

CSS Grid

CSS Layouts

Datamatiker

Dagens Formål

- At I kan lave lækre grids!

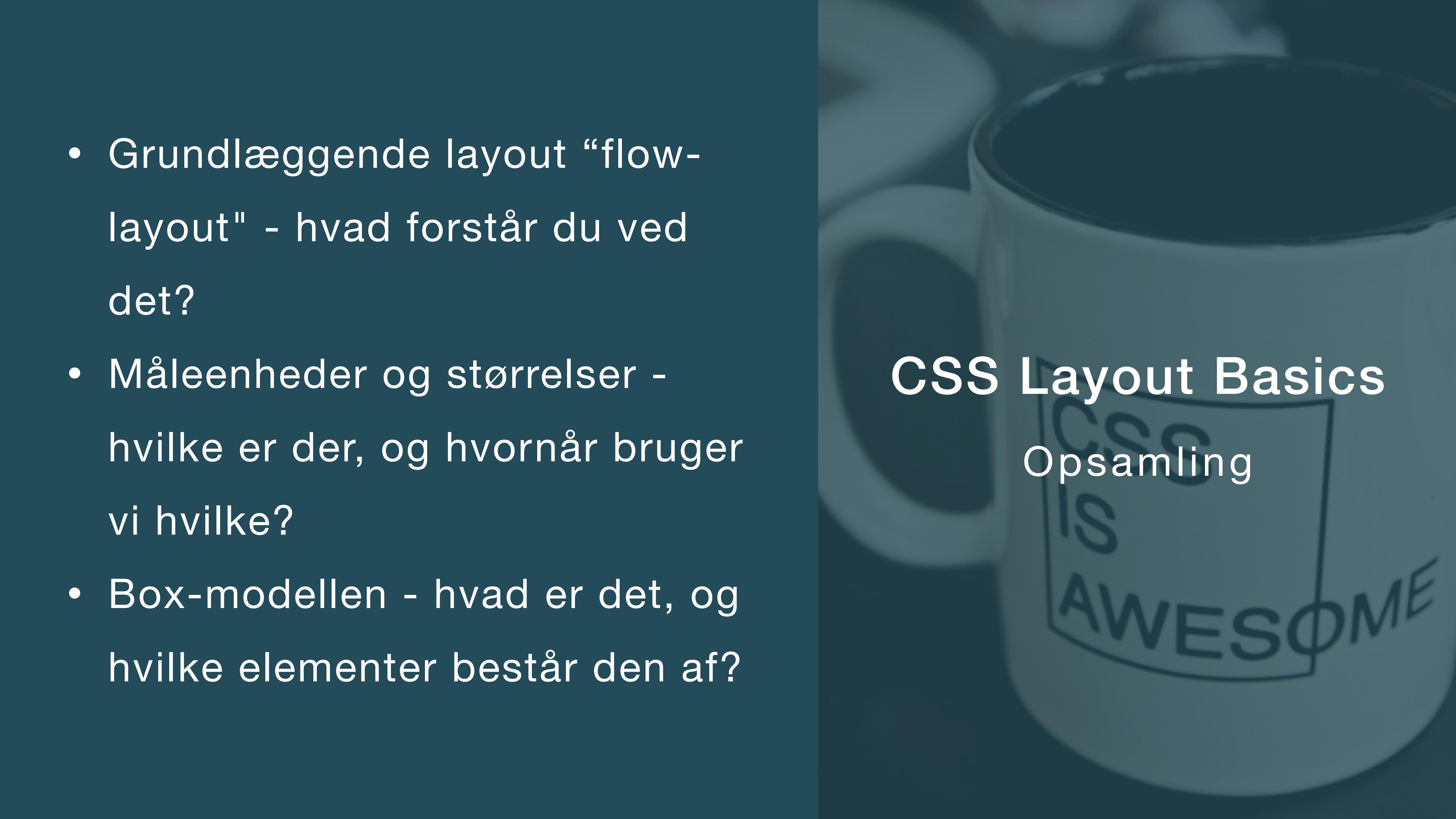
Datamatiker

kea
KØBENHAVNS ERHVERVSAKADEMI

Agenda

- CSS Layout - opsamling
- CSS Grid Layout
 - container & items
 - grid-template-columns
 - grid-template-rows
 - grid-gap
- Grid Areas Demo
 - grid-template-areas
- Grid og Media Queries
- Grid Layout på din opskrift

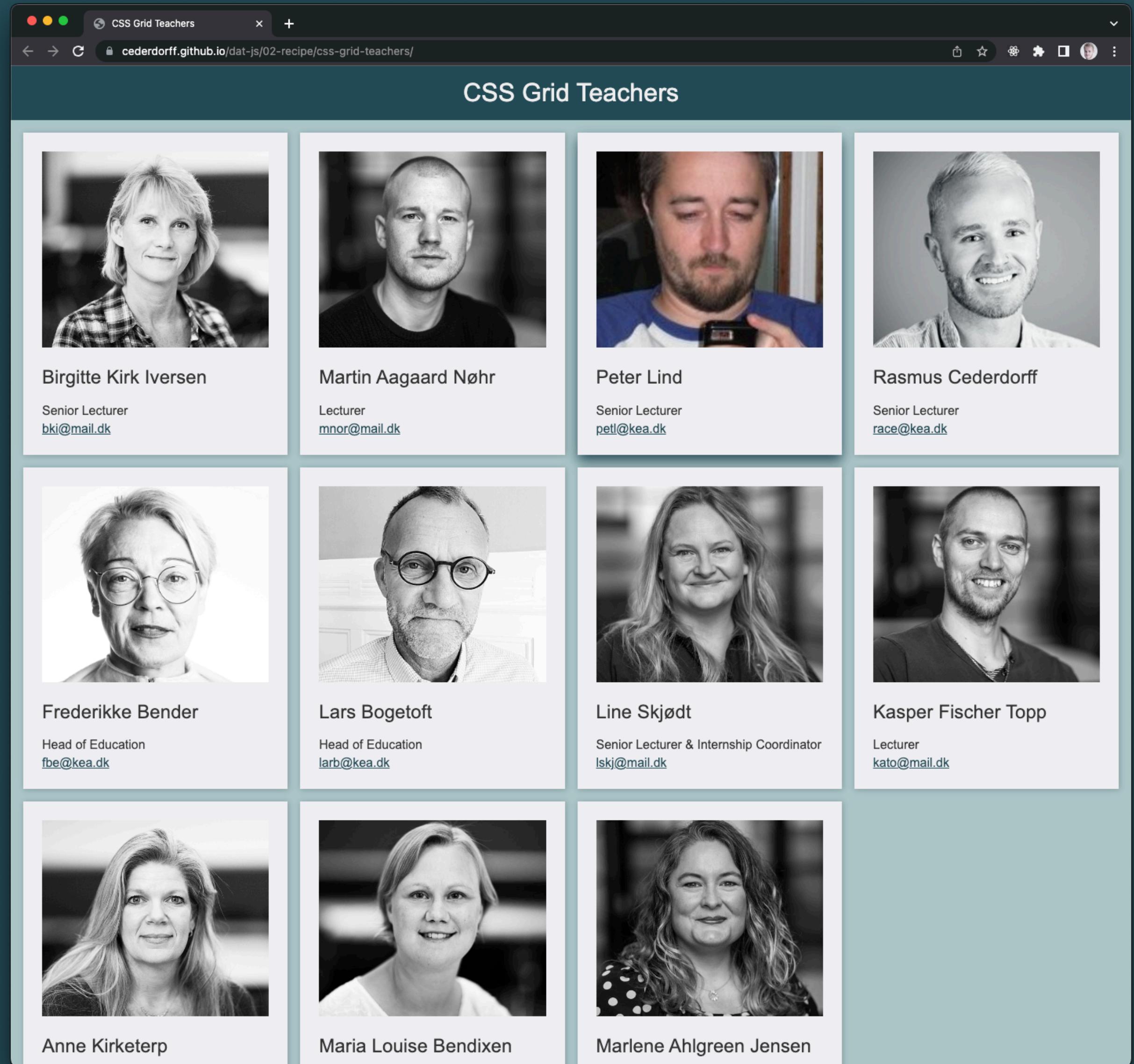
- Grundlæggende layout "flow-layout" - hvad forstår du ved det?
- Måleenheder og størrelser - hvilke er der, og hvornår bruger vi hvilke?
- Box-modellen - hvad er det, og hvilke elementer består den af?



