

# Frontend <Lektion class="fem">

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# NACKADEMIN

# Lektionstillfällets mål

## Mål med lektionen

- Introduktion till Responsiv webbdesign (RWD)
- CSS MQ – Media Queries
- Introduktion till Bootstrap

## Arbetsmetod

- Teori och praktik varvas under lektionen

# Kort summering av föregående lektion

## Föregående lektion:

- Boxmodellen
- Bilder och bakgrundsbilder
- Listor
- Flexbox
- Grid

# Vad är Responsiv Webbdesign? Responsive Web Design, RWD

”Responsiv webbdesign innebär webbdesign som tillåter layouten att förändras beroende på vilken skärmstorlek och skärmupplösning som besökaren har, och beroende på vilka funktioner som webbläsaren stödjer.”

Källa: [https://sv.wikipedia.org/wiki/Responsiv\\_webbdesign](https://sv.wikipedia.org/wiki/Responsiv_webbdesign)

# Responsive Web Design

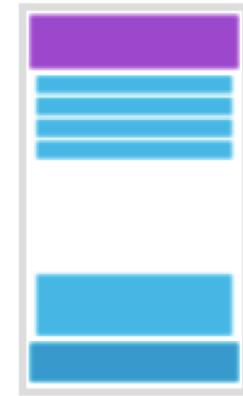
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**Desktop**



**Tablet**

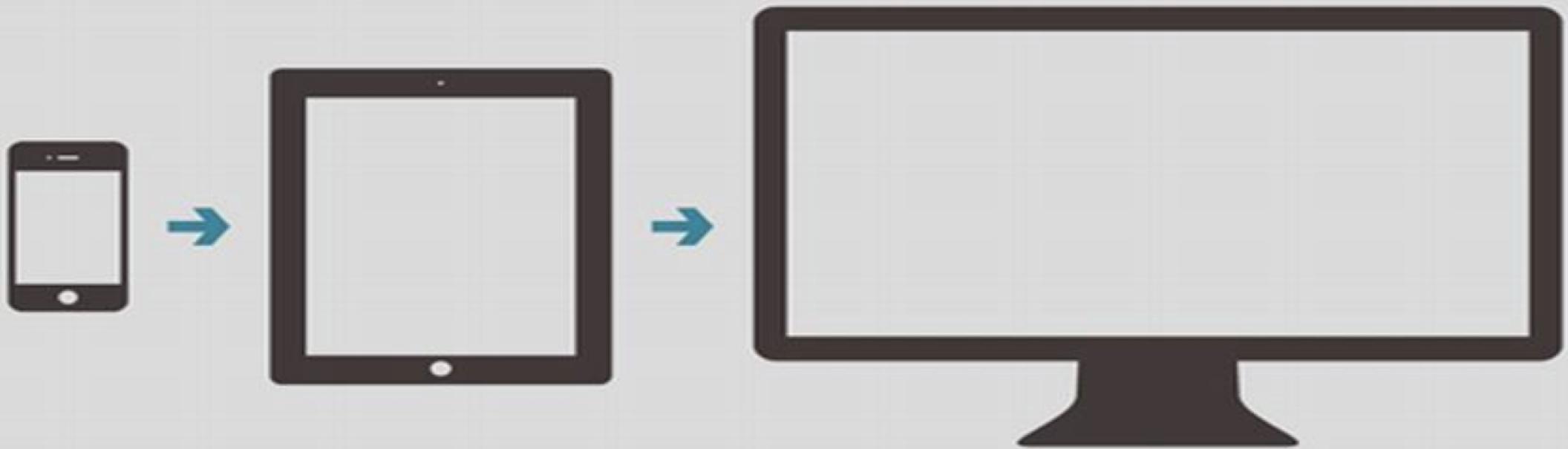


**Phone**

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[https://www.w3schools.com/css/css\\_rwd\\_intro.asp](https://www.w3schools.com/css/css_rwd_intro.asp)

# MOBILE FIRST



<https://medium.com/@Vincentxia77/what-is-mobile-first-design-why-its-important-how-to-make-it-7d3cf2e29d00>

