

# Grids and Layout

Prof. Lydia Chilton  
COMS 4170  
26 January 2022

Type/raise hand in zoom!



# TA sections are assigned on Slack

- Please reach out and **say hi!** Share a meme. Complain about the class. (Although I'm also in the group... so beware).
- This TA is in charge of grading you.
- If you have a question too specific or personal for the Ed Board, please ask your TA first.
- Your TA will provide "continuity of care."
- Your TA is your mentor. Their feedback will dictate your project grade.
- 3 of the students in your section will be your groupmates. Start making friends now!
- **If you have been admitted to this class after Monday morning** - you might not have a TA group yet. You'll just have to wait for now. We'll do another round of assignments after the class adjustment period (Friday).

# Why do we have TA sections?

- Individual Mentorship improves education by 2 standard deviations.
  - Mentors can help you "debug" the way you're thinking about problems to help you get faster and better at design and programming.
- Humans are social learners.
  - We learn behaviors, habits, mental models by observing other people.
    - (Not from reading lecture slides!)
  - We learn best when we feel understood by others.
- Common complain – "I don't know anyone in this class"
  - Now you'll know 25 other people at least.

# No private homework questions on Ed.

- We won't answer private Ed questions.
- Because we can't answer the same question 550 times.
- If you have a specific or private issue, **contact your TA on slack!**

# Switching Sections

- If you want to switch sections,
  - **put yourself on the waitlist of the section you want to be in.**
  - Email Lydia your reason.
  - I'll decide by Friday (add/drop date).
- It's a huge pain to move people around, so I will only do this for people with a legit reason.

# More Office Hours tonight:



Office Hours - UI Design Spring 22



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100% \$ % .0 .00 123 Lato 11 B I S A

D15	A	B	C	D
20				
21				
22	Wednesdays	6:00 PM	Maria	<a href="https://meet.google.com/nsw-oojq-twq">https://meet.google.com/nsw-oojq-twq</a>
23		7:00 PM	SWAPNIL	<a href="https://columbiauniversity.zoom.us/j/8634556879?pwd=UGV0">https://columbiauniversity.zoom.us/j/8634556879?pwd=UGV0</a>
24		8:00 PM	George Cherian	<a href="https://columbiauniversity.zoom.us/j/91440875345?pwd=WXhJ">https://columbiauniversity.zoom.us/j/91440875345?pwd=WXhJ</a> <a href="https://columbiauniversity.zoom.us/j/91440875345?pwd=WXhJ">2ZRekFPY1JPc2ILS1V5dz09</a>
25				
26	Thursdays	9:00 AM	YY	no pro acct yet
27		10:00 AM	YY	no pro acct yet
28		12:00 PM	George Cherian	<a href="https://columbiauniversity.zoom.us/j/91440875345?pwd=WXhJ">https://columbiauniversity.zoom.us/j/91440875345?pwd=WXhJ</a> <a href="https://columbiauniversity.zoom.us/j/91440875345?pwd=WXhJ">2ZRekFPY1JPc2ILS1V5dz09</a>
29		2:00 PM	Pramo	<a href="https://columbiauniversity.zoom.us/j/94111404634?pwd=ajcv">https://columbiauniversity.zoom.us/j/94111404634?pwd=ajcv</a>
30		3:00 PM	Pramo	<a href="https://columbiauniversity.zoom.us/j/94111404634?pwd=ajcv">1OUJHWnIZRGFwUVI5UT09</a>
31		6:00 PM	Esme	No pro acct yet
32		7:00 PM	Margaret	No pro acct yet
33				
34				

UI Design '22

# oh-waiting-room

- All DMs
- Mentions & reactions
- Saved items
- Slack Connect
- More
- Starred
- staff
- Channels
  - general
  - oh-waiting-room**
  - random
  - Add channels
- Direct messages (2)

This is the very beginning of the #oh-waiting-room. You created this channel yesterday. Add description

Add people

lydia 9:03 PM  
joined #oh-waiting-room.

Send a message to #oh-waiting-room

+ @ Aa

# Put yourself in the queue, and a TA will reach out on slack.



Office Hours Queue ☆ 📁 ☁

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↶ ↷ 🖨 📄 | 100% ▾ | \$ % .0\_ .00 123 ▾ | Default (Ari... ▾ | 10 ▾ | **B** *I* ~~S~~ A | 🔍 🗃 ↻ ▾ | ☰ ▾ | ⏴ ⏵ ▾

C13 | *fx*

	A	B	C	D	E
1	<b>slack name</b>	<b>Time you put yourself in the queue</b>	<b>what problem number?</b>	<b>any other details.</b>	<b>TA who will help you (for staff use only)</b>
2					
3	lydia	11:50 PM	1a	i need help getting started	ANYONE!!!!
4	drashko	11:53	12c	I know my answer is right, I just want to show off and waste TA time.	everyone!!!!
5	elmo	12:01	5a,b,c,		george, if possible
6					
7					
8					

# User Interface Design

COMS 4170 · Spring 2022

[Home](#)

[Grading](#)

[Syllabus](#)

[Ed Forum](#)

## Our Goals:

1. Understand users and build websites that suit the needs and abilities.
2. Design useable systems through iteration and feedback.

### INSTRUCTOR

[Prof. Lydia Chilton](#)

OH: Monday 5:30-6:30, CEPSR 612

Please contact staff through [Ed](#) or Slack

### TA OFFICE HOURS

The list of [TA office hours](#) is [here](#)

To attend office hours, hang out in the Slack channel "oh-waiting-room".

Add yourself to the [OH queue here](#) (and pinned to the oh-waiting-room slack channel. A TA will ping you on slack when they're ready for you. Feel free to chat with other students in the waiting room channel.

### WEEKLY SCHEDULE

Monday, Wednesday

4:10–5:25pm

IAB 417

# Desu



- Senior in CC majoring in CS
- Previously took and TA'ed for Professor Brian Smith's UI course; I have also TA'ed for 1004 and 3134 since sophomore year
- I've interned as a software engineer (frontend, design, ux) in fintech and bigtech so let me know if you need advice or resources!
- Fun Facts:
  - Grew up in Louisiana, Georgia, and Florida (Yes, I say "y'all" unironically)
  - Big movie/show fanatic – I've seen movies that have yet to be released and I always know the inside scoop on The Bachelor series drama
  - Timothée Chalamet is my favorite human besides my mom
- Stoked to be TAing for this class and can't wait to support y'all!

# Audrey



- Senior in CC studying CS and German (don't really know how that happened)
- previously took Prof. Smith's section and really enjoyed learning how to approach human-centered design
- I can't wait to meet and work with everyone!

# SWAPNIL



- Second Year Grad student at SEAS pursuing MS CS (Software Systems Track)
- I took UI Design in spring 2021, LOVED IT!!!
- I have a granted patent and I am working on my own startup (I don't want a stable life :-P), so if anyone wants to talk about startups, MVP, Patents, etc., feel free to ping me.
- I have binge-watched Peaky Blinders like 100 times, and I can do a 101 if you need a company.
- Something random: Lydia is too cool to be a professor (You can say anything in her class), but warm up assignments are not so cool. However, you will feel good about them halfway through the semester.

# Sarah Huang

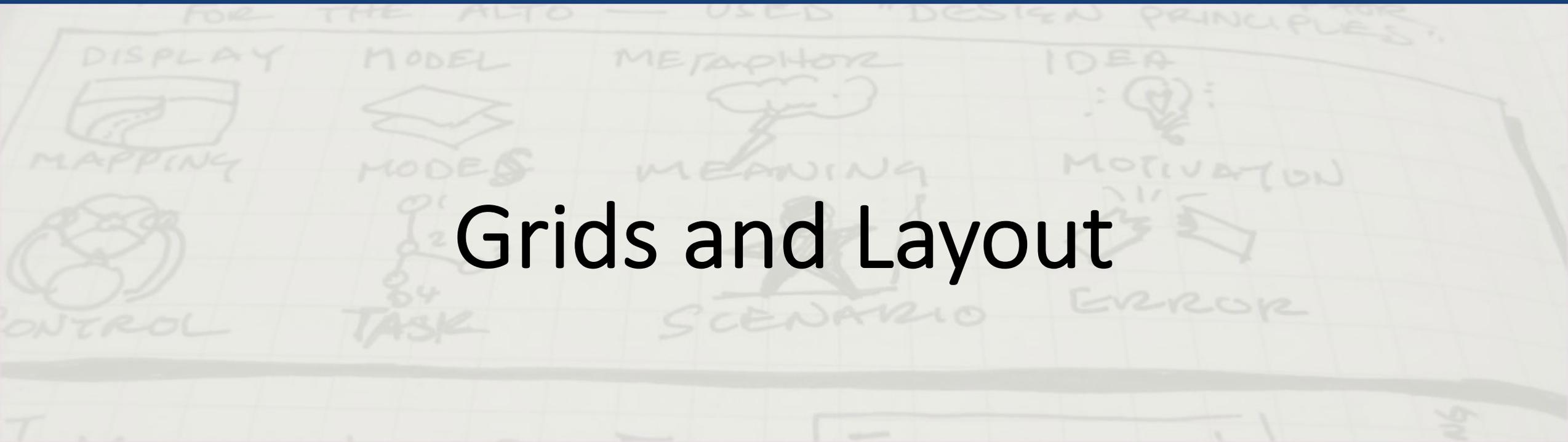


- Senior at Barnard majoring in CS
- Took UI Design (Spring 2020) and Advanced Web Design Studio (Fall 2021) with Lydia!
- Interests lie in UI/UX design, HCI, and frontend research
- Worked in HCI/frontend research over the past two summers, co-authored a paper with one of Lydia's grad students + undergrads
- Hobbies: learning languages, horror movies, currently watching Fleabag, reading
- Can't wait to meet everyone! :)

# Casey



- MS CS Student
- Took UI Design Fall '21 with Professor Brian Smith and loved the material
- I am originally from California and did my undergrad at UCLA
- I play club volleyball and love yoga and cooking in my free time
- I'm excited to meet you all and to have a great semester!



# Grids and Layout

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The main feature of many websites is to **display information** in a way that helps users **accomplish a goal**.

```
i:Exit --PrevPg <Space>NextPg v:View Attach. d:Del r:Reply j:Next ? :Help
624 Aug 03 T Martinez ( 37) Loans with tiny points are here now
625 0 Jul 01 R. Jackson ( 123) Loans with tiny rates are here now
626 Aug 05 Benjamin E. Mag ( 50) Long time no hear
627 May 17 Krista Aaron ( 44) long time no see...
628 0 Jun 03 Josiah House ( 35) Looking for a hot date tonight, tomorrow, or next week?
629 Jul 03 Brigitte I. Hay ( 63) Looking for a N.ew H.ome?
630 May 17 Joe Burns ( 58) Looking for you
631 Jun 01 Save in a poor ( 145) Low Rate Consolidation Mortgage Loan
632 + Jul 02 Igiel@virtualig ( 2) LowCost SoftWare OnCD
+ Mult: Mail/junk/spam (Msgs:950 Old:142 10M) -- (subject/date) (66%)
Date: Mon, 17 May 2004 03:40:09 +0100
From: Krista Aaron <Christinefeminine@highstream.com>
Subject: long time no see...

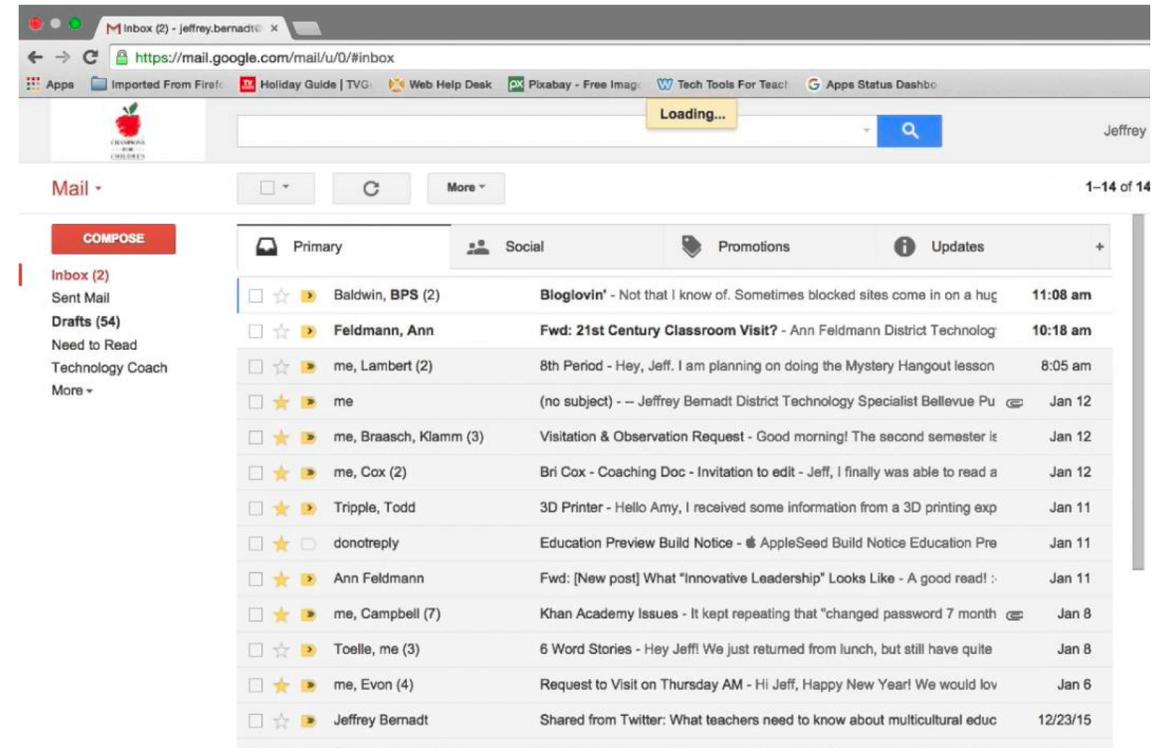
[--- Autoview using /usr/bin/elinks -force-html -dump '/tmp/mutt.html' ---]
My name is Jen and I'm new to this dating thing. I've checked out your profile
you put up and it's interesting. => I just want to get to know you a little
better if you don't mind, come check my profile out at:

www.livejen.com/chat.html

I also got a webcam so we can make it interesting, anyways hope you get back to
me.
bye :)

gxsnkxxgnduvy.jwyceudc.jobxs
zcozccrociiesbehgbpow
rnxlfnjqbplipdkgwuyqofracsz
xmqaubxsbjrppoibvlpfhqowldtp
bixghvrxrtggfcoqcofzycb
hugzffaffulsklpzhrfxbtt
btpztlfotqmmoaiwlosqv
- - 627/950: Krista Aaron long time no see... (66%)
Key is not bound. Press '?' for help.
```

Pine text-based email client



GMail

# Seven tools for visually indicating importance

You are cordially invited to  
Robert and Alexandra's delectable after dinner  
party.  
Wine and nibbles will be served.  
When: February 20<sup>th</sup>, 2018 at 9:30pm.  
Where: the pad. If you need directions, ping us.  
Kindly let us know if you will be attending by  
February 1<sup>st</sup>.

Conceptual grouping



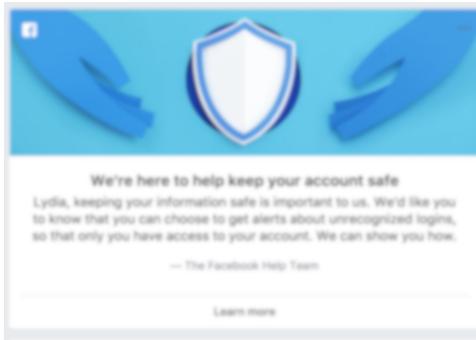
Location



Whitespace



Size



Images

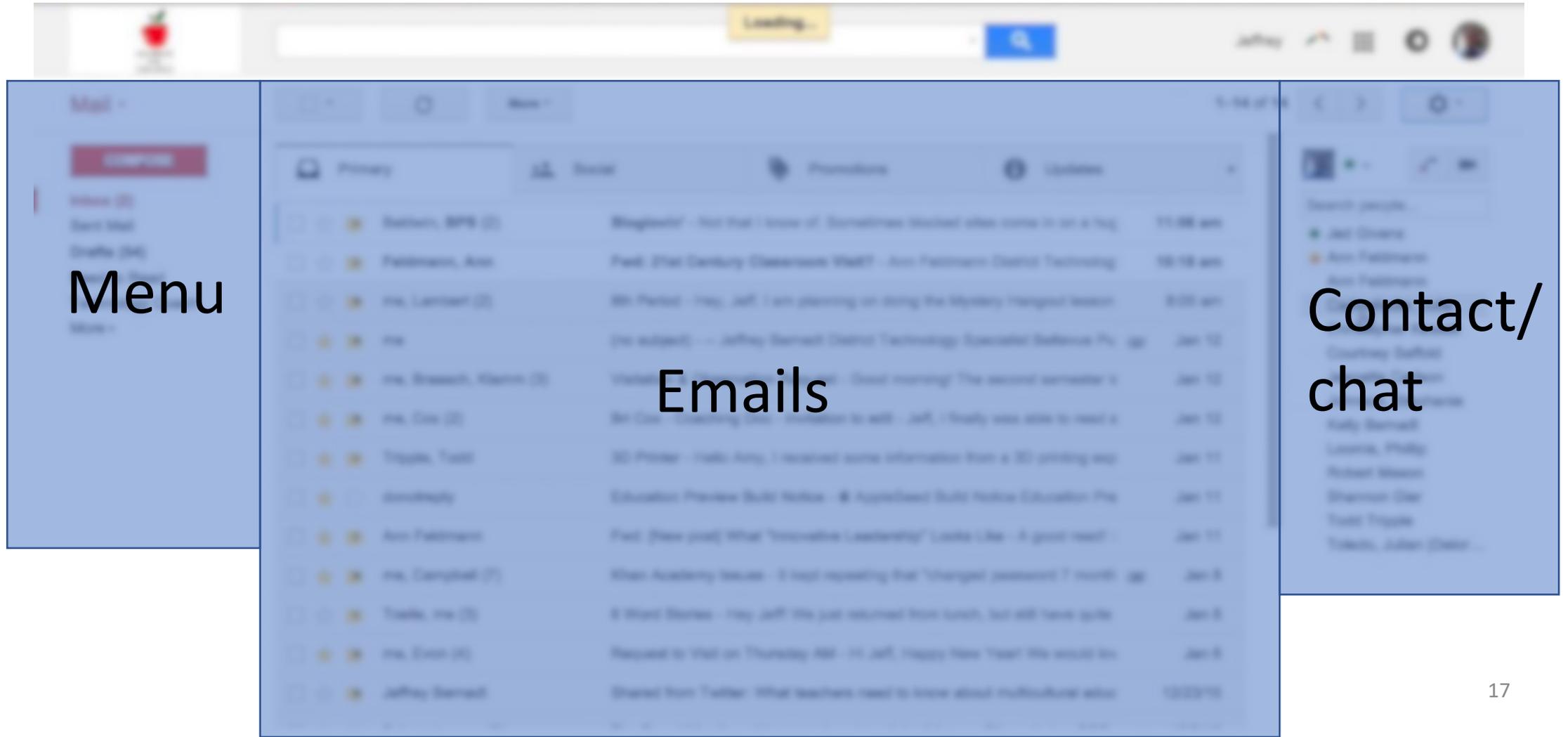
You are cordially invited to  
**Robert and Alexandra's  
delectable after dinner party.**  
Wine and nibbles will be served.

Contrast

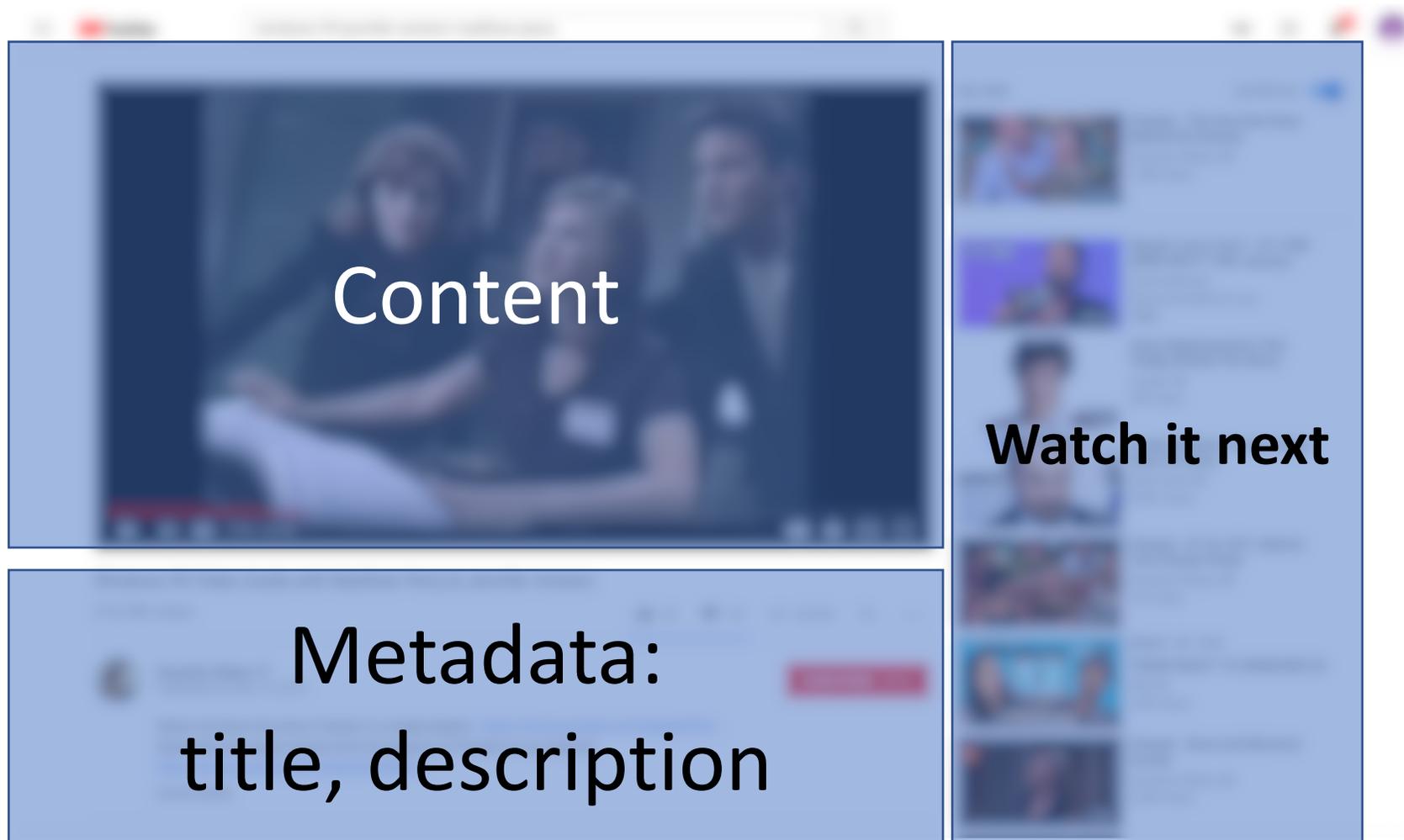


Color

# What are the conceptual groups in Gmail?



# What are the conceptual groups in YouTube



How should we layout  
information on a page?

# Old school information layout

**LEIPZIGER  
MESSE**  
*Allgemeine Mustermesse mit  
Technischer Messe und  
Baumesse*  
**Die allgemeine internationale  
Messe Deutschlands**  
*Die erste und größte Messe der Welt  
Für Aussteller und Einkäufer  
gleich wichtig*  
BEGINN DER HERBSTMESSE AM 27. AUGUST 1922.  
*Auskunft erteilt und Anmeldungen nimmt entgegen*  
MESSAMT FÜR DIE MUSTERMESSEN  
IN LEIPZIG

Vance Hotel  
Statesville, N. C.