CSS Layout Basics

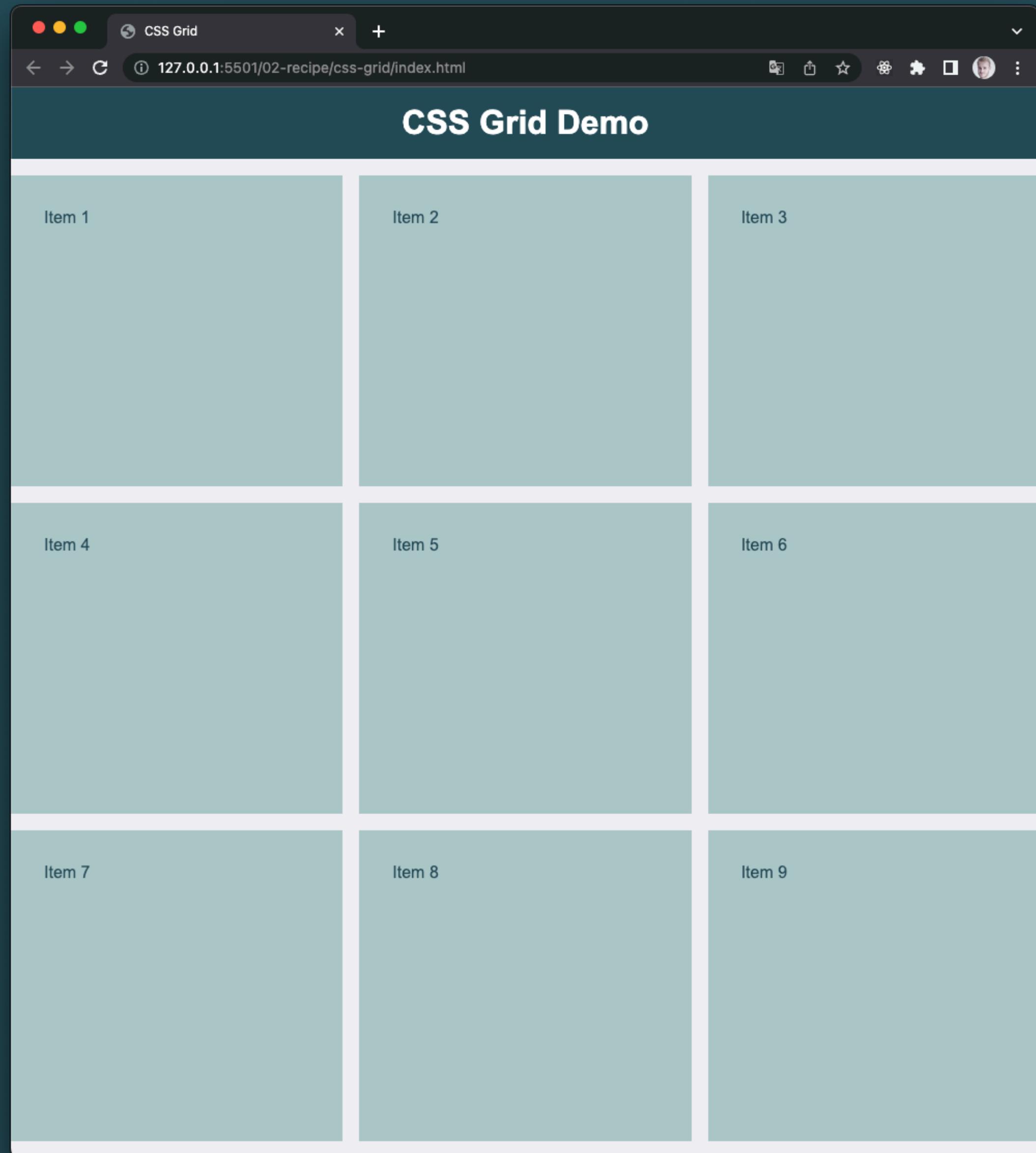
Opsamling

AWESOME



CSS Grid Demo

- Opret nyt projekt: css-grid
- index.html med en grid container og mindst 6 grid items
- app.css med
 - display: grid
 - grid-template-columns
 - grid-template-rows
 - grid-gap



CSS Grid Demo

- Opret nyt projekt: css-grid
- index.html med en grid container og mindst 6 grid items
- app.css med
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 - grid-template-columns
 - grid-template-rows
 - grid-gap

CSS Layouts

Introduction to CSS layout

Normal flow

The display property

Flexbox

Grid

Floats

Positioning

Table layout

Multiple-column layout

Grid & Flexbox

... two CSS layout models that can be used to create layouts with just a couple of CSS rules.

... responsive and flexible layouts.

CSS Grids

CSS Grid Teachers

The screenshot shows a grid layout with three columns. Each column contains a portrait photo and the name of a teacher below it. The first column has 'Birgitte Kirk Iversen' (Senior Lecturer, hki@mail.dk). The second column has 'Martin Aagaard Nøhr' (Lecturer, mnor@mail.dk). The third column has 'Peter Lind' (Senior Lecturer, pell@kea.dk).

Header

The screenshot shows a grid layout with three columns. Each column is labeled 'Column'. Below the grid, there is a footer section labeled 'Footer'.

Amerikanske chocolate chip cookies

The screenshot shows a grid layout. The left side has a 'Cookies' section with text about classic American cookies. The right side has a large image of chocolate chip cookies. Below the image, there are sections for 'Ingredienser' (Ingredients) and 'Sådan gør du' (How to do it), each with its own list of steps.

Cookies

Klassiske amerikanske cookies - sprøde udenpå og bløde indeni... Og hvis der er noget du virkelig kan, derover på den anden side af atlanten, så er det at bage cookies. Om vi kalder dem Chocolate chip cookies eller bare Cookies ger nok ikke den store forskel. Der er chokoladestykker i - og de smager prægtfuldt. Prøv denne opskrift på den perfekte Chocolate chip cookie, næste gang lækkersulten banker på døren!

Ingredienser

Cookies

- Bledt smør, 150 g
- Sukker, (ca. 1½ dl) 125 g
- Brun farin, (ca. 1½ dl) 125 g
- Vanillesukker, 2 tsk
- Æg, 1
- Hvedemel (ca. 4½ dl), 250 g
- Natron, 1 tsk
- Griset salt, ¼ tsk
- Bagepulver, ½ tsk