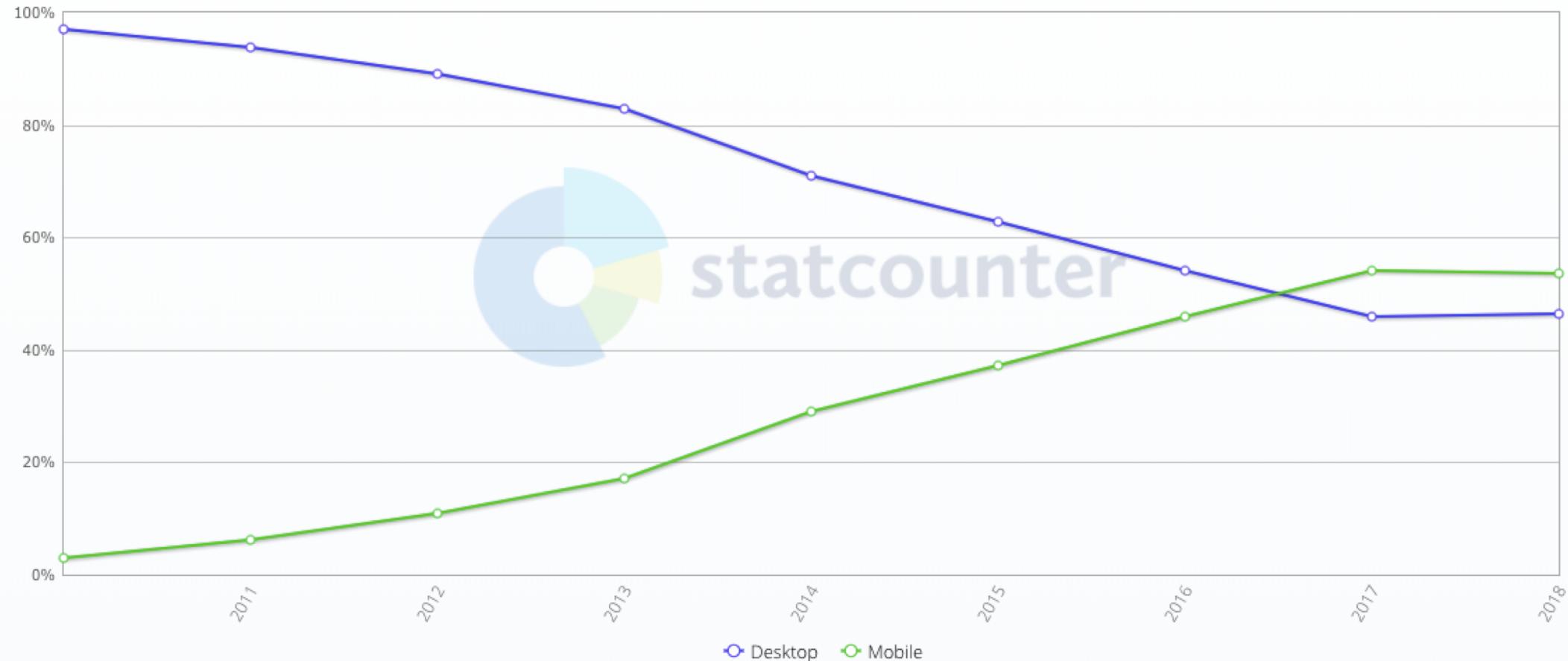
# Varför Mobile-first?

<http://gs.statcounter.com/platform-market-share/desktop-mobile/worldwide#yearly-2010-2018>

Desktop vs Mobile Market Share Worldwide

2010 - 2018

Edit Chart Data



# Metataggen viewport

- Viewport är enhetens visuella area av en webbsida.
- Viewport är olika på olika enheter.
- Med hjälp av metataggen viewport kan vi kontrollera hur en webbsida ska skalas (zoomas).
- OBS! Det är viktigt att lägga till detta vid responsiv design.

```
<meta name="viewport"  
      content="width=device-width, initial-scale=1">  
  
width=device-width anger att bredden på sidan ska följa enhetens bredd.  
initial-scale=1 anger om sidan ska skalas upp/ner (1 = 100%).
```

Bra att läsa: [https://www.w3schools.com/css/css\\_rwd\\_viewport.asp](https://www.w3schools.com/css/css_rwd_viewport.asp)

# CSS Media Queries

- CSS Media Queries är en viktig del vid utveckling av Responsive Web.
- Med Media Queries arbetar vi med ett antal s.k. brytpunkter.
- Med brytpunkter kan vi bestämma när vissa CSS-Regler ska användas.
- Brytpunkterna begränsas utifrån webbläsarens bredd.

