

A black and white photograph of five people in a meeting room. Four individuals are leaning over a table, looking down at a large sheet of paper. A fifth person is seated at the head of the table, also looking at the paper. On the table are several glasses, a coffee cup, and some papers. The background shows a window with a view of a brick building.

CSS Grid

Introduction to CSS Grid

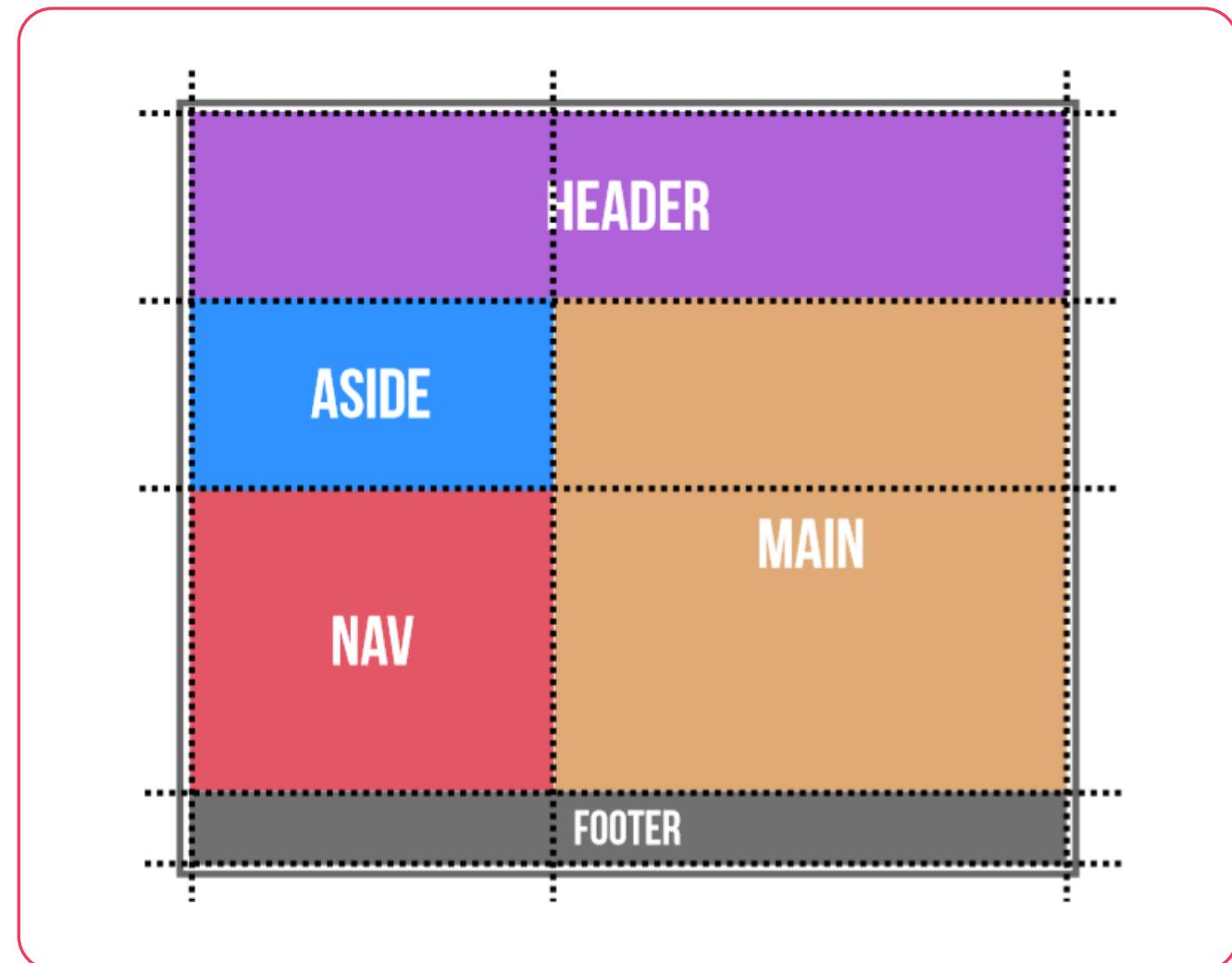
WHAT IS CSS GRID

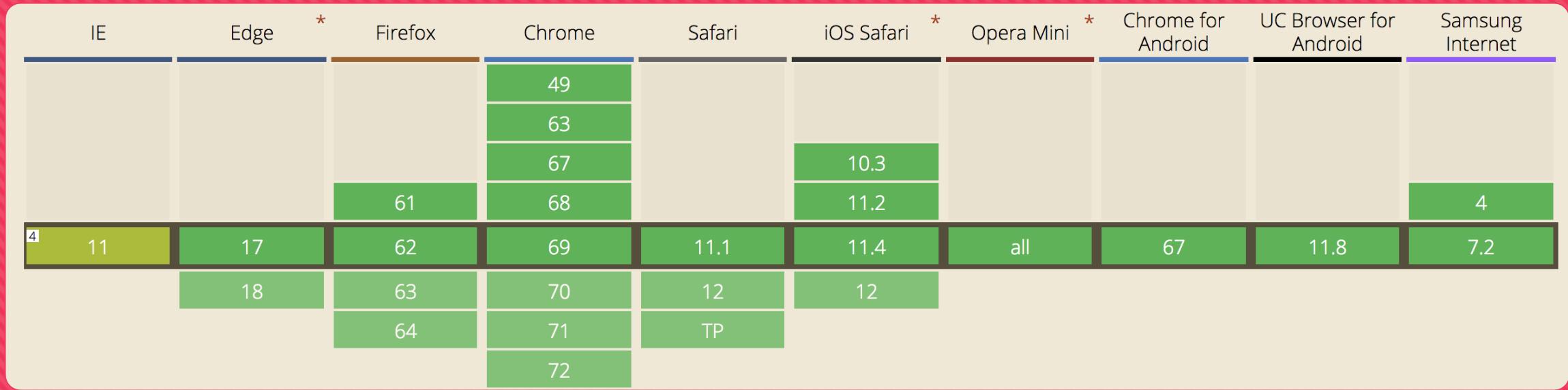
Modul layout 2 dimensi yang
dapat mengatur baris
sekaligus kolom



Preview

```
<div class="container">  
  <header>Header</header>  
  <aside>Aside</aside>  
  <nav>Nav</nav>  
  <main>Main</main>  
  <footer>Footer</footer>  
</div>
```