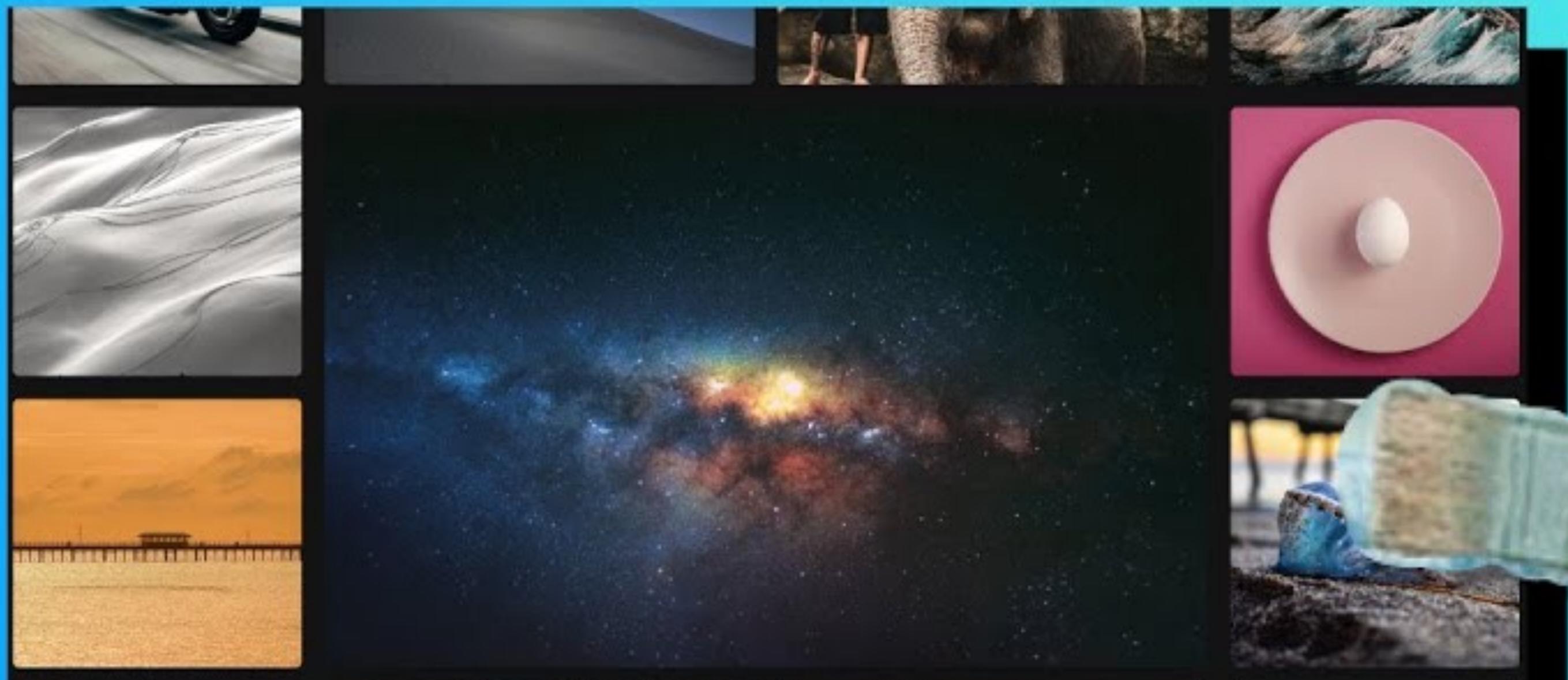
Sådan gør du

1. Pisk smør, sukker, brun farin, vanille og æg godt sammen.
2. Bland hvedemel, natron, salt og bagepulver og før det i smørblandingen sammen med chokolade.
3. Del dejen i 20 stykker a ca. 45 g og form dem til kugler.
4. Sat kuglerne på plader med bagepapir - tryk dem let flate. Kagerne fylder en del ud, så sørge for, at der er god plac til mellem dem.
5. Bag kagerne til de er gyldne, men bløde i midten.
6. Lad kagerne afkøle ca. 5 min. på bagepladen og flyt dem så over på en rist.

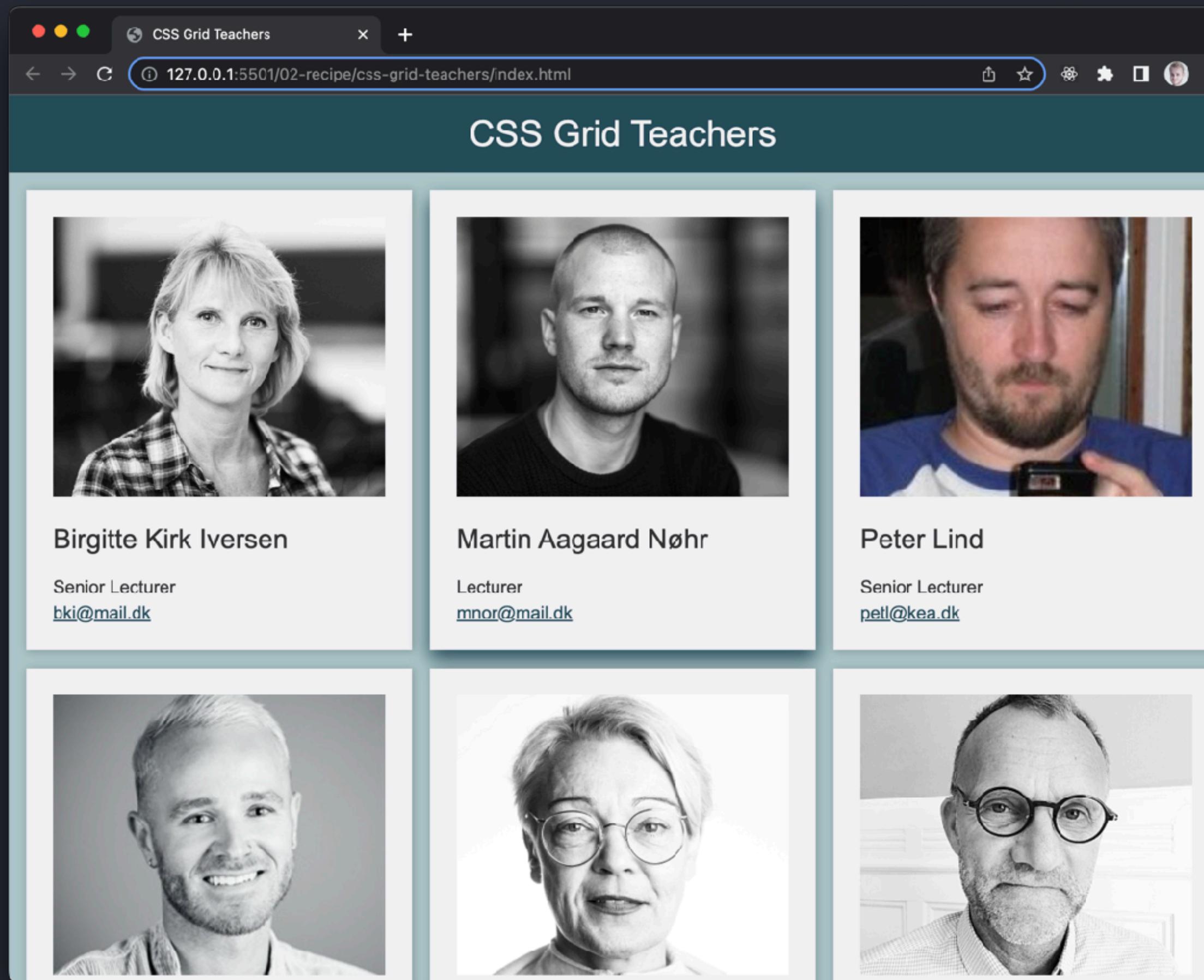
Bagetid

The Joy of

GOING



CSS Grid



```
<section class="grid-container">...</section>

/* ----- grid container styling ----- */
.grid-container {
  display: grid;
  grid-template-columns: 1fr;
  gap: 1em;
  padding: 1em;
}

@media (min-width: 600px) {
  .grid-container {
    grid-template-columns: 1fr 1fr;
  }
}

@media (min-width: 992px) {
  .grid-container {
    grid-template-columns: 1fr 1fr 1fr;
  }
}
```

CSS Grid

The screenshot shows a web page titled "Person Array". It features a 2x2 grid of portrait photos and names. The top-left cell contains a photo of Birgitte Kirk Iversen, a Senior Lecturer, with the email bki@mail.dk. The top-right cell contains a photo of Martin Aagaard Nøhr, a Lecturer, with the email mnor@mail.dk. The bottom-left cell contains a photo of Rasmus Cederdorff, a Senior Lecturer, with the email race@mail.dk. The bottom-right cell contains a photo of Dan Okkels Brendstrup, a Lecturer, with the email dob@mail.dk. The browser's developer tools are open, showing the DOM structure and CSS styles for the grid container.

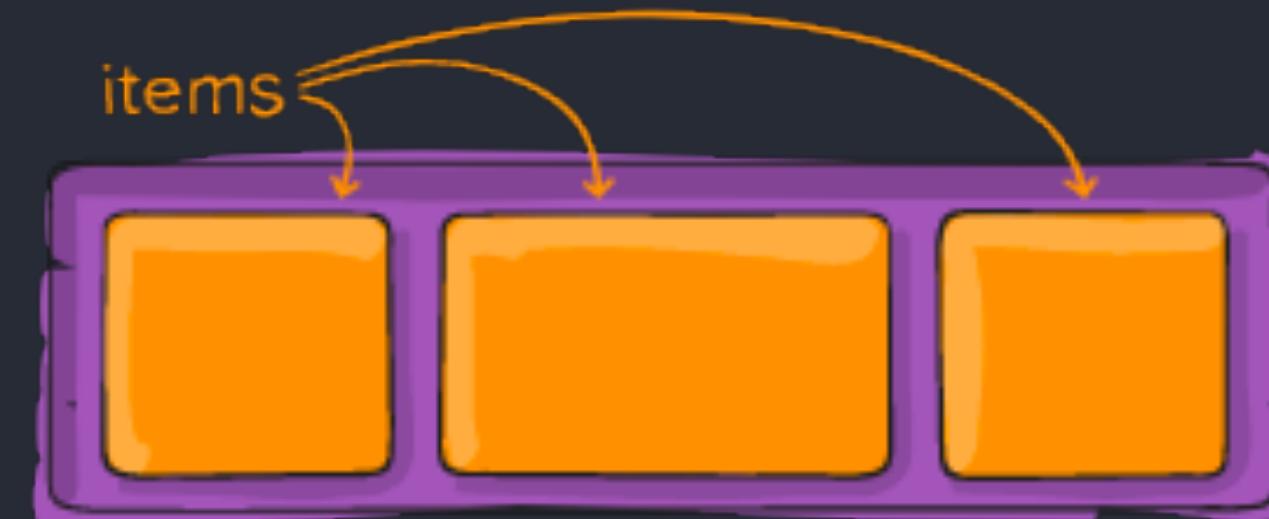
```
<section id="content" class="grid-container"></section>

/* ----- grid container styling ----- */
.grid-container {
  display: grid;
  grid-template-columns: 1fr;
  gap: 1em;
}

@media (min-width: 600px) {
  .grid-container {
    grid-template-columns: 1fr 1fr;
  }
}

@media (min-width: 992px) {
  .grid-container {
    grid-template-columns: 1fr 1fr 1fr;
  }
}
```