# CSS Media Queries – Exempel 1

```
@media (min-width: 576px) {  
    body {  
        background-color: red;  
    }  
}  
  
@media (min-width: 768px) {  
    body {  
        background-color: green;  
    }  
}  
  
@media (min-width: 992px) {  
    body {  
        background-color: blue;  
    }  
}
```

# CSS Media Queries – Exempel 2

```
@media (max-width: 600px) {  
    .ad {  
        display: none;  
    }  
}
```

```
<div class="ad">  
  
</div>
```

# CSS Media Queries – Exempel 3

[https://www.w3schools.com/css/tryit.asp?filename=trycss\\_mediaqueries\\_img\\_gallery](https://www.w3schools.com/css/tryit.asp?filename=trycss_mediaqueries_img_gallery)

## Responsive Image Grid

Resize the browser window to see the responsive effect.



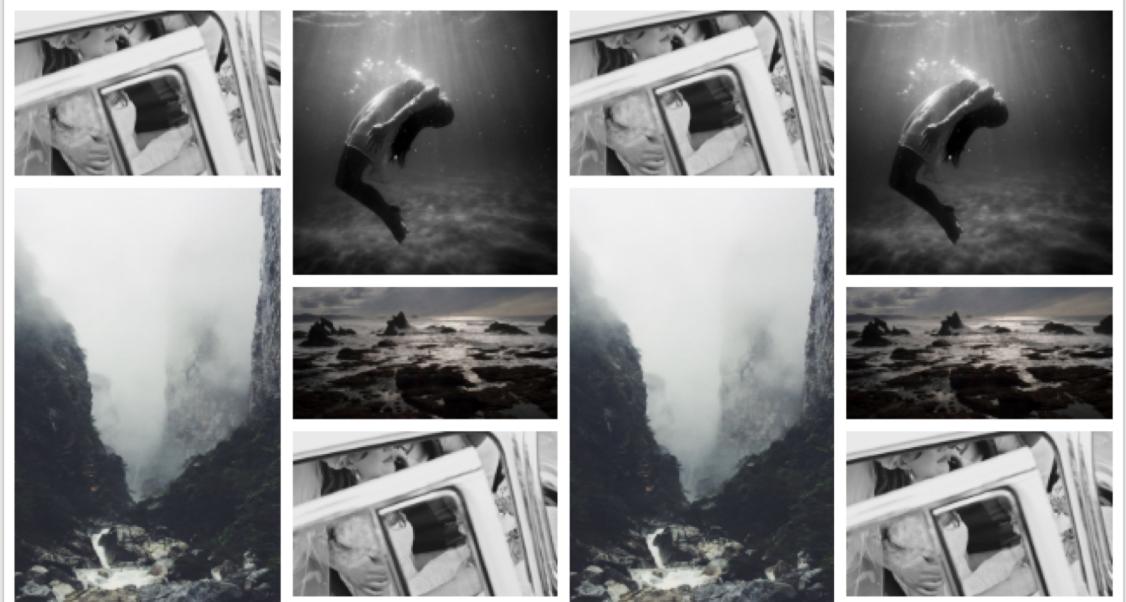
## Responsive Image Grid

Resize the browser window to see the responsive effect.



## Responsive Image Grid

Resize the browser window to see the responsive effect.



# CSS Media Queries – Exempel 4

[https://www.w3schools.com/css/tryit.asp?filename=trycss\\_mediaqueries\\_website](https://www.w3schools.com/css/tryit.asp?filename=trycss_mediaqueries_website)

Resize the browser window to see the responsive effect.

## My Website

With a **flexible** layout.

Link  
Link  
Link  
Link

### About Me

Photo of me:

Image

Some text about me in culpa qui officia deserunt mollit anim..

