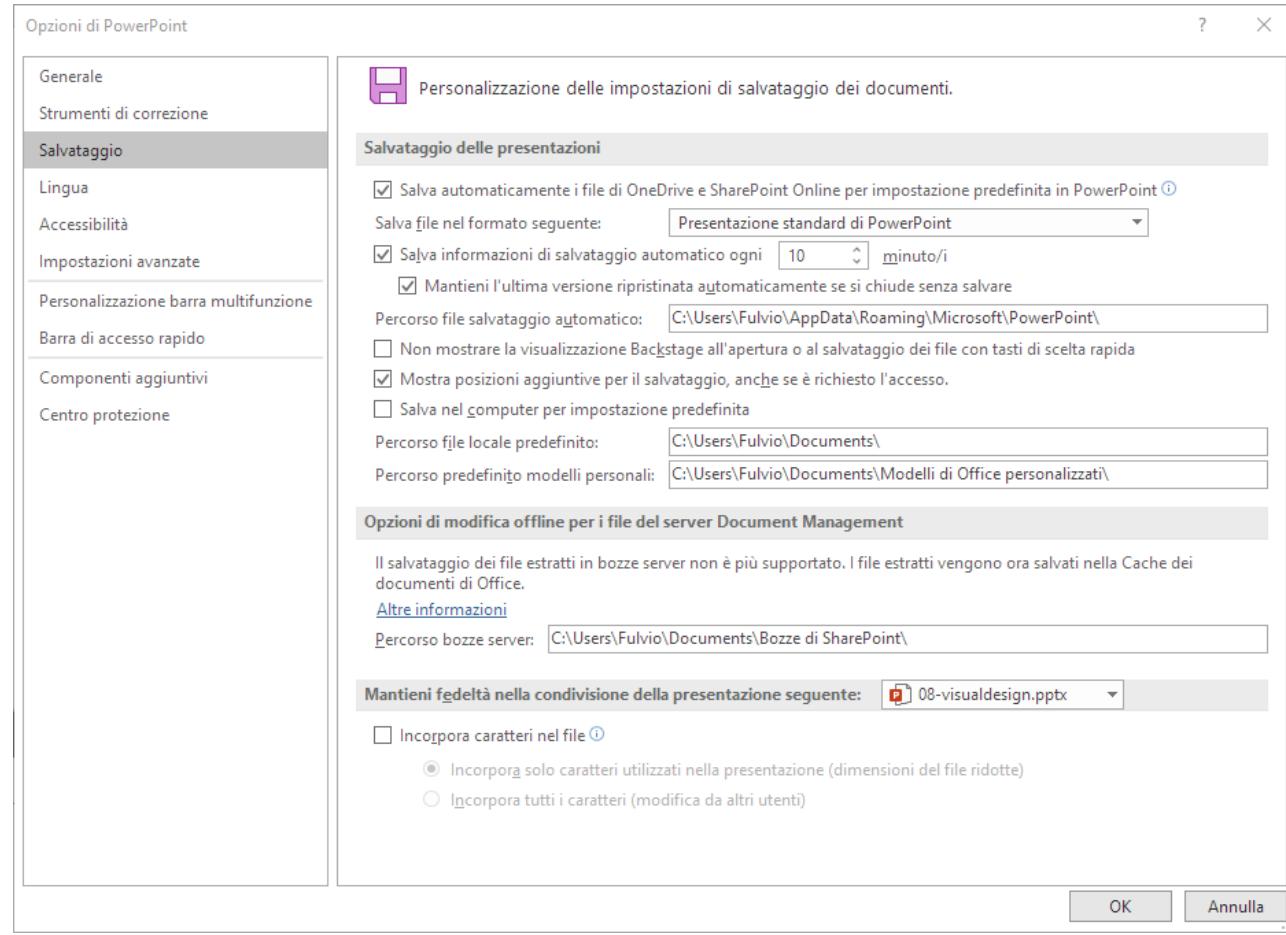
27/10/22

32

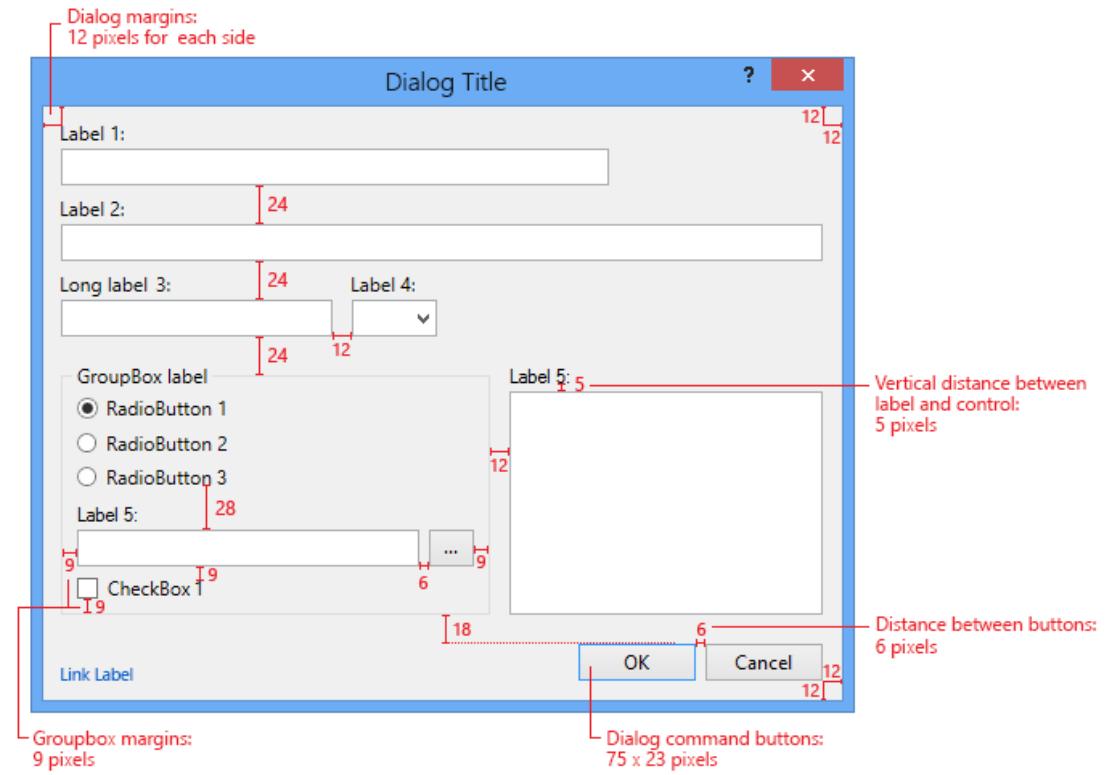
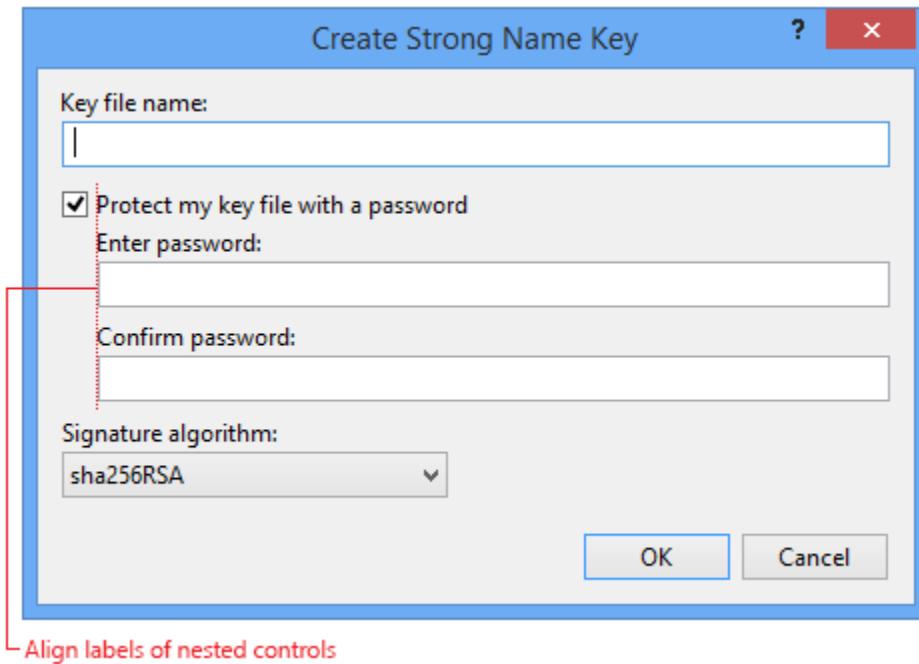
# Alignment

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