CSS Grid



```
/* ----- grid container styling ----- */
.grid-container {
  display: grid;
  grid-template-columns: 1fr;
  gap: 1em;
  padding: 1em;
}

@media (min-width: 600px) {
  .grid-container {
    grid-template-columns: 1fr 1fr;
  }
}

@media (min-width: 992px) {
  .grid-container {
    grid-template-columns: 1fr 1fr 1fr;
  }
}
```

```
.grid-item {
  box-shadow: 1px 1px 8px □rgba(0, 0, 0, 0.25);
  padding: 1.5em;
  background-color: ■#f1f1f4;
  transition: 0.5s;
  animation: fadeIn 0.5s;
}

.grid-item:hover {
  box-shadow: 0 8px 16px 0 □rgb(38, 76, 89);
}

.grid-item img {
  width: 100%;
  height: 250px;
  object-fit: cover;
}

.grid-item p {
  margin: 0.3em 0;
```

Grid Container

CSS Grid Layout

w3schools.com/css/css_grid.asp

HTML CSS JAVASCRIPT

Display Property

An HTML element becomes a grid container when its `display` property is set to `grid` or `inline-grid`.

Example

```
.grid-container {  
  display: grid;  
}
```

[Try it Yourself »](#)

Example

```
.grid-container {  
  display: inline-grid;  
}
```

[Try it Yourself »](#)

All direct children of the grid container automatically become *grid items*.

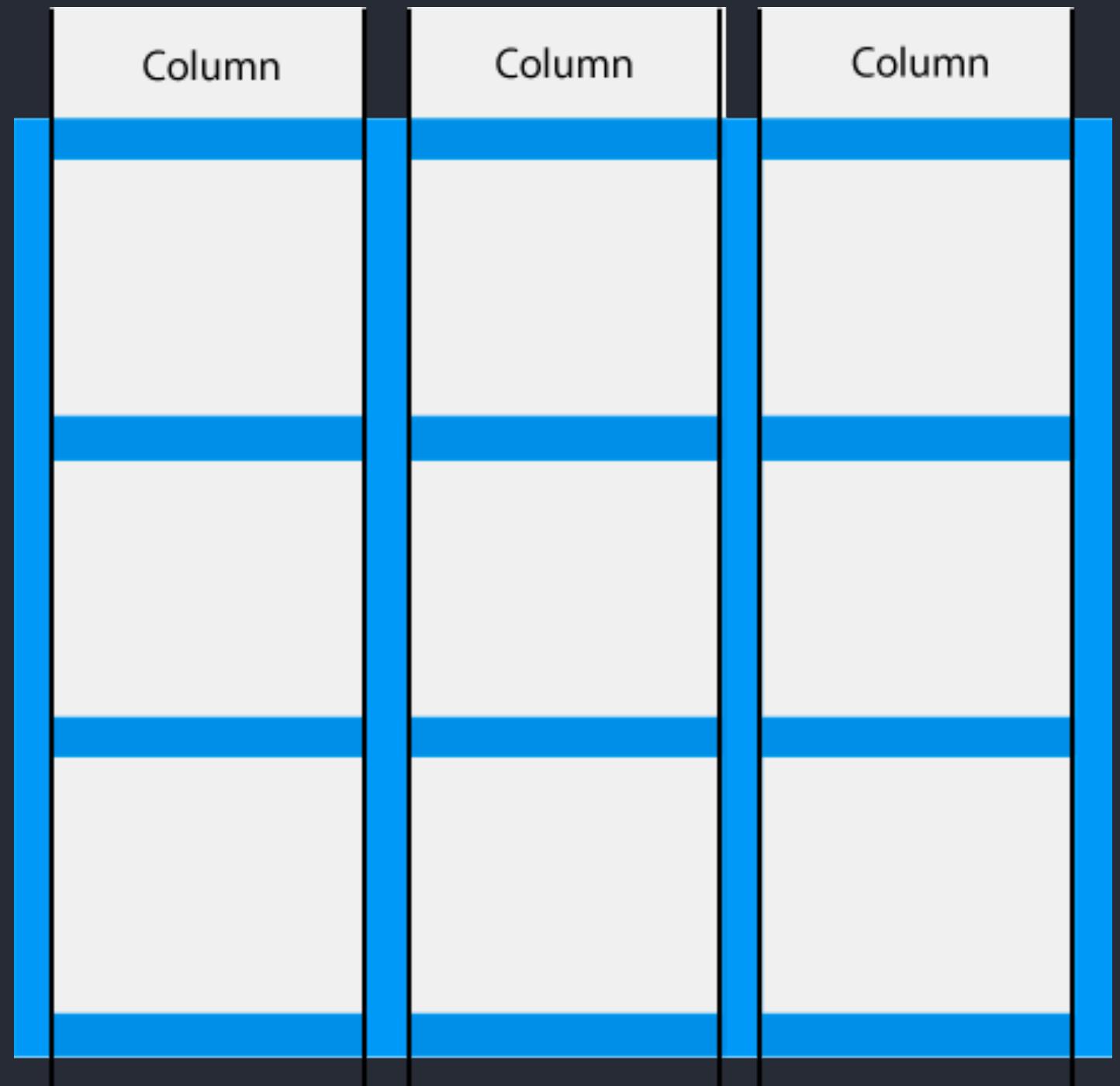
Example

```
<div class="grid-container">  
  <div class="grid-item">1</div>  
  <div class="grid-item">2</div>  
  <div class="grid-item">3</div>  
  <div class="grid-item">4</div>  
  <div class="grid-item">5</div>  
  <div class="grid-item">6</div>  
  <div class="grid-item">7</div>  
  <div class="grid-item">8</div>  
  <div class="grid-item">9</div>  
</div>
```



Grid Columns

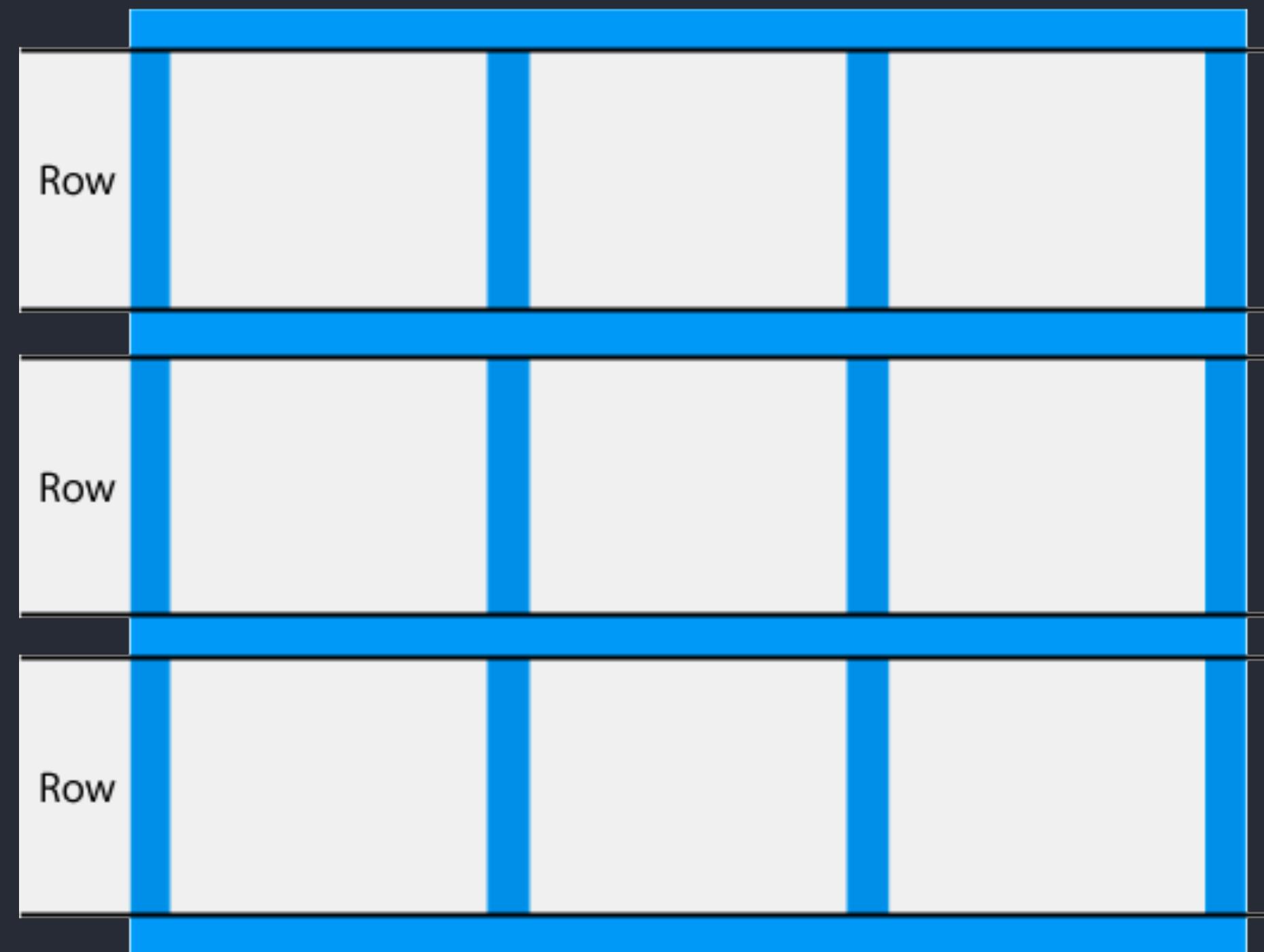
Vertical Lines



```
.grid-container {  
    display: grid;  
    grid-template-columns: auto auto auto auto;  
}
```

