



# **Layout fundamentals for websites (NMW)**

**Class 04**

# Organizing content (suite)

Without really realizing it, web designers always have been using some kind of grids. In the old days using frames and tables and now different CSS techniques, we manage to divide available space in different zones.

**My Table Example**

cellpadding, cellspacing, border, rowspan, colspan, align, valign	Tables control Web page layout.
	Tables are controlled with the attributes cellpadding (how much padding surrounds the content inside a cell), cellspacing (how much space appears between adjacent cells) and border (the width of the lines between cells). All three are measured in pixels. These attributes appear inside the TABLE tag.
The attributes rowspan and colspan allow one cell to span more than one row or column. These attributes appear inside the TD tag.	Finally, positioning of elements within a table cell is controlled by align (left, center, right) and valign.

Page layout using tables.

**Main Menu**

**Topics**

- Introduction
- Basic concepts
  - What is a font?
  - Body text
  - Font sizes
  - Font styles
  - Serifs
  - Screen fonts
  - Proportional fonts
  - Anti-aliasing
  - Resident fonts
- Choosing a font
- Leading

**Media Components**

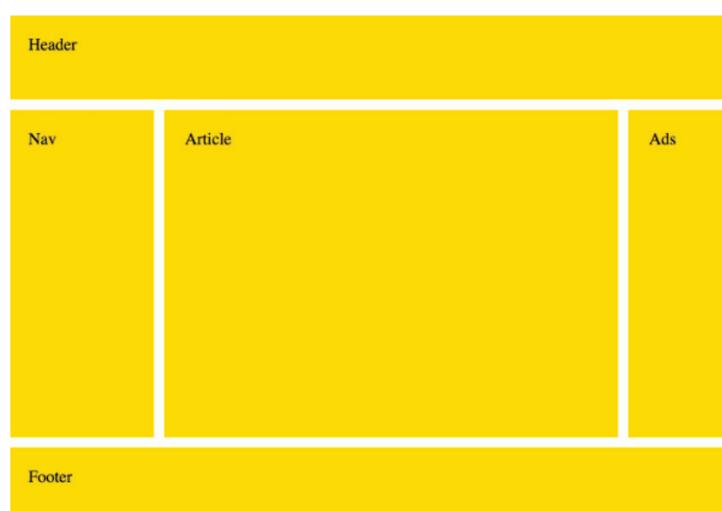
**Graphics      Audio      Video      Text      Animation**

Leading (it rhymes with wedding) refers to the amount of vertical space between lines. Recall that a font size is defined as the distance between a point on a character and the same point on the character on an adjacent line. In the days of hot metal type, when extra vertical space was required between lines of text, thin strips of lead were inserted between the lines of text.

Now, of course, space is inserted between lines electronically, but the term 'leading' endures.

You can [see the effects](#) of increasing leading. A rule of thumb proposed by a number of [writers](#), and supported by [research](#) on printed material, says that the longer the lines, the more leading there should be.

Page layout using frames.