BROWSER SUPPORT

BAGIAN 1

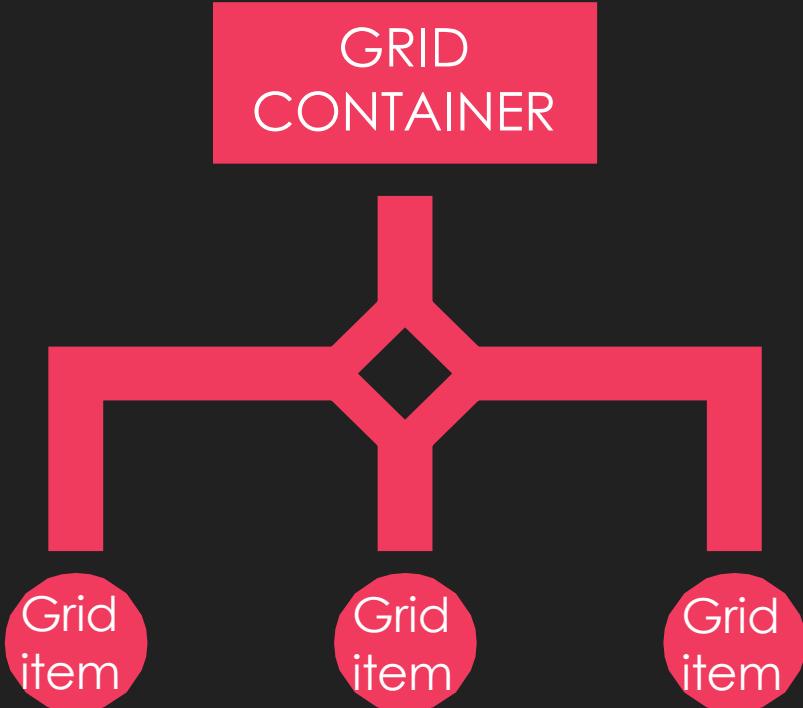
TERMINOLOGI

GRID CONTAINER

**Elemen pembungkus
grid**

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

GRID ITEM

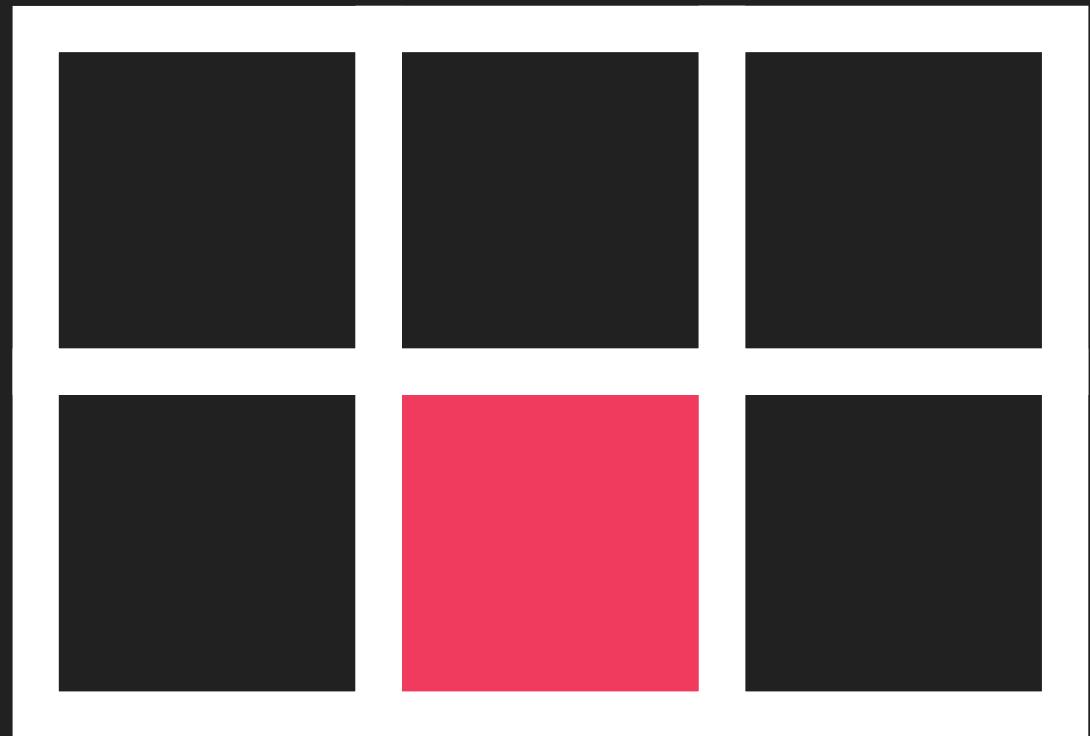


Element-element yang berada tepat 1 level di dalam grid container

```
<div class="container">  
  <div class="item">1</div>  
  <div class="item">2</div>  
  <div class="item">3</div>  
</div>
```