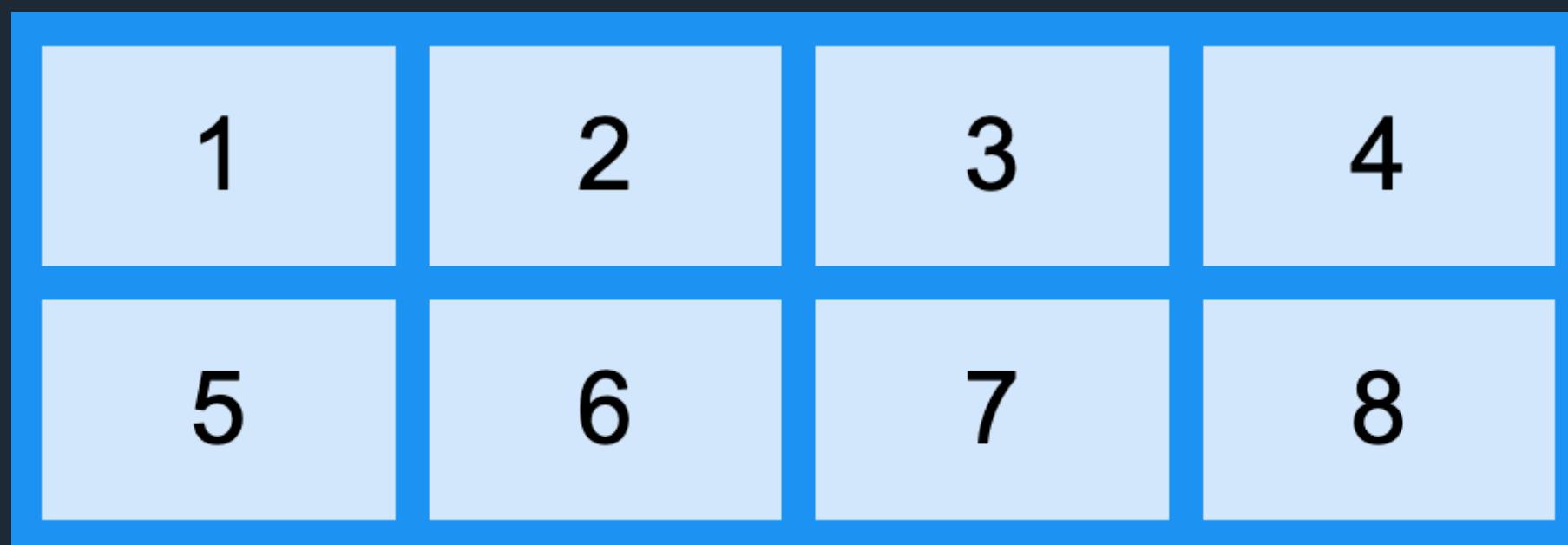
Grid Rows

Horisontal Lines



```
.grid-container {  
    display: grid;  
    grid-template-rows: 100px 300px;  
}
```

grid-template-columns



The grid-template-columns Property

The `grid-template-columns` property defines the number of columns in your grid layout, and it can define the width of each column.

Make a grid with 4 columns:

```
.grid-container {  
    display: grid;  
    grid-template-columns: auto auto auto auto;  
}
```

Set a size for the 4 columns:

```
.grid-container {  
    display: grid;  
    grid-template-columns: 80px 200px auto 40px;  
}
```

https://www.w3schools.com/css/css_grid.asp

grid-template-rows

The grid-template-rows Property

The `grid-template-rows` property defines the height of each row.

1	2	3	4
5	6	7	8

The value is a space-separated-list, where each value defines the height of the respective row:

```
.grid-container {  
    display: grid;  
    grid-template-rows: 80px 200px;  
}
```

https://www.w3schools.com/css/css_grid.asp

The justify-content Property

The `justify-content` property is used to align the whole grid inside the container.

Note: The grid's total width has to be less than the container's width for the `justify-content` property to have any effect.

Example

```
.grid-container {  
  display: grid;  
  justify-content: space-around;  
}
```

[Try it Yourself »](#)

Example

```
.grid-container {  
  display: grid;  
  justify-content: space-around;  
}
```

[Try it Yourself »](#)

The align-content Property

The `align-content` property is used to *vertically* align the whole grid inside the container.

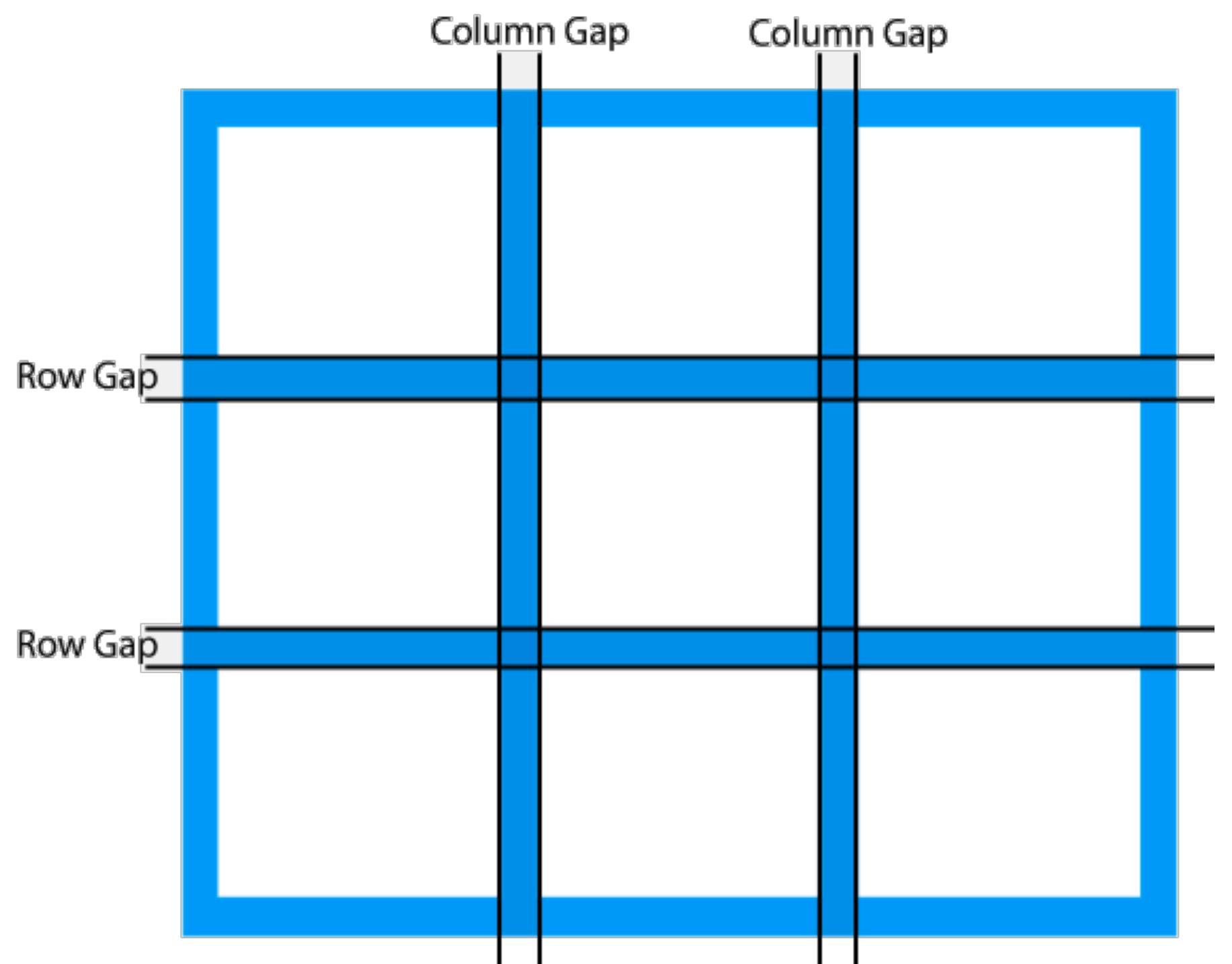
Note: The grid's total height has to be less than the container's height for the `align-content` property to have any effect.