# Example



# Example



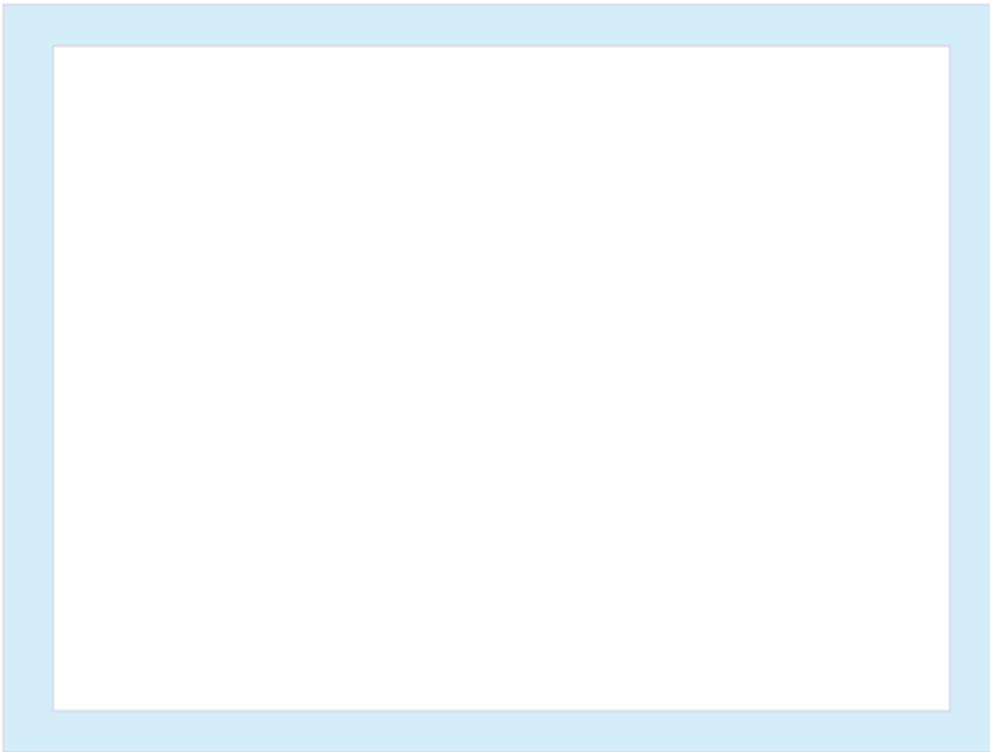
<https://docs.microsoft.com/en-us/visualstudio/extensibility/ux-guidelines/layout-for-visual-studio?view=vs-2019>