**Grays**  
"FAMOUS for FOOD"

ways 21, 64, 70  
We Never Close

**TYPICAL MENU**

BREAKFAST 25 cents	LUNCH 35c and 50c	DINNER 50 cents
Fruit or Cereal	Homemade Vegetable Soup Tomato Broth	Tomato Juice
One Egg, Any Style	Lettuce and Tomato Salad	Homemade Vegetable Soup
One Piece Bacon or Sausage	Roast Beef Brown Gravy	Cream of Green Pea Soup
Jelly	Baked Virginia Ham	Country Style Steak
Hominy Grits	Fried Salmon Trout and Cole Slaw	Broiled Lamb Chops
Buttered or Dry Toast	Boston Brown Potatoes	Baked Salmon Trout
Coffee Tea Milk	Green Beans	Poached Egg on Toast
Specials from 25c to 75c	Diced Carrots and Cream	Hash Brown Potatoes
§	Corn Muffins	Early June Peas
§	Assorted Pies	Corn Pudding
A La Carte Service at all Times	Fruit Jello Whipped Cream	Head Lettuce with Dressing
§	Vanilla or Chocolate Ice Cream and Cake	Boston Cream Pie
§	§	Vanilla or Chocolate Ice Cream and Cake

Symmetrical

**Eggs and Omelettes**  
Scrambled Eggs with English Kipperd Herrings 1.00  
Hangtown Fried Oyster Omelette 1.00

**Specialties of the House**  
SPAGHETTI DERBY: Italian Spaghetti, Fresh Tomatoes, Mushrooms  
and Meat Sauce 1.10  
MEXICAN TAMALES (Old Fashioned Mexican Maize Chicken Tamale,  
Fresh Daily) 90  
CREAMED TURKEY DERBY (All White Meat, Served in Toasted  
Crouton, with Cranberry Jelly) 2.25  
PAN FRIED CORNED BEEF HASH 1.00; with Poached Egg 1.25  
STEAK HAMBURGER DE LUXE (Ground Sirloin Steak)  
with or without Onions, Potatoes 1.85  
DE LUXE CHICKEN ENCHILADAS with Chili Con Carne  
and Frijoles 1.50  
FILET MIGNON TID-BITS with Sliced Mushrooms, Chef's Special,  
Risotto 1.85  
SCALLOPED CHICKEN A LA KING in Patty Shell, Peas in Butter 1.25

**Entrees**  
HUNGARIAN VEAL GOULASH with Egg Noodles Polonaise 1.50  
RACK OF LAMB PARISIENNE in Casserole 1.50  
BOILED HAM HOCKS and Baked Beans, Boston Brown Bread 95  
PAN FRIED ROAST BEEF HASH, Poached Egg 1.00  
MEDAILLONS OF PORK FILET Saute, Marsala, Timbale of Rice 1.50  
FRESH ASPARAGUS with Fried Ham, Sauce Hollandaise 1.65  
DERBY APPLE PANCAKE with Cinnamon Butter 1.10  
EMINCE OF CALF'S LIVER with Mushrooms,  
in Sour Cream Sauce, Rice 1.20

**Desserts**  
Ice Cream 40  
Parfaits 50  
Baked Fresh Rhubarb 50  
Sherbet 40

**Pastry Specials**  
Blackbottom Pie 40  
Parisian Pastries 40  
Rio Rita Cake 40  
Rice or Chocolate Pudding 35

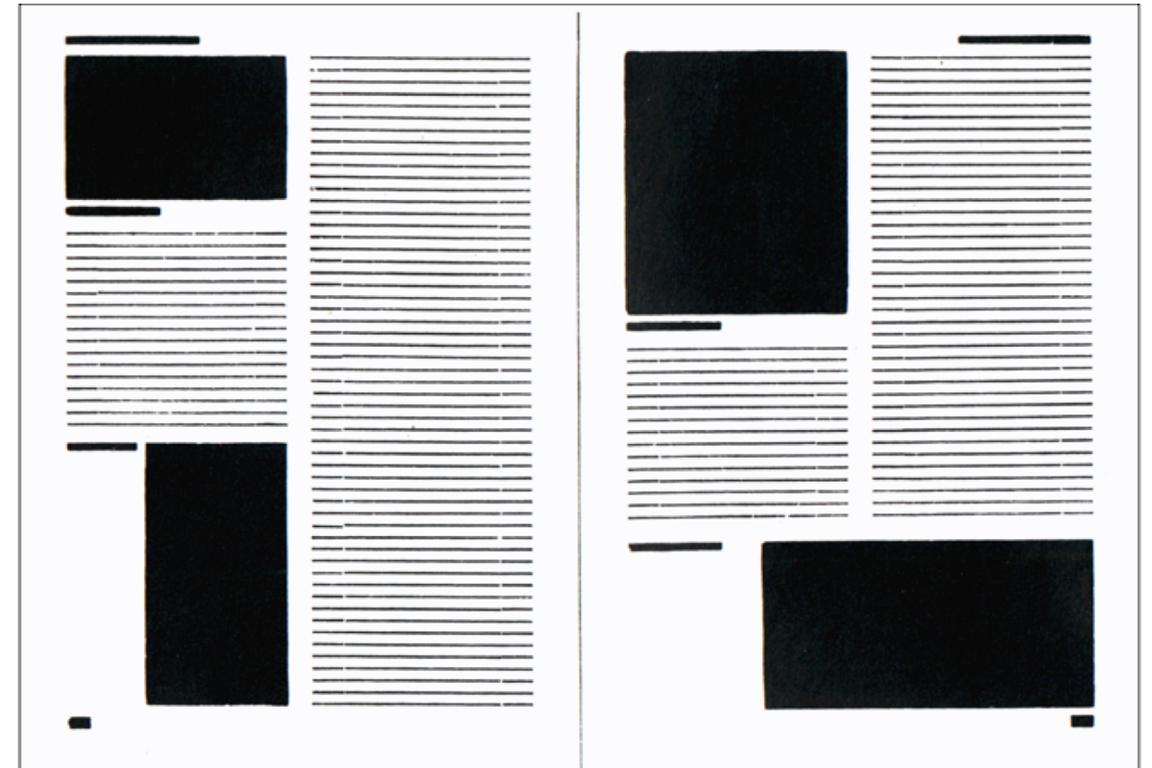
BEVERAGES AS LISTED ON A LA CARTE MENU

Sales Tax will be added on all taxable items in accordance with the rulings  
issued under the Sales and Use Tax Law  
Sorry we cannot be responsible for lost articles  
Friday, January 17, 1947

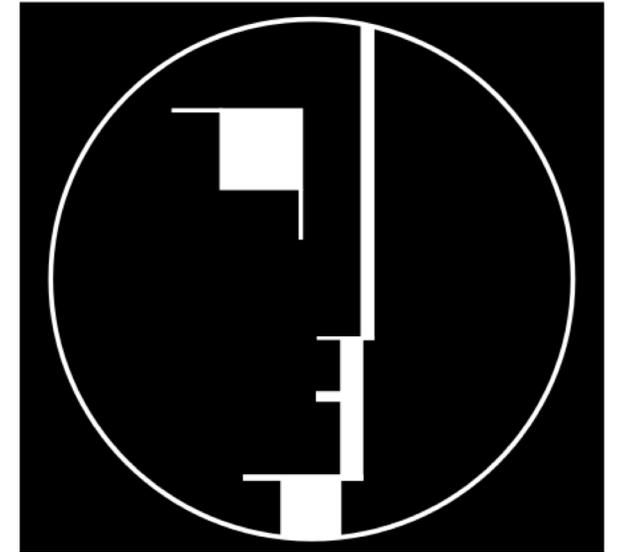
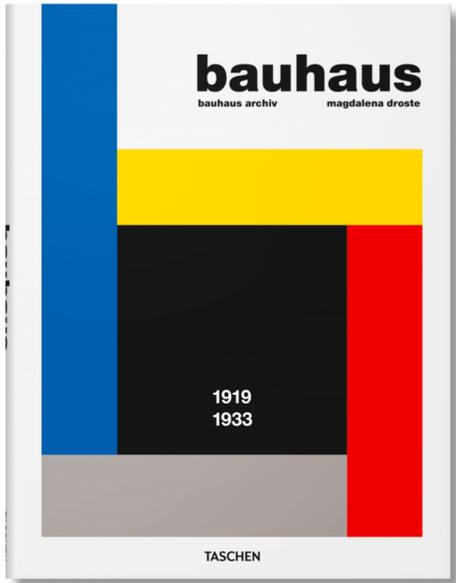
Before:  
Symmetric Layout



Now:  
**Asymmetric Grids Layout**



# The Bauhaus School of Design (1919-1933)



“[Bauhaus] attempted to unify the principles of mass production with individual artistic vision.

It strove to combine aesthetics with everyday function.”

# Grid Layouts:

## Typographer Jan Tschichold made grid layouts inspired by Bauhaus

	<p><b>Lorem Ipsum!</b></p> <p><i>dolor sit amet</i></p>	<p><b>Lorem Ipsum!</b></p> <p><i>dolor sit amet</i></p>	<p><b>Lorem Ipsum!</b></p> <p><i>dolor sit amet</i></p>	
<p>Consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>	<p>Consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>	<p>Consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>		

	<p><b>Lorem Ipsum Dolor Sit Amet Consectetur</b></p>	<p><b>Lorem ipsum dolor sit amet</b>          Consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>		
		<p><b>Lorem ipsum dolor sit amet</b>          Consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>		
		<p><b>Lorem ipsum dolor sit amet</b>          Consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>		

# Grids can convey importance through: Groups, location, size and whitespace

You are cordially invited to  
Robert and Alexandra's delectable after dinner  
party.  
Wine and nibbles will be served.  
When: February 20<sup>th</sup>, 2018 at 9:30pm.  
Where: the pad. If you need directions, ping us.  
Kindly let us know if you will be attending by  
February 1<sup>st</sup>.

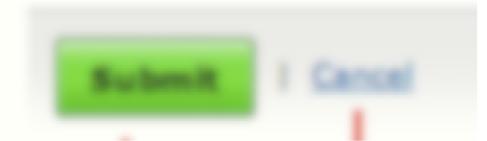


Conceptual grouping

Location



Whitespace



Size

# Grids can convey importance through: Groups, location, size and whitespace

	<b>Lorem Ipsum!</b> <i>dolor sit amet</i>  Consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.	<b>Lorem Ipsum!</b> <i>dolor sit amet</i>  Consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.	<b>Lorem Ipsum!</b> <i>dolor sit amet</i>  Consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.	
--	--	--	--	--

**How do we create groups in a grid?**

By creating a column or row.

**How do we use location to make a group appear more important?**

Put the information in the upper left grid cell.

**How do we use size to make a group appear more important?**

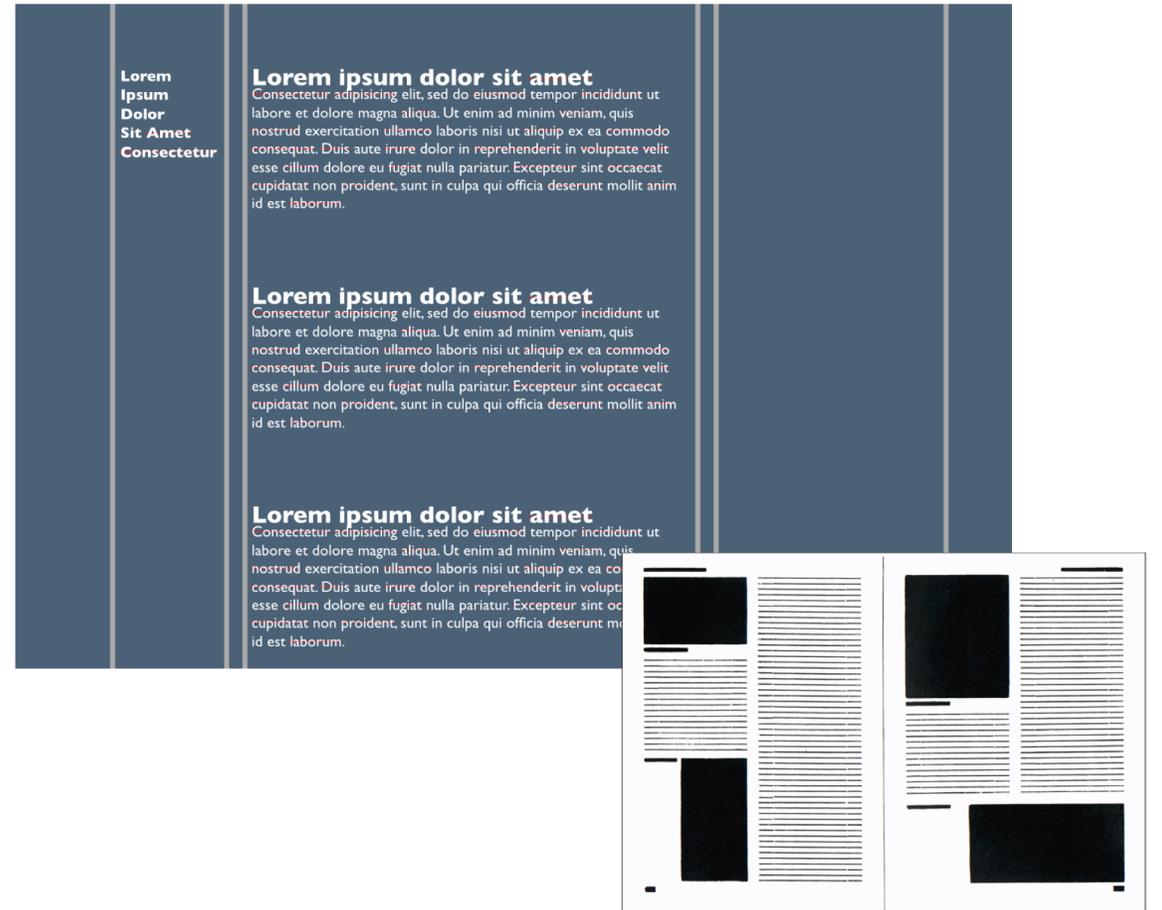
Make a column wider.

**How do we use whitespace to make a group appear more important?**

Increase the size of the gutters.

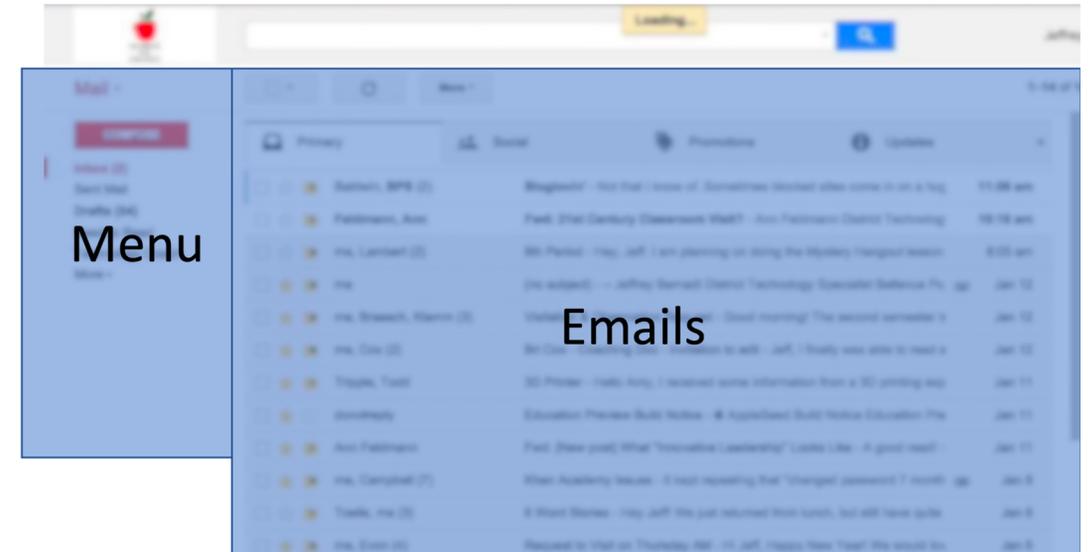
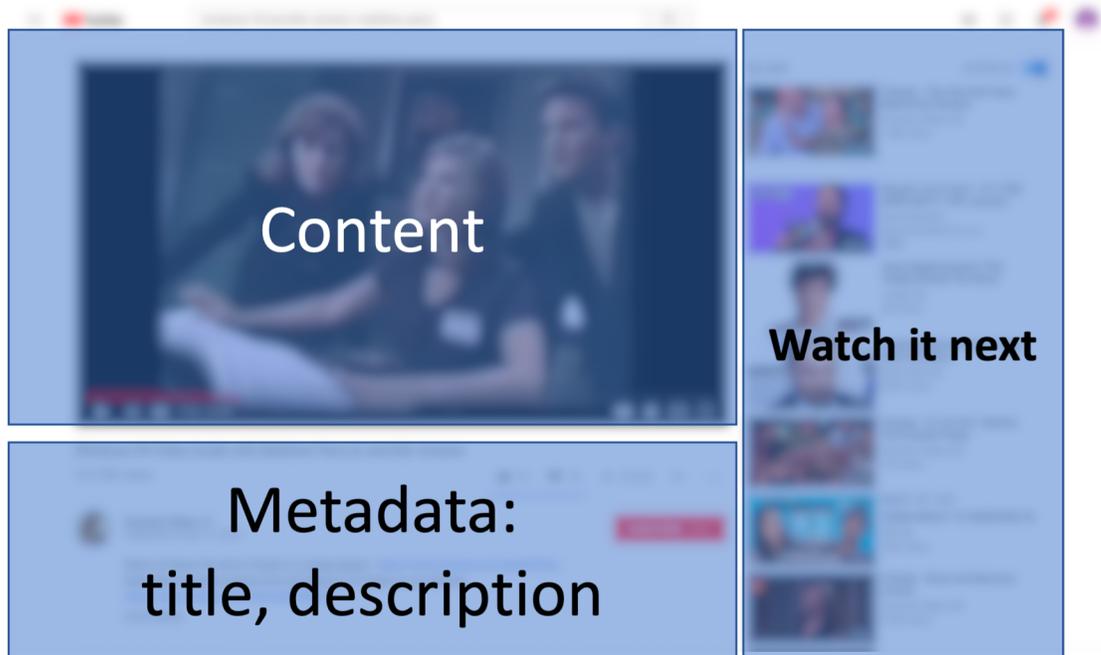
# Not all the ideas of the Bauhaus school are new.

WTF?



But there is freedom from the symmetric layout.

# Grid layout heavily influenced web layout

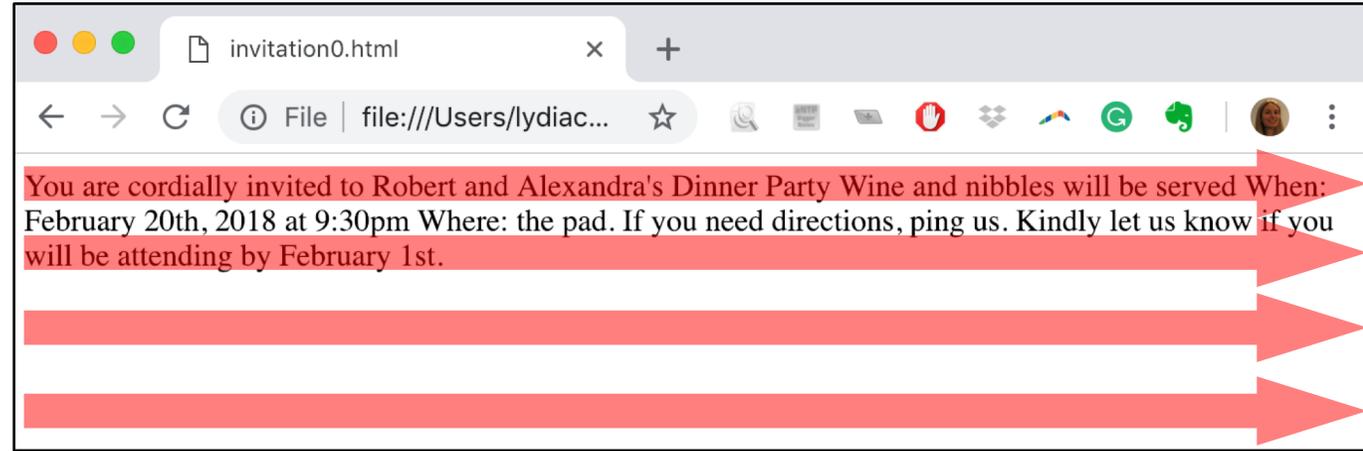


# Basic Layout in HTML (no grids yet)

How to construct the layout of information in HTML and CSS

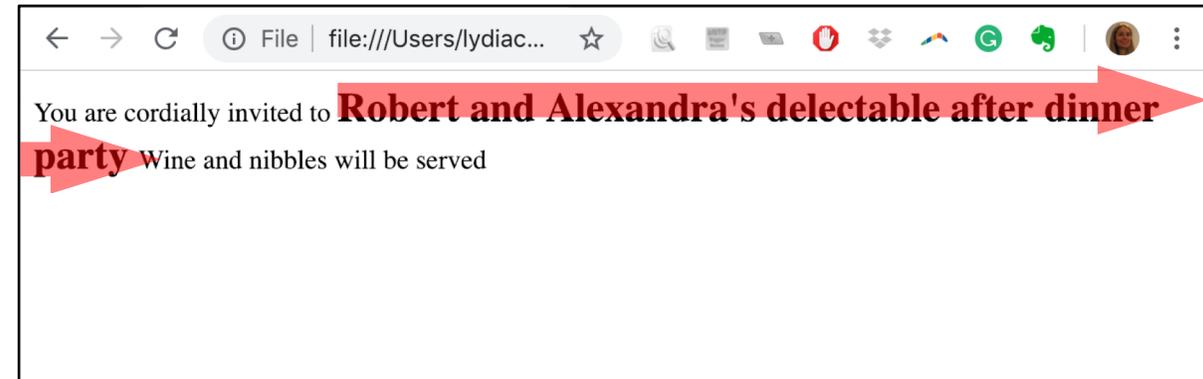
# Web Browsers are in charge of rendering HTML

```
invitation0.html
1 <html>
2   <body>
3
4     You are cordially invited to
5     Robert and Alexandra's Dinner Party
6     Wine and nibbles will be served
7
8     When: February 20th, 2019 at 9:30pm
9     Where: the pad. If you need directions, ping us.
10
11     Kindly let us know if you will be attending by February 1st.
12
13
14   </body>
15 </html>
```



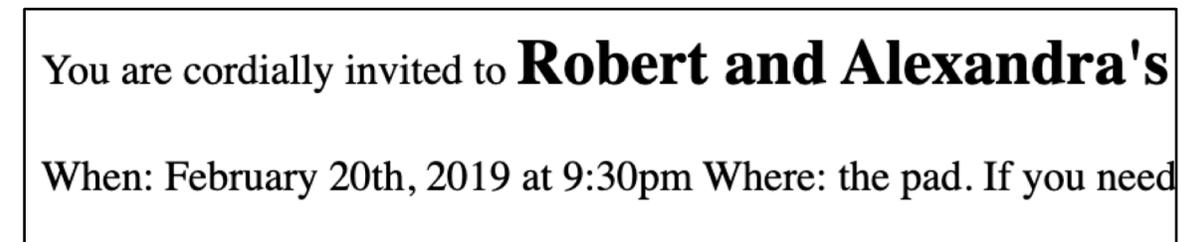
When you add elements, they either obey the line-wrap layout or break it.

```
19 <div>
20   You are cordially invited to
21   <span class="dark big">
22     Robert and Alexandra's
23     delectable after dinner party
24   </span>
25   Wine and nibbles will be served
26 </div>
```



`<span>` elements **obey** line-wrap layout

```
<div>
  You are cordially invited to <span class="dark big">
</div>
<div>
  When: February 20th, 2019 at 9:30pm Where: the pad. If you need
</div>
```



`<div>` elements **break** line-wrap layout

# When you use a new element, ask: does it obey or break line-wrap layout?

Anchor  
(hyperlink)

```
<a href="slides.pdf">Slides are here</a>
```

[Slides are here](#)

Image

```

```



# The best way to know what a layout will look like is to run it.

Form

```
<form action="/action.php">  
  First name: <br>  
  <input type="text" name="firstname" value="Mickey">  
  <br>  
  Last name: <br>  
  <input type="text" name="lastname" value="Mouse">  
  <br><br>  
  <input type="submit" value="Submit">  
</form>
```

First name:

Mickey

Last name:

Mouse

Submit

Today's goal:

# Remake this information layout in HTML and CSS

facebook



## PictureCorrect Photography Tips

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



**PictureCorrect Photography Tips** My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries to my portfolio! What is yours?