Example

```
.grid-container {  
  display: grid;  
  height: 400px;  
  align-content: center;  
}
```

[Try it Yourself »](#)

Grid Gap



The `column-gap` property sets the gap between the columns:

```
.grid-container {  
    display: grid;  
    column-gap: 50px;  
}
```

The `row-gap` property sets the gap between the rows:

```
.grid-container {  
    display: grid;  
    row-gap: 50px;  
}
```

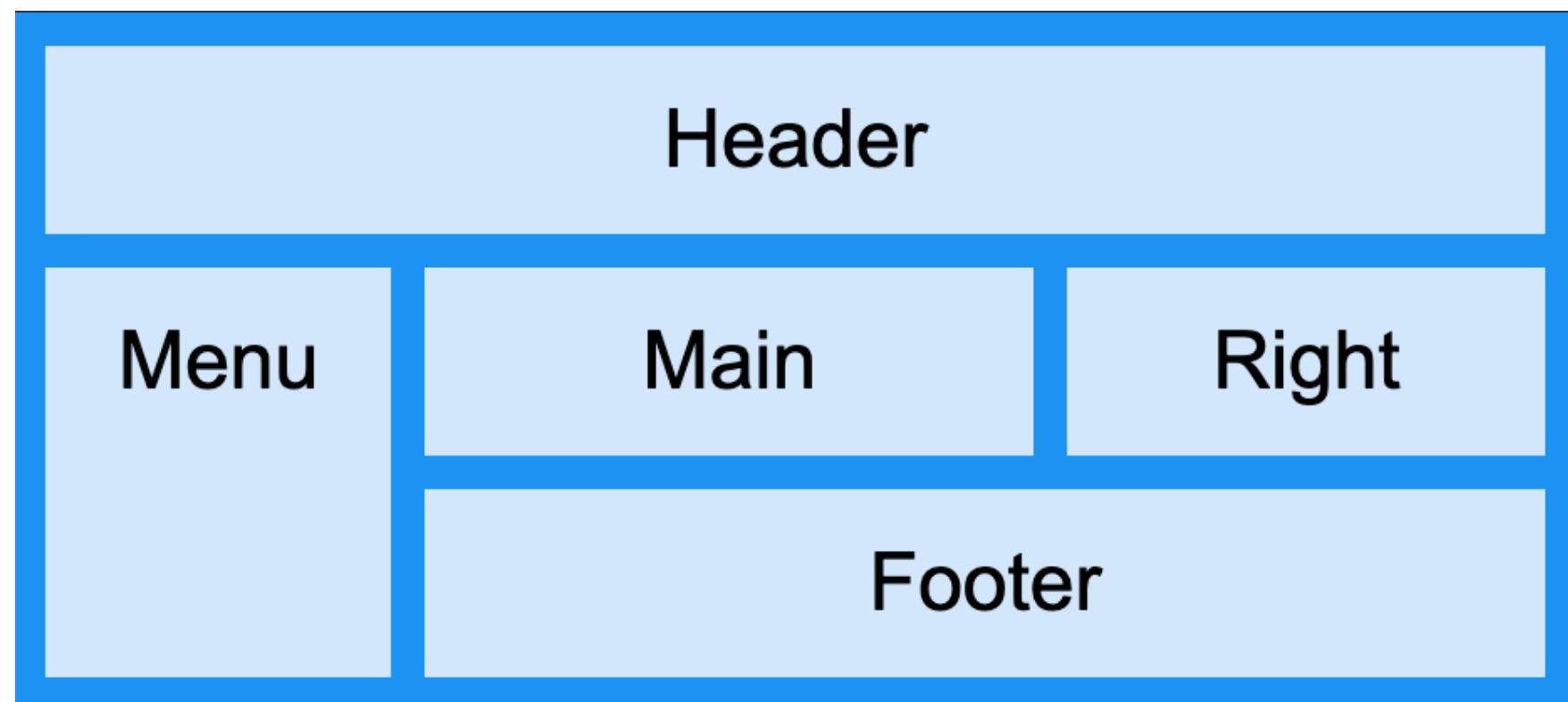
The `gap` property is a shorthand property for the `row-gap` and the `column-gap` properties:

```
.grid-container {  
    display: grid;  
    gap: 50px 100px;  
}
```

The `gap` property can also be used to set both the row gap and the column gap in one value:

```
.grid-container {  
    display: grid;  
    gap: 50px;  
}
```

Grid Areas

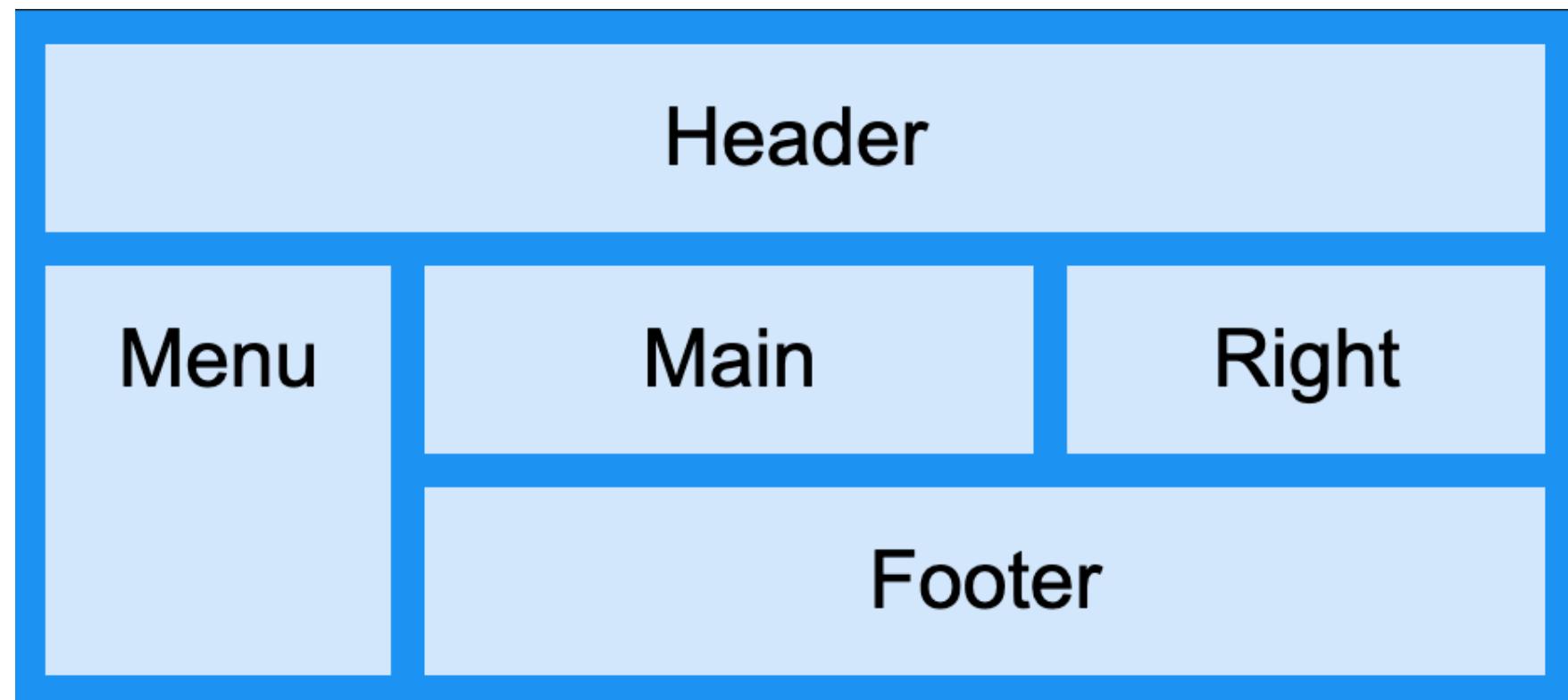


Item1 gets the name "myArea" and spans all five columns in a five columns grid layout:

```
.item1 {  
    grid-area: myArea;  
}  
.grid-container {  
    grid-template-areas: 'myArea myArea myArea  
    myArea myArea';  
}
```