# 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

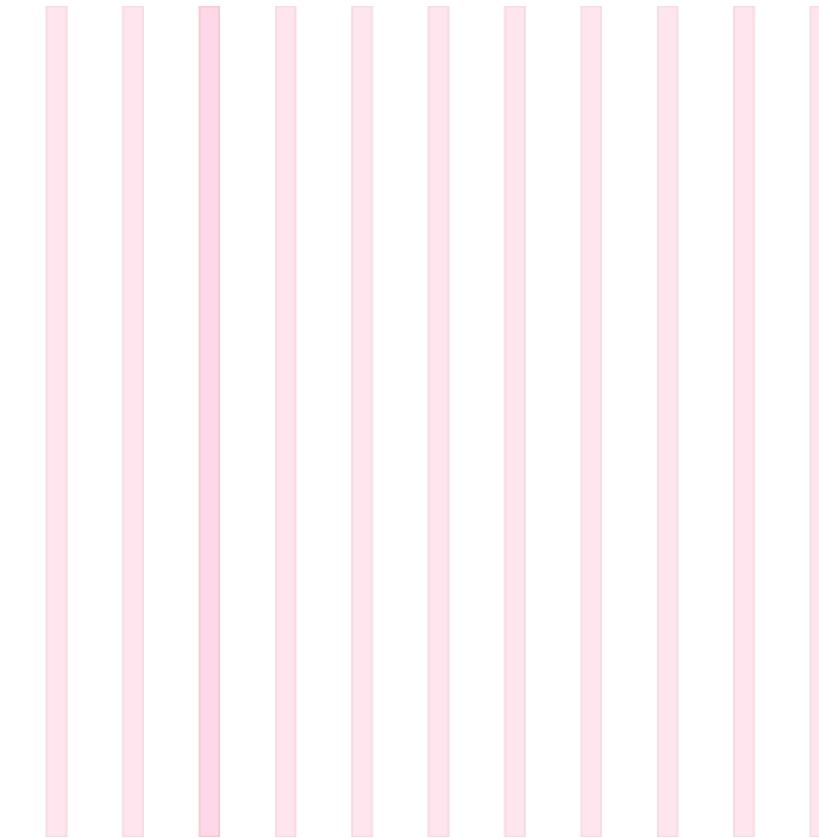
## Margins



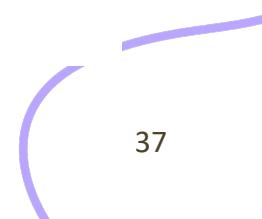
27/10/22



## Columns & Gutters

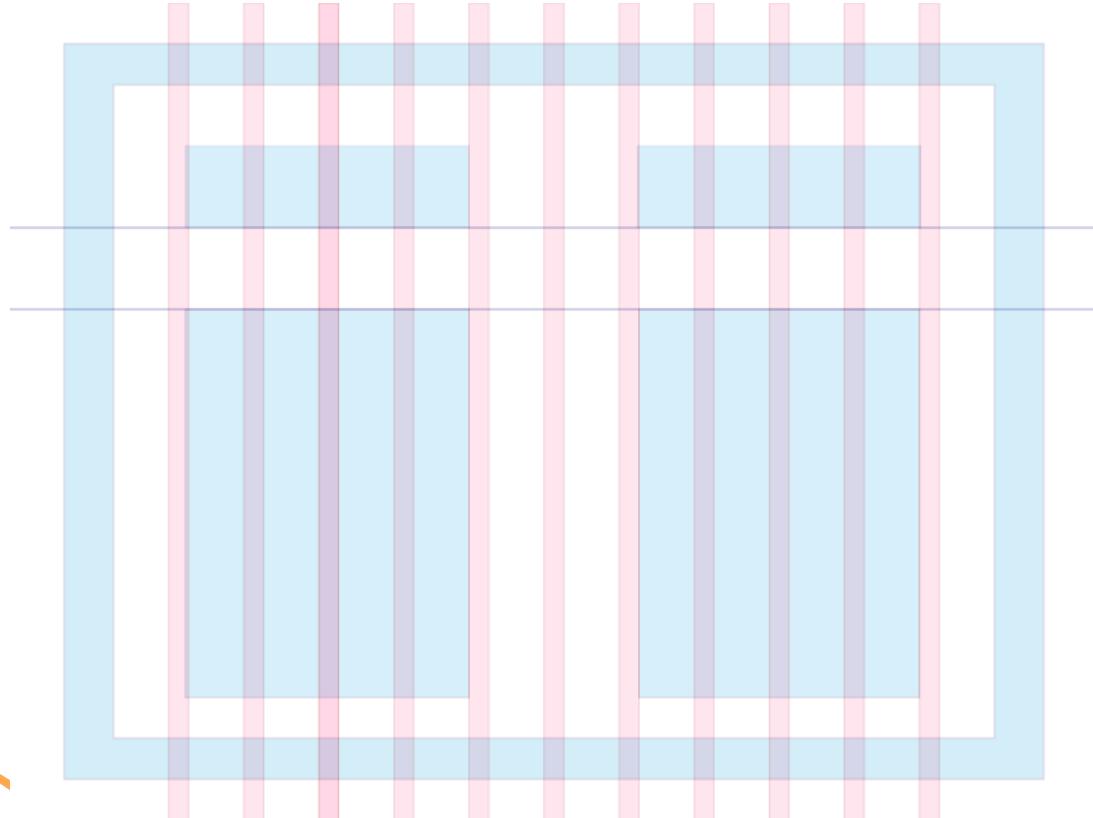


37



# Grid Layout Ingredients

## Hanglines and Baselines



27/10/22

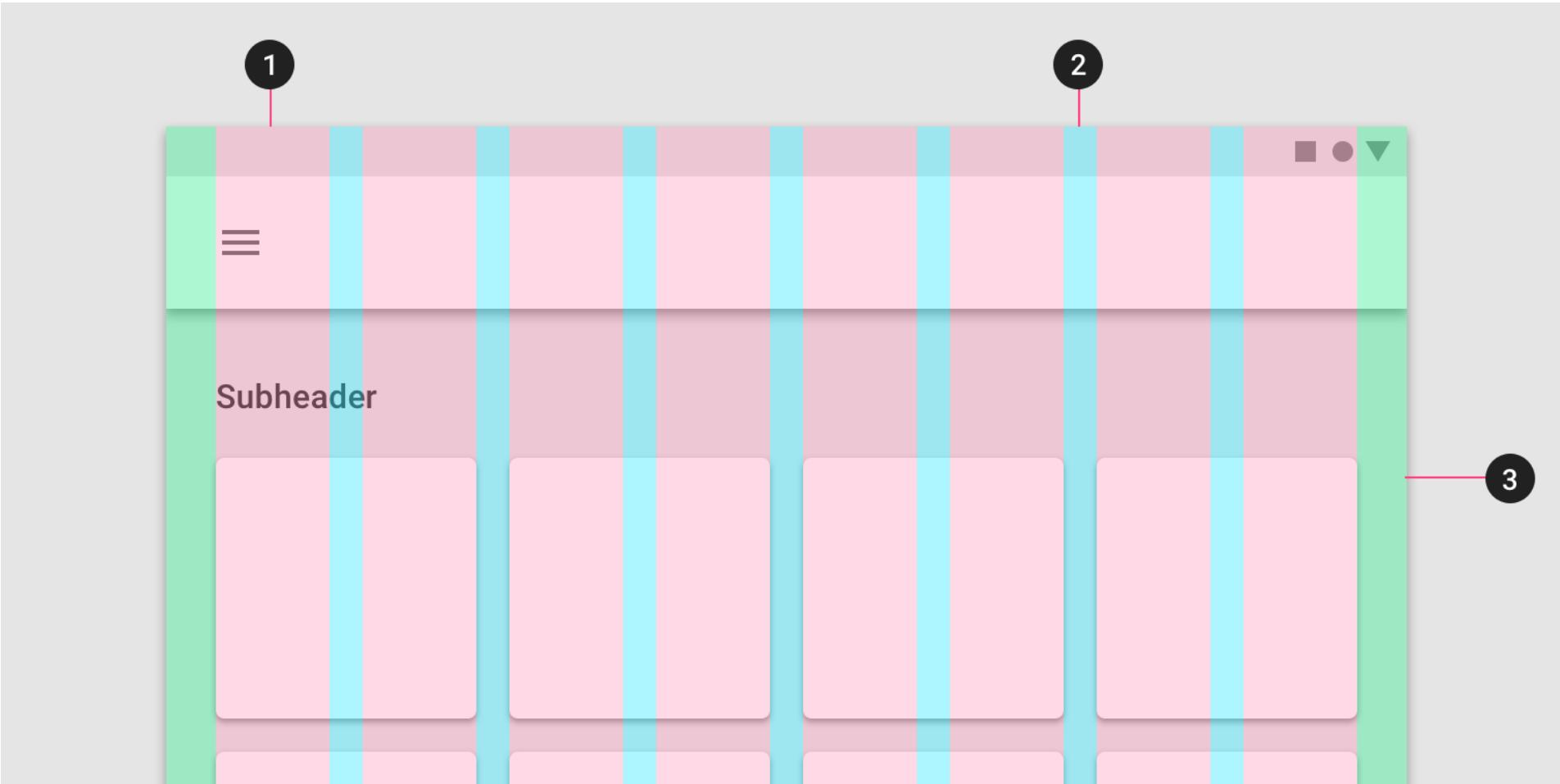