-Richard

11 minutes ago · Flag



**James Donnelly** Larger concerts to cover and improve my portrait editing style/skill

10 minutes ago · Flag



**Jose Antonio Rubido** To push my photpography foward full throttle

9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

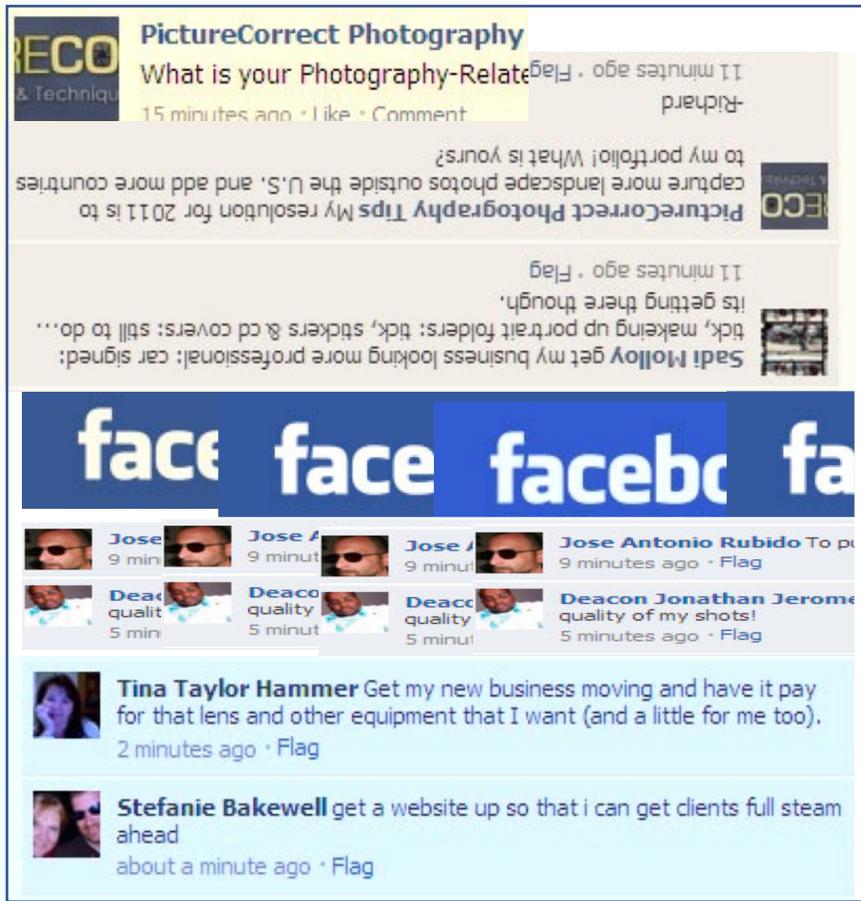
5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!



# How would you help this person?



# Iterative Style of Programming

What is the **smallest** unit of progress I can make?

## Iteration

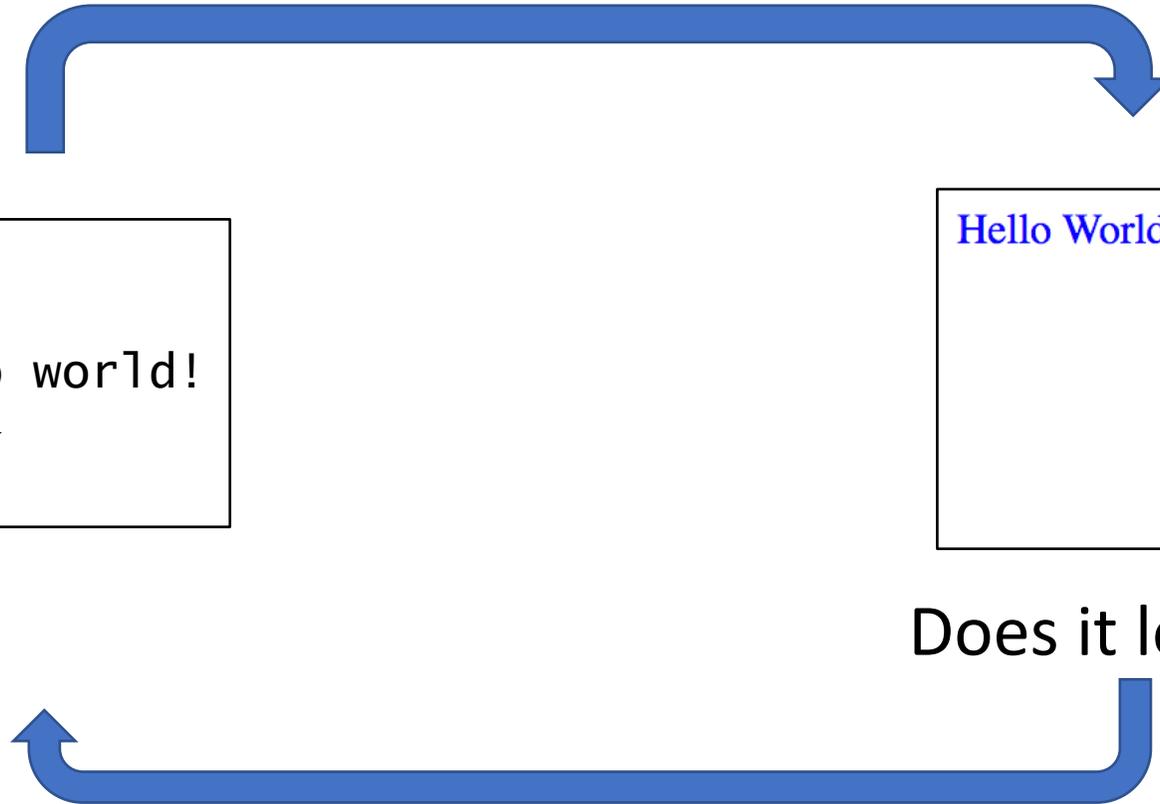
```
<html>
  <body>
    Hello world!
  </body>
</html>
```

```
Hello World!
```

## Goal



Does it look ok?



# Step 0. Make a html page, connect some CSS

```
<!DOCTYPE html>
<html>
<head>
<style>
  #test{
    color: blue;
  }
</style>
</head>

<body>
  <div id="test">Hello World!</div>
</body>
</html>
```



Hello World!

# What should we do first?

A screenshot of a Facebook post from the page 'PictureCorrect Photography Tips'. The post title is 'What is your Photography-Related New Year's Resolution??' and it was posted 15 minutes ago. Below the title, it says 'Adel Gomaa and Richard Schneider like this.' There are five comments from users: Sadi Molloy, PictureCorrect Photography Tips, James Donnelly, Jose Antonio Rubido, and Deacon Jonathan Jerome Johnson. Each comment includes a small profile picture and the text of their resolution. The entire screenshot is enclosed in a red border.

**facebook**

**PictureCorrect Photography Tips**  
What is your Photography-Related New Year's Resolution??  
15 minutes ago · Like · Comment

Adel Gomaa and Richard Schneider like this.

**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.  
11 minutes ago · Flag

**PictureCorrect Photography Tips** My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries to my portfolio! What is yours?  
-Richard  
11 minutes ago · Flag

**James Donnelly** Larger concerts to cover and improve my portrait editing style/skill  
10 minutes ago · Flag

**Jose Antonio Rubido** To push my photpography foward full throttle  
9 minutes ago · Flag

**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!  
5 minutes ago · Flag

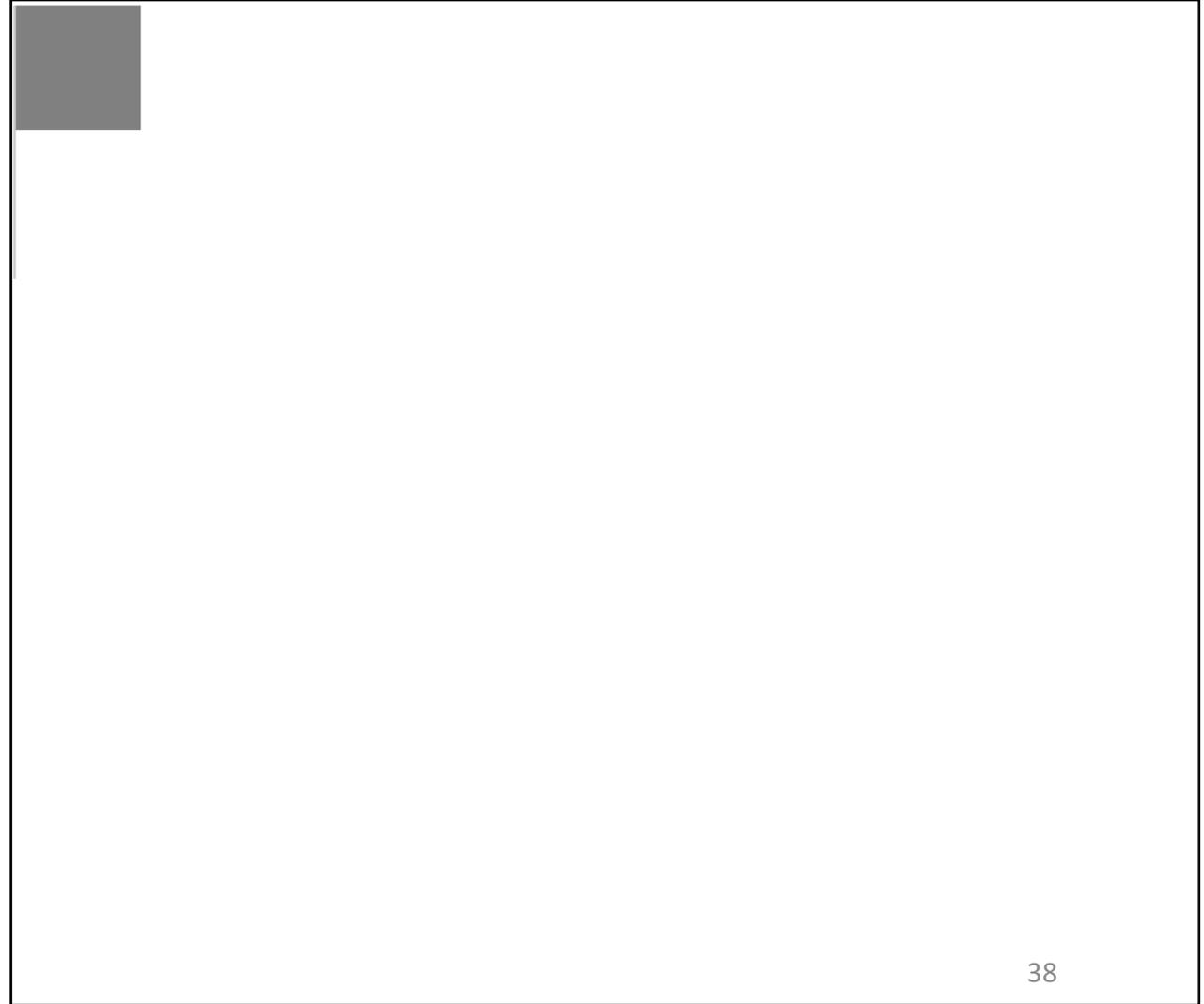
**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!  
4 minutes ago · Flag

Make a container

# Step 1. Make a container div

```
1 <div id="container">  
2  
3 </div>
```

```
1 #container{  
2   width: 50px;  
3   height: 50px;  
4   background-color: grey;  
5 }  
6
```



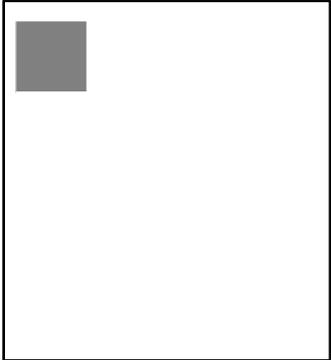
# Iterative Style of Programming

What's the most **basic** thing I can do to make **necessary** progress towards my goal?

# Goal

# Iteration

```
<html>  
  <body>  
    Hello world!  
  </body>  
</html>
```



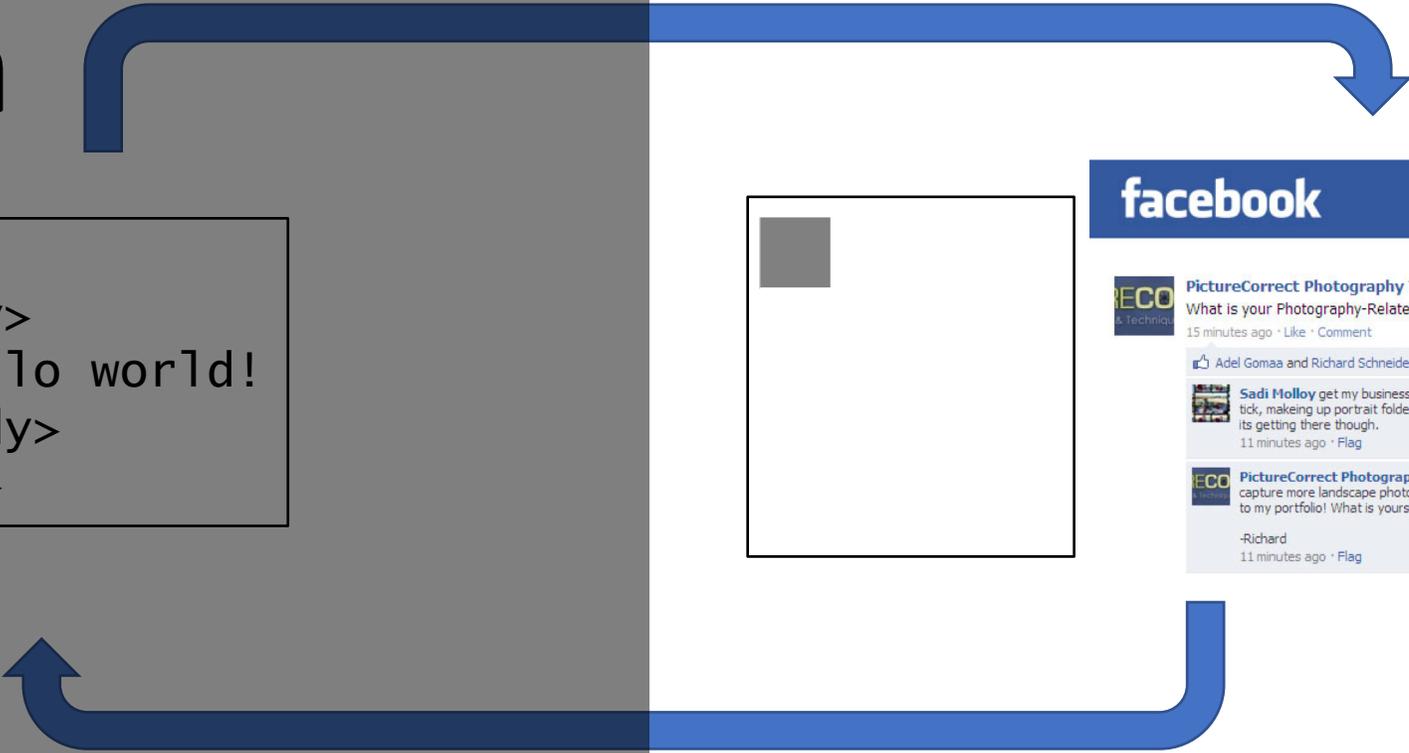
facebook

**PictureCorrect Photography Tips**  
What is your Photography-Related New Year's Resolution??  
15 minutes ago · Like · Comment

Adel Gomaa and Richard Schneider like this.

**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.  
11 minutes ago · Flag

**PictureCorrect Photography Tips** My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries to my portfolio! What is yours?  
-Richard  
11 minutes ago · Flag



Does it look ok? What's next?

# Give Container div realistic width.

```
1 <div id="container">  
2  
3 </div>
```

```
1 #container{  
2   width: 350px;  
3   height: 50px;  
4   margin: 50px;  
5   background-color: grey;  
6 }
```



# What's next?



The image shows a screenshot of a Facebook post from the page "PictureCorrect Photography Tips". The post title is "What is your Photography-Related New Year's Resolution??" and it was posted 15 minutes ago. Below the title, it shows that Adel Gomaa and Richard Schneider liked the post. The main content of the post is a list of resolutions from several users:

- Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though. 11 minutes ago · Flag
- PictureCorrect Photography Tips** My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries to my portfolio! What is yours? -Richard 11 minutes ago · Flag
- James Donnelly** Larger concerts to cover and improve my portrait editing style/skill 10 minutes ago · Flag
- Jose Antonio Rubido** To push my photpography foward full throttle 9 minutes ago · Flag
- Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots! 5 minutes ago · Flag
- Latu Peti Vimahi Manulua-hafoka** learn learn learn!!! 4 minutes ago · Flag

The post has a total of 42 reactions.

# Create a blue Facebook header

```
1 <div id="container">
2   <div id="fb_brand">
3     FACEBOOK
4   </div>
5 </div>
```

```
1 #container{
2   width: 350px;
3   margin: 50px;
4 }
5
6 #fb_brand{
7   background-color: blue;
8   color: white;
9 }
```



FACEBOOK

# What next?

## FACEBOOK

## facebook



### PictureCorrect Photography Tips

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



**PictureCorrect Photography Tips** My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries to my portfolio! What is yours?

-Richard

11 minutes ago · Flag



**James Donnelly** Larger concerts to cover and improve my portrait editing style/skill

10 minutes ago · Flag



**Jose Antonio Rubido** To push my photpography foward full throttle

9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!

4 minutes ago · Flag

44

# Get header height right. (Add padding)

```
1 <div id="container">
2   <div id="fb_brand">
3     FACEBOOK
4   </div>
5 </div>
```

```
1 #container{
2   width: 350px;
3   margin: 50px;
4 }
5
6 #fb_brand{
7   background-color: blue;
8   color: white;
9   padding-left: 40px;
10  padding-top: 20px;
11  padding-bottom: 20px;
12 }
```



FACEBOOK

# What next?

FACEBOOK

## facebook



### PictureCorrect Photography Tips

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

 Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



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9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!

4 minutes ago · Flag

46

# Add the first post

```
1 <div id="container">
2   <div id="fb_brand">
3     FACEBOOK
4   </div>
5   <div id="top_post">
6     FIRST POST
7   </div>
8 </div>
```



FACEBOOK

FIRST POST

# What next?

FACEBOOK

FIRST POST

## facebook



**PictureCorrect Photography Tips**

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

 Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



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11 minutes ago · Flag



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9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!

4 minutes ago · Flag

48

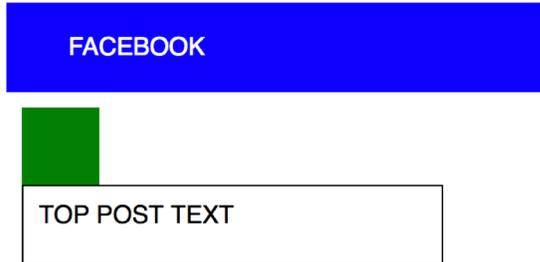
# Add internal structure to the first post

```
6 <div id="top_post">
7   <div id="top_post_image">
8   </div>
9   <div id="top_post_text">
10    TOP POST TEXT
11  </div>
12 </div>
```

```
14 #top_post_image{
15   height: 50px;
16   width: 50px;
17   background-color: green;
18   display: inline-block;
19 }
20
21 #top_post_text{
22   height: 30px;
23   width: 250px;
24   padding: 10px;
25   border: 1px solid black;
26   display: inline-block;
27   vertical-align: top;
28
29 }
```



By default, DIV elements will flow down the page. `display: block`  
To get them to flow across the page, you must set `display: inline-block`



```
18 #top_post_image{
19   height: 50px;
20   width: 50px;
21   background-color: green;
22   /*display: inline-block;*/
23 }
24
25 #top_post_text{
26   height: 30px;
27   width: 250px;
28   padding: 10px;
29   border: 1px solid black;
30   /*display: inline-block;*/
31   vertical-align: top;
32 }
```



```
14 #top_post_image{
15   height: 50px;
16   width: 50px;
17   background-color: green;
18   display: inline-block;
19 }|
20
21 #top_post_text{
22   height: 30px;
23   width: 250px;
24   padding: 10px;
25   border: 1px solid black;
26   display: inline-block;
27   vertical-align: top;
28
29 }
```

# What next?

FACEBOOK

TOP POST TEXT

facebook



**PictureCorrect Photography Tips**

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

 Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



**PictureCorrect Photography Tips** My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries to my portfolio! What is yours?

-Richard

11 minutes ago · Flag



**James Donnelly** Larger concerts to cover and improve my portrait editing style/skill

10 minutes ago · Flag



**Jose Antonio Rubido** To push my photpography foward full throttle

9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!

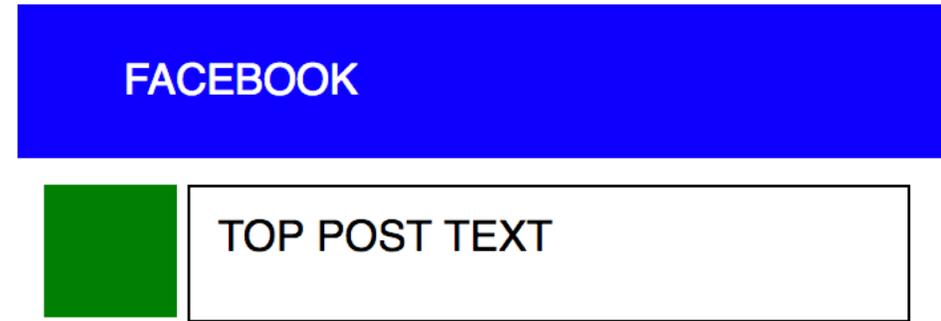
4 minutes ago · Flag

51

# Add padding on the top post

```
6 <div id="top_post">
7   <div id="top_post_image">
8   </div>
9   <div id="top_post_text">
10    TOP POST TEXT
11  </div>
12 </div>
13
```

```
14 #top_post{
15   padding: 10px;
16 }
17
```



# What next?

FACEBOOK

TOP POST TEXT

## facebook



**PictureCorrect Photography Tips**

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



**PictureCorrect Photography Tips** My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries to my portfolio! What is yours?

-Richard

11 minutes ago · Flag



**James Donnelly** Larger concerts to cover and improve my portrait editing style/skill

10 minutes ago · Flag



**Jose Antonio Rubido** To push my photpography foward full throttle

9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!

53

4 minutes ago · Flag

# Add replies.

```
13 <div id="reply_container">|
14   <div class="reply">
15     REPLY
16   </div>
17   <div class="reply">
18     REPLY
19   </div>
20   <div class="reply">
21     REPLY
22   </div>
23 </div>
```



FACEBOOK



TOP POST TEXT

REPLY  
REPLY  
REPLY

# What next?

FACEBOOK

TOP POST TEXT

REPLY  
REPLY  
REPLY

facebook



**PictureCorrect Photography Tips**

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



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11 minutes ago · Flag



**James Donnelly** Larger concerts to cover and improve my portrait editing style/skill

10 minutes ago · Flag



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9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!