Resize the browser window to see the responsive effect.

## My Website

With a **flexible** layout.

Link Link Link Link

### About Me

Photo of me:

Image

Some text about me in culpa qui officia deserunt mollit anim..

### More Text

Some text..  
Sunt in culpa qui officia deserunt mollit anim id est laborum  
consectetur adipiscing elit, sed do eiusmod tempor incididunt ut  
labore et dolore magna aliqua. Ut enim ad minim veniam, quis  
nostrud exercitation ullamco.

Image

Some text..  
Sunt in culpa qui officia deserunt mollit anim id est laborum  
consectetur adipiscing elit, sed do eiusmod tempor incididunt ut  
labore et dolore magna aliqua. Ut enim ad minim veniam, quis  
nostrud exercitation ullamco.

Some text..  
Sunt in culpa qui officia deserunt mollit anim id est laborum  
consectetur adipiscing elit, sed do eiusmod tempor incididunt ut  
labore et dolore magna aliqua. Ut enim ad minim veniam, quis  
nostrud exercitation ullamco.

# Vad är Bootstrap?

# Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

<http://getbootstrap.com>



# Bootstrap Starter template

<https://getbootstrap.com/docs/4.2/getting-started/introduction>

The screenshot shows the Bootstrap Documentation page for the 'Starter template'. The top navigation bar includes a logo, 'Home', 'Documentation' (which is the active tab), 'Examples', 'Themes', 'Expo', and 'Blog'. A dropdown menu indicates 'v4.2'. On the left, a sidebar lists 'Getting started' (with 'Introduction' expanded) and various other documentation sections like 'Layout', 'Content', 'Components', etc. The main content area is titled 'Starter template' and contains a note about using the latest design standards. It shows a code snippet for a basic HTML page:

```
<!doctype html>
<html lang="en">
  <head>
    <!-- Required meta tags -->
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

    <!-- Bootstrap CSS -->
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.2.1/css/bootstrap.min.css" integrity="sha384-q7k+OcC1kqTn+FqJU+QV9aXgqFQZj+uXGqDZLWZPzNQmEg" crossorigin="anonymous">

    <title>Hello, world!</title>
  </head>
  <body>
    <h1>Hello, world!</h1>

    <!-- Optional JavaScript -->
    <!-- jQuery first, then Popper.js, then Bootstrap JS -->
    <script src="https://code.jquery.com/jquery-3.3.1.slim.min.js" integrity="sha384-q8i/X+965Dz0rT7abK41JStQIAq" crossorigin="anonymous">
    <script src="https://cdn.jsdelivr.net/npm/popper.js@1.14.6/dist/umd/popper.min.js" integrity="sha384-wH1oVlCj9EhrRjW8J2YU6ceRqC1QHqpN0MqEzq7hDfjGZB" crossorigin="anonymous">
    <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.2.1/js/bootstrap.min.js" integrity="sha384-B0UglyQ+jN6PdEF7V3ZZWCrCl0ht14dM09k4OQfjcG+zLWZPZq7NPyLqHw==" crossorigin="anonymous">
  </body>
</html>
```

A 'Copy' button is located in the top right corner of the code block. At the bottom, there's a note: 'That's all you need for overall page requirements. Visit the [Layout docs](#) or [our official examples](#) to start laying out your site's content and components.'

# Bootstrap CDN – Content Delivery Network

## **One advantage of using the Bootstrap CDN:**

Many users already have downloaded Bootstrap from MaxCDN when visiting another site. As a result, it will be loaded from cache when they visit your site, which leads to faster loading time. Also, most CDN's will make sure that once a user requests a file from it, it will be served from the server closest to them, which also leads to faster loading time.