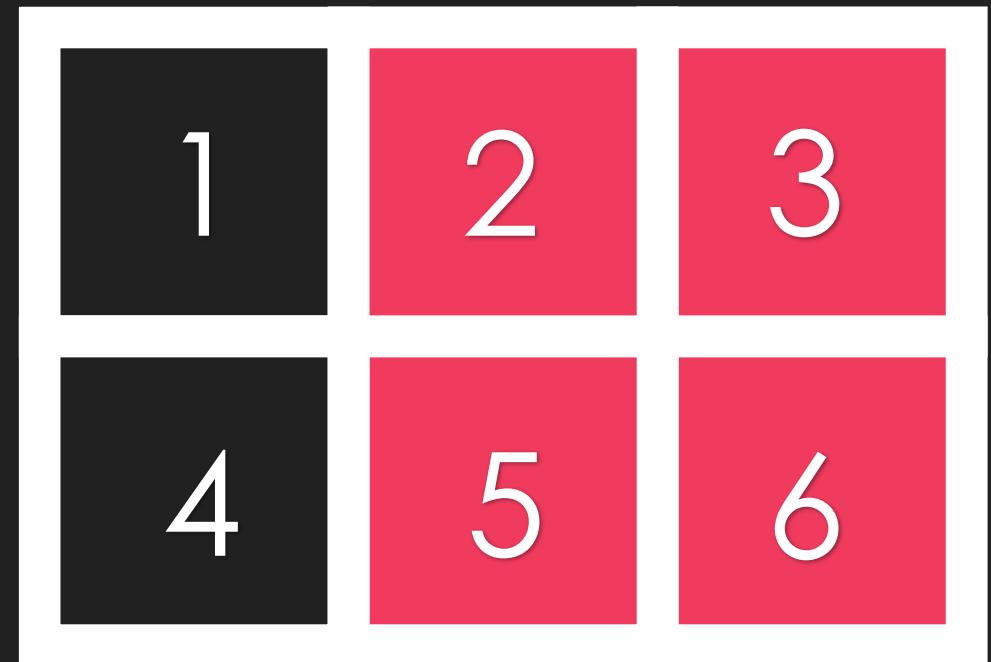
GRID CELL

Pertemuan antara baris dan kolom di dalam grid



GRID AREA

Kumpulan grid cell yang membentuk sebuah kotak



REVIEW TERMINOLOGI

- Grid container
- Grid item
- Grid cell
- Grid area

BAGIAN 2

CSS GRID PROPERTIES

CSS GRID PROPERTIES

- Grid-template-columns
- Grid-template-rows
- Grid-auto-columns
- Grid-auto-rows
- Grid-auto-flow
- Grid-template-areas
- Grid-template
- Grid-column-gap
- Grid-row-gap
- Grid-gap
- Grid

- Justify-items
- Align-items
- Place-items
- Justify-content
- Align-content
- Place-content

- Grid-column-start
- Grid-column-end
- Grid-row-start
- Grid-row-end
- Grid-column
- Grid-row
- Grid-area
- Justify-self
- Align-self
- Place-self

container

item

Grid-template-columns & grid-template-rows

- Mendefinisikan kolom/baris dengan cara menuliskan nilai dipisahkan oleh spasi
- Nilai merepresentasikan ukuran grid item
- Spasi merepresentasikan jumlah kolom/baris

```
.grid-container{  
    display: grid;  
    grid-template-columns: <track-size> ... | [line-name] <track-size> ... ;  
    grid-template-rows: <track-size> ... | [line-name] <track-size> ... ;  
}
```

<track-size> : px, %, auto, fr (fraction)

EXPLICIT & IMPLICIT GRID

- Explicit: Baris atau kolom dituliskan secara jelas
- Implicit: Ketika grid menentukan otomatis karena tidak disebutkan dalam explicit

Grid-auto-columns & grid-auto-rows

- Mengatur ukuran grid track yang tidak dituliskan pada grid-template (implicit track)

```
.container{  
    grid-auto-columns: <track-size>;  
    grid-auto-rows: <track-size>;  
}
```

Grid-auto-flow

- Mengatur arah grid (kebawah/kesamping)

```
.container{  
    grid-auto-flow: row | column | row dense | column dense;  
}
```

SPECIAL KEYWORDS & FUNCTIONS

- repeat()

```
grid-template-columns: repeat(4, 1fr) repeat(5, 1.5fr);
```

- min-content & max-content

Menentukan seberapa besar ukuran grid cell berdasarkan content sebuah item

```
grid-template-columns: min-content max-content;
```