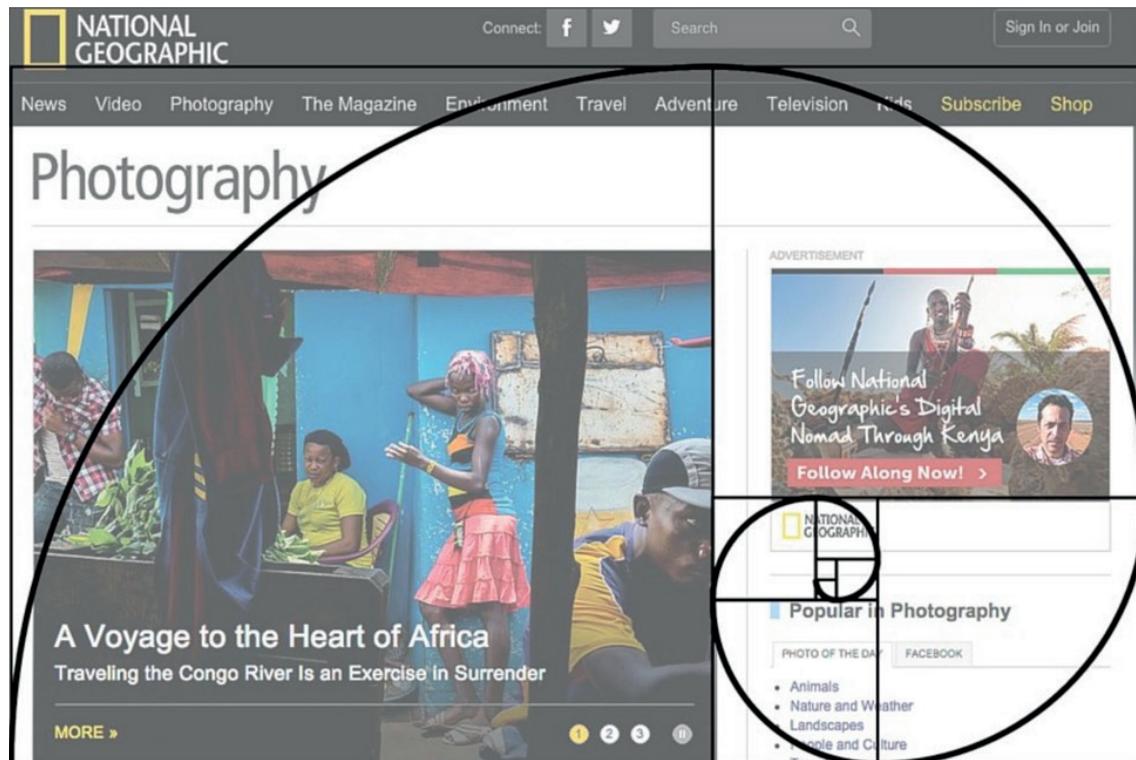
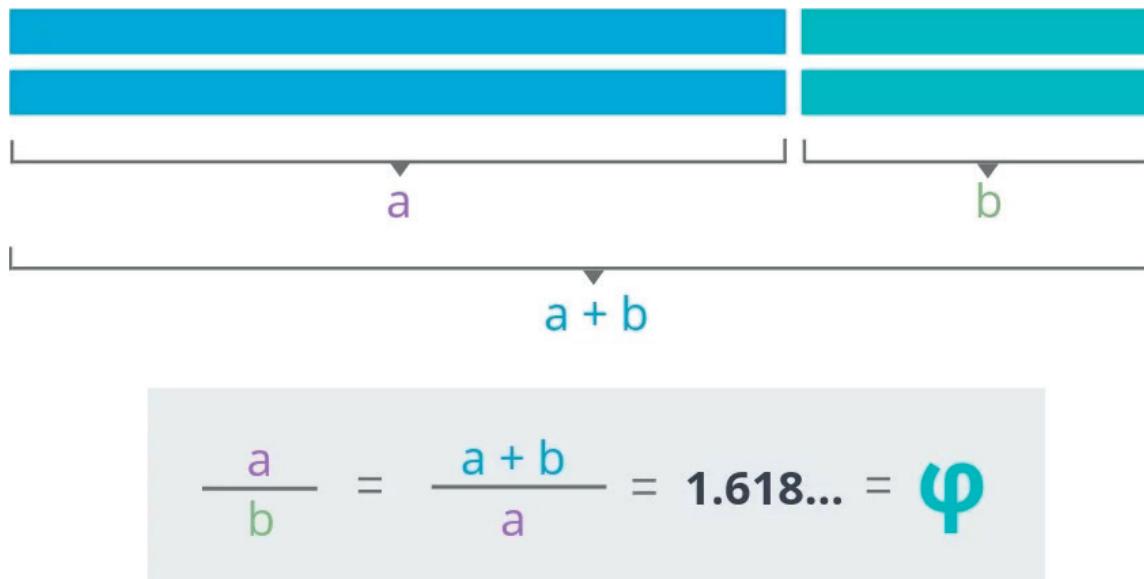


Page layout using CSS containers.

## Divine proportion to web

The grids used nowadays by web designers come from what graphic designers used for centuries for various types of documents and were based, in parts, on the divine proportion you have been told about in many different design courses and which gave us the rule of thirds.