Källa: [https://www.w3schools.com/bootstrap4/bootstrap\\_get\\_started.asp](https://www.w3schools.com/bootstrap4/bootstrap_get_started.asp)

# Kontextuella färger

Följande klasser används för att visa färger som har olika kontextuella betydelser!

```
<p class="text-primary">.text-primary</p>
<p class="text-secondary">.text-secondary</p>
<p class="text-success">.text-success</p>
<p class="text-danger">.text-danger</p>
<p class="text-warning">.text-warning</p>
<p class="text-info">.text-info</p>
<p class="text-light">.text-light</p>
<p class="text-dark">.text-dark</p>
```

.text-primary

.text-secondary

.text-success

.text-danger

.text-warning

.text-info

.text-light

.text-dark

# Kontextuella bakgrundsfärger

```
<p class="bg-primary text-white">.bg-primary</p>
<p class="bg-secondary text-white">.bg-secondary</p>
<p class="bg-success text-white">.bg-success</p>
<p class="bg-danger text-white">.bg-danger</p>
<p class="bg-warning text-white">.bg-warning</p>
<p class="bg-info text-white">.bg-info</p>
<p class="bg-dark text-white">.bg-dark</p>
<p class="bg-light">.bg-light</p>
<p class="bg-white">.bg-white</p>
```

# Kontextuella länkar

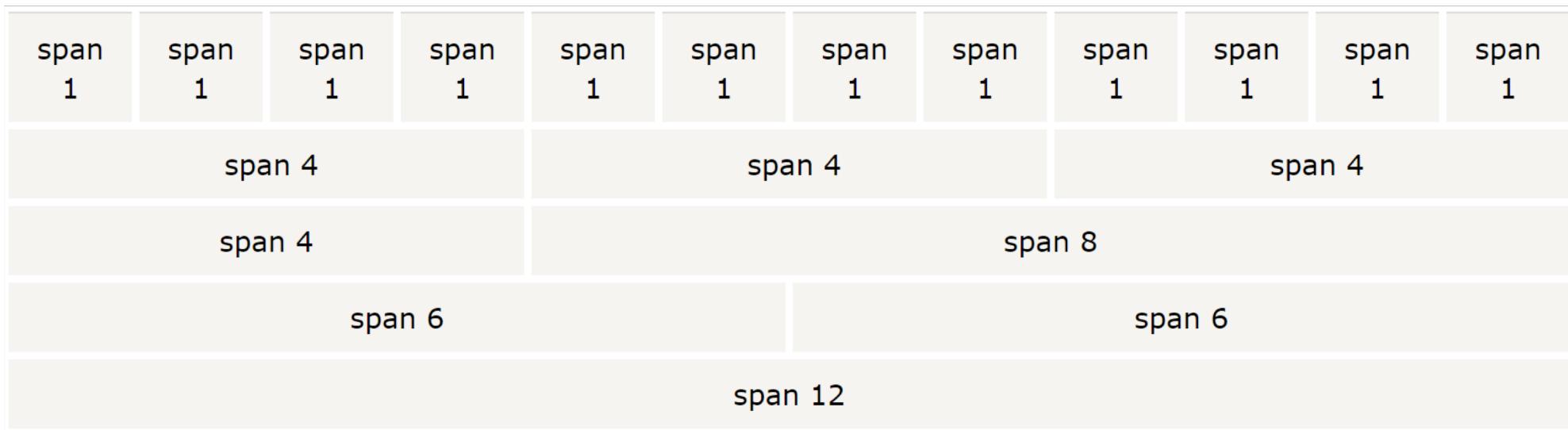
```
<p><a href="#" class="text-primary">Primary link</a></p>
<p><a href="#" class="text-secondary">Secondary link</a></p>
<p><a href="#" class="text-success">Success link</a></p>
<p><a href="#" class="text-danger">Danger link</a></p>
<p><a href="#" class="text-warning">Warning link</a></p>
<p><a href="#" class="text-info">Info link</a></p>
<p><a href="#" class="text-light">Light link</a></p>
<p><a href="#" class="text-dark">Dark link</a></p>
```

# Bootstrap Responsive Container

```
<body>
  <div class="container bg-dark text-white">
    <h1>En bootstrap container</h1>
  </div>
</body>
```

# Bootstrap Grid System

- Bootstrap använder rader och kolumner för placering av innehåll.
- Bootstrap tillåter upp till 12 kolumner på en sida.
- Dessa 12 kolumner kan grupperas för att få bredare kolumner.