- auto-fill & auto-fit

menentukan jumlah item untuk berada pada grid track

```
grid-template-columns: repeat(auto-fit, 100px);
```

- minmax()

menentukan ukuran minimal dan maksimal

```
grid-template-columns: repeat(auto-fit, minmax(150px, 1fr));
```

Grid-gap

- Mendefinisikan jarak antara baris atau kolom

```
.container{  
    column-gap: <size>;  
    row-gap: <size>;  
}
```

```
.container{  
    gap: <size>;  
}
```

REVIEW 1 GRID PROPERTIES

- Grid-template-columns
- Grid-template-rows
- Grid-auto-columns
- Grid-auto-rows
- Grid-auto-flow
- Grid-column-gap
- Grid-row-gap
- Grid-gap

Latihan Responsive Image Gallery

Grid-template-area

- Mendefinisikan grid template menggunakan nama dan area yang ditulis pada property grid-area pada item

```
.container{  
    grid-template-areas:  
        "<nama-area> <nama-area> ... "  
        "<nama-area> <nama-area> ... ";  
}  
  
.header{  
    grid-area: header;  
}  
  
.sidebar{  
    grid-area: sidebar;  
}  
  
.content{  
    grid-area: content;  
}
```

Grid-template

- Shorthand untuk mendefinisikan grid-template-rows, grid-template-columns, dan grid-template-areas dalam satu deklarasi

```
.container{  
  grid-template: <grid-template-rows> | <grid-template-areas> / <grid-template-columns>;  
}
```

Grid

Shorthand untuk mendefinisikan property berikut ini dalam satu deklarasi:

1. `Grid-template-rows`
2. `Grid-template-columns`
3. `Grid-template-areas`
4. `Grid-auto-rows`
5. `Grid-auto-columns`
6. `Grid-auto-flow`

REVIEW GRID PROPERTIES

- Grid-template-columns
- Grid-template-rows
- Grid-auto-columns
- Grid-auto-rows
- Grid-auto-flow
- Grid-template-areas
- Grid-template
- Grid-column-gap
- Grid-row-gap
- Grid-gap
- Grid

BAGIAN 3

GRID ALIGNMENT

GRID ALIGNMENT

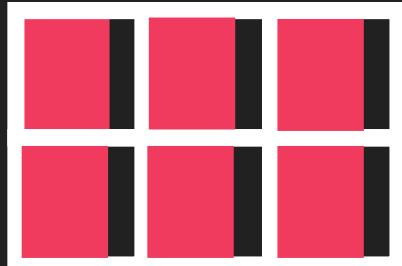
- Grid-template-columns
- Grid-template-rows
- Grid-auto-columns
- Grid-auto-rows
- Grid-auto-flow
- Grid-template-areas
- Grid-template
- Grid-column-gap
- Grid-row-gap
- Grid-gap
- Grid
- Justify-items
- Align-items
- Place-items
- Justify-content
- Align-content
- Place-content
- Grid-column-start
- Grid-column-end
- Grid-row-start
- Grid-row-end
- Grid-column
- Grid-row
- Grid-area
- Justify-self
- Align-self
- Place-self

Justify-items

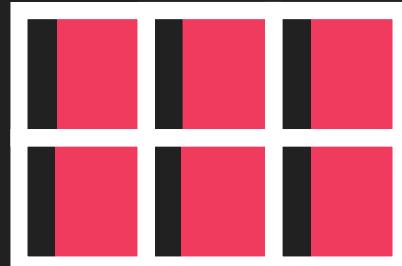
Mensejajarkan grid items
pada sumbu horizontal

```
.container{  
  justify-items: start | end | center | stretch;  
}
```