## Baseline Grids



38

# Example of Grid-based Layout

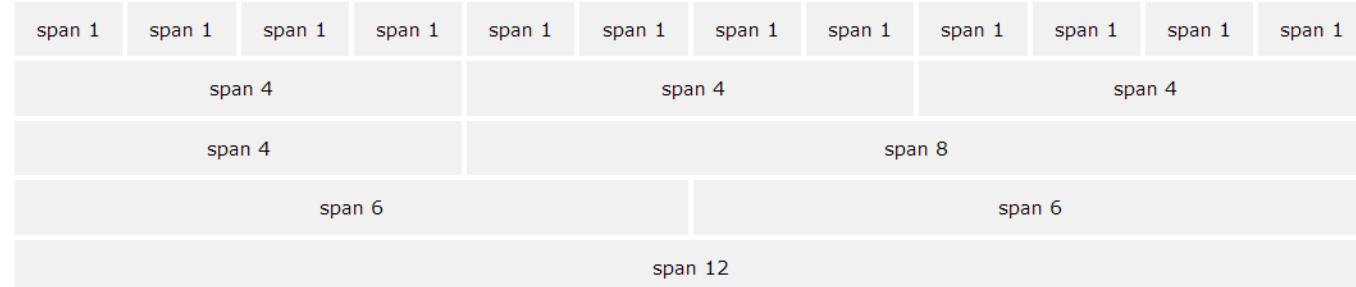
1. Columns
2. Gutters
3. Margins



<https://material.io/design/layout/responsive-layout-grid.html#columns-gutters-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)