Bildkälla: [https://www.w3schools.com/bootstrap4/bootstrap\\_grid\\_basic.asp](https://www.w3schools.com/bootstrap4/bootstrap_grid_basic.asp)

# Bootstrap Grid System – Exempel 1

3 kolumner med automatisk bredd på alla enheter

```
<div class="container">  
  <div class="row">  
    <div class="col">Kolumn 1</div>  
    <div class="col">Kolumn 2</div>  
    <div class="col">Kolumn 3</div>  
  </div>  
</div>
```

# Bootstrap Grid System – Exempel 2

Kolumn 1 och 3 har automatiska bredder.

Kolumn 2 använder 6 av 12 (halva sidans bredd)

```
<div class="container">  
  <div class="row">  
    <div class="col">Kolumn 1</div>  
    <div class="col-6">Kolumn 2</div>  
    <div class="col">Kolumn 3</div>  
  </div>  
</div>
```

# Grid breakpoints

- Bootstrap använder olika brytpunkter för olika enheter.

	<b>Extra small</b> <code>&lt;576px</code>	<b>Small</b> <code>≥576px</code>	<b>Medium</b> <code>≥768px</code>	<b>Large</b> <code>≥992px</code>	<b>Extra large</b> <code>≥1200px</code>
<b>Max container width</b>	None (auto)	540px	720px	960px	1140px
<b>Class prefix</b>	<code>.col-</code>	<code>.col-sm-</code>	<code>.col-md-</code>	<code>.col-lg-</code>	<code>.col-xl-</code>

Läs mer

<https://getbootstrap.com/docs/4.1/layout/grid/>

# Grid breakpoints – Exempel 1

- Visa 3 kolumner på små enheter och uppåt ( $\geq 576\text{px}$ ).
- På mobiltelefoner staplas kolumnerna under varandra automatiskt.

```
<div class="container">
  <div class="row">
    <div class="col-sm">Kolumn 1</div>
    <div class="col-sm">Kolumn 2</div>
    <div class="col-sm">Kolumn 3</div>
  </div>
</div>
```

# Grid breakpoints – Exempel 2

- Visa 2 kolumner med olika bredder på medium enheter och uppåt ( $\geq 768\text{px}$ ).
- OBS! På mobiltelefoner staplas kolumnerna under varandra automatiskt.

```
<div class="row">
  <div class="col-md-4">Kolumn 1</div>
  <div class="col-md-8">Kolumn 2</div>
</div>
```

# Grid breakpoints – Exempel 3

- Visa 4 kolumner på medium enheter och uppåt.
- Visa 2 kolumner på alla andra enheter.

```
<div class="row">
  <div class="col-6 col-md-3">Kolumn 1</div>
  <div class="col-6 col-md-3">Kolumn 2</div>
  <div class="col-6 col-md-3">Kolumn 3</div>
  <div class="col-6 col-md-3">Kolumn 4</div>
</div>
```

# Textjustering

```
<p class="text-left">
```

Left aligned text on all viewport sizes.</p>

```
<p class="text-center">
```

Center aligned text on all viewport sizes.</p>

```
<p class="text-right">
```

Right aligned text on all viewport sizes.</p>

# Width

```
<p class="w-25 bg-light">Width 25%</p>
<p class="w-50 bg-light">Width 50%</p>
<p class="w-75 bg-light">Width 75%</p>
<p class="w-100 bg-light">Width 100%</p>
```

# Margin och Padding

- Margin och padding anges i detta format  
**{property}{sides}-{size}**
- **Property** är antingen **m** (margin) eller **p** (padding)
- **Sides** är **t** (top), **b** (bottom), **l** (left), **r** (right)  
**x** (left och right), **y** (top och bottom)
- **Size** är mellan 0 och 5 (3 = 1rem \*)
  
- Tips: Bra att läsa om rem
- <https://www.sitepoint.com/understanding-and-using-rem-units-in-css/>

# Margin – Exempel

```
<div class="m-0">Margin 0</div>
<div class="m-1">Margin 1</div>
<div class="m-2">Margin 2</div>
<div class="m-3">Margin 3</div>
<div class="m-4">Margin 4</div>
<div class="m-5">Margin 5</div>
```

# Padding – Exempel

```
<div class="p-0">Padding 0</div>
<div class="p-1">Padding 1</div>
<div class="p-2">Padding 2</div>
<div class="p-3">Padding 3</div>
<div class="p-4">Padding 4</div>
<div class="p-5">Padding 5</div>
```