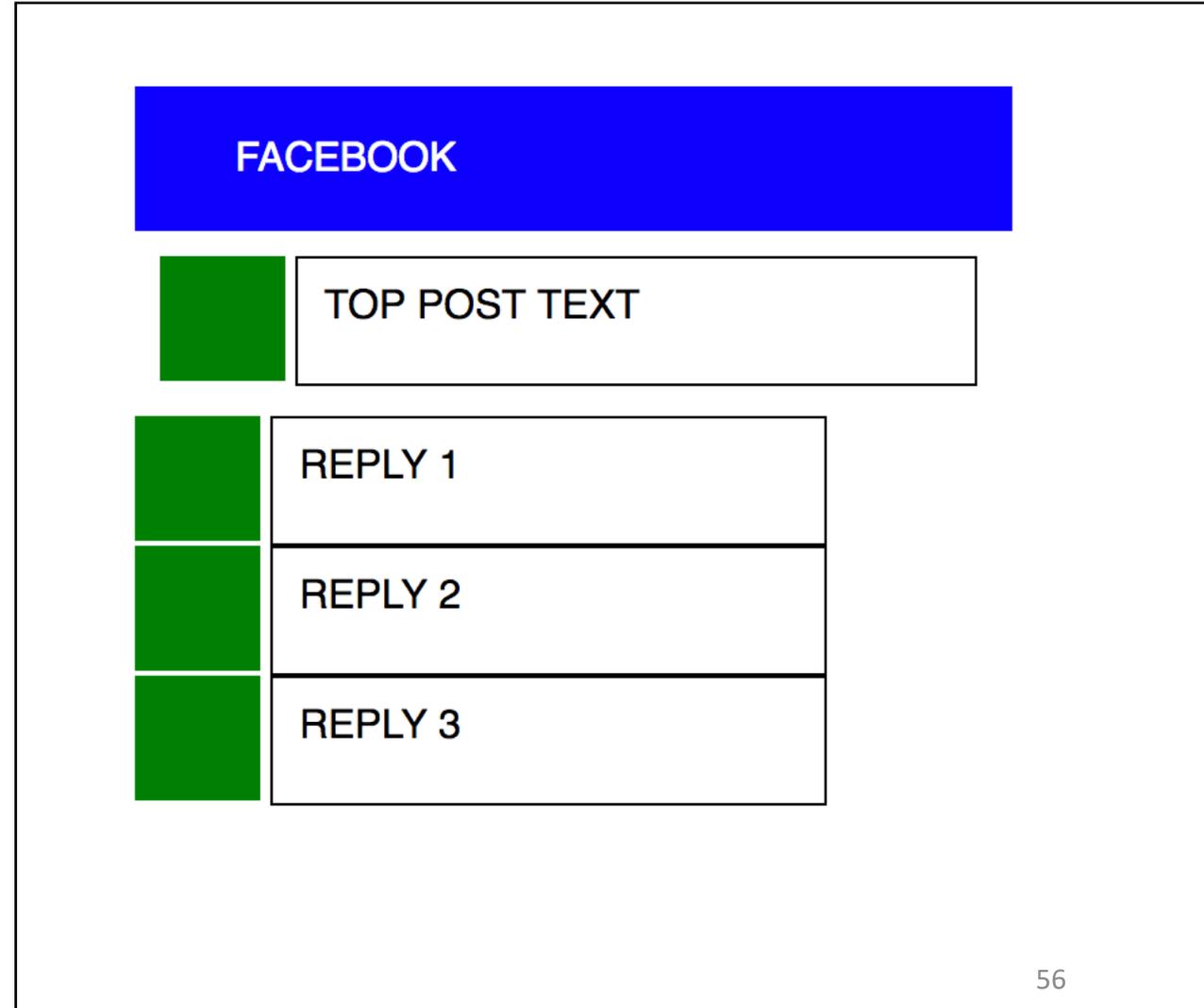
55

4 minutes ago · Flag

# Reply substructure: image and text

```
14 <div class="reply">
15   <div class="reply_image">
16   </div>
17   <div class="reply_text">
18     REPLY 1
19   </div>
20 </div>
```

```
35 .reply_image{
36   height: 50px;
37   width: 50px;
38   background-color: green;
39   display: inline-block;
40   vertical-align: top;
41 }
42
43 .reply_text{
44   height: 30px;
45   width: 200px;
46   padding: 10px;
47   border: 1px solid black;
48   display: inline-block;
49   vertical-align: top;
50 }
```



# What next?

FACEBOOK

TOP POST TEXT

REPLY 1

REPLY 2

REPLY 3

facebook



**PictureCorrect Photography Tips**

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



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-Richard

11 minutes ago · Flag



**James Donnelly** Larger concerts to cover and improve my portrait editing style/skill

10 minutes ago · Flag



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9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!

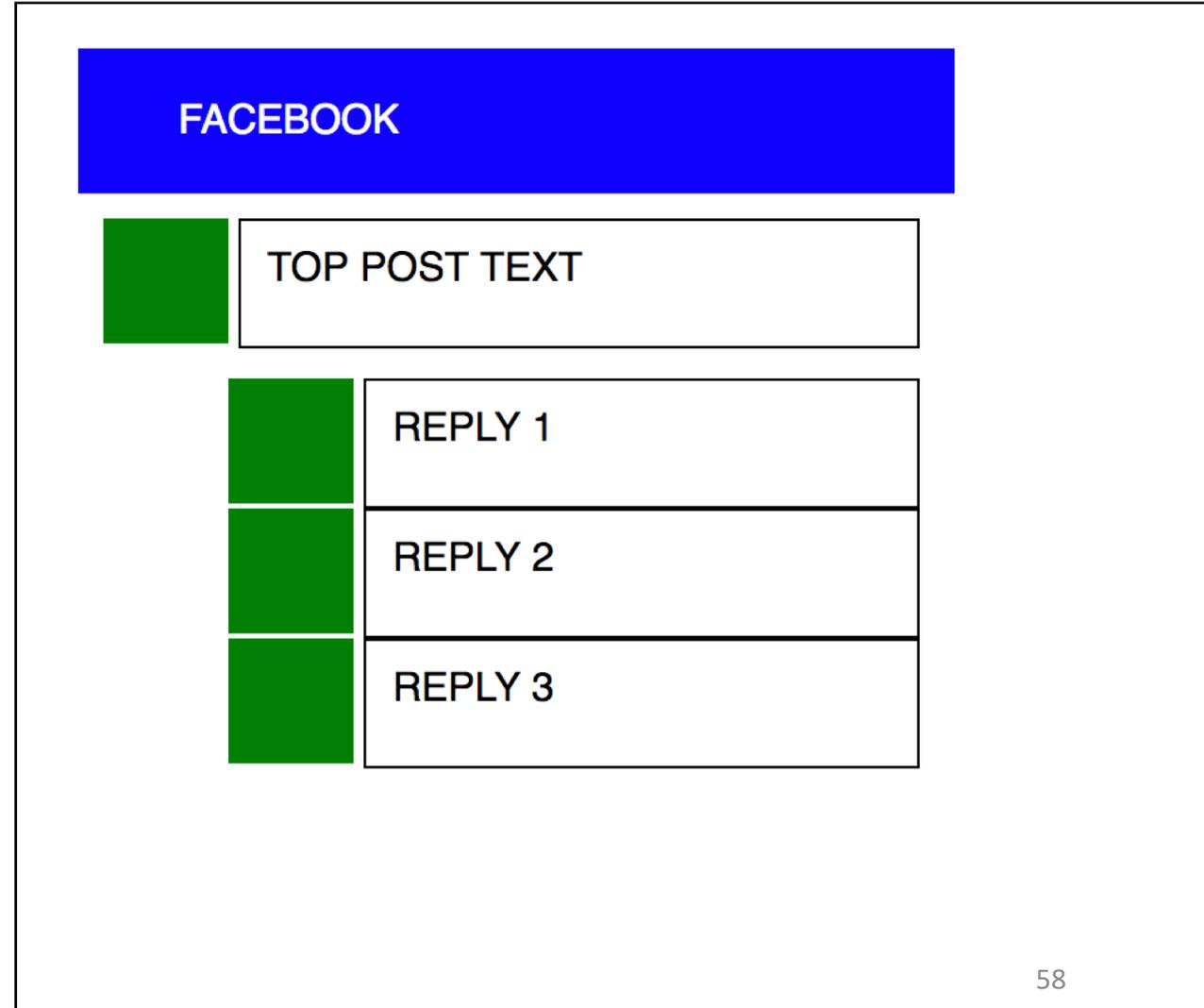
4 minutes ago · Flag

57

# Reply container positioning

```
13 <div id="reply_container">
14   <div class="reply">
15     <div class="reply_image">
16     </div>
17     <div class="reply_text">
18       REPLY 1
19     </div>
20   </div>
```

```
35 #reply_container{
36   padding-left: 60px;
37 }
38
```



# What next?

FACEBOOK

TOP POST TEXT

REPLY 1

REPLY 2

REPLY 3

facebook



**PictureCorrect Photography Tips**

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



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10 minutes ago · Flag



**Jose Antonio Rubido** To push my photpography foward full throttle

9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!

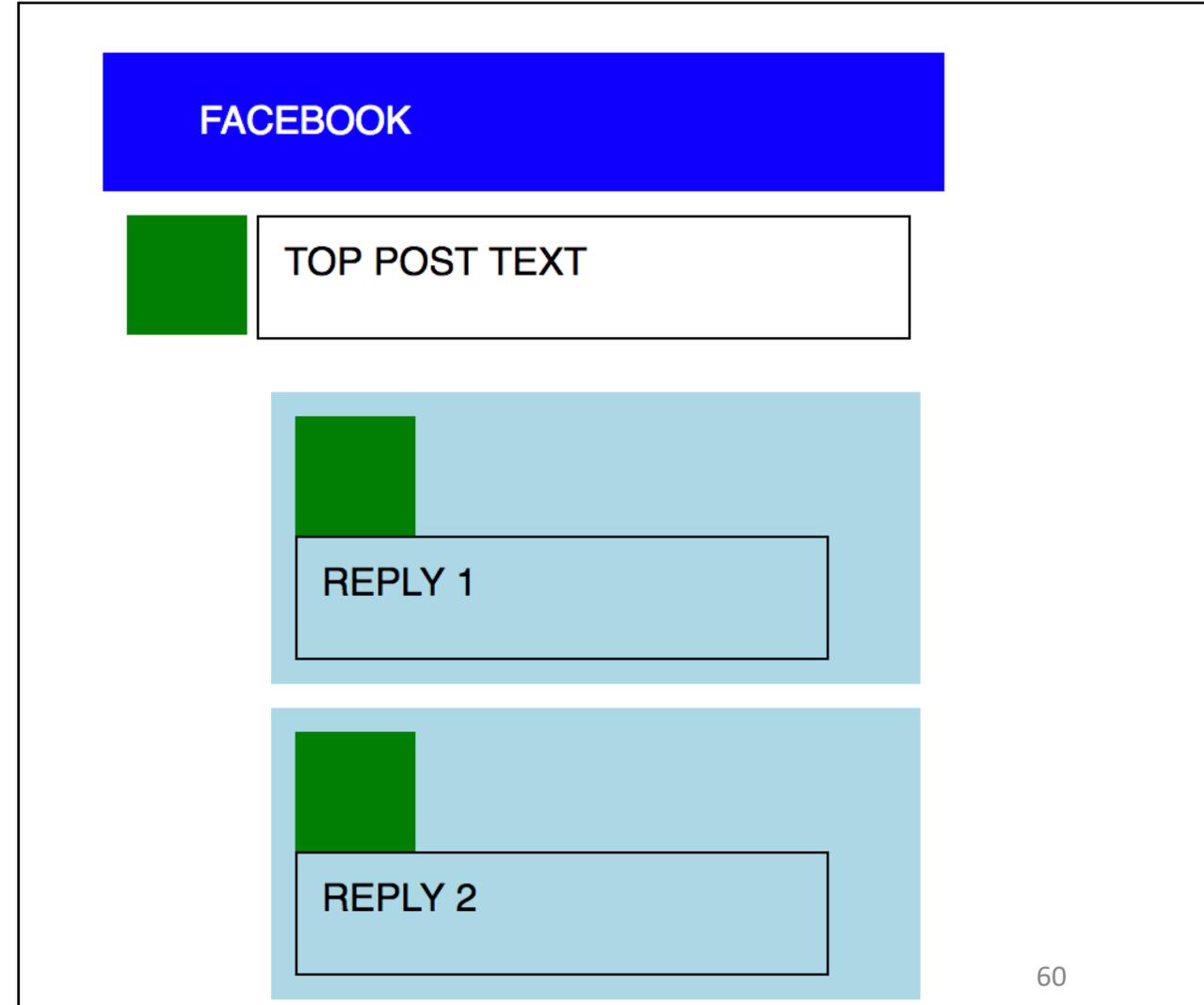
4 minutes ago · Flag

59

# Reply Class background-color

```
13 <div id="reply_container">
14   <div class="reply">
15     <div class="reply_image">
16     </div>
17     <div class="reply_text">
18       REPLY 1
19     </div>
20   </div>
```

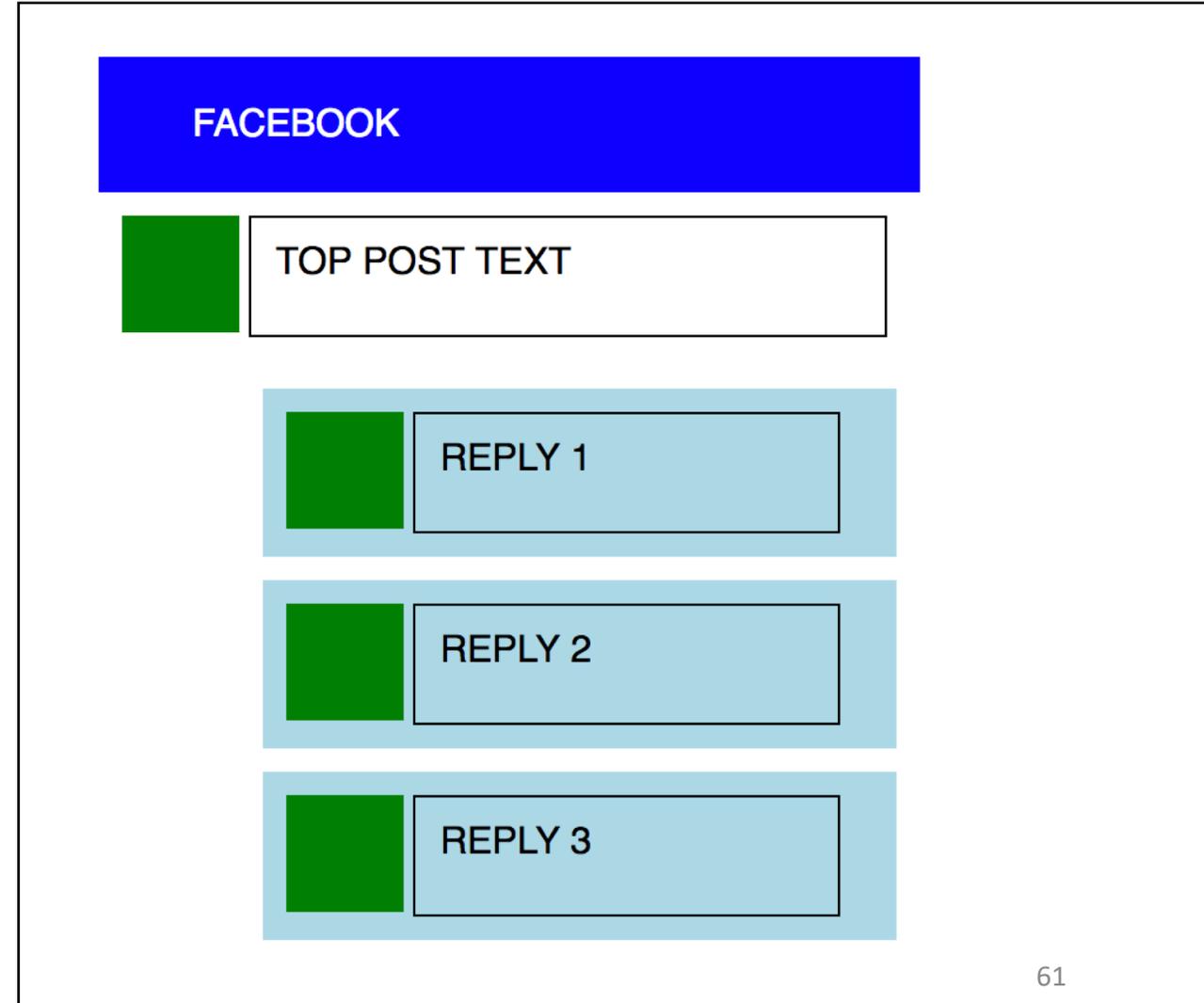
```
39 .reply{
40   background-color: lightblue;
41   padding: 10px;
42   margin: 10px;
43 }
```



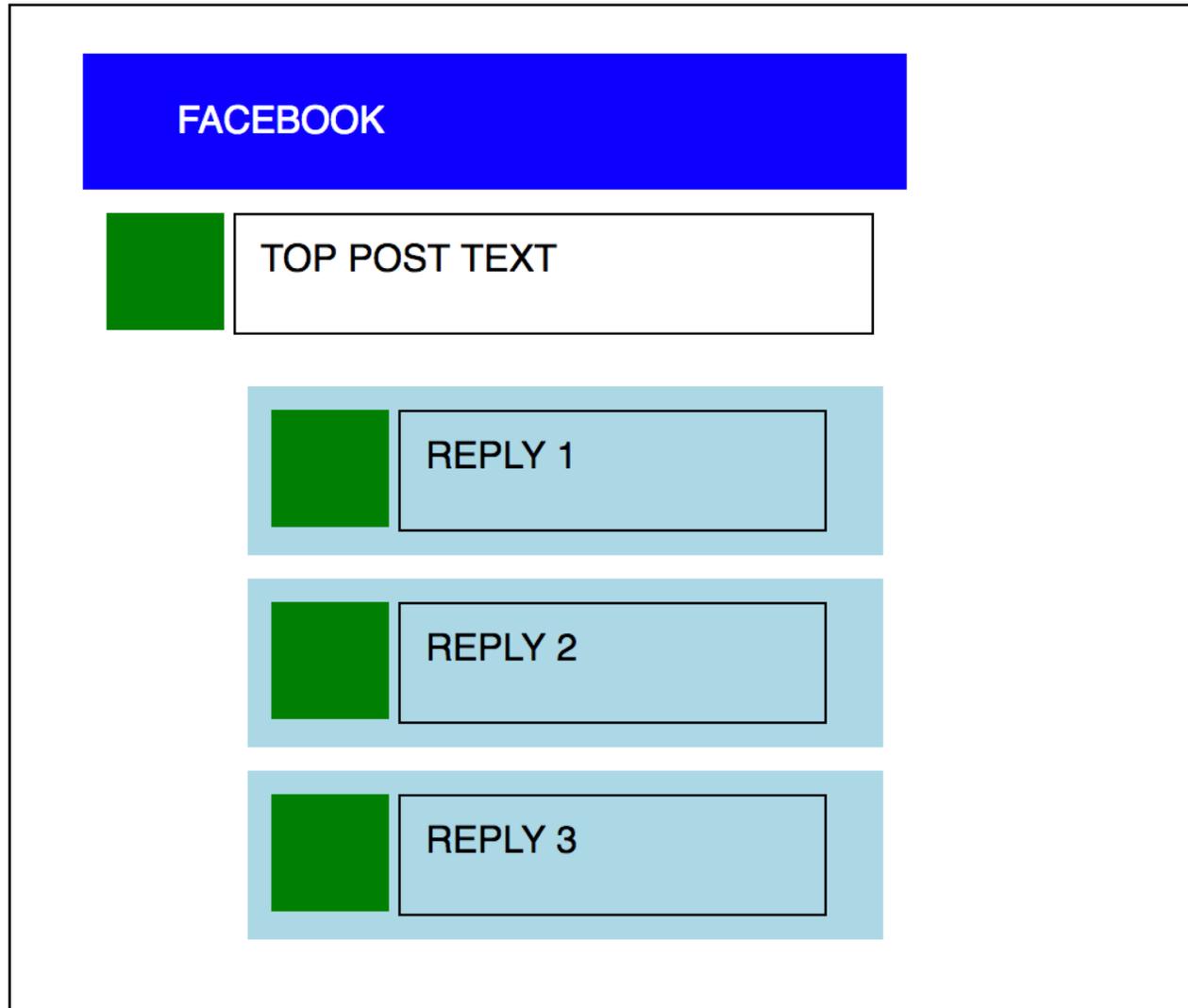
# Reduce Reply Text Width

```
13 <div id="reply_container">
14   <div class="reply">
15     <div class="reply_image">
16     </div>
17     <div class="reply_text">
18       REPLY 1
19     </div>
20   </div>
  .. - . . - ..
```

```
53 .reply_text{
54   height: 30px;
55   width: 160px;
56   padding: 10px;
57   border: 1px solid black;
58   display: inline-block;
59   vertical-align: top;
60 }
```



# What next?



## facebook



### PictureCorrect Photography Tips

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



**PictureCorrect Photography Tips** My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries to my portfolio! What is yours?

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11 minutes ago · Flag



**James Donnelly** Larger concerts to cover and improve my portrait editing style/skill

10 minutes ago · Flag



**Jose Antonio Rubido** To push my photpography foward full throttle

9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!