# Example: 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>

<https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/bootstrap-responsive-layout.php>

# Grid Structure

Main body:  
Mix of 2x and 3x  
columns

Alternating row  
types



Title area outside the grid

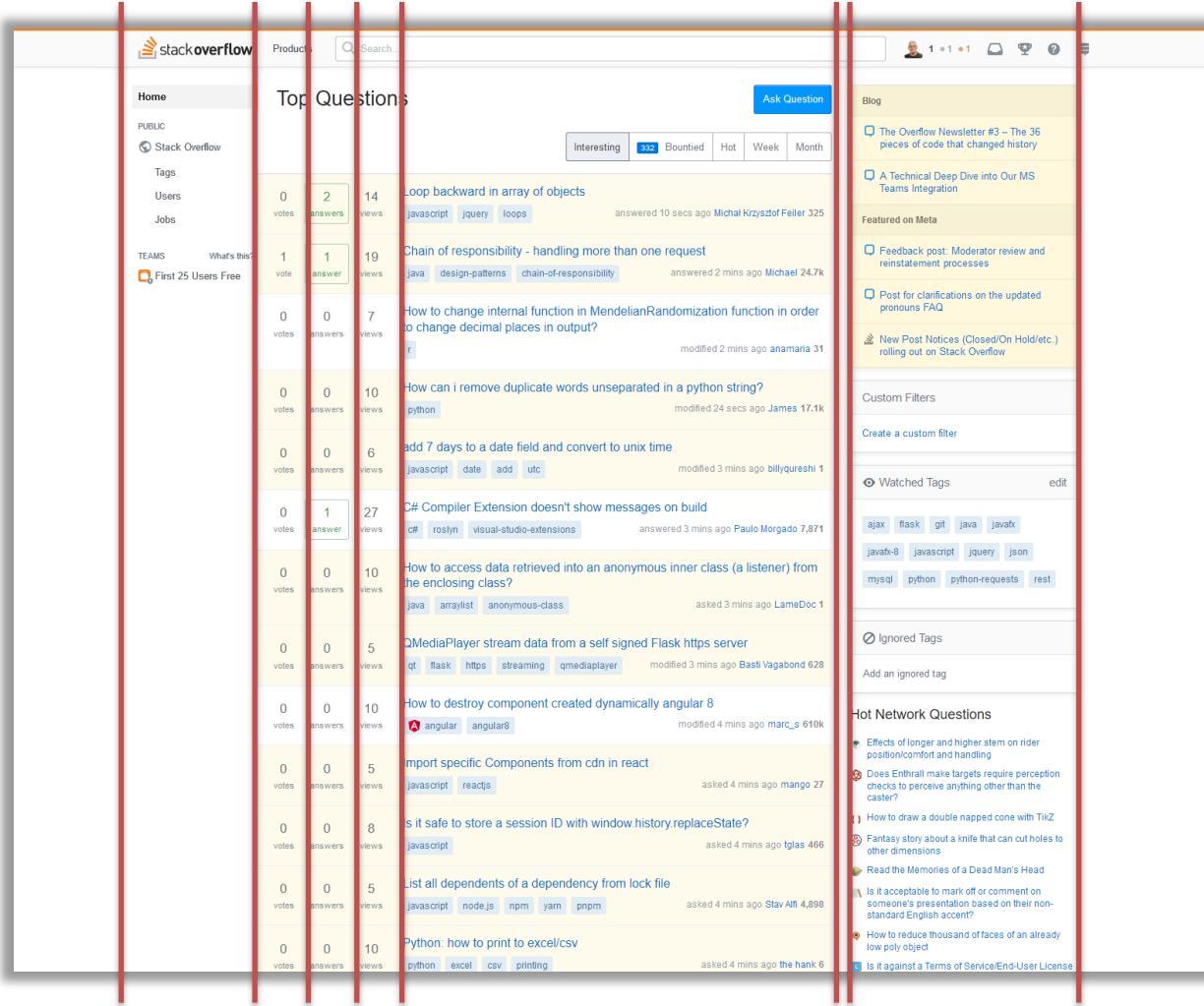
Right column for other types of articles