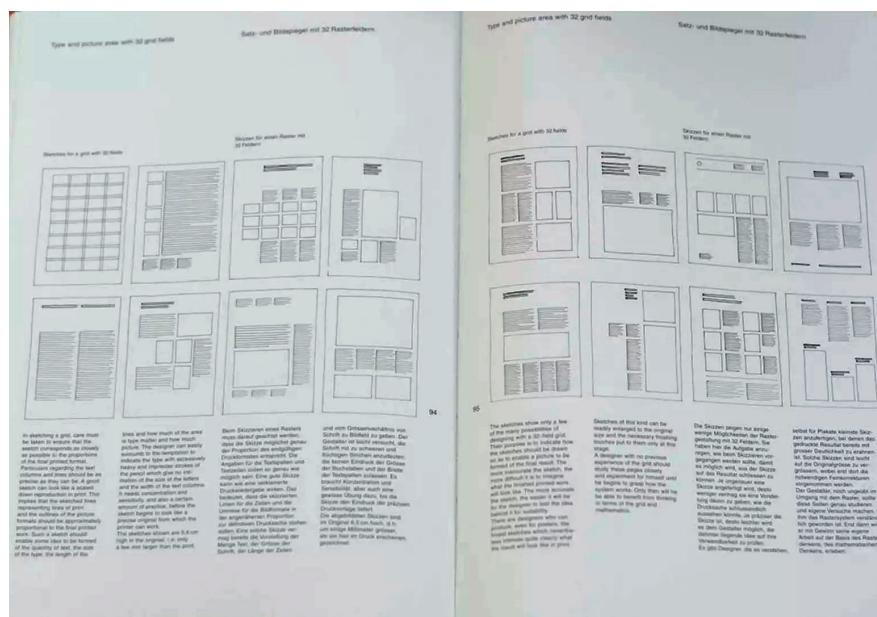
### The golden ratio



The golden ratio has been applied to books and to newspaper, for instance:



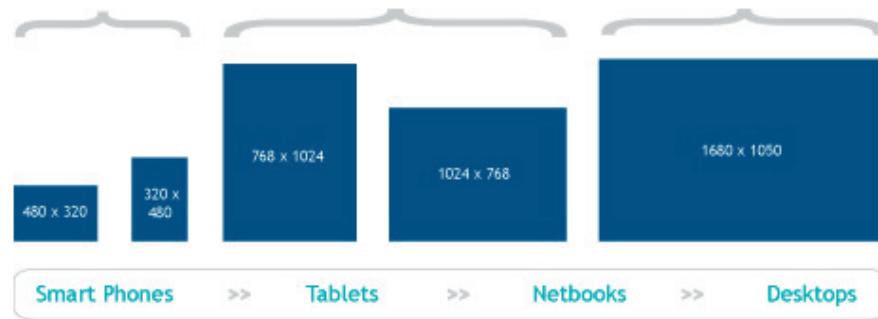
The Swiss school and typographers such as *Jan Tschichold* and *Herbert Bayer* finally developed a more precise grid system:



## Developing a grid

### The format

It is first necessary to define the format, the shape of the window in which elements will be positioned. Of course, the ratio will be defined using the golden rule and basic technological constraints, when it comes to the web.