4 minutes ago · Flag

62

# Reply Text is longer

```
14 <div class="reply">
15   <div class="reply_image">
16   </div>
17   <div class="reply_text">
18     REPLY 1 REPLY 1 REPLY 1 REPLY 1 REPLY 1
19     REPLY 1 REPLY 1
20   </div>
21 </div>
```

```
53 .reply_text{
54   height: 30px;
55   width: 160px;
56   padding: 10px;
57   border: 1px solid black;
58   display: inline-block;
59   vertical-align: top;
60 }
```

FACEBOOK

TOP POST TEXT

REPLY 1 REPLY 1  
REPLY 1 REPLY 1  
REPLY 1 REPLY 1  
REPLY 1

REPLY 2

REPLY 3

# Reply Text height fixed

```
14 <div class="reply">
15   <div class="reply_image">
16   </div>
17   <div class="reply_text">
18     REPLY 1 REPLY 1 REPLY 1 REPLY 1 REPLY 1
19     REPLY 1 REPLY 1
20   </div>
21 </div>
```

```
53 .reply_text{
54   /*height: 30px;*/
55   width: 160px;
56   padding: 10px;
57   border: 1px solid black;
58   display: inline-block;
59   vertical-align: top;
60 }
```

FACEBOOK

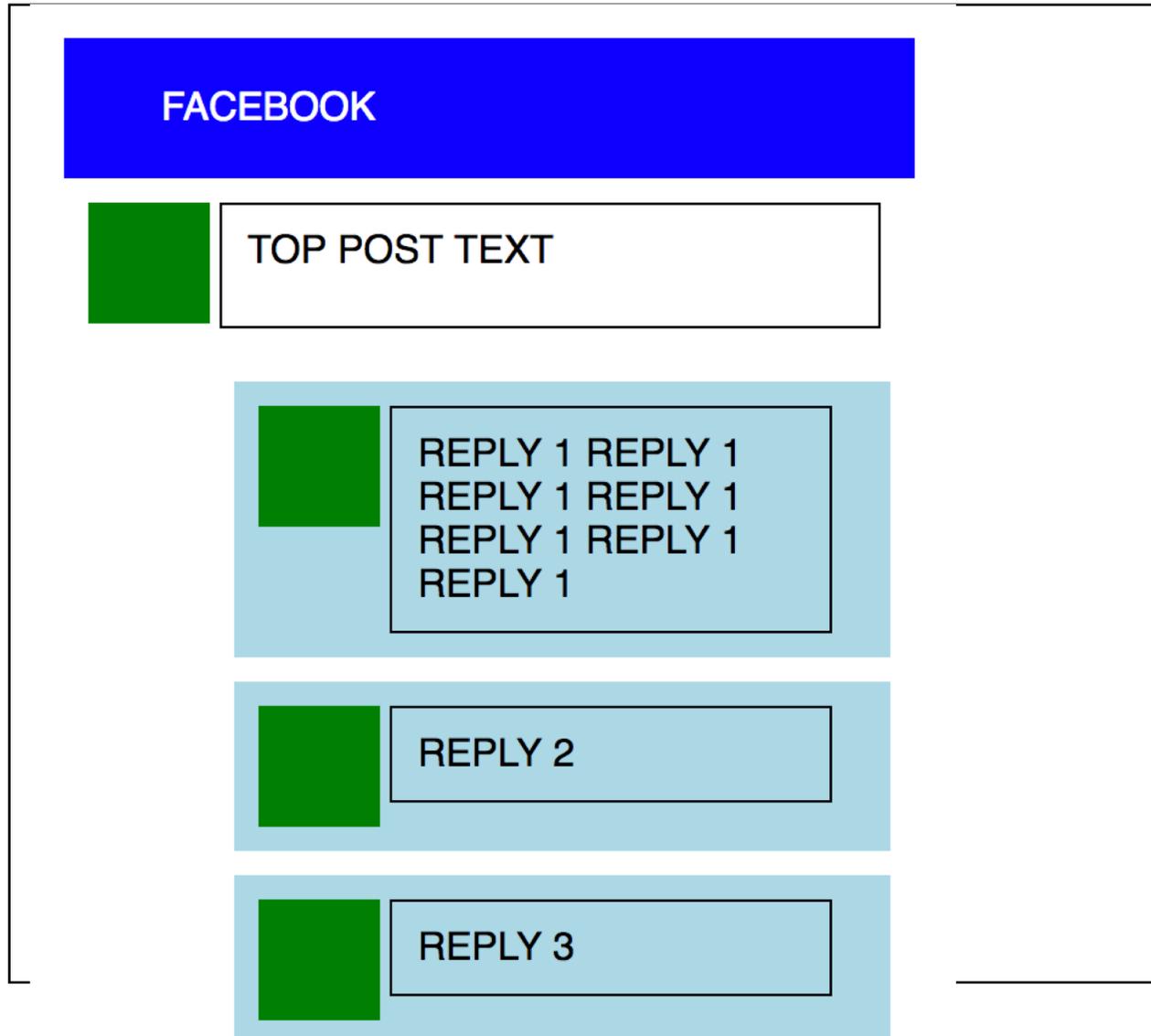
TOP POST TEXT

REPLY 1 REPLY 1  
REPLY 1 REPLY 1  
REPLY 1 REPLY 1  
REPLY 1

REPLY 2

REPLY 3

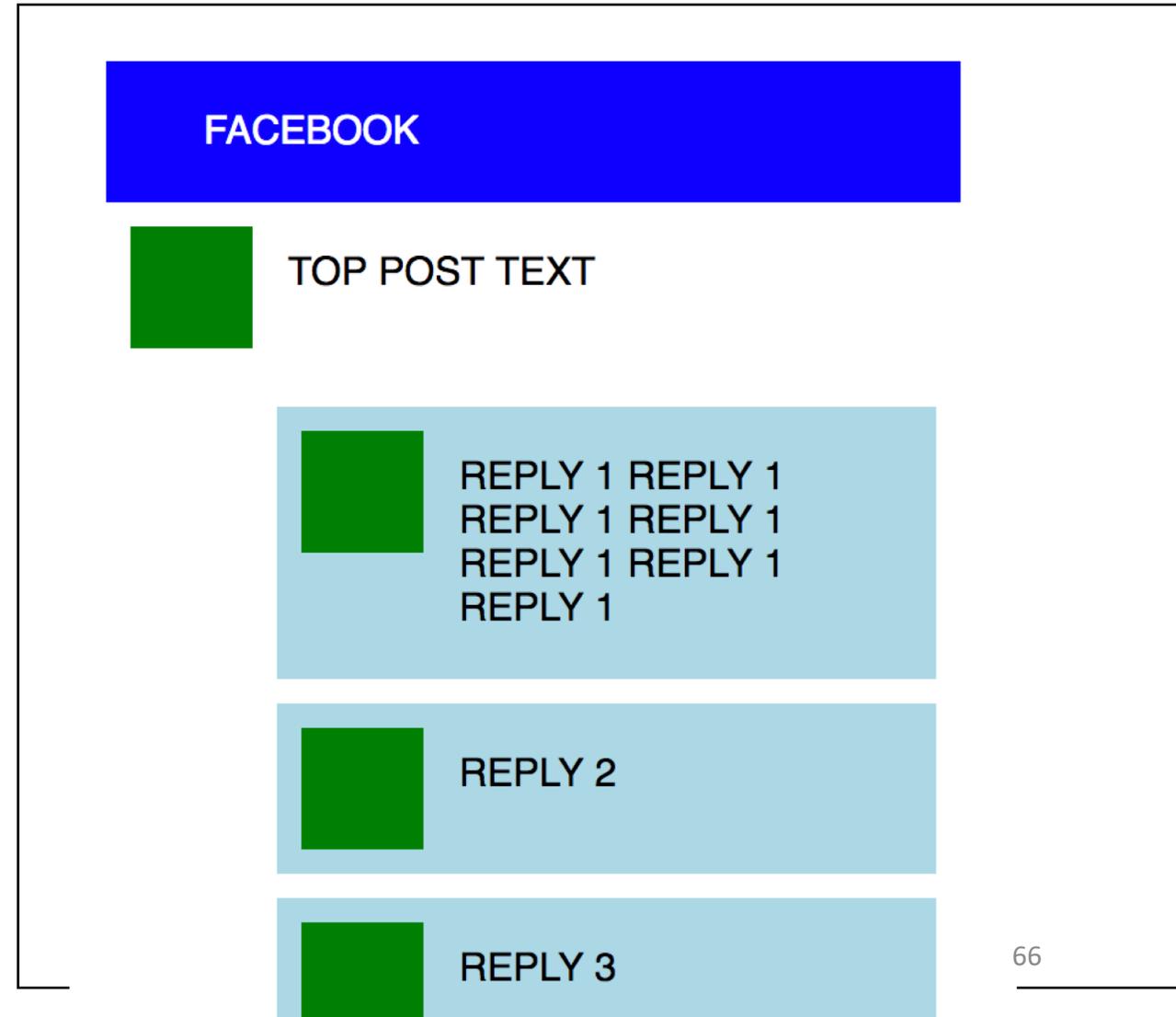
# What other scaffolding do I need to remove?



The screenshot shows a Facebook post from "PictureCorrect Photography Tips" with the text "What is your Photography-Related New Year's Resolution??" and "15 minutes ago · Like · Comment". Below the post are several replies from users: Adel Gomaa and Richard Schneider like this; Sadi Molloy shares a list of tasks; PictureCorrect Photography Tips shares their own resolution; Richard shares a resolution; James Donnelly shares a resolution; Jose Antonio Rubido shares a resolution; Deacon Jonathan Jerome Johnson shares a resolution; and Latu Peti Vimahi Manulua-hafoka shares a resolution. The post has 65 likes.

# Remove borders

```
25 #top_post_text{
26   height: 30px;
27   width: 250px;
28   padding: 10px;
29   /*border: 1px solid black;*/
30   display: inline-block;
31   vertical-align: top;
32 }
33 }
34 }
53 .reply_text{|
54   width: 160px;
55   padding: 10px;
56   /*border: 1px solid black;*/
57   display: inline-block;
58   vertical-align: top;
59 }
```



# This is a great start for layout!

FACEBOOK

TOP POST TEXT

REPLY 1 REPLY 1  
REPLY 1 REPLY 1  
REPLY 1 REPLY 1  
REPLY 1

REPLY 2

REPLY 3

facebook



**PictureCorrect Photography Tips**

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



**PictureCorrect Photography Tips** My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries to my portfolio! What is yours?

-Richard

11 minutes ago · Flag



**James Donnelly** Larger concerts to cover and improve my portrait editing style/skill

10 minutes ago · Flag



**Jose Antonio Rubido** To push my photpography foward full throttle

9 minutes ago · Flag



**Deacon Jonathan Jerome Johnson** To learn more and enhance the quality of my shots!

5 minutes ago · Flag



**Latu Peti Vimahi Manulua-hafoka** learn learn learn!!!

4 minutes ago · Flag



**Tina Taylor Hammer** Get my new business moving and have it pay

# After layout... what next?

facebook



## PictureCorrect Photography Tips

What is your Photography-Related New Year's Resolution??

15 minutes ago · Like · Comment

 Adel Gomaa and Richard Schneider like this.



**Sadi Molloy** get my business looking more professional: car signed: tick, making up portrait folders: tick, stickers & cd covers: still to do... its getting there though.

11 minutes ago · Flag



**PictureCorrect Photography Tips** My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries to my portfolio! What is yours?

-Richard

11 minutes ago · Flag

# Iterative Style of Programming

helps you build a mental model of your code.

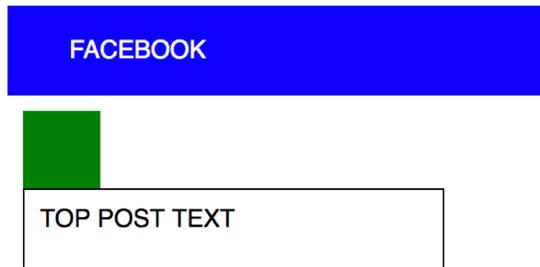
What's the small unit of progress I can make?



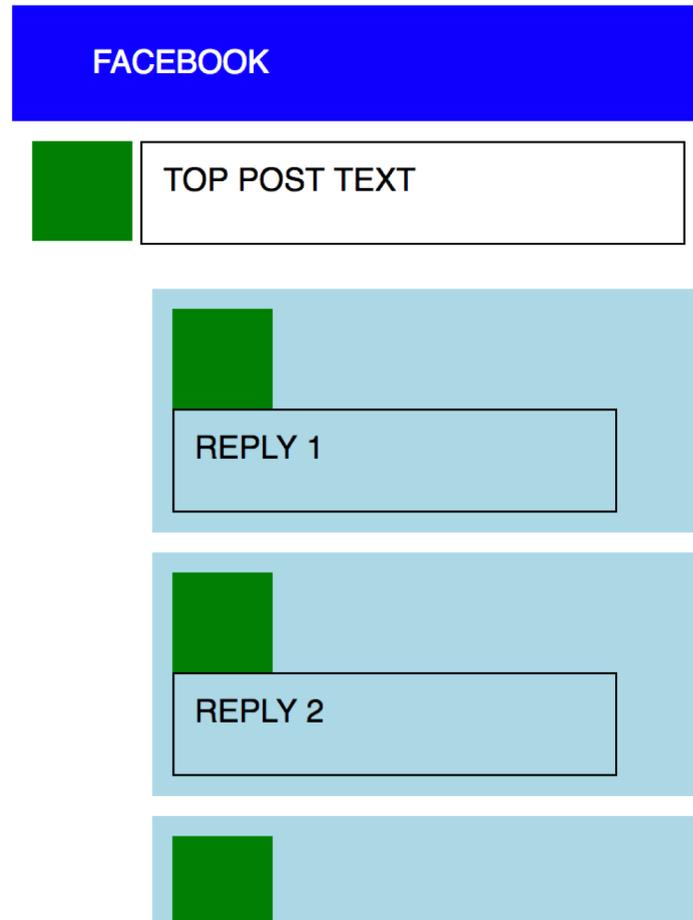
Does it look ok?

# Iterative Style of Programming helped me recover from errors one at a time (as I created them)

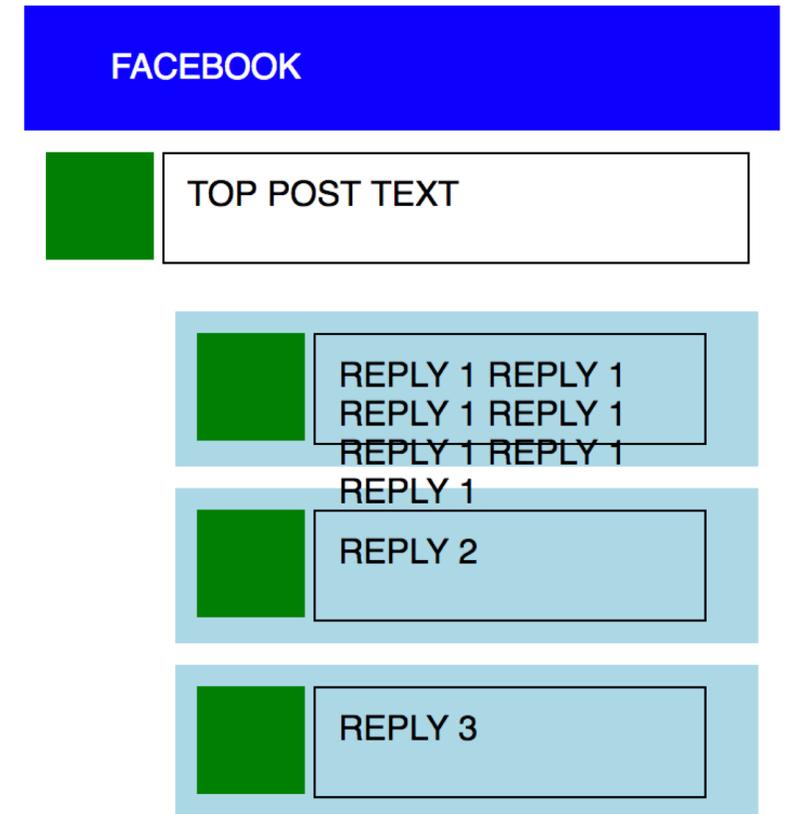
Error 1: display inline-block



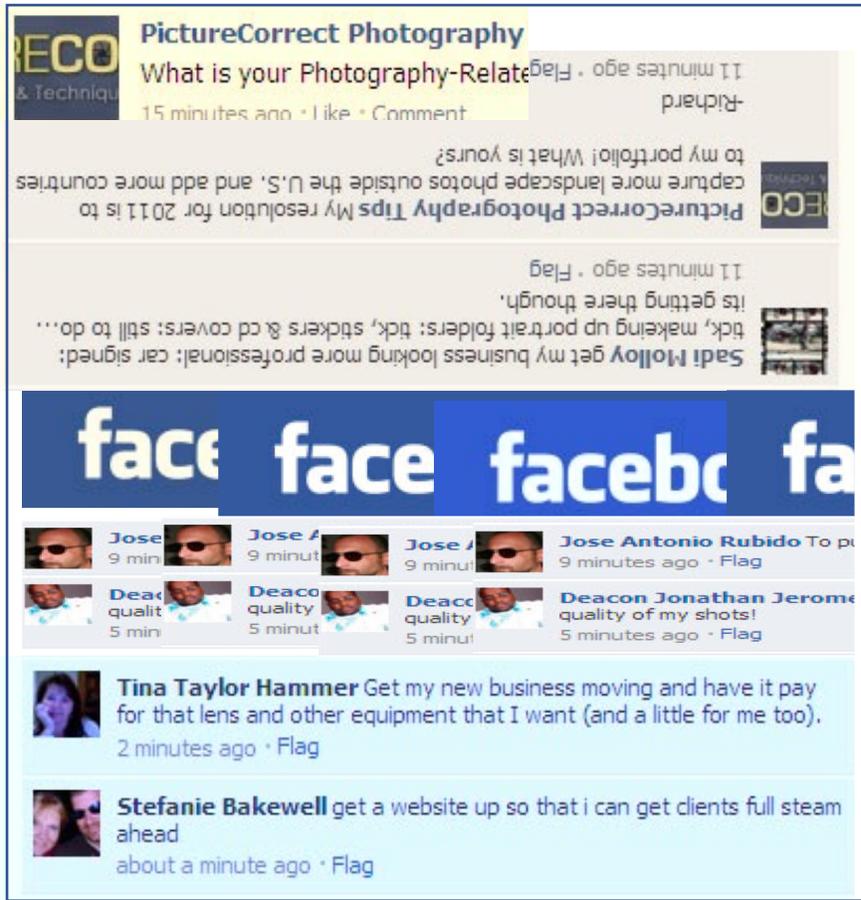
Error 2: reply div padding



Error 3: Reply div height



# Once you have too many bugs, you can't fix it.



# Grids

Currently the dominant way to layout information

# That worked but it would be much easier if we had a grid.



	Lorem Ipsum!	Lorem Ipsum!	Lorem Ipsum!	
	<i>dolor sit amet</i>	<i>dolor sit amet</i>	<i>dolor sit amet</i>	
	Consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.	Consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.	Consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.	

**COMPOSE**

- Inbox (2)
- Sent Mail
- Drafts (54)**
- Need to Read
- Technology Coach
- More ▾

	Primary	Social	Promotions	Updates	
<input type="checkbox"/>	★ ▶ Baldwin, BPS (2)				<b>Bloglovin'</b> - Not that I know of. Sometimes blocked sites come in on a hug <b>11:08 am</b>
<input type="checkbox"/>	★ ▶ Feldmann, Ann				<b>Fwd: 21st Century Classroom Visit?</b> - Ann Feldmann District Technolog' <b>10:18 am</b>
<input type="checkbox"/>	★ ▶ me, Lambert (2)				8th Period - Hey, Jeff. I am planning on doing the Mystery Hangout lesson <b>8:05 am</b>
<input type="checkbox"/>	★ ▶ me				(no subject) - -- Jeffrey Bernadt District Technology Specialist Bellevue Pu <b>Jan 12</b>
<input type="checkbox"/>	★ ▶ me, Braasch, Klamm (3)				Visitation & Observation Request - Good morning! The second semester is <b>Jan 12</b>
<input type="checkbox"/>	★ ▶ me, Cox (2)				Bri Cox - Coaching Doc - Invitation to edit - Jeff, I finally was able to read a <b>Jan 12</b>
<input type="checkbox"/>	★ ▶ Tripple, Todd				3D Printer - Hello Amy, I received some information from a 3D printing exp <b>Jan 11</b>
<input type="checkbox"/>	★ □ donotreply				Education Preview Build Notice - 🍏 AppleSeed Build Notice Education Pre <b>Jan 11</b>
<input type="checkbox"/>	★ ▶ Ann Feldmann				Fwd: [New post] What "Innovative Leadership" Looks Like - A good read! : <b>Jan 11</b>
<input type="checkbox"/>	★ ▶ me, Campbell (7)				Khan Academy Issues - It kept repeating that "changed password 7 month <b>Jan 8</b>
<input type="checkbox"/>	★ ▶ Toelle, me (3)				6 Word Stories - Hey Jeff! We just returned from lunch, but still have quite <b>Jan 8</b>
<input type="checkbox"/>	★ ▶ me, Evon (4)				Request to Visit on Thursday AM - Hi Jeff, Happy New Year! We would lov <b>Jan 6</b>
<input type="checkbox"/>	★ ▶ Jeffrey Bernadt				Shared from Twitter: What teachers need to know about multicultural educ <b>12/23/15</b>

Search people...

- Jed Givens
- Ann Feldmann
- Ann Feldmann
- Cadwallader, Julie**
- Christopher Kessell
- Courtney Saffold
- Jeanette Carlson
- Johnson, Stephanie
- Kelly Bernadt
- Loomis, Phillip
- Robert Mason
- Shannon Gier
- Todd Tripple
- Toledo, Julian (Delor...



### Windows 95 Video Guide with Matthew Perry & Jennifer Aniston

216,782 views

2K

48

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#### Up next

AUTOPLAY



#### Friends - The One that Goes Behind the Scenes

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David Mitchell  
Recommended for you  
New



#### Actor Replacements That Totally Ruined The Show

Looper  
3M views



#### Inside Matthew Perry's Tragic Real Life Story

Nicki Swift  
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#### Friends - ET On VH1: Behind The Friends Finale

Favorite Videos  
1M views



#### REACT S7 - E19 TEENS REACT TO WINDOWS 95

FBE  
12M views



#### Friends - Ross and Monica's Cousin

Favorite Videos  
3.6M views

# Twitter Bootstrap

An implementation of grid layout

# How many columns do you see?

## Columbia University

@Columbia

"The best education is one that prepares you for your own venture into the unknown." - Lee C. Bollinger, Columbia University President

New York, New York

columbia.edu

Joined February 2011

Tweet to Columbia University

4 Followers you know



2,754 Photos and videos



Tweets   Tweets & replies   Media



**Columbia University** @Columbia · 39m  
Groundbreaking. Beautiful. Monumental. Posing Modernity: The Black Model from Manet and Matisse to Today is closing soon. Come now, it's free!  
[@ColumbiaSOA](#) #arts #Harlem [ow.ly/Q8rM30nssdJ](#)



Who to follow · Refresh · View all



**Princeton University** ...

Follow



**Yale University** @Yale

Follow



**Harvard University** @H...

Follow



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Trends for you · Change

#SDLive  
37.9K Tweets

#Sabres  
2,607 Tweets

James Ingram  
R&B legend James Ingram has died at age 66

Rusev  
3,867 Tweets

#SBGC

# How wide is the middle (compared to the sides)?

**Columbia University**   
@Columbia

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New York, New York

[columbia.edu](http://columbia.edu)

Joined February 2011

[Tweet to Columbia University](#)

4 Followers you know



2,754 Photos and videos



**Tweets**   **Tweets & replies**   **Media**

 **Columbia University**  @Columbia · 39m

Groundbreaking. Beautiful. Monumental. Posing Modernity: The Black Model from Manet and Matisse to Today is closing soon. Come now, it's free!  
[@ColumbiaSOA](#) #arts #Harlem [ow.ly/Q8rM30nssdJ](#)



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 **Yale University**  @Yale  [Follow](#)