https://www.w3schools.com/css/css_grid_item.asp

Grid Areas

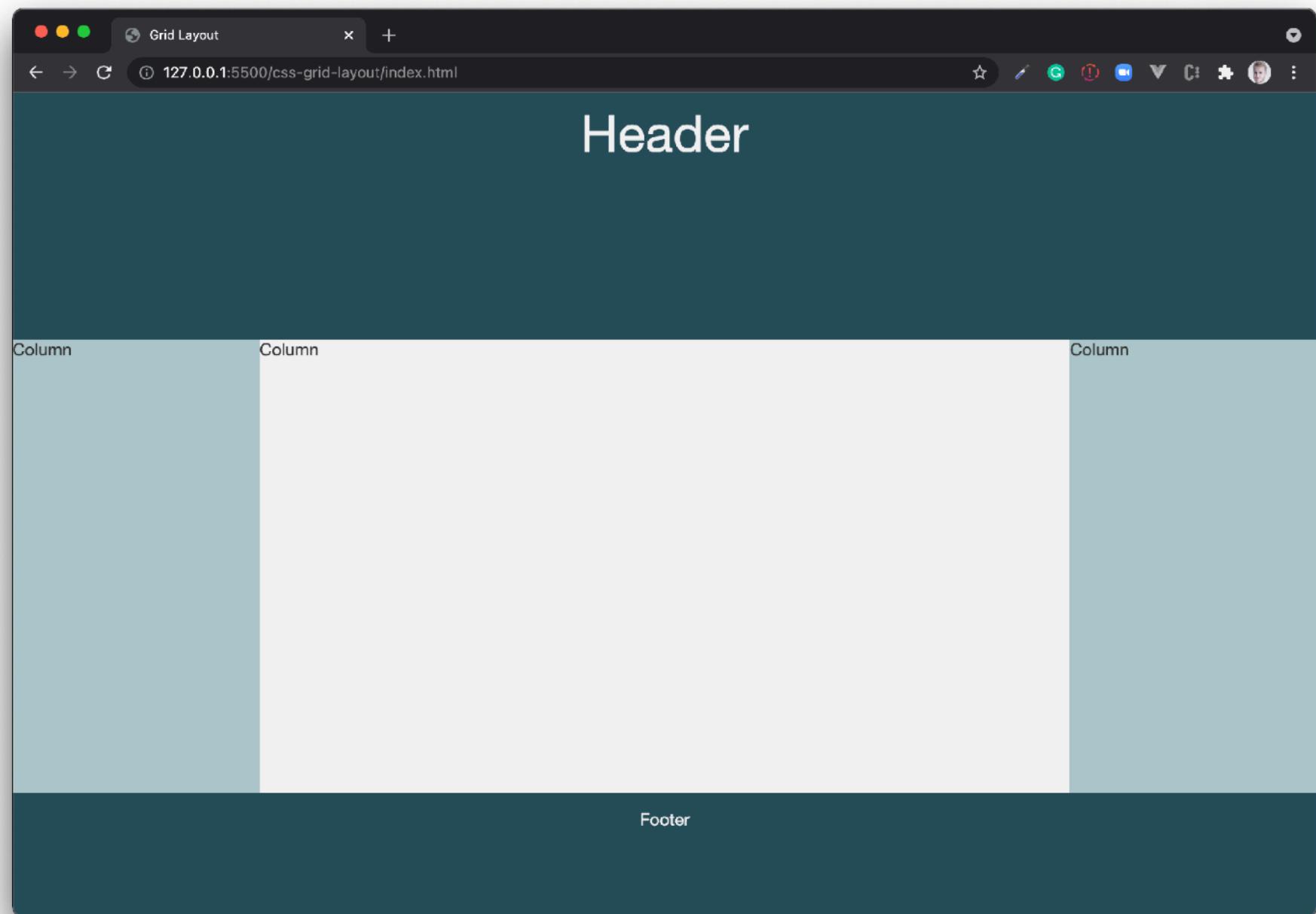


Name all items, and make a ready-to-use webpage template:

```
.item1 { grid-area: header; }
.item2 { grid-area: menu; }
.item3 { grid-area: main; }
.item4 { grid-area: right; }
.item5 { grid-area: footer; }

.grid-container {
  grid-template-areas:
    'header header header header header header'
    'menu main main main right right'
    'menu footer footer footer footer footer';
}
```

Grid Areas



```
header {  
  grid-area: header;  
}  
  
.left {  
  grid-area: left;  
}  
  
.middle {  
  grid-area: middle;  
}  
  
.right {  
  grid-area: right;  
}  
  
footer {  
  grid-area: footer;  
}  
  
.grid-container {  
  display: grid;  
  grid-template-areas:  
    "header header header header header header"  
    "left middle middle middle middle right"  
    "footer footer footer footer footer footer";  
}
```

https://www.w3schools.com/css/css_grid_item.asp

100 seconds of CSS

G R O O D
L A Y O U T

○○○

CONTAINER

<main>

<header>Header</header>

<article>Article</article>

<aside>Author</aside>

<nav>Sidebar</nav>

<footer>Footer</footer>

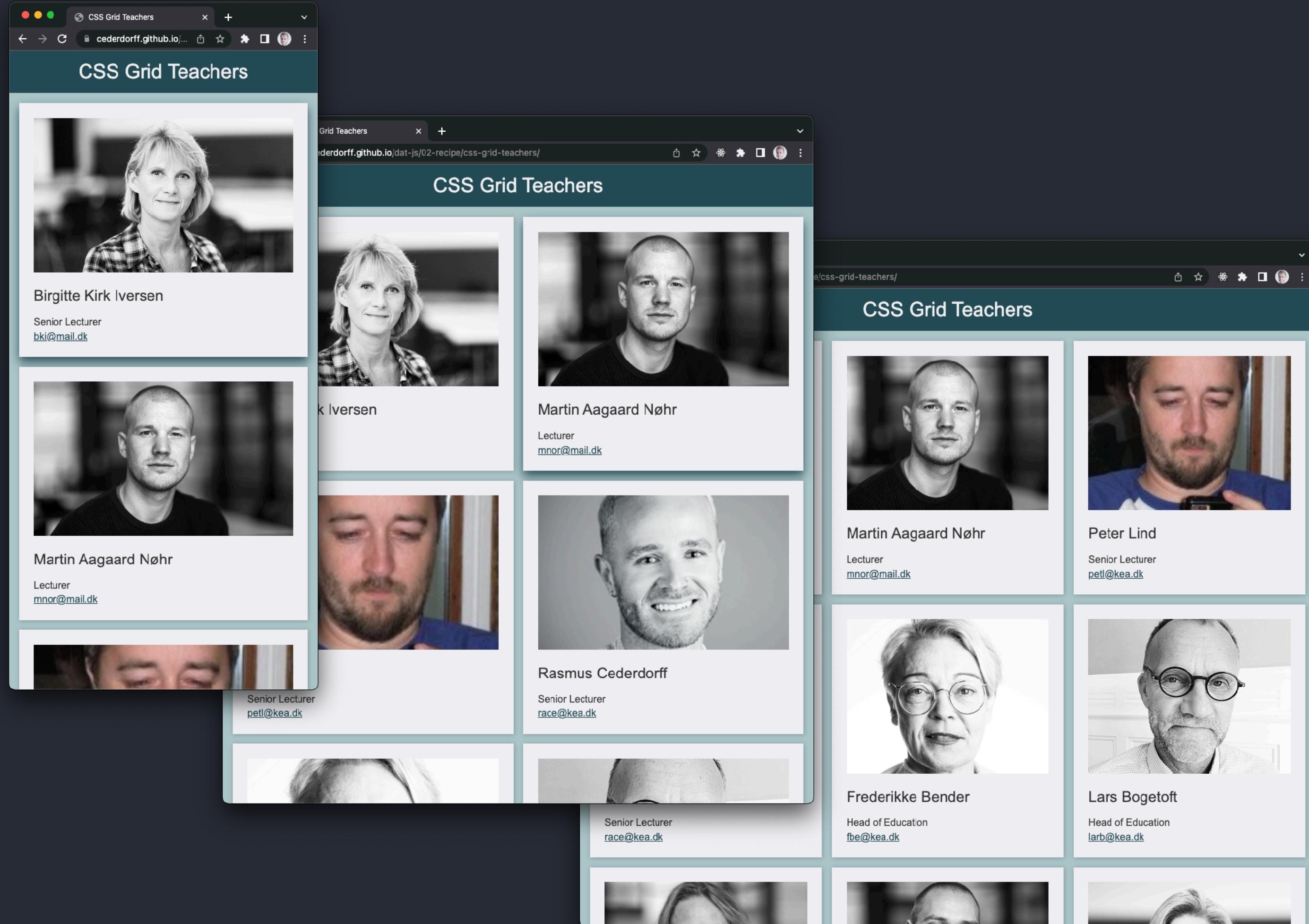
</main>

I
T
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M
S

```
/* GRID Container */
main {
    display: grid;
}

/* GRID Items */
header { }
aside { }
article { }
nav { }
footer { }
```

