

# Web Design Using HTML & CSS (1)

Web design is a craft, think about if you had to design a table, whilst you want it to look nice it has to also provide some standard functionality — webpages are the same.

## The Hard Part of Design - Thinking About Design

### Design and Cultures

- the use of colour is often used to hint at certain themes and using these associations is part of design
- however these associations between colour and theme will change in different parts of the world

### Design and Fashion



These changes to the OK button are non-functional, i.e. it won't affect the functionality of the button

However some of the designs look more modern compared to others — old styles are updated and phased out

- web users have a sense of current style so you may wish to avoid using outdated styles, this could lead visitors to think your webpage is much older than it is or could portray a retro look
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# Design Principles

## Design Principle 1

### Test with your intended audience

- not just to check they can use the service correctly, but also to get first impressions about the design choices you have made
  - your intentions may not have been obvious to users
  - or could be misleading

## Design Principle 2

### On the web, use a responsive design

## Other design principles:

### Gestalt (1) principle

*7 gestalt principles in total but we will discuss 2 of them*

The first gestalt principle is regarding how people have a tendency to interpret shapes as the **simplest possible combination** of familiar shapes

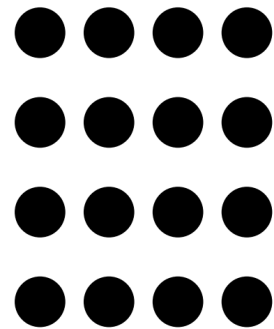
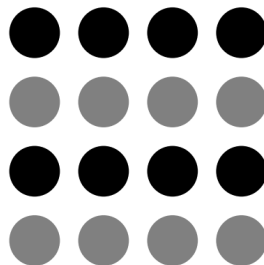
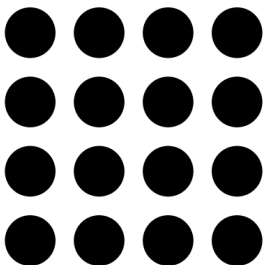
- in the below image, the circles with missing segments are complex shapes, however in the way they are aligned below it could appear that there are 3 whole black circles on top of which someone has laid a white triangle

- this is because circles and triangles are familiar shapes, and our brain prefers images like that over unfamiliar sliced up images of familiar shapes



## Gestalt (2)

We view items as being **more related** the closer they are to each other



All the items as equidistant to their neighbours in each row and column.

If we want to give the impression that items are more closely related to items in the same row then you could use colour.

An equally effective technique could be to **increase the spacing between rows but not columns.**

## Whitespace

- generally whitespace can be effective as a way of grouping items or ideas on a page

gnats	gram	\$13.65
	each	.01
gnu	stuffed	92.50
emu		33.33
armadillo	frozen	8.99

Item		
Animal	Description	Price (\$)
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.50
Emu	stuffed	33.33
Armadillo	frozen	8.99

Item		
Animal	Description	Price (\$)
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TeX manual

booktabs

Uses lines to separate rows and columns

Shows that appropriate whitespace in a tabular format without the need for line separation.

We view the third example as higher quality despite a similar process to the second, this comes from appropriate padding between the cell contents and the border lines.

## Text Width

This is one of the more **contentious** topics in web design is what is the most appropriate text width for reading text off a page.

**Common guidelines may suggest:**

- 50 - 60 characters
- two full alphabets (52 letters)
- 12 words
- 30 em

It would be important to consider the context behind what the text someone is reading

- i.e. someone reading a scientific journal may want different text layout to someone reading a newspaper

People also differ a lot in preference for long or short lines.

- In newspapers the dominant opinion is short lines are better (a column formula)

## Responsive Design

- one design idea which is *particularly* important for web design is responsiveness
- these days people access websites on a variety of different devices (phones laptops etc)

You want webpages to **adjust to the capabilities of each device**

- i.e. re scaling to accommodate for smaller phone screens

# The Easy Part of Design

In the vast majority of web design what you are wanting to create is this:

Evenly

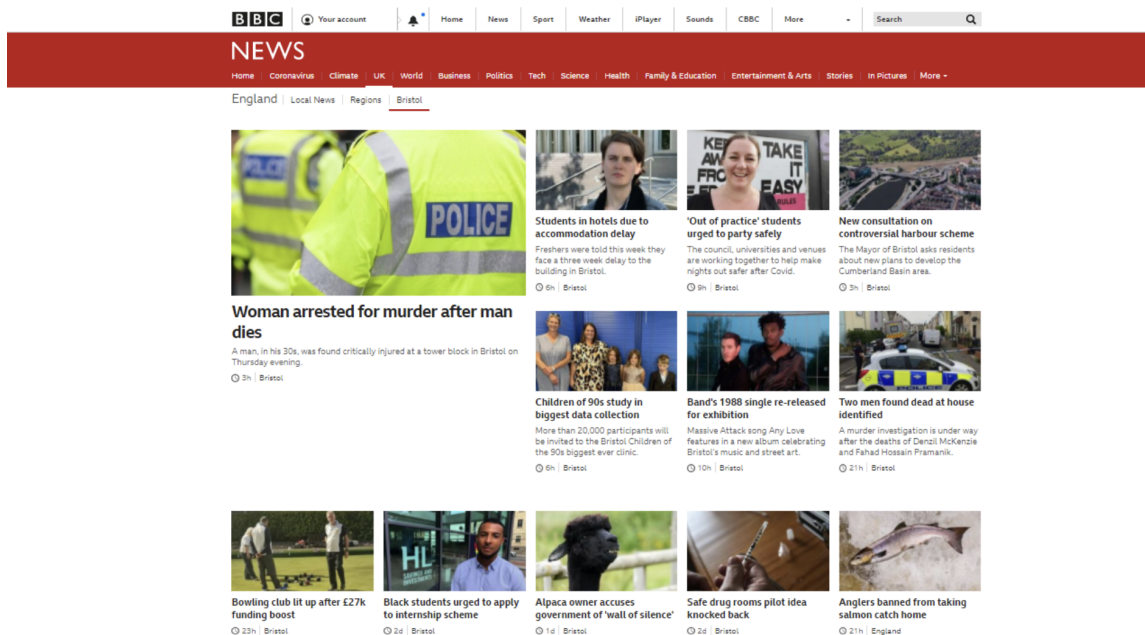
Spaced

Rectangular

Grids

- a natural layout that fits the majority of content types

## Examples



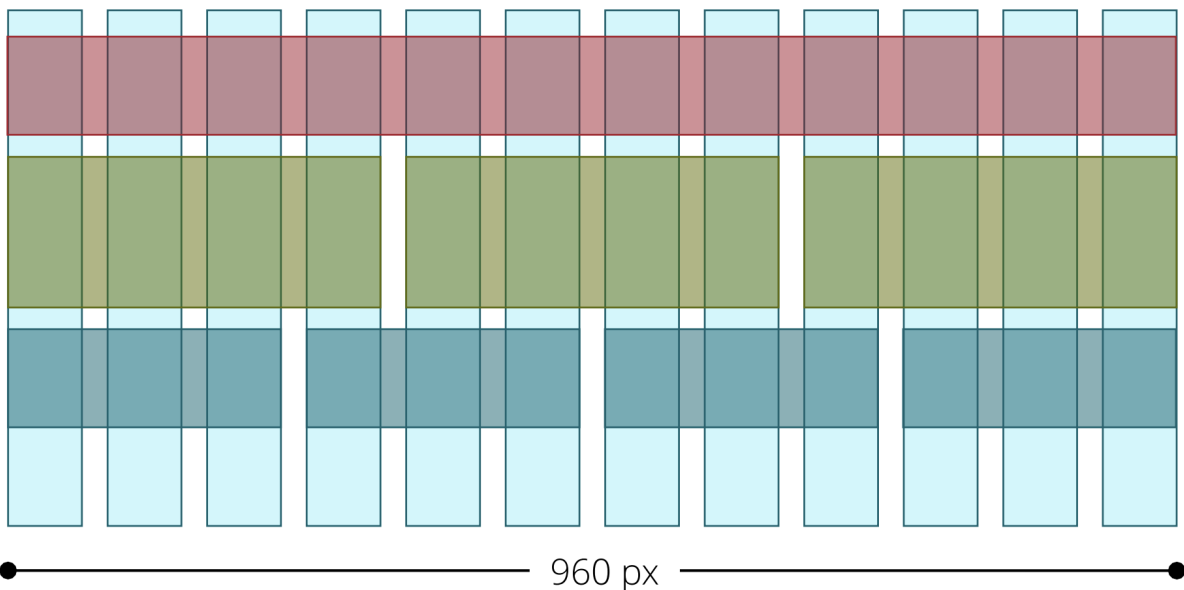
- each article has a box of the same size (ignoring the lead article)

Going further than equally spaced rectangular grids

## The 960 grid system (960.gs)

A system based around some of the most commonly used dimensions in web design.

- You start with a html body that is 960px wide (960 pixels)
- you then divide it into 12 columns each 60 px wide
- columns have a margin of 10 pixels either side (20 pixels between each of them)
- you can use this grid system as a conceptual reference to place elements
  - typically put a big page spanning element at the top (the red bar)
  - followed by progressively smaller elements



By using this reference system to draw elements you get a good use of space, with consistent spacing between elements and a layout that doesn't look completely *blocky* if you were to use the standard grid.

# Linking Together HTML and CSS

## 1. Linking CSS to HTML

CSS can be linked to HTML in three different ways: inline, internal, and external. The most common and efficient method for larger projects is using an external stylesheet.

- **External CSS:** Use the `<link>` tag within the `<head>` section of your HTML document. This method keeps the CSS separate from the HTML, making the code easier to manage and maintain.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Document</title>
  <!-- Link to an external CSS file -->
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h1>Hello, World!</h1>
</body>
</html>
```

## Code to link your CSS Stylesheet



- the css file should be in the same folder as your index.html

```
<link rel="stylesheet" href="styles.css" />
```