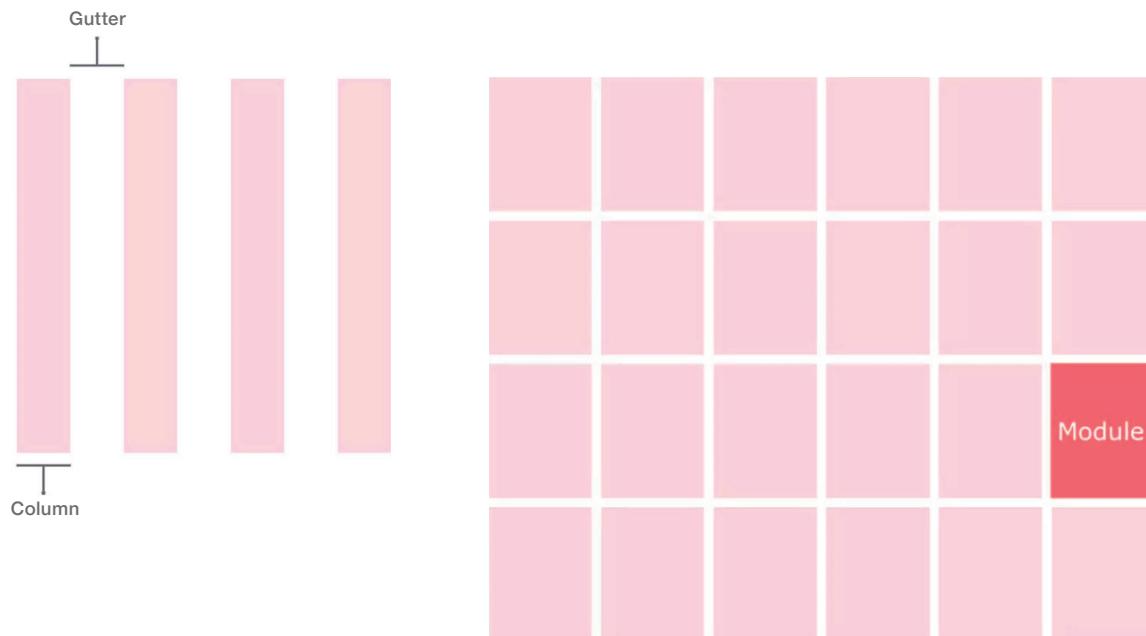


### The margin

The margin differs from a print to a web document. Since it is impossible to know in advance the size of the viewport that will be used to view a web document, Margin may vary, horizontal width may be limited or the design might be fluid or adaptive. Margin between the elements and the various zones should be sufficient to avoid confusion.

### Columns, gutters and modules

Columns are used as space units to define zones in which to position the different elements. The gutter is the space between the columns. Modules are defined when rows are created.