CSS Grid & media queries



[css-grid-teachers](#)

```
/* ----- grid container styling ----- */
.grid-container {
  display: grid;
  grid-template-columns: 1fr;
  gap: 1em;
  padding: 1em;
}

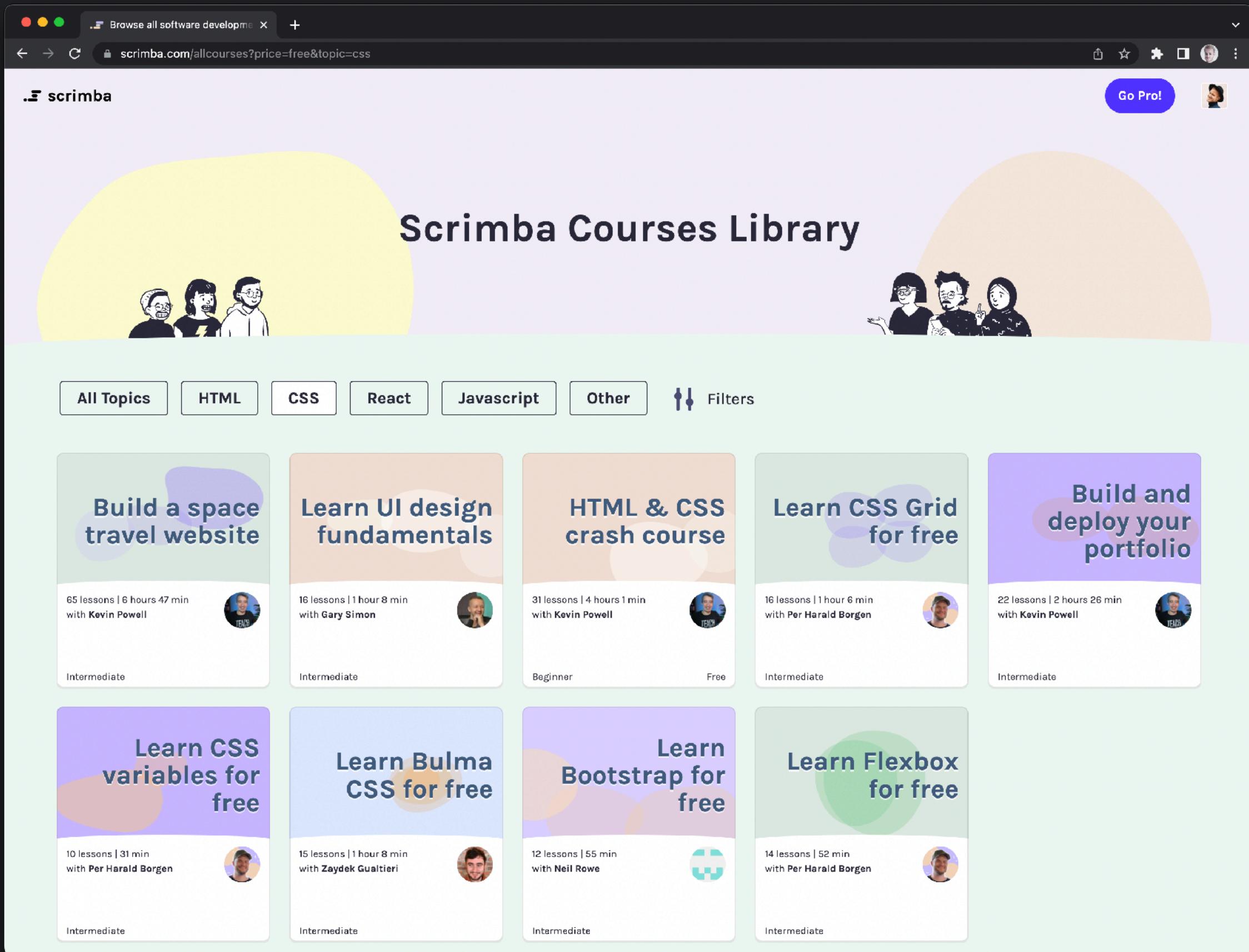
@media (min-width: 600px) {
  .grid-container {
    grid-template-columns: 1fr 1fr;
  }
}

@media (min-width: 992px) {
  .grid-container {
    grid-template-columns: 1fr 1fr 1fr;
  }
}
```

Scrimba Courses

Learn CSS Grid for free: <https://scrimba.com/learn/cssgrid>

Learn Flexbox for free: <https://scrimba.com/learn/flexbox>



<https://scrimba.com/allcourses>

CSS Grid Layout Module

The screenshot shows the main page of the CSS Grid Layout Module. At the top, there's a navigation bar with links for Tutorials, References, Exercises, Sign Up, and a Login button. Below the navigation is a secondary menu with links for HTML, CSS (which is highlighted in green), JAVASCRIPT, SQL, PYTHON, and JAVA. A search bar is also present. The main content area has a title "CSS Grid Layout Module". Below the title is a diagram of a grid layout with four columns and three rows. The columns are labeled "Header", "Main", "Right", and "Footer". The rows are labeled "Menu", "Main Content", and "Footer". A "Try it Yourself" button is located at the bottom left.

The screenshot shows the "Grid Container" page. The top navigation bar includes links for HTML, CSS (highlighted in green), JAVASCRIPT, SQL, PYTHON, and JAVA. The main content starts with a section titled "Grid Container" which explains that to make an element a grid container, you set the `display` property to `grid` or `inline-grid`. It mentions that grid containers consist of grid items placed in columns and rows. Below this is a section titled "The grid-template-columns Property" which describes how to define the number of columns and their widths. It includes an example code snippet for creating a grid with 4 columns:

```
.grid-container {  
  display: grid;  
  grid-template-columns: auto auto auto auto;  
}
```

The screenshot shows the "CSS Grid Item" page. The top navigation bar includes links for HTML, CSS (highlighted in green), JAVASCRIPT, SQL, PYTHON, and JAVA. The main content starts with a section titled "CSS Grid Item" which states that a grid container contains grid items. Below this is a diagram of a grid layout with 5 items labeled 1 through 5. A "Try it Yourself" button is located at the bottom left.

CSS Templates

w3schools.com/css/css_templates.asp

HTML CSS JAVASCRIPT SQL PYTHON PHP BOOTSTRAP HOW TO W3.CSS JAVA JQUERY C++

CSS Multiple Columns
CSS User Interface
CSS Variables
CSS Box Sizing
CSS Media Queries
CSS MQ Examples
CSS Flexbox

CSS Responsive
RWD Intro
RWD Viewport
RWD Grid View
RWD Media Queries
RWD Images
RWD Videos
RWD Frameworks
RWD Templates

CSS Grid
Grid Intro
Grid Container
Grid Item

CSS SASS
SASS Tutorial

CSS Examples
CSS Templates
CSS Examples
CSS Quiz
CSS Exercises
CSS Certificate

CSS References
CSS Reference
CSS Selectors

CSS Layout Templates

We have created some responsive starter templates with CSS.

You are free to modify, save, share, and use them in all your projects.

Header, equal columns and footer:

Try it (using float) »

Try it (using flexbox) »

Try it (using grid) »

Header, unequal columns and footer:

Try it (using float) »

Try it (using flexbox) »

Try it (using grid) »

Topnav, content and footer:

Sidenav and content:

NetSikker inkluderet
sikrer dig hjælp ved digitale krænkelser
Se vilkår på telenor.dk

NEW
We just launched W3Schools videos
Explore now

COLOR PICKER

LIKE US

“

Learning to code requires
a **HUGE** investment of
time and energy.

”