# Margin – Flera exempel

```
<p><span class="mr-5 bg-success">Margin Right 5</span> lorem ipsum,  
<span class="ml-3 bg-success">Margin Left 3 </span> dolor sit amet.</p>  
<p>Lorem ipsum<span class="mx-5 bg-success">Margin Left & Right 5</span>  
dolor sit amet.</p>  
<p class="my-5 bg-success">Margin Top & Bottom 5</p>  
<p>Lorem ipsum dolor sit amet, consectetur elit. Voluptatum, optio.</p>
```

Margin Right 5      lorem ipsum,    Margin Left 3 dolor sit amet.

Lorem ipsum      Margin Left & Right 5      dolor sit amet.

Margin Top & Bottom 5

Lorem ipsum dolor sit amet, consectetur elit. Voluptatum, optio.

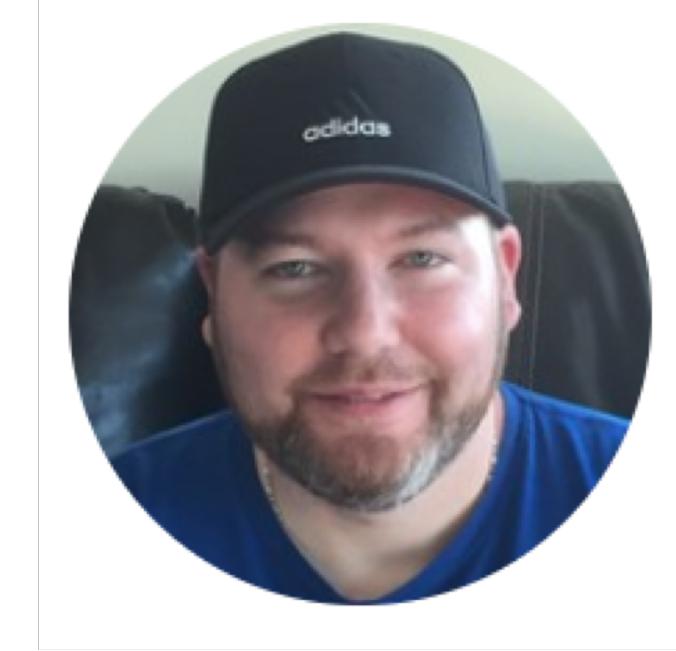
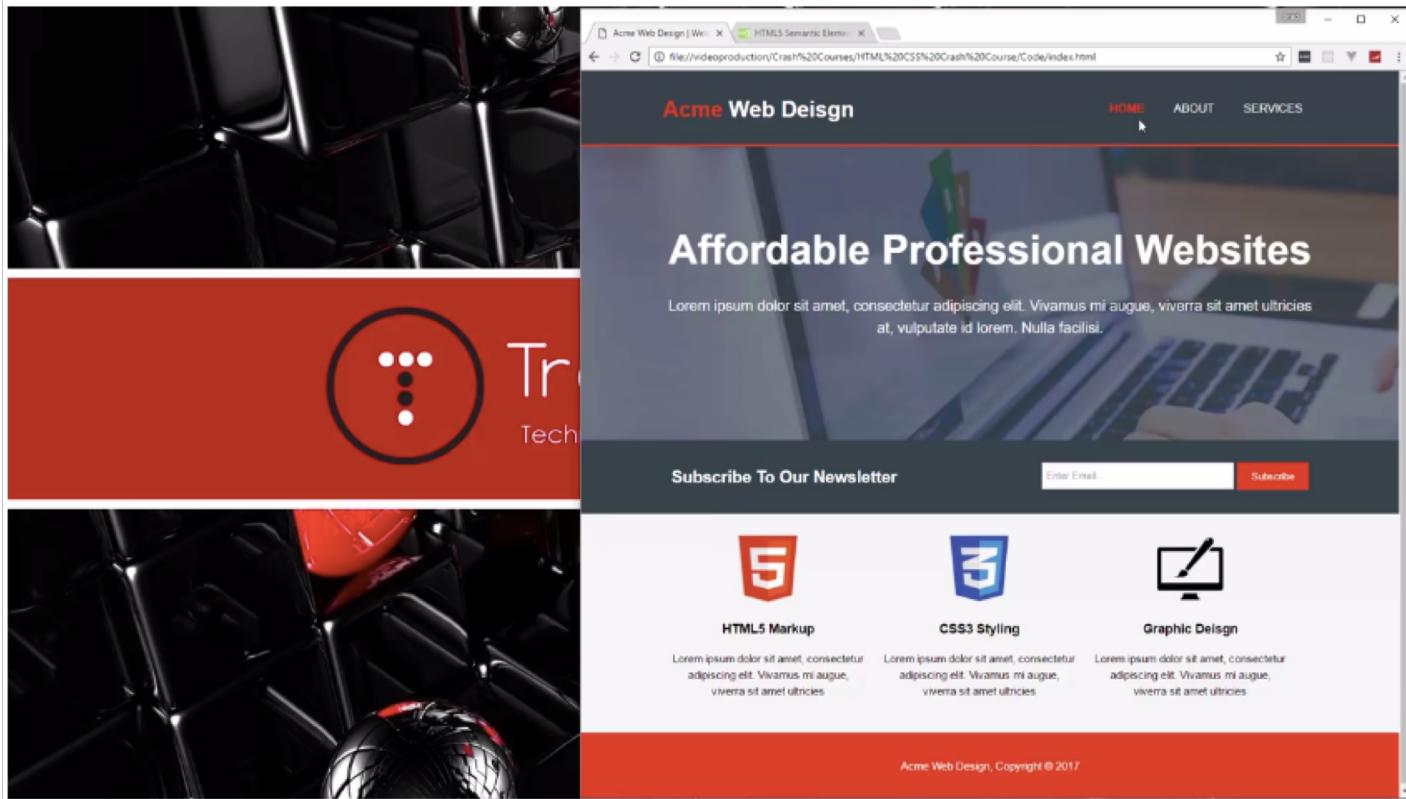
# Automatiska marginaler

```
<div class="mx-auto w-25 bg-light">  
Center this div  
</div>
```