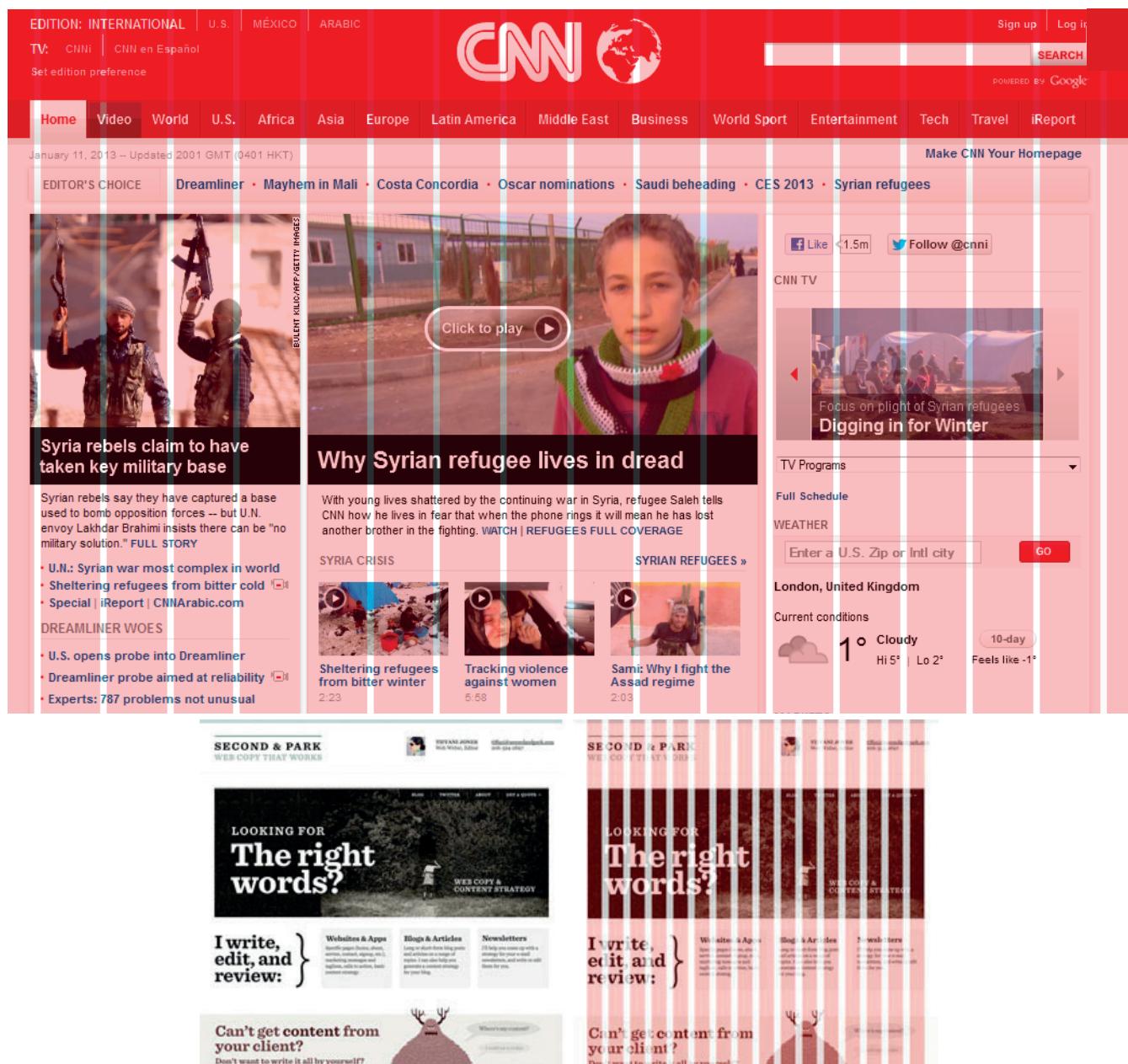


# Using the layout grids

Grids are systems developed to create order within the contents of a composition. Just like some designer developed methods to manage empty spaces such as margins and leading, invisible grids systems have been created in order to help designers position textual and iconic contents within their documents.

Of course, what was used for centuries for print has been adapted to suite web designer's needs. Far from making pages look the same, grids ensure cohesion and automatically give users an impression of good organization and participate greatly in user experience.

Every good quality website you have seen was based on a grid and those are very easy to understand once you look at how they are used to layout the various elements of web pages.



## How to create a grid?

A grid divides a layout with vertical and/or horizontal guidelines (margins, spaces and columns) to provide a framework to help organizing content. Without having to make a web page look like a newspaper, a grid helps creating a uniform structure to start the design with. It's a tool that should guide you, not constraint you. So use grids as a base and let your creativity and intuition do the rest.

You've already been using basic grids when you learned coding. Different HTML tags were used to defined different zones of the web page such as header, footer, main and aside.

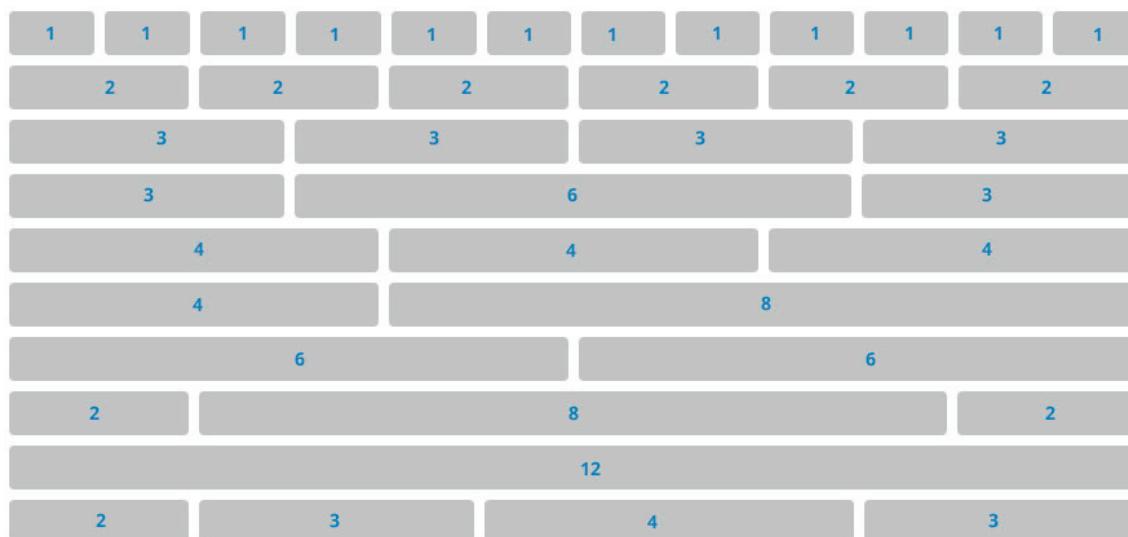
Although, these containers forming a grid should be defined in a logical, flexible and useful way. There are many different theories on how to set up a grid, but you basically must choose what works best for you and your project. You can divide a blank document mathematically, creating an even or odd number of columns and gutters and, as long as the same grid is used within a site, the result should be good. The more complex and elaborate the grid is, the more freedom you have within the page.

### Defining the columns and gutter

After deciding the total width the page's elements will occupy, it is needed to define the number of columns that will be used.