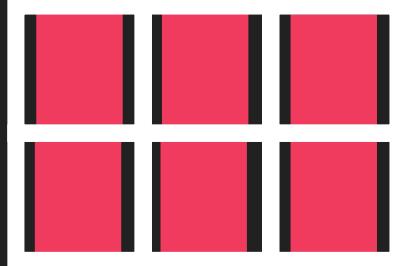
start



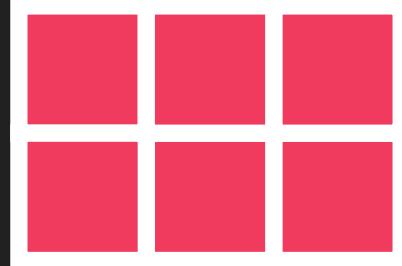
end



center



stretch

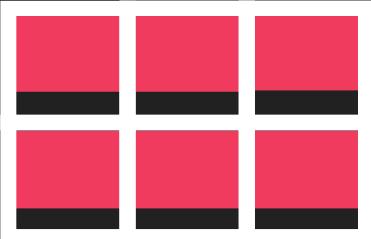


Align-items

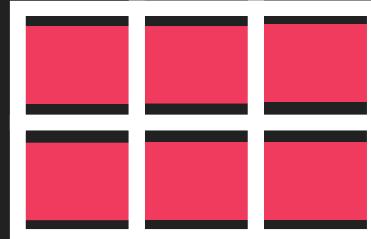
Mensejajarkan grid-items
pada sumbu vertikal

```
.container{  
    align-items: start | end | center | stretch;  
}
```

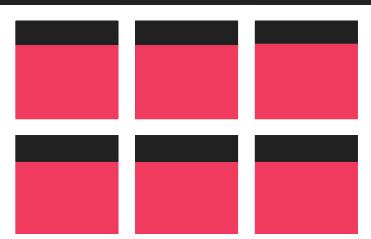
start



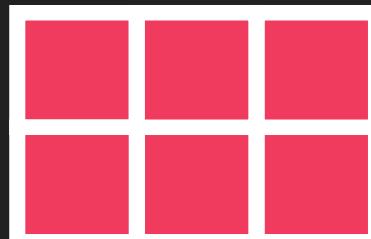
center



end



stretch



Place-items

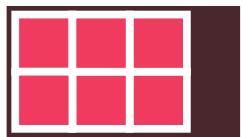
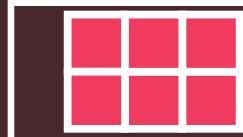
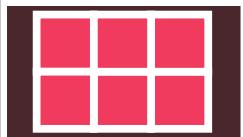
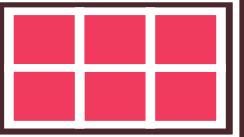
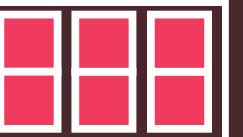
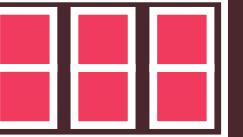
Shorthand untuk justify-items dan align-items

```
.container{  
    place-items: <align-items> <justify-items>;  
}
```

Justify-content

- Mengatur posisi seluruh grid container pada sumbu horizontal
- Digunakan ketika ukuran grid lebih kecil dari ukuran containernya, biasanya Ketika ukuran itemsnya sudah fix (px)

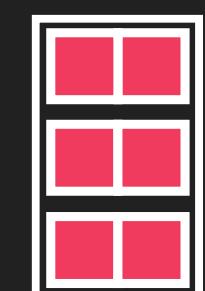
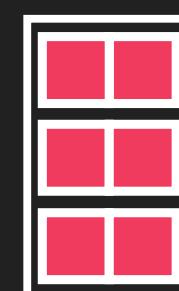
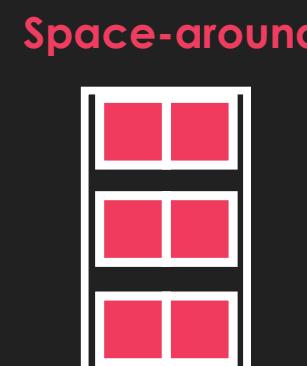
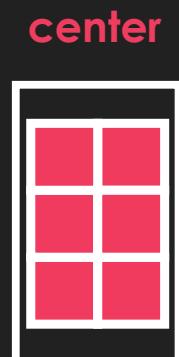
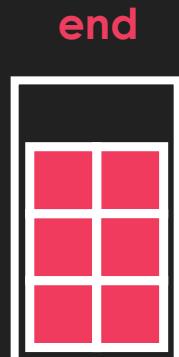
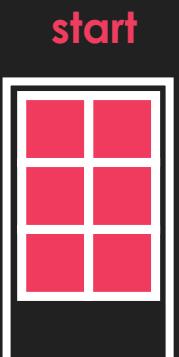
```
.container{  
    justify-content: start | end | center | stretch | space-around |  
                  space-between | space-evenly;  
}
```