# Grid Structure

Navigation  
(left, smaller)

Main content  
(center, wide)

Related content  
(right, smaller)



# Example (2019)

Software								Top
Periodo		Codice	Lingua	Insegnamento	Crediti	Docente	Note	Vincoli
<b>1° anno</b>								
1	01PDW0V	EN	Information systems ING-INF/05 (6)		6	M. Morisio	<a href="#">Note</a>	<a href="#">Vincoli</a>
1	02GOLOV	IT	Architetture dei sistemi di elaborazione ING-INF/05 (10) Oppure		10	P. Bernardi E. Sanchez Sanchez	<a href="#">Note</a>	<a href="#">Vincoli</a>
1	02LSEOV	EN	Computer architectures ING-INF/05 (10)		10	P. Montuschi	<a href="#">Note</a>	<a href="#">Vincoli</a>
1	01SQJOV	EN	Data Science and Database Technology ING-INF/05 (8) Oppure		8	S. Chiusano	<a href="#">Note</a>	<a href="#">Vincoli</a>
1	01SQMOV	IT	Data Science e Tecnologie per le Basi di Dati ING-INF/05 (8)		8	E. Baralis	<a href="#">Note</a>	<a href="#">Vincoli</a>
1	01OTW0V	EN	Computer network technologies and services ING-INF/05 (6) Oppure		6	M. Baldi	<a href="#">Note</a>	<a href="#">Vincoli</a>
1	02KPN0V	IT	Tecnologie e servizi di rete ING-INF/05 (6)		6	G. Marchetto	<a href="#">Note</a>	<a href="#">Vincoli</a>
2	02IEUOV	EN	Formal languages and compilers ING-INF/05 (6)		6	R. Sisto	<a href="#">Note</a>	<a href="#">Vincoli</a>
2	05BIDOV	IT	Ingegneria del software ING-INF/05 (8) Oppure		8	G. Bruno	<a href="#">Note</a>	<a href="#">Vincoli</a>
2	04GSP0V	EN	Software engineering ING-INF/05 (8)		8	M. Morisio	<a href="#">Note</a>	<a href="#">Vincoli</a>
2	01UDFOV	IT	Applicazioni Web I ING-INF/05 (6) Oppure		6	E. Masala	<a href="#">Note</a>	<a href="#">Vincoli</a>
2	01TXY0V	EN	Web Applications I ING-INF/05 (6)		6	F. Corno	<a href="#">Note</a>	<a href="#">Vincoli</a>
2	02GRSOV	IT	Programmazione di sistemi ING-INF/05 (10) Oppure		10	G. Cabodi	<a href="#">Note</a>	<a href="#">Vincoli</a>
2	01NYH0V	EN	System and device programming ING-INF/05 (10)		10	S. Quer	<a href="#">Note</a>	<a href="#">Vincoli</a>
<b>2° anno</b>								
1	01TYMOV	EN	Insegnamento a scelta 1 Information systems security ING-INF/05 (6) Oppure		6	6	<a href="#">Note</a>	<a href="#">Vincoli</a>
1	01UDUOV	IT	Sicurezza dei sistemi informativi ING-INF/05 (6)		6		<a href="#">Note</a>	<a href="#">Vincoli</a>
1	01SQNOV	EN	Software Engineering II ING-INF/05 (6) Crediti liberi		6		<a href="#">Note</a>	<a href="#">Vincoli</a>
1,2	29EBHOV		Tesi		30			
2			Insegnamento a scelta 2		6			
<b>Insegnamento a scelta 1</b>								
Periodo	Codice	Lingua	Insegnamento	Crediti	Docente	Note	Vincoli	
1	01TYDOV	EN	Cloud Computing ING-INF/05 (6)	6		<a href="#">Note</a>	<a href="#">Vincoli</a>	
1	01PDCOV	EN	Digital control technologies and architectures ING-INF/04 (6)	6		<a href="#">Note</a>	<a href="#">Vincoli</a>	
1	01TXZ0V	EN	Distributed systems programming ING-INF/05 (6)	6		<a href="#">Note</a>	<a href="#">Vincoli</a>	Si
1	01NWPOV	IT	Elaborazione dell'audio digitale ING-INF/05 (6)	6		<a href="#">Note</a>	<a href="#">Vincoli</a>	
1	01UDGOV	EN	Energy management for IoT ING-INF/05 (6)	6		<a href="#">Note</a>	<a href="#">Vincoli</a>	Si
1	02JSK0V	EN	Human Computer Interaction ING-INF/05 (6)	6		<a href="#">Note</a>	<a href="#">Vincoli</a>	★
1	01SQIOV	EN	Machine Learning and Artificial Intelligence ING-INF/05 (6)	6		<a href="#">Note</a>	<a href="#">Vincoli</a>	
1	01PDX0V	EN	Modern design of control systems ING-INF/04 (6)	6		<a href="#">Note</a>	<a href="#">Vincoli</a>	
1	01OUUV0V	EN	Optimization methods and algorithms MAT09 (6)	6		<a href="#">Note</a>	<a href="#">Vincoli</a>	
1	04CET0V	EN	Statistical methods MAT09 (6)	6		<a href="#">Note</a>	<a href="#">Vincoli</a>	