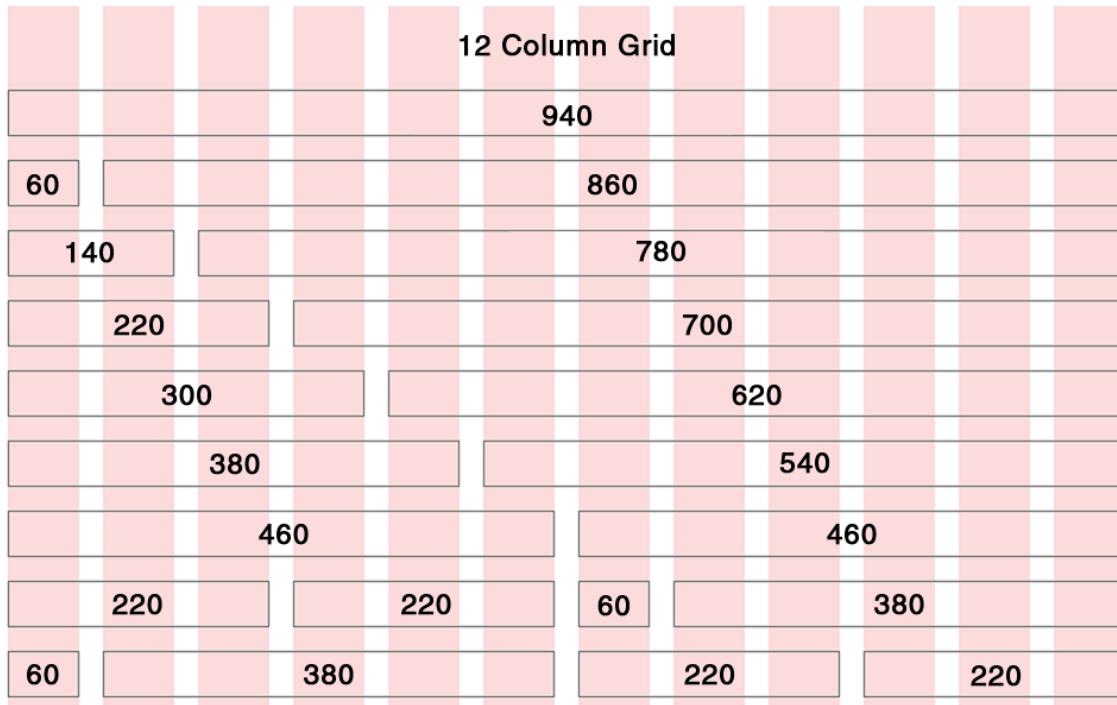
Generally, the page is divided by multiples of three or four will be used. Twelve is ideal, because it can be divided by three and four.



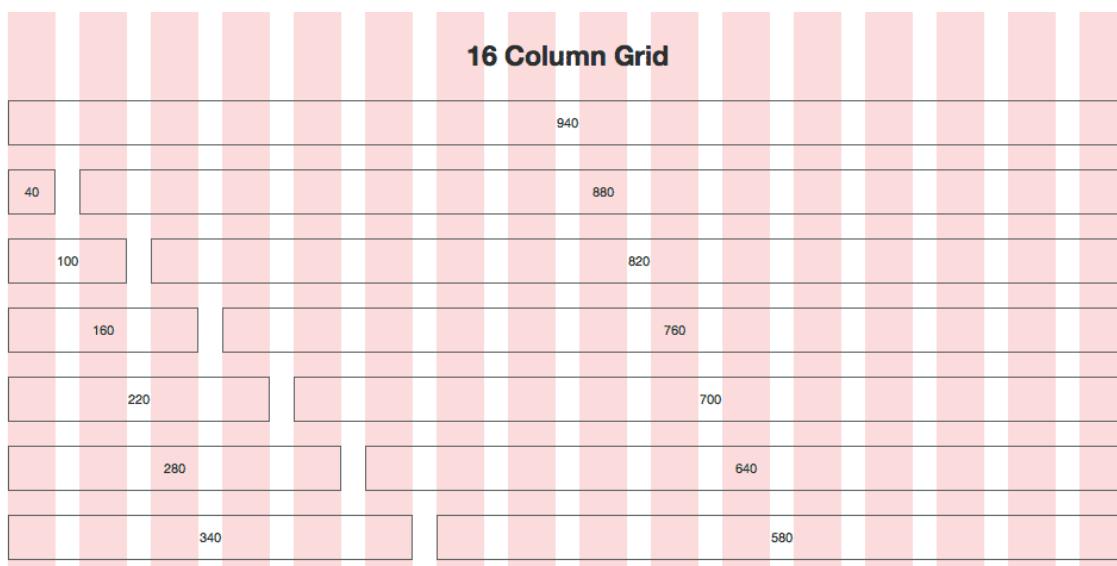
There are some very popular grid system you can use such as **960 grid**, the **Blueprint grid**, and the **1200px grid system**.