# Build An HTML5 Website With A Responsive Layout

By Brad Traversy

<https://youtu.be/Wm6CUkswsNw>



<https://www.udemy.com/user/brad-traversy/>

# Bra att läsa om MQ på W3Schools

[https://www.w3schools.com/css/css3 mediaqueries.asp](https://www.w3schools.com/css/css3_mediaqueries.asp)

[https://www.w3schools.com/css/css3 mediaqueries ex.asp](https://www.w3schools.com/css/css3_mediaqueries_ex.asp)

# Bra att läsa om Bootstrap på W3Schools

[https://www.w3schools.com/bootstrap4/bootstrap\\_get\\_started.asp](https://www.w3schools.com/bootstrap4/bootstrap_get_started.asp)

[https://www.w3schools.com/bootstrap4/bootstrap\\_colors.asp](https://www.w3schools.com/bootstrap4/bootstrap_colors.asp)

[https://www.w3schools.com/bootstrap4/bootstrap\\_grid\\_system.asp](https://www.w3schools.com/bootstrap4/bootstrap_grid_system.asp)

[https://www.w3schools.com/bootstrap4/bootstrap\\_grid\\_examples.asp](https://www.w3schools.com/bootstrap4/bootstrap_grid_examples.asp)

# Summering av dagens lektion

- Vi har gått igenom
  - Introduktion till Responsiv webbdesign (RWD)
  - CSS MQ – Media Queries
  - Introduktion till Bootstrap
- Reflektioner kring dagens lektion?
  - Vad tar du med dig från dagens lektion?
  - Finns det något som var extra svårt att förstå?
  - Finns det något som vi behöver repetera?
  - Hur upplevde du dagens arbetsmetoder?

# Framåtblick inför nästa lektion

**Under nästa lektion kommer vi att jobba med**

- Mer om Bootstrap
- CSS Mallar (Templates)
- Projektarbete startar  
Planering, bilda grupper, informationssökning!
- **OBS! Deadline att lämna in den individuella inlämningsuppgiften!**