 **Harvard University**  @H...  [Follow](#)

 **Find people you know**  
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**Trends for you** · Change

**#SDLive**  
37.9K Tweets

**#Sabres**   
2,607 Tweets

**James Ingram**  
R&B legend James Ingram has died at age 66

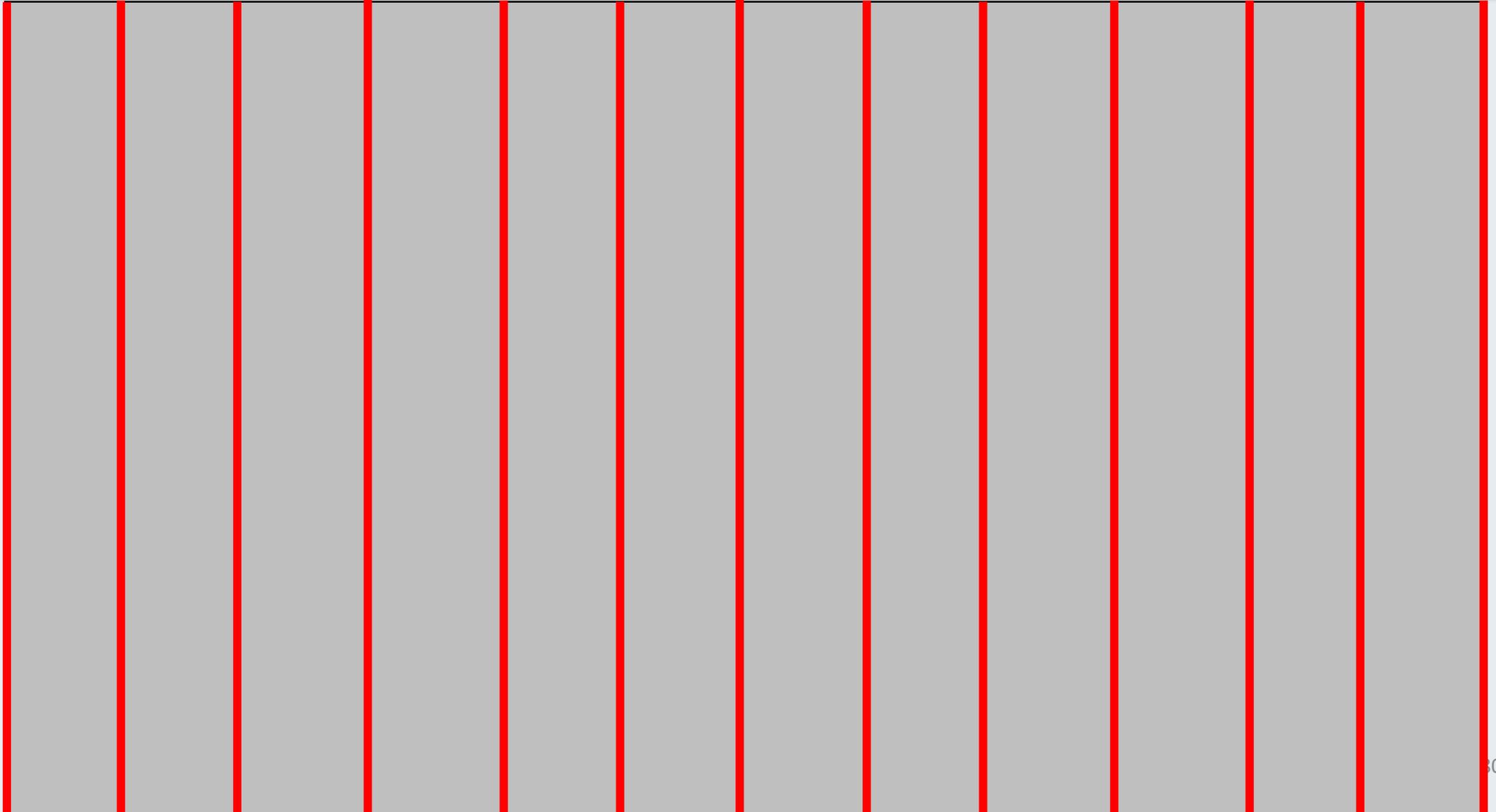
**Rusev**  
3,867 Tweets

**#SBGC**

All content goes in the main container



The container is divided into **12** columns



# You get to apportion those 12 columns

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New York, New York

columbia.edu

Joined February 2011

Tweet to Columbia University

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## Tweets

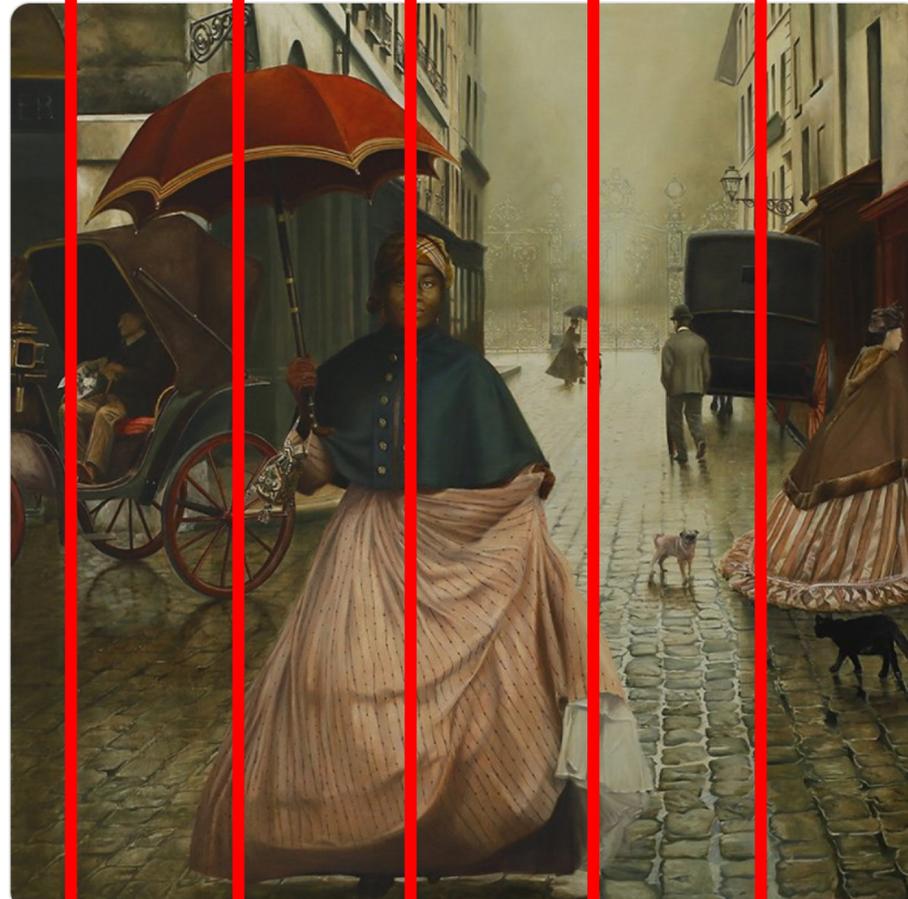
## Tweets & replies

## Media



Columbia University @Columbia · 39m

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@ColumbiaSOA #arts #Harlem [ow.ly/Q8rM30nssdJ](#)



## Who to follow · Refresh View all



Princeton University

Follow



Yale University @Yale

Follow



Harvard University @H...

Follow



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## Trends for you · Change

#SDLive

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#Sabres

2,607 Tweets

James Ingram

R&B legend James Ingram has died at age 66

Rusev

3,867 Tweets

#SBGC

3,521 Tweets

# 12 columns: split in 3, 6, 3

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New York, New York

columbia.edu

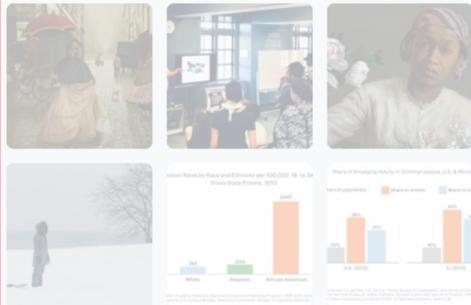
Joined February 2011

Tweet to Columbia University

4 Followers you know



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## Tweets Tweets & replies Media

Columbia University @Columbia · 39m  
Groundbreaking. Beautiful. Monumental. Posing Modernity: The Black Model from Manet and Matisse to Today is closing soon. Come now, it's free!  
@ColumbiaSOA #arts #Harlem ow.ly/Q8rM30nssdJ



## Who to follow · Refresh · View all

Princeton University @Princeton · Follow

Yale University @Yale · Follow

Harvard University @Harvard · Follow

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## Trends for you · Change

#SDLive  
37.9K Tweets

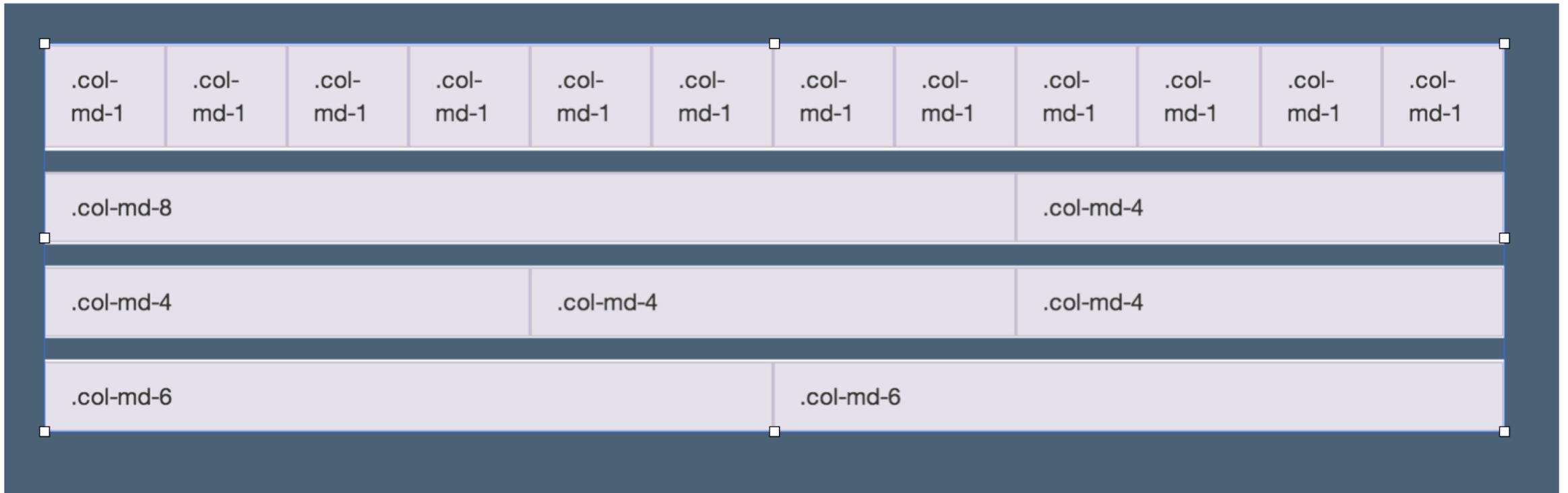
#Sabres  
2,607 Tweets

James Ingram  
R&B legend James Ingram has died at age 66

Rusev  
3,867 Tweets

#SBGC  
3,521 Tweets

# Bootstrap grid. How many columns?



# Do the columns have the same rows?

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New York, New York

[columbia.edu](http://columbia.edu)

Joined February 2011

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**Tweets**   Tweets & replies   Media

**Columbia University** @Columbia · 39m  
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[@ColumbiaSOA](#) #arts #Harlem [ow.ly/Q8rM30nssdJ](https://ow.ly/Q8rM30nssdJ)



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- Harvard University** [Follow](#)

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### Trends for you

Change

- #SDLive**  
37.9K Tweets
- #Sabres**  
2,607 Tweets
- James Ingram**  
R&B legend James Ingram has died at age 66
- Rusev**  
3,867 Tweets
- #SBGC**

# Is there alignment within the column?

### Columbia University

@Columbia

"The best education is one that prepares you for your own venture into the unknown." - Lee C. Bollinger, Columbia University President

New York, New York

columbia.edu

Joined February 2011

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R&B legend James Ingram has died at age 66
- Rusev**  
3,867 Tweets
- #SBGC**

# Can you use the original grid?

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Tweets Tweets & replies Media

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[@ColumbiaSOA](#) #arts #Harlem [ow.ly/Q8rM30nssdJ](#)



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Find people you know  
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### Trends for you

#SDLive  
37.9K Tweets

#Sabres  
2,607 Tweets

James Ingram  
R&B legend James Ingram has died at age 66

Rusev  
3,867 Tweets

#SBGC

# Can you use the original grid? NO

The image shows a screenshot of a Twitter profile for Columbia University (@Columbia). The profile information includes the name "Columbia University", the handle "@Columbia", a bio quote from C. Bollinger, the location "New York, New York", the website "columbia.edu", and the date "Joined February 2011". There is a "Tweet to Columbia University" button and a section for "4 Followers you know" with profile pictures. Below this is a "2,754 Photos and videos" section with a grid of image thumbnails, including a painting and a bar chart.

The main content area shows a tweet from Columbia University (@Columbia) posted 39 minutes ago. The tweet text is: "Groundbreaking. Beautiful. Monumental. Posing Modernity: The Black Model from Manet and Matisse to Today is closing soon. Come now, it's free! @ColumbiaSOA #arts #Harlem ow.ly/Q8rM30nssdJ". The tweet includes a large image of a painting depicting a woman in a long, light-colored dress and a dark shawl holding a red umbrella on a cobblestone street. The image is overlaid with a red grid that is slightly offset from the original grid lines, illustrating the difficulty of using the original grid.

Navigation tabs at the top of the tweet section include "Tweets", "Tweets & replies", and "Media". To the right of the tweet is a "Who to follow" section with profiles for Princeton University, Yale University, and Harvard University, each with a "Follow" button. Below this is a "Find people you know" section with a "Connect other address books" link. At the bottom right is a "Trends for you" section with trending topics like #SDLive, #Sabres, James Ingram, Rusev, and #SBGC.

# Grids within grids!!!

## Columbia University

@Columbia

"The best education is one that prepares you for your own venture into the unknown." - Lee C. Bollinger, Columbia University President

New York, New York

columbia.edu

Joined February 2011

Tweet to Columbia University

4 Followers you know



2,754 Photos and videos



## Tweets Tweets & replies Media



Columbia University @Columbia · 3m  
Groundbreaking. Beautiful. Monumental. Posing Modernity: The Black Model from Manet and Matisse to Today is closing soon. Come now, it's free!  
@ColumbiaSOA #arts #Harlem [ow.ly/Q8M30nssdJ](http://ow.ly/Q8M30nssdJ)



## Who to follow · Refresh View all



Princeton University

Follow



Yale University @Yale

Follow



Harvard University @H...

Follow



Find people you know

Import your contacts from Gmail

Connect other address books

## Trends for you · Change

#SDLive

37.9K Tweets

#Sabres

2,607 Tweets

James Ingram

R&B legend James Ingram has died at age 66

Rusev

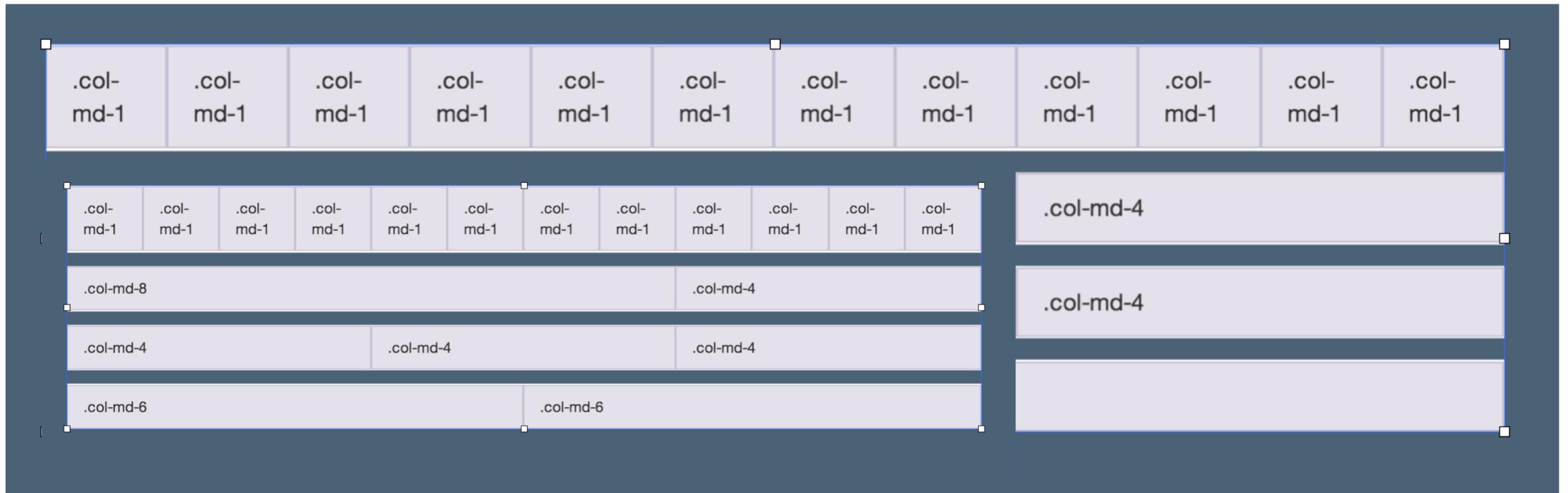
3,867 Tweets

#SBGC

3,521 Tweets

# Nested grids.

Apportion 12 columns with in a column.





# What's happening?

Sign up

Login



Featured

Sports

News

Music

Entertainment

Lifestyle

More ▾

## Moments · View all

Isaiah Thomas becomes a meme...  
NBA · 2 hours ago



This bot-generated Coachella...  
Haha · 3 hours ago



People are going crazy over this...  
Business Insider · 5 hours ago



**New to Twitter?**

Sign up now to get your own personalized timeline!

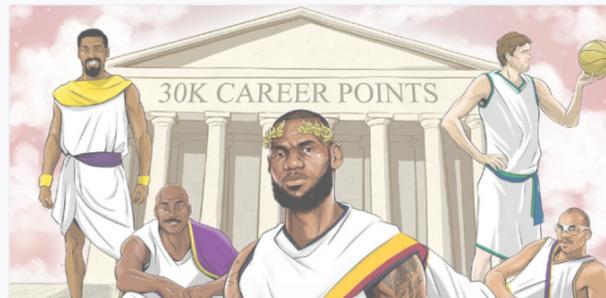
[Sign up](#)

## Featured Tweets

### General News >



### Sports commentary >



### World News >



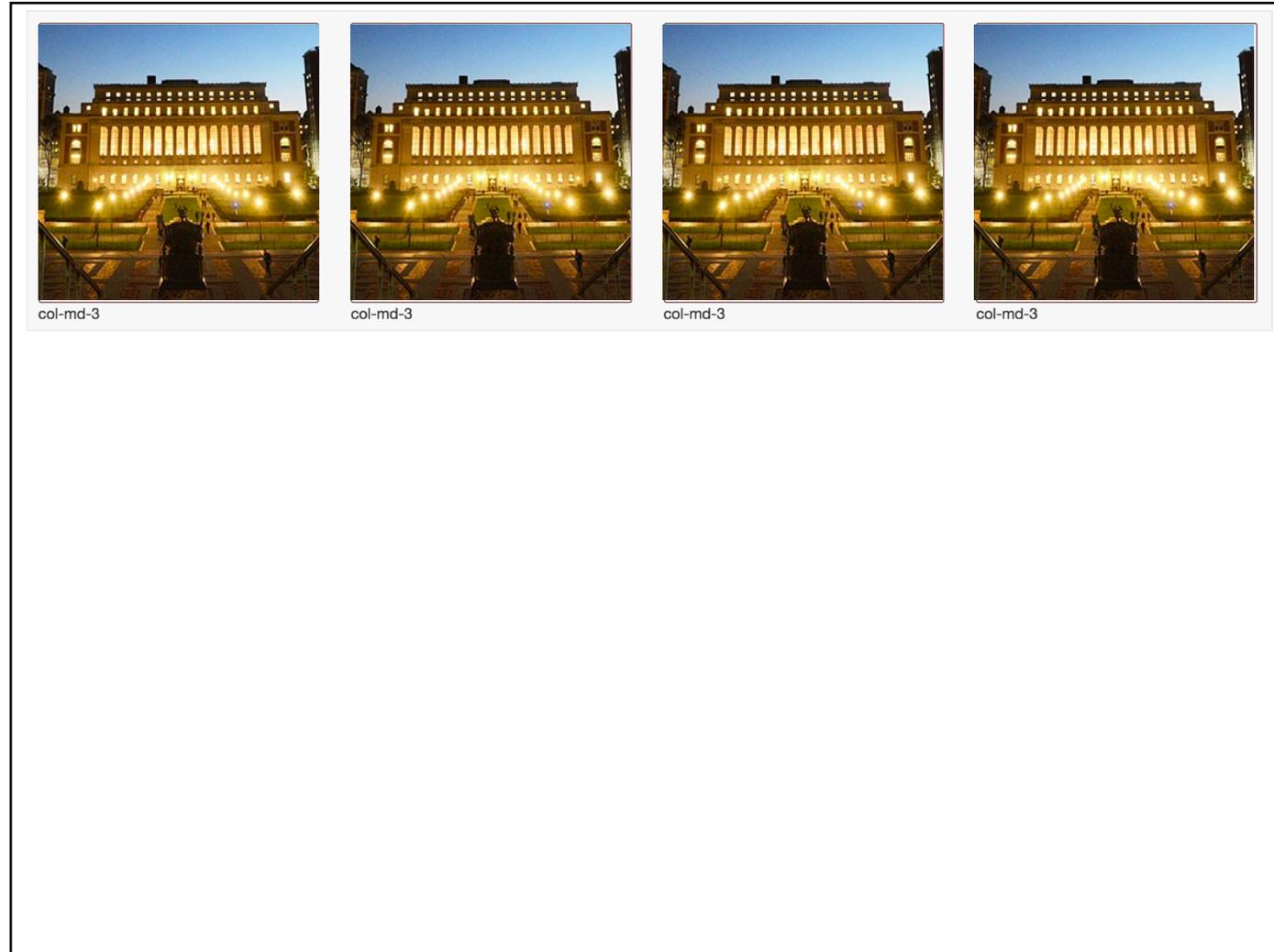
# Add Bootstrap to your HTML

CSS & JS in <head> tag, before your own CSS

```
1 <!doctype html>
2 <html>
3   <head>
4     <meta charset="utf-8">
5     <title>Test</title>
6
7     <!-- Add Bootstrap -->
8     <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-alpha.6/css/bootstrap.min.css" integrity="sha384-A7Zj7v+d/sdmMqp/n0QwliLvUsJfDHW-
9     <script src="https://code.jquery.com/jquery-3.1.1.slim.min.js" integrity="sha384-A7FZj7v+d/sdmMqp/n0QwliLvUsJfDHW-
10    <script src="https://cdnjs.cloudflare.com/ajax/libs/tether/1.4.0/js/tether.min.js" integrity="sha384-DztdAPBWPRXSA
11    <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-alpha.6/js/bootstrap.min.js" integrity="sha384-vBWwz
12
13    <!-- Add our own CSS and JS -->
14
15    <link href="components/main.css" rel="stylesheet" type="text/css">
16
```

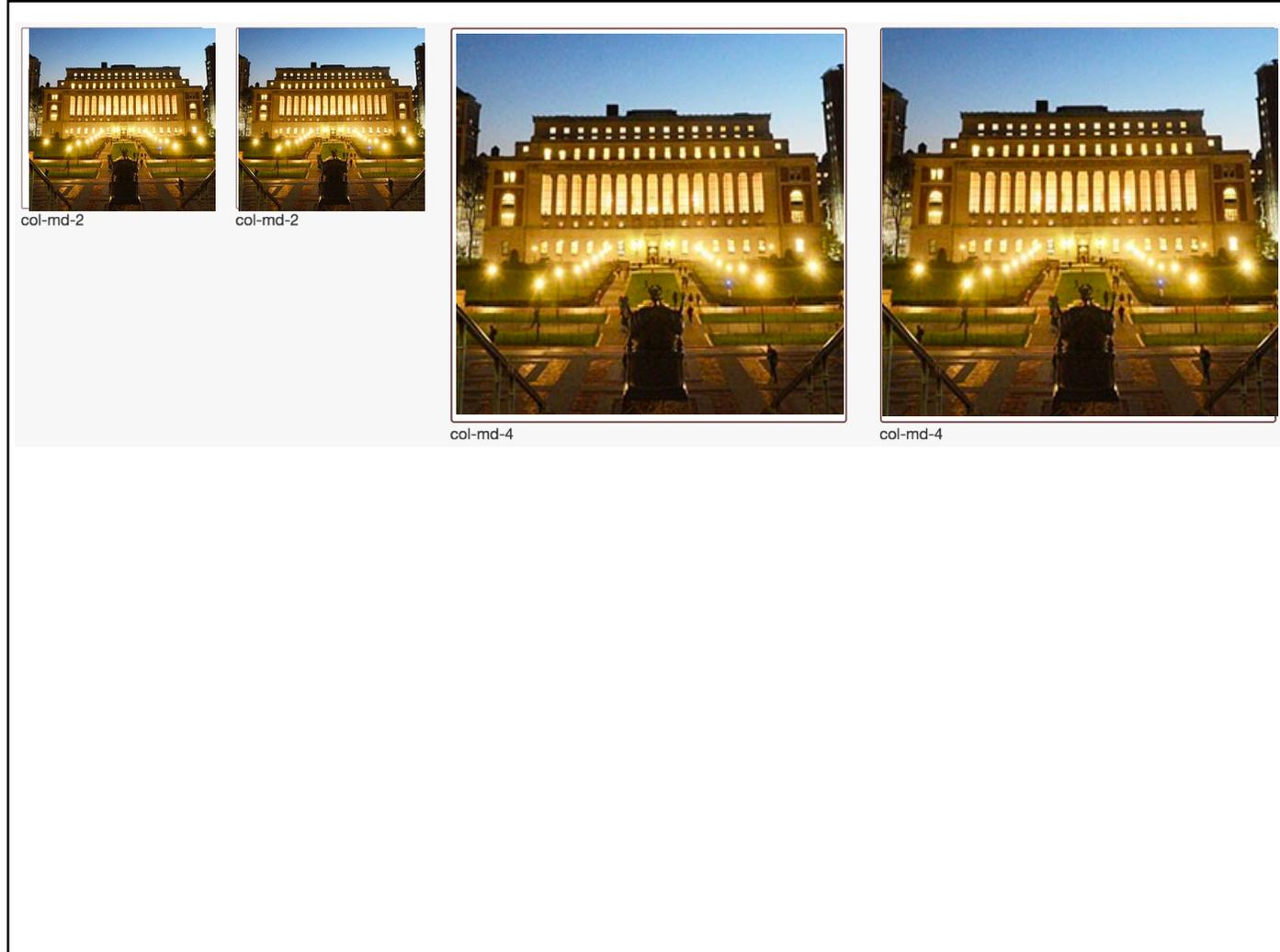
# 1. What will this produce?

```
<div class="container">
  <div class="row">
    <div class="col-md-3">
      
    </div>
    <div class="col-md-3">
      
    </div>
    <div class="col-md-3">
      
    </div>
    <div class="col-md-3">
      
    </div>
  </div>
</div>
```