## The 960/1140/1200px grid systems

12-column grid divided into 60px increments with 20px gutters:



16-column grid divided into 40px increments with 20px gutters:



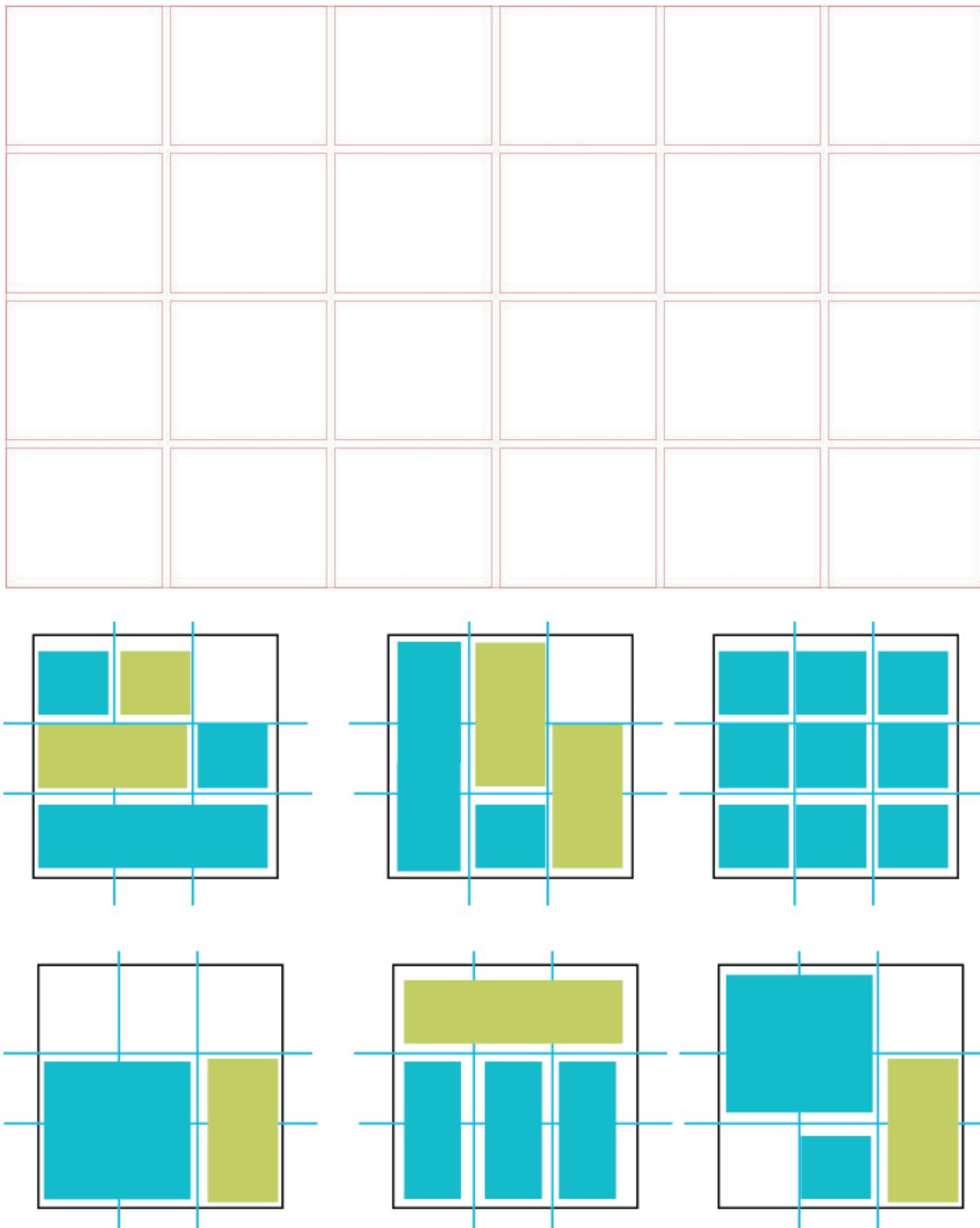
<https://960.gs/>

<https://1440px.com/>

<https://1200px.com/>

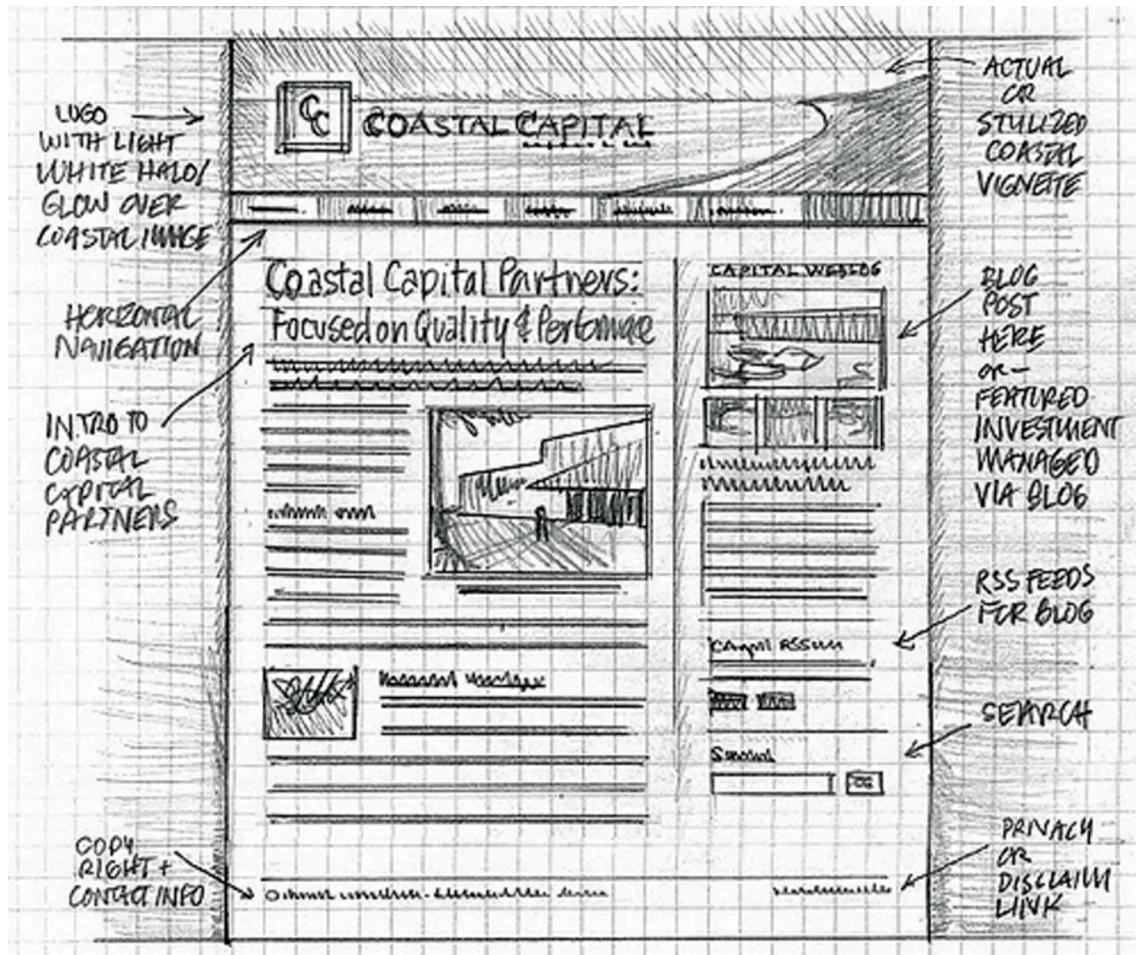
## 2D grid or modular grid

Some designers use this grid system composed of both columns and rows allowing various configurations.



## Sketch first

Before starting to code, make sketches. You can use graph paper to help visualize the grid you will use. Position every element of your page and make multiple attempts until you come with an excellent solution. Then only you should start coding.



### Sources and references:

<https://www.interaction-design.org/literature/article/the-grid-system-building-a-solid-design-layout>

<https://www.smashingmagazine.com/2017/12/building-better-ui-designs-layout-grids/>

<https://visme.co/blog/layout-design/>