# Example (same page in 2020)

Software

▼ 1° anno 2020/2021

Periodo	Codice	SSD	Insegnamento	Lingua	Crediti	Docente	Note	Orario
1	01PDWOW	ING-INF/05 (6)	Information systems	🇬🇧	6	M. Morisio (118 iscr.)	🕒	
1	02GOLOV	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	01SQJOV	ING-INF/05 (8)	Data Science and Database Technology	🇬🇧	8	S. Chiusano (172 iscr.)	🕒	
oppure								
1	01SQMOV	ING-INF/05 (8)	Data Science e Tecnologie per le Basi di Dati	🇮🇹	8	E. Baralis (254 iscr.)	🕒	
1	01OTWOW	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	02JEUOV	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	04GSPOV	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	01SQNOV	ING-INF/05 (6)	Software Engineering II	🇬🇧	6		🕒	
1,2			Crediti liberi		6			
1,2	29EBHOV		Tesi		30			
2			Insegnamento a scelta 2		6			

# 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

27/10/22

47

I live inside my car leasing website all day Monday to Friday 9am-6pm. I lease the cheapest PCP and contract hire cars in the UK! - I am Ling, accept no substitutes

# LINGSCARS.com

Leader of the Pack - The UK's favorite car leasing website!

Contract hire cars from Ling Valentine. LINGSCARS 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**

4 News

PUBLIC PICCADILLY

**Leader of the Pack**

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

BREXIT RISK FREE! February 2017 theguardian

**CARS A-Z**

**ABARTH**

124 Spider Convertible  
595 Convertible  
595 Hatchback  
695 Convertible

**ALFA ROMEO**

Giulia Saloon  
Giulietta  
Stelvio Estate

**AUDI**

**1 DELIVERY TODAY**

Ford Ka+ Arthur ATTLEBOROUGH, NR17

**21 DELIVERIES IN LAST WEEK**

Renault Captur Cath PONTEFRACT, WF81

Mercedes GLC Coupe Bill BEDLINGTON, NE22

BMW 2 Series Convert... Pingu DERBY, DE6

Nissan Qashqai Arlene GLASGOW, G11

Volvo XC60 Estate Saif HILTON KEYNES, MK8

Seat Leon Ben BARNESLEY, 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

**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?). 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!**

**NICOLE...PAPA!**

**MEGA-HATCH!**

**Car Leasing Online Service Response Times**

Quote > Proposal > Order > Delivery

**75 CUSTOMERS IN 'PROPOSAL'**

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

**RENT NEW £127/mth including VAT**

**RENT NEW £152/mth including VAT**

**RENT NEW £157/mth including VAT**

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

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

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

**129 CUSTOMERS IN 'ORDER'**

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

# Colors

- Be careful, do not 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 image displays two side-by-side screenshots of the Stack Overflow homepage, specifically the 'Top Questions' section. Both screenshots show a list of programming-related questions. The left screenshot shows the full list of questions, while the right screenshot shows a significantly reduced list, indicating a search or filter has been applied.

**Left Screenshot (Original State):**

- Loop backward in array of objects (answered 10 secs ago)
- Chain of responsibility - handling more than one request (answered 2 mins ago)
- How to change internal function in MendelianRandomization function in order to change decimal places in output? (modified 2 mins ago)
- How can i remove duplicate words unseparated in a python string? (modified 24 secs ago)
- add 7 days to a date field and convert to unix time (modified 3 mins ago)
- C# Compiler Extension doesn't show messages on build (answered 3 mins ago)
- How to access data retrieved into an anonymous inner class (a listener) from the enclosing class? (asked 3 mins ago)
- QMediaPlayer stream data from a self signed Flask https server (modified 3 mins ago)
- How to destroy component created dynamically angular 8 (modified 4 mins ago)
- Import specific Components from cdn in react (asked 4 mins ago)
- Is it safe to store a session ID with window.history.replaceState? (asked 4 mins ago)
- List all dependents of a dependency from lock file (asked 4 mins ago)
- Python: how to print to excel/csv (asked 4 mins ago)