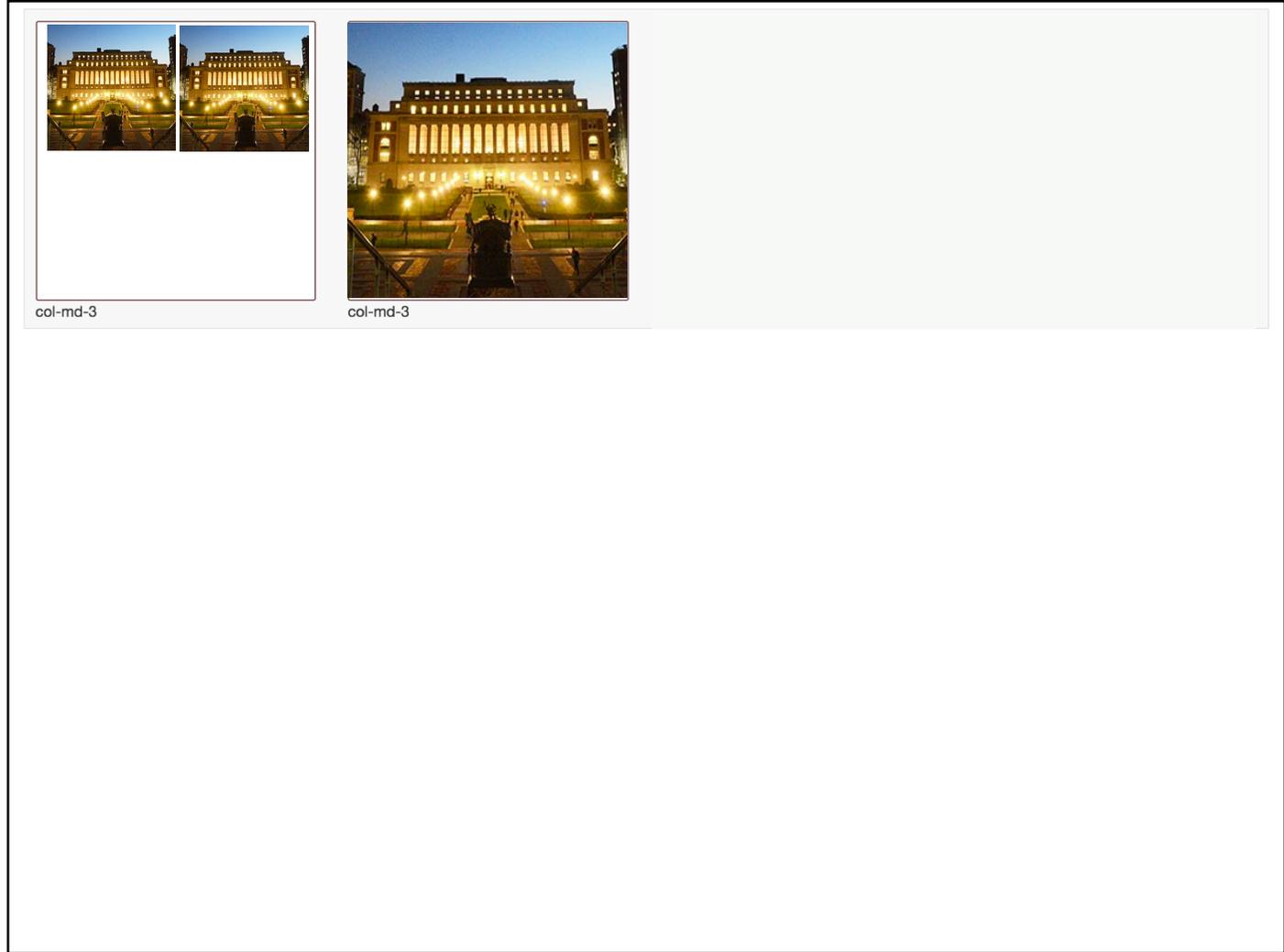
## 2. What will this produce?

```
<div class="container">
  <div class="row">
    <div class="col-md-2">
      
    </div>
    <div class="col-md-2">
      
    </div>
    <div class="col-md-4">
      
    </div>
    <div class="col-md-4">
      
    </div>
  </div>
</div>
```

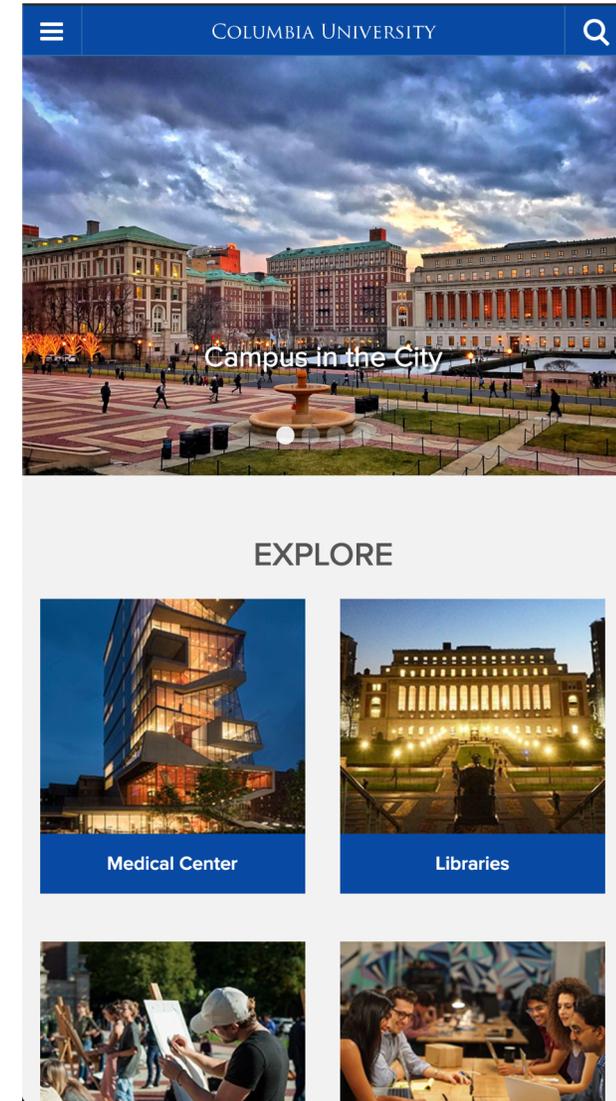
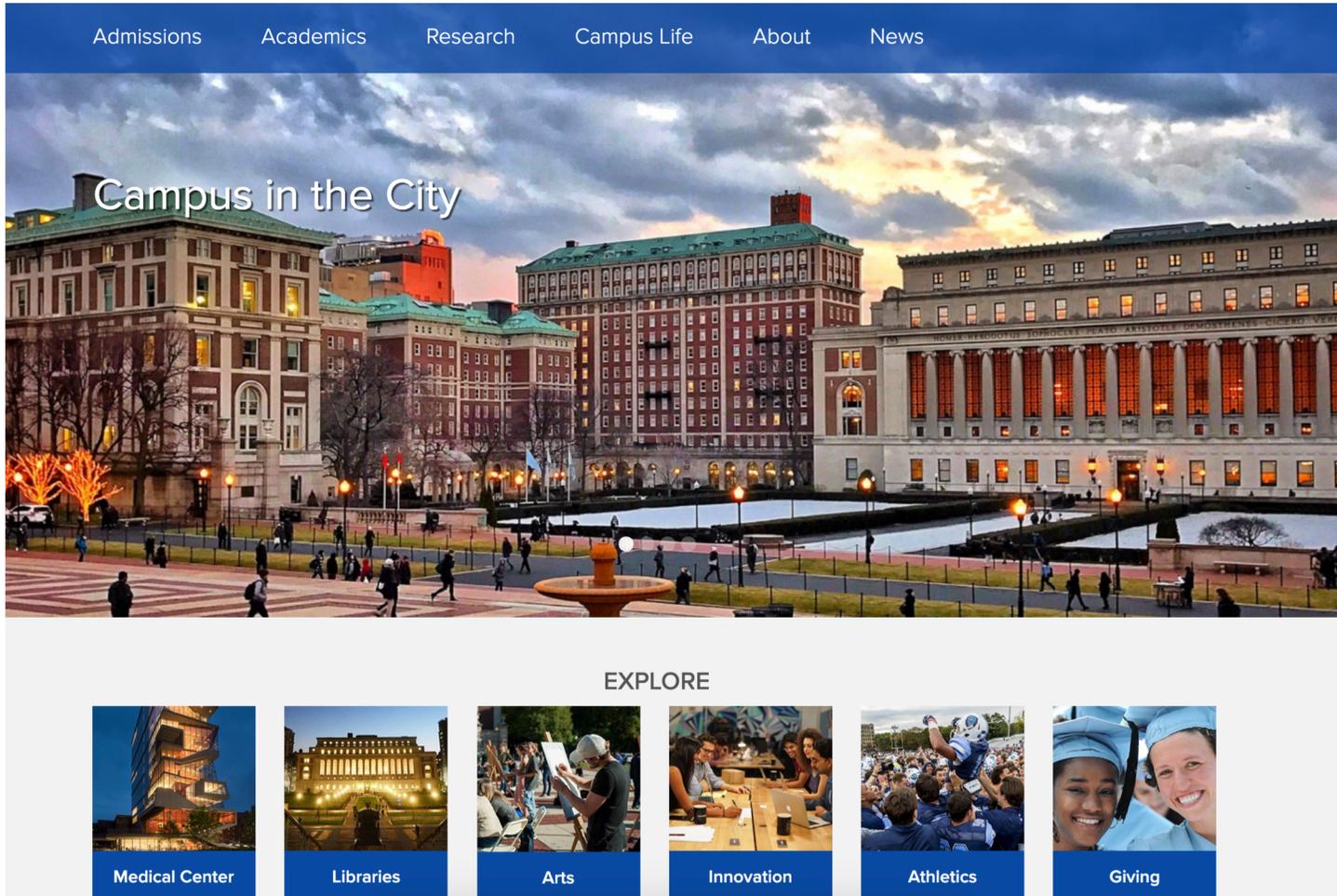


# 3. What will this produce?

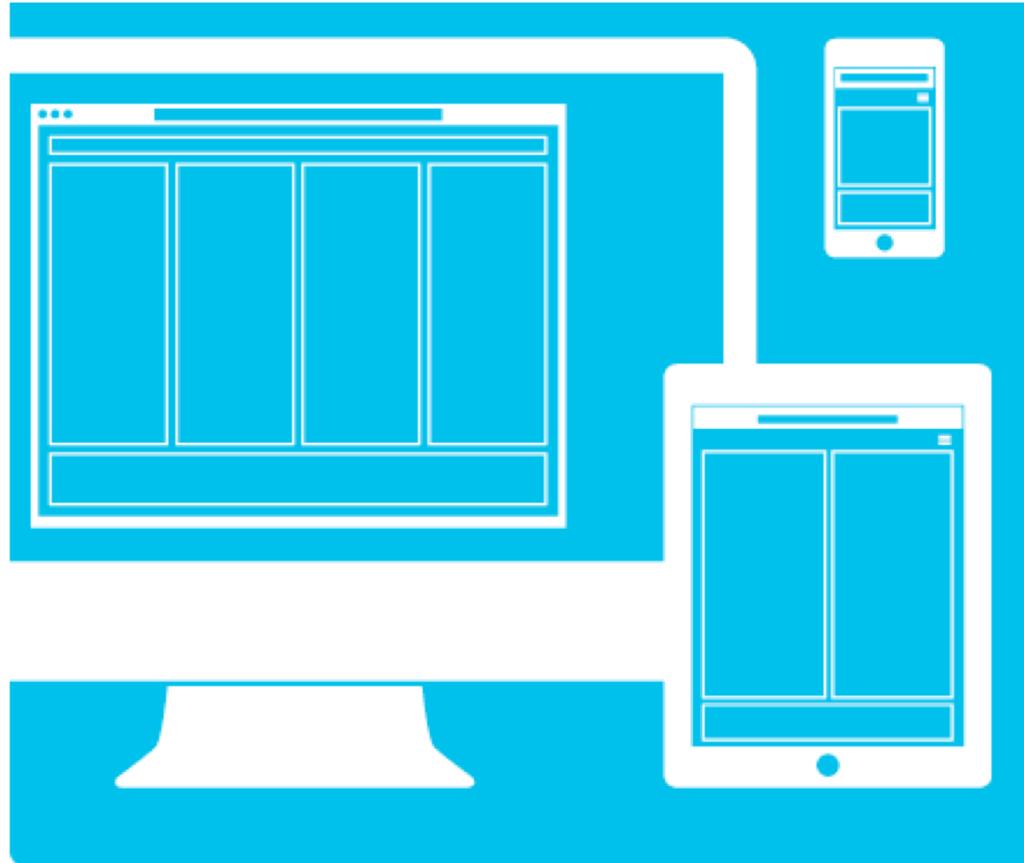
```
<div class="container">  
  <div class="row">  
    <div class="col-md-3">  
      <div class="row">  
        <div class="col-md-6">  
            
        </div>  
        <div class="col-md-6">  
            
        </div>  
      </div>  
    </div>  
    <div class="col-md-3">  
        
    </div>  
    <div class="col-md-6">  
    </div>  
  </div>  
</div>
```



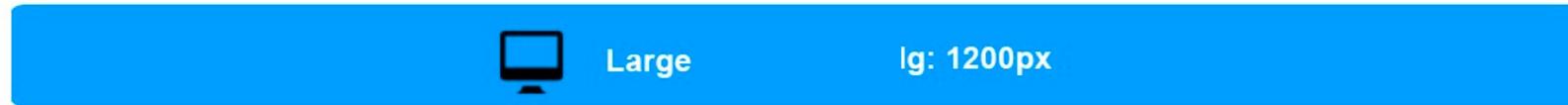
# Bootstrap solves another problem for you



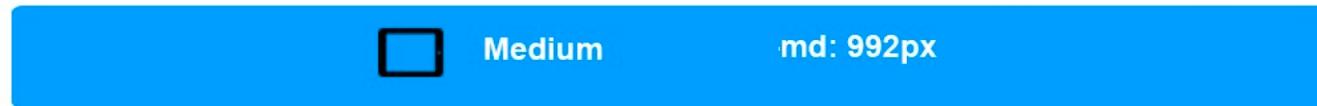
Bootstrap enables **responsive design**:  
making it easy for the layout to respond to changes in  
the screen size.



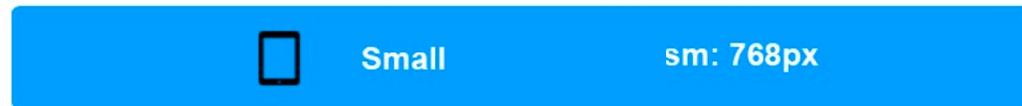
# Four Device sizes



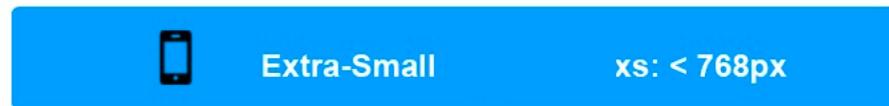
Desktops



Laptops



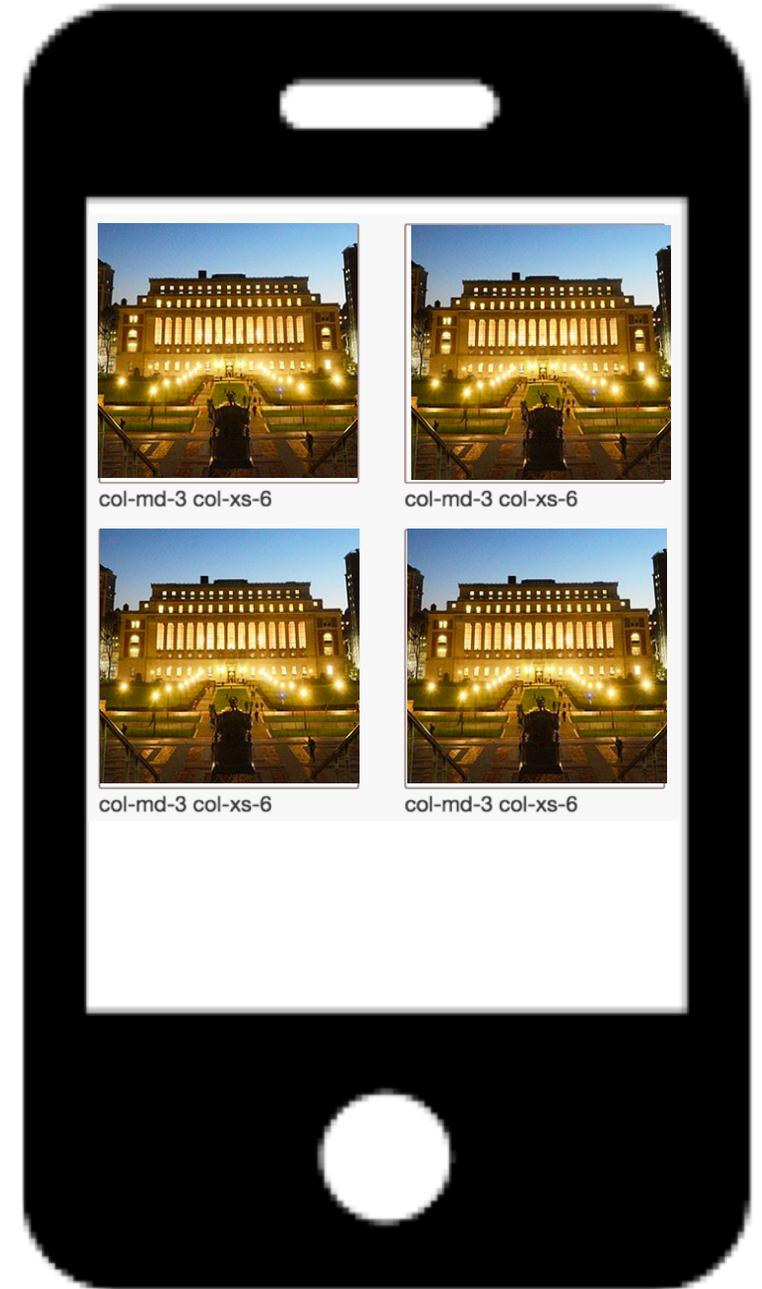
Tablets



Phones

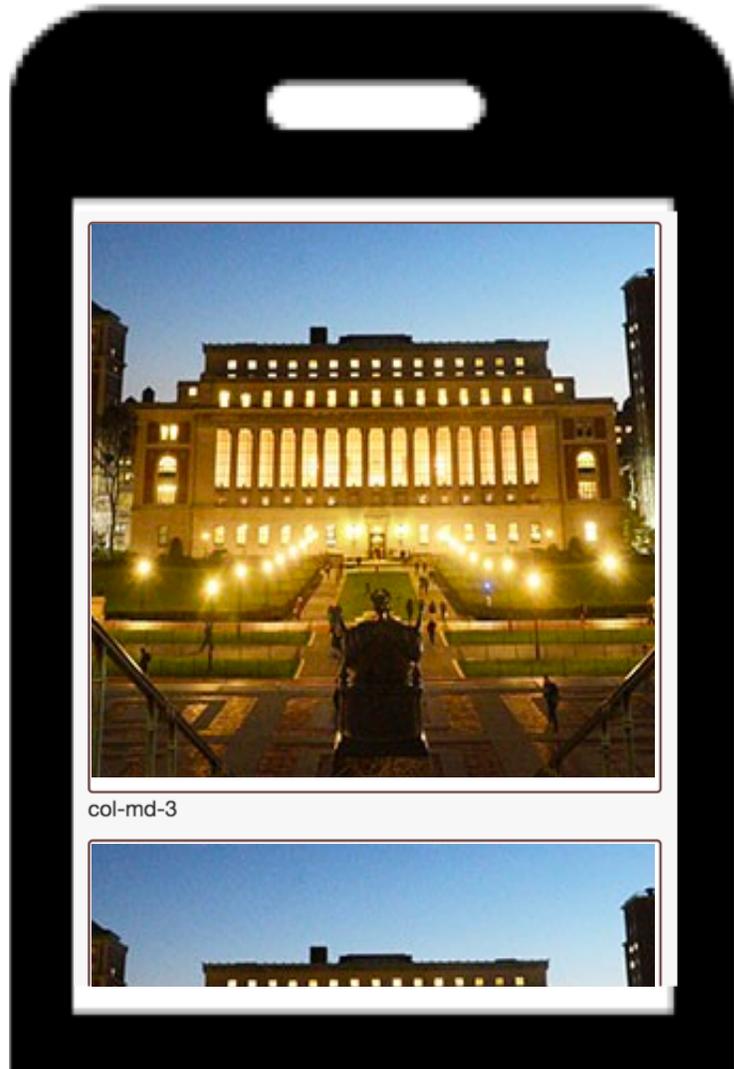
# What will this do on a phone?

```
<div class="row">  
  <div class="col-md-3 col-sm-6">  
      
  </div>  
  <div class="col-md-3 col-sm-6">  
    <img src = "./columbia.jpg">  
  </div>  
  <div class="col-md-3 col-sm-6">  
    <img src = "./columbia.jpg">  
  </div>  
  <div class="col-md-3 col-sm-6">  
    <img src = "./columbia.jpg">  
  </div>  
</div>
```

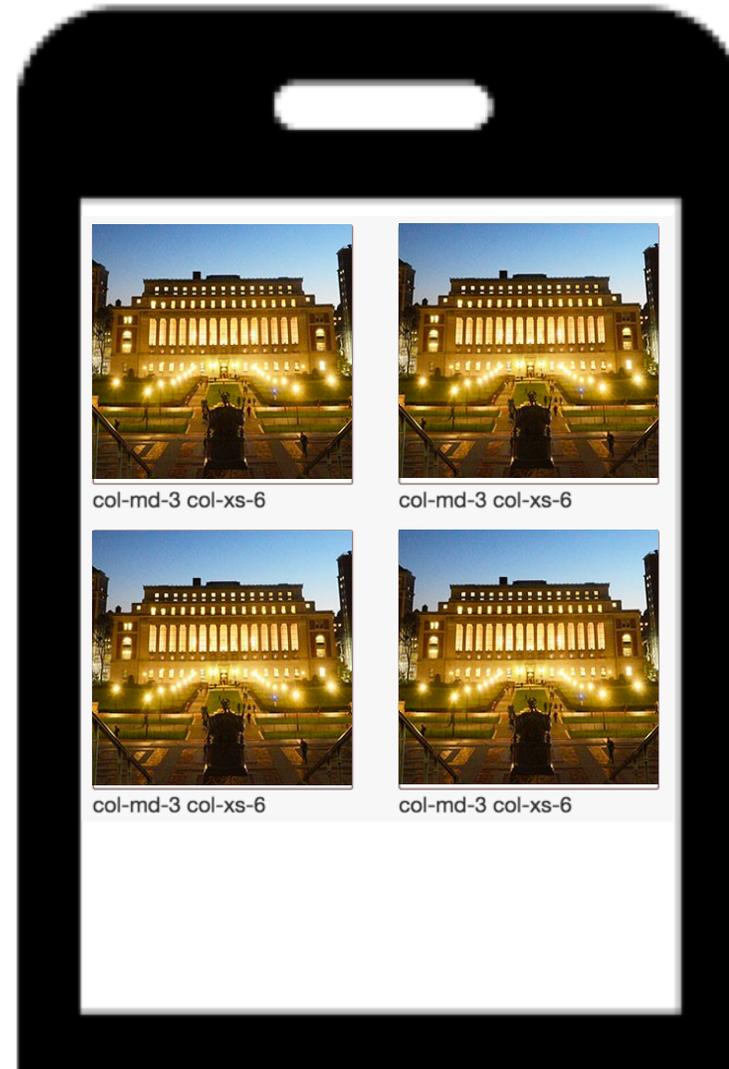


# What's the difference in layout?

`class="col-md-3"`



`class="col-md-3 col-sm-6"`



In summary...

# Old school information layout was symmetrical

**LEIPZIGER  
MESSE**

*Allgemeine Mustermesse mit  
Technischer Messe und  
Baumesse*

**Die allgemeine internationale  
Messe Deutschlands**

*Die erste und größte Messe der Welt  
Für Aussteller und Einkäufer  
gleich wichtig*

BEGINN DER HERBSTMESSE AM 27. AUGUST 1922.

*Auskunft erteilt und Anmeldungen nimmt entgegen*

**MESSAMT FÜR DIE MUSTERMESSEN  
IN LEIPZIG**

**Vance Hotel**  
Statesville, N. C.

**ways**  
"FAMOUS for FOOD"

ways 21, 64, 70  
We Never Close



**TYPICAL MENU**

<p><b>BREAKFAST</b> 25 cents</p> <p>Fruit or Cereal</p> <p>One Egg, Any Style</p> <p>One Piece Bacon or Sausage</p> <p>Jelly</p> <p>Hominy Grits</p> <p>Buttered or Dry Toast</p> <p>Coffee    Tea    Milk</p> <p>§</p> <p>Specials from 25c to 75c</p> <p>§</p> <p>A La Carte Service at all Times</p> <p>§</p> <p>See Food in Special</p>	<p><b>LUNCH</b> 35c and 50c</p> <p>Homemade Vegetable Soup</p> <p>Tomato Broth</p> <p>Lettuce and Tomato Salad</p> <p>Roast Beef Brown Gravy</p> <p>Baked Virginia Ham</p> <p>Fried Salmon Trout and Cole Slaw</p> <p>Boston Brown Potatoes</p> <p>Green Beans</p> <p>Diced Carrots and Cream</p> <p>Corn Muffins</p> <p>Assorted Pies</p> <p>Fruit Jello Whipped Cream</p> <p>Vanilla or Chocolate Ice Cream and Cake</p> <p>Coffee    Tea    Milk</p>	<p><b>DINNER</b> 50 cents</p> <p>Tomato Juice</p> <p>Homemade Vegetable Soup</p> <p>Cream of Green Pea Soup</p> <p>Country Style Steak</p> <p>Broiled Lamb Chops</p> <p>Baked Salmon Trout</p> <p>Poached Egg on Toast</p> <p>Hash Brown Potatoes</p> <p>Early June Peas</p> <p>Corn Pudding</p> <p>Head Lettuce with Dressing</p> <p>Boston Cream Pie</p> <p>Vanilla or Chocolate Ice Cream and Cake</p> <p>Coffee    Tea    Milk</p>
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**Eggs and Omelettes**

Scrambled Eggs with English Kipperd Herrings 1.00  
Hangtown Fried Oyster Omelette 1.00

**Specialties of the House**

SPAGHETTI DERBY: Italian Spaghetti, Fresh Tomatoes, Mushrooms and Meat Sauce 1.10  
MEXICAN TAMALE (Old Fashioned Mexican Maize Chicken Tamale, Fresh Daily) 90  
CREAMED TURKEY DERBY (All White Meat, Served in Toasted Crouton, with Cranberry Jelly) 2.25  
PAN FRIED CORNED BEEF HASH 1.00; with Poached Egg 1.25  
STEAK HAMBURGER DE LUXE (Ground Sirloin Steak) with or without Onions, Potatoes 1.85  
DE LUXE CHICKEN ENCHILADAS with Chili Con Carne and Frijoles 1.50  
FILET MIGNON TID-BITS with Sliced Mushrooms, Chef's Special, Risotto 1.85  
SCALLOPED CHICKEN A LA KING in Patty Shell, Peas in Butter 1.25

**Entrees**

HUNGARIAN VEAL GOULASH with Egg Noodles Polonaise 1.50  
RACK OF LAMB PARISIENNE in Casserole 1.50  
BOILED HAM HOCKS and Baked Beans, Boston Brown Bread 95  
PAN FRIED ROAST BEEF HASH, Poached Egg 1.00  
MEDAILLONS OF PORK FILET Saute, Marsala, Timbale of Rice 1.50  
FRESH ASPARAGUS with Fried Ham, Sauce Hollandaise 1.65  
DERBY APPLE PANCAKE with Cinnamon Butter 1.10  
EMINCE OF CALF'S LIVER with Mushrooms, in Sour Cream Sauce, Rice 1.20

**Desserts**

Ice Cream 40  
Parfaits 50

Baked Fresh Rhubarb 50  
Sherbet 40

**Pastry Specials**

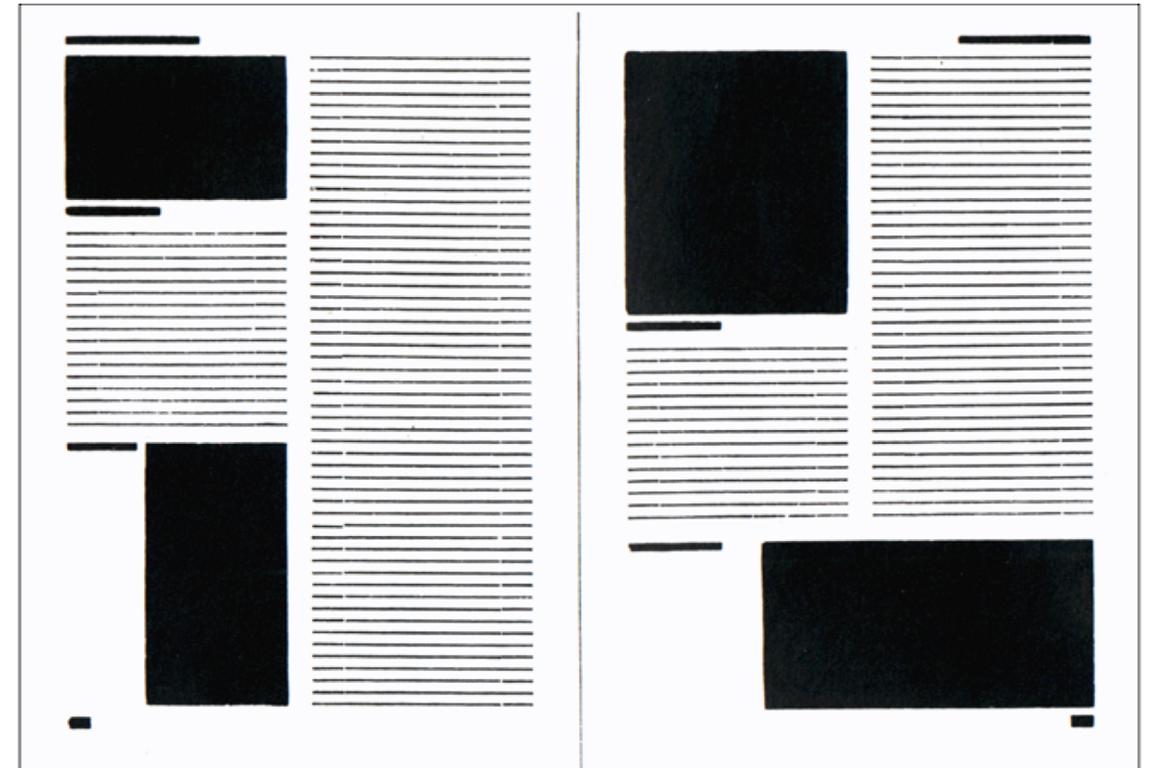
Blackbottom Pie 40  
Parisian Pastries 40

Rio Rita Cake 40  
Rice or Chocolate Pudding 35

BEVERAGES AS LISTED ON A LA CARTE MENU

Sales Tax will be added on all taxable items in accordance with the rulings issued under the Sales and Use Tax Law  
Sorry we cannot be responsible for lost articles  
Friday, January 17, 1947

The Bauhaus School of Design helped give rise to asymmetric grid layouts.



# Grids layouts help you convey importance with grouping, location, size, and whitespace.



# Twitter Bootstrap is a widely used grid system.



**Moments** · View all

Isaiah Thomas becomes a meme...  
NBA · 2 hours ago

A photograph of Isaiah Thomas in a Cleveland Cavaliers jersey, looking towards the camera.

This bot-generated Coachella...  
Haha · 3 hours ago

A poster for the Coachella festival, listing various bands and acts for Friday, Saturday, and Sunday.

People are going crazy over this...  
Business Insider · 5 hours ago

A photograph of a Mattress Firm store exterior.

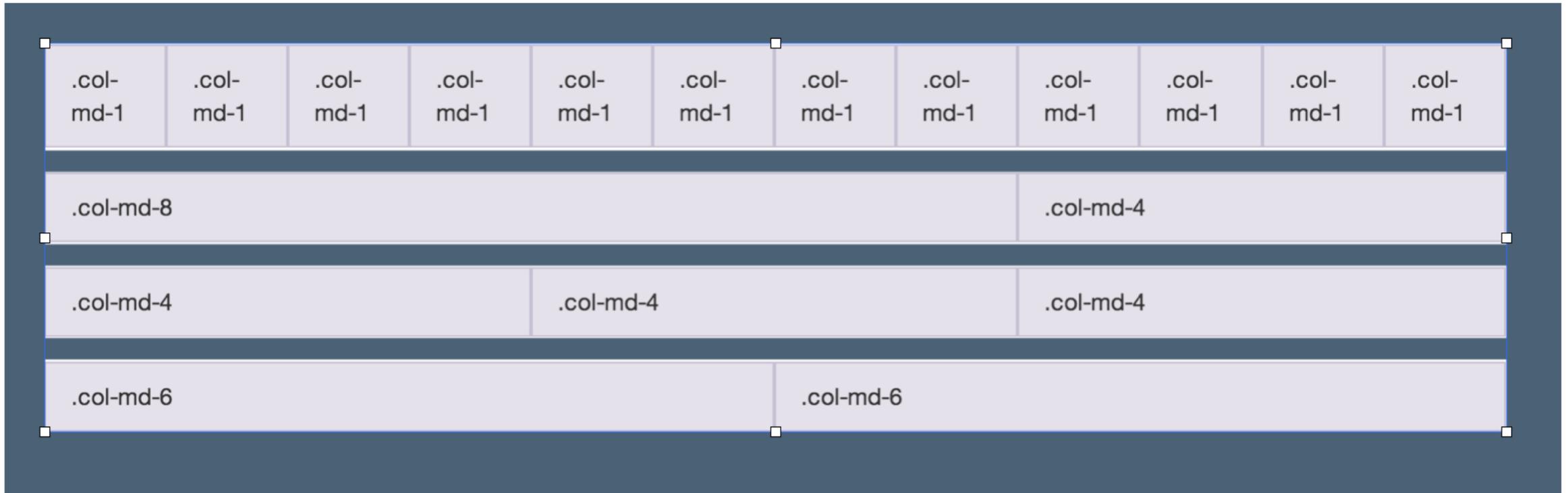
**New to Twitter?**  
Sign up now to get your own personalized timeline!

[Sign up](#)

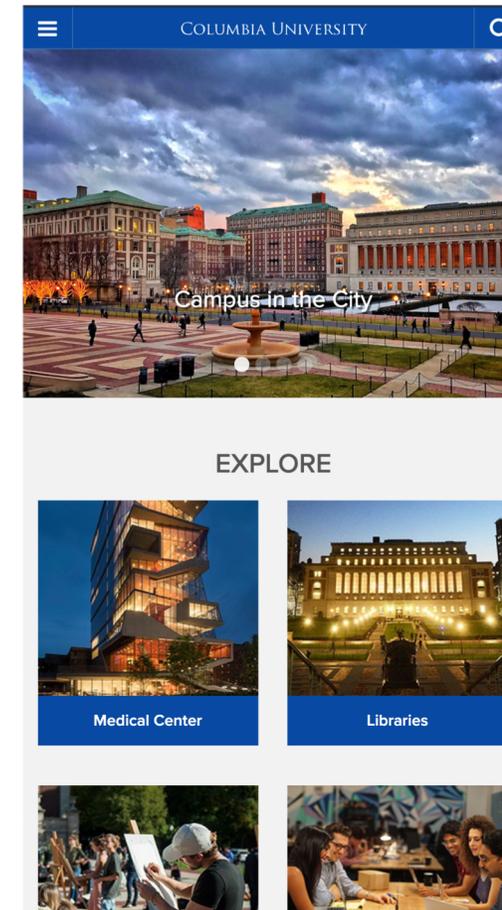
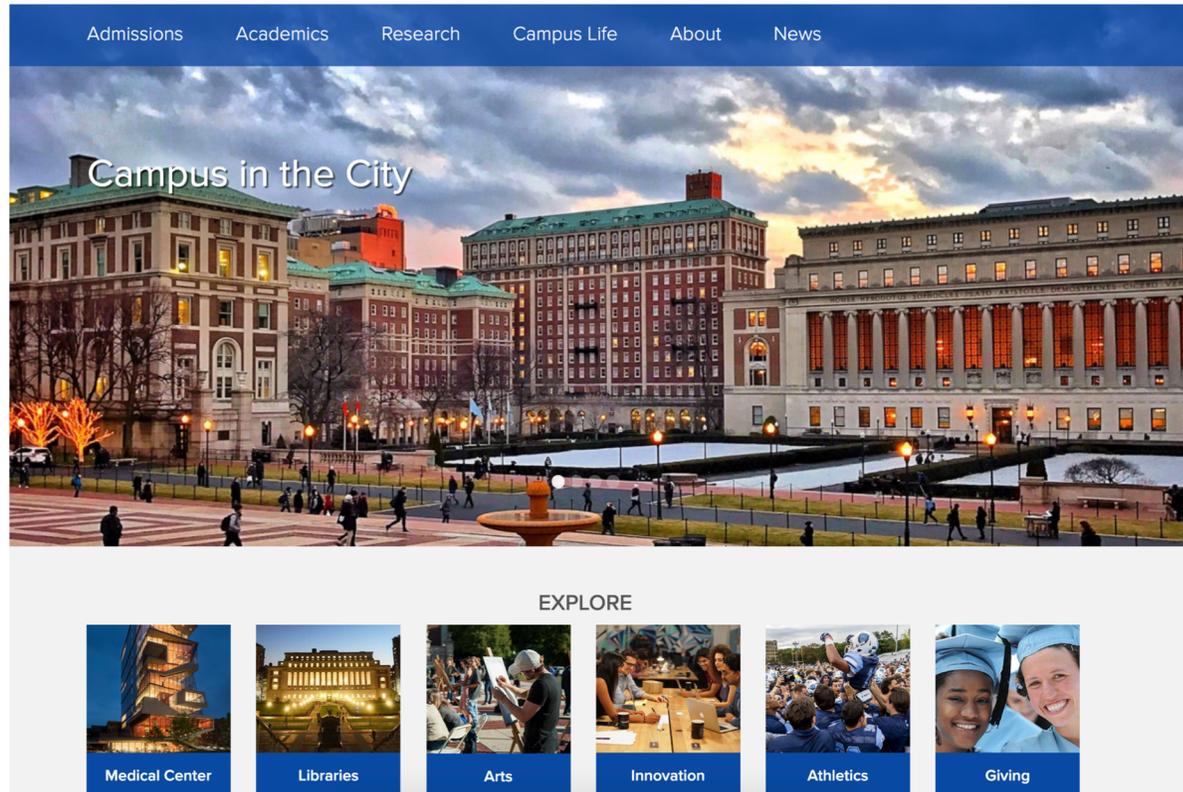
## Featured Tweets



# Bootstrap allocates width into twelve columns



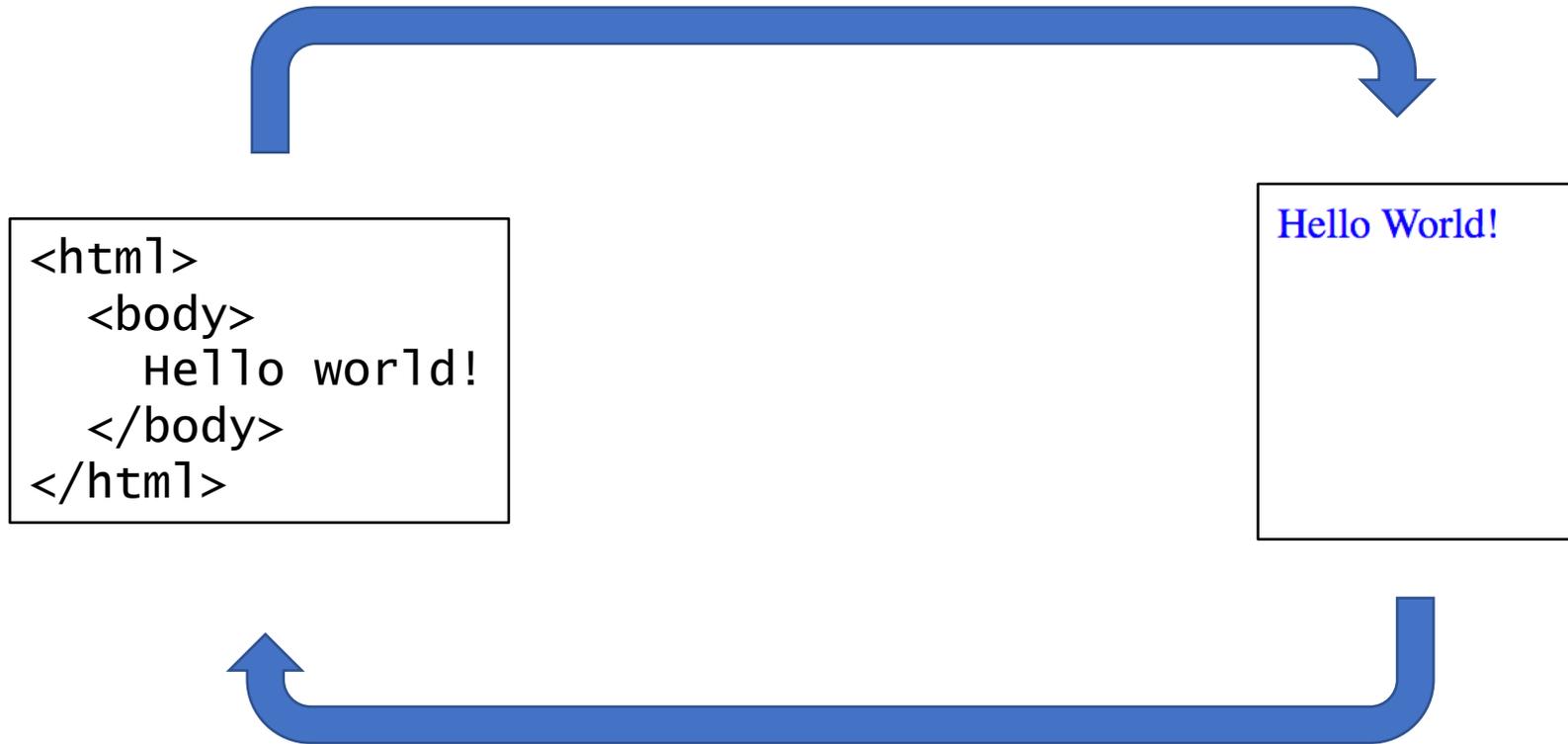
# Responsive design helps you specify the layout for different sized screens



# Iterative Style of Programming

helps you build a mental model of your code.

What's the **smallest** unit of progress I can make?



Does it look ok?

# Homework 2: Grids and Layout

Warm up: due Friday 1/28 @ 11:59pm on Courseworks

Main: due Tuesday 2/1 @ 11:59pm on Courseworks.

## Warm-up:

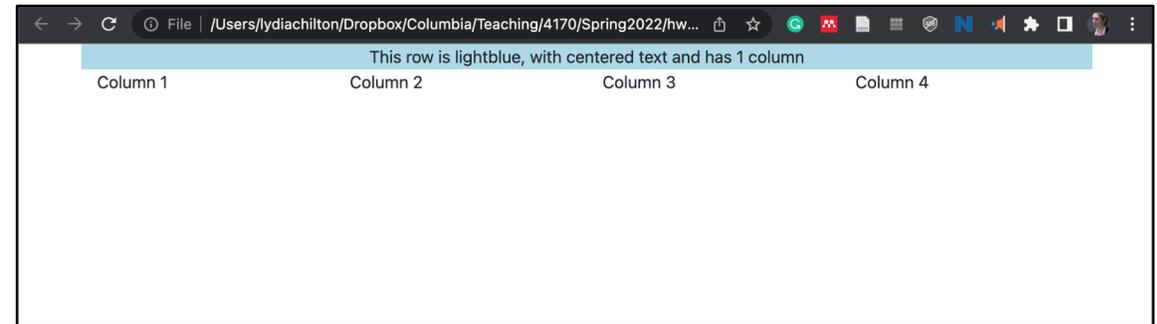
### Problems:

1. **Recreate the following webpage. (Show below at two different screen sizes)**

- a. Use Bootstrap 4.2.1. Attach it in the <head> section will the following code:

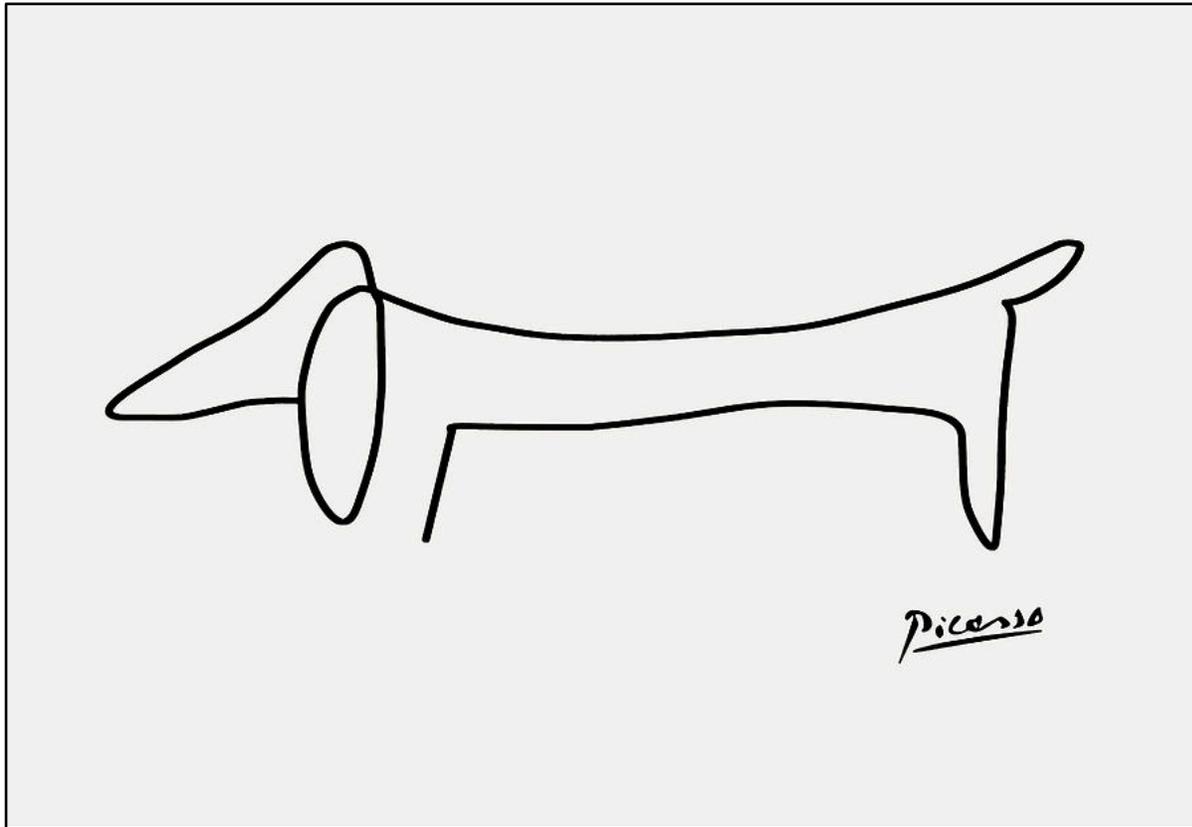
```
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.2.1/css/bootstrap.min.css"
crossorigin="anonymous">
```

- b. Create one row with only 1 column. Make that row or column have a lightblue background-color. The text in that column should be centered.
- c. Create another row with 4 evenly spaced column on a medium screen.
- d. In that second row, when the screen is small, the Columns should wrap down the page.
- e. Submit a PDF with two screenshots.
- First show the webpage when it's on a large device
  - Second, show the webpage when it's on a small device.
  - Your images should look like the examples below.



11:50 PM

Well, this tinder html was fun but also frustrating, but also rewarding...



Things that look simple can be deceptively hard to make....

**Simple is hard.**