**Right Screenshot (Filtered State):**

- Loop backward in array of objects (answered 10 secs ago)
- Chain of responsibility - handling more than one request (answered 2 mins ago)
- How to change internal function in MendelianRandomization function in order to change decimal places in output? (modified 2 mins ago)
- How can i remove duplicate words unseparated in a python string? (modified 24 secs ago)
- add 7 days to a date field and convert to unix time (modified 3 mins ago)
- C# Compiler Extension doesn't show messages on build (answered 3 mins ago)
- How to access data retrieved into an anonymous inner class (a listener) from the enclosing class? (asked 3 mins ago)
- QMediaPlayer stream data from a self signed Flask https server (modified 3 mins ago)
- How to destroy component created dynamically angular 8 (modified 4 mins ago)
- Import specific Components from cdn in react (asked 4 mins ago)
- Is it safe to store a session ID with window.history.replaceState? (asked 4 mins ago)
- List all dependents of a dependency from lock file (asked 4 mins ago)
- Python: how to print to excel/csv (asked 4 mins ago)

# Palettes

Allegato 1

ABACO COLORI POLITICO

BLU

PANTONE	CMYK
288 CVP	100/80/0/30
90%	90%
80%	80%
70%	70%
60%	60%
50%	50%

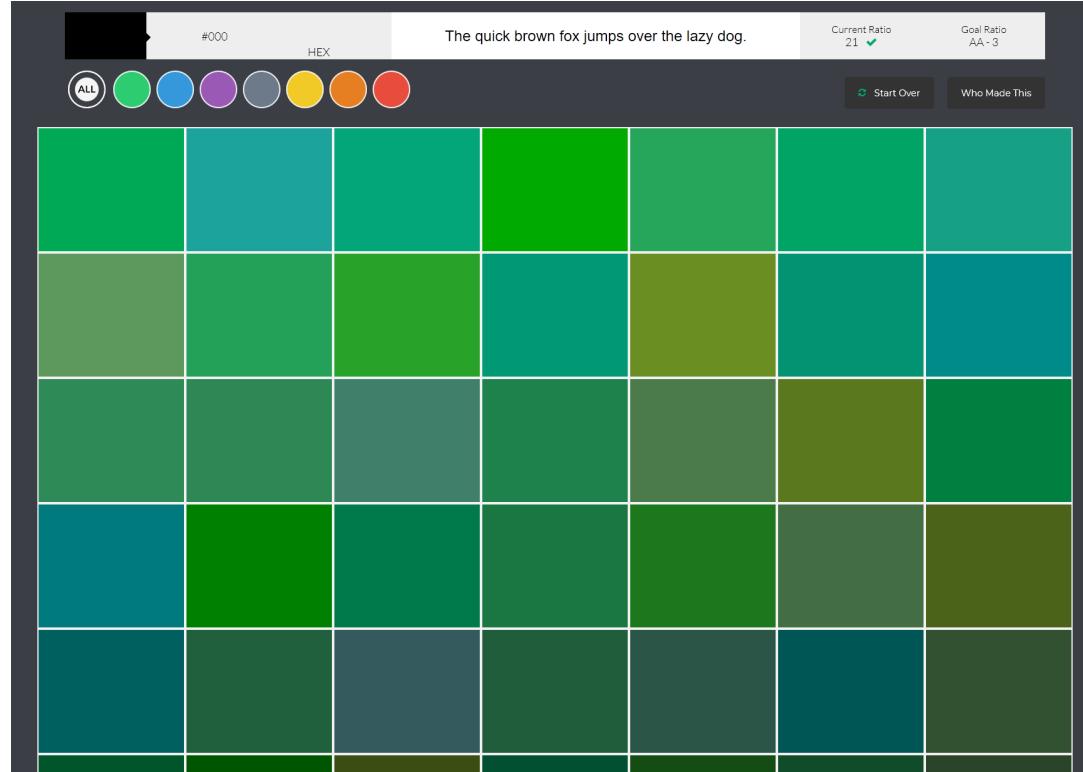
ARANCIO

PANTONE	CMYK	CMYK
ORANGE 021	0/70/90/0	0/70/100/0
137 CVP	0/60/90/0	0/60/100/0
130 CVP	0/50/90/0	0/50/100/0
123 CVP	0/40/90/0	0/40/100/0
	0/30/90/0	0/30/100/0
	130 CVP	

COMBINAZIONI

CMYK	CMYK
100/80/0/30	0/70/100/0
100/80/0/30	0/60/100/0
100/80/0/30	0/50/100/0
100/80/0/30	0/40/100/0
100/80/0/30	0/30/100/0

# Color Contrast



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

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: 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										



# License

- These slides are distributed under a Creative Commons license “**Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)**”
- **You are free to:**
  - **Share** — copy and redistribute the material in any medium or format
  - **Adapt** — remix, transform, and build upon the material
  - The licensor cannot revoke these freedoms as long as you follow the license terms.
- **Under the following terms:**
  - **Attribution** — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
  - **NonCommercial** — You may not use the material for commercial purposes.
  - **ShareAlike** — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original.
  - **No additional restrictions** — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.
- <https://creativecommons.org/licenses/by-nc-sa/4.0/>