start	end	center	stretch	Space-around	Space-between	Space-evenly
						

Align-content

- Mengatur posisi seluruh grid container pada sumbu vertikal
- Digunakan ketika ukuran grid lebih kecil dari ukuran containernya, biasanya Ketika ukuran itemsnya sudah fix (px)

```
.container{  
  align-content: start | end | center | stretch | space-around | space-between | space-evenly;  
}
```



Place-content

- Mengatur posisi seluruh grid container pada sumbu vertikal
- Digunakan ketika ukuran grid lebih kecil dari ukuran containernya, biasanya Ketika ukuran itemsnya sudah fix (px)

```
.container{  
    place-content: <justify-content> <align-content>;  
}
```

REVIEW GRID ALIGNMENT

1. Justify-items
2. Align-items
3. Place-items
4. Justify-content
5. Align-content
6. Place-content

BAGIAN 4

GRID ITEM PROPERTIES

GRID ITEM PROPERTIES

- Grid-template-columns
- Grid-template-rows
- Grid-auto-columns
- Grid-auto-rows
- Grid-auto-flow
- Grid-template-areas
- Grid-template
- Grid-column-gap
- Grid-row-gap
- Grid-gap
- Grid
- Justify-items
- Align-items
- Place-items
- Justify-content
- Align-content
- Place-content
- Grid-column-start
- Grid-column-end
- Grid-row-start
- Grid-row-end
- Grid-column
- Grid-row
- Grid-area
- Justify-self
- Align-self
- Place-self

item

grid-column-start grid-column-end

grid-row-start grid-row-end

Menentukan tempat dari grid item sesuai nomor atau nama grid line yang spesifik

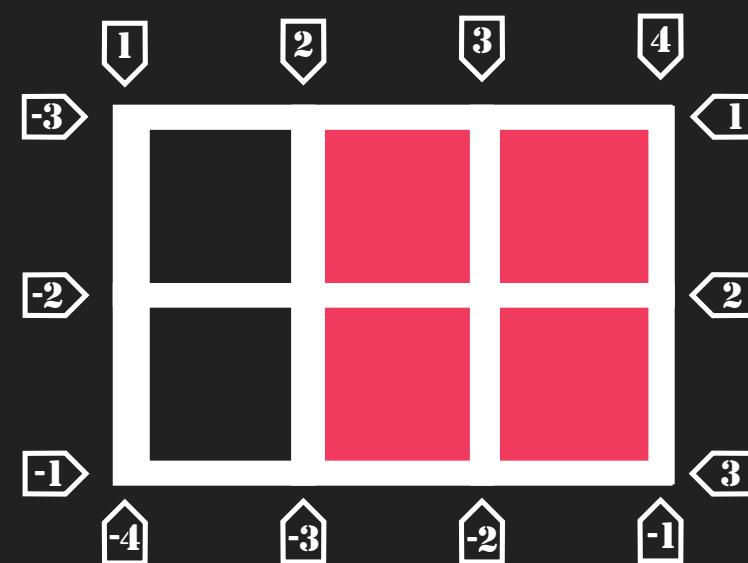
```
.item {  
    grid-column-start: <nomor> | <nama> | span <nomor> | span <nama> | auto;  
    grid-column-end: <nomor> | <nama> | span <nomor> | span <nama> | auto;  
    grid-row-start: <nomor> | <nama> | span <nomor> | span <nama> | auto;  
    grid-row-end: <nomor> | <nama> | span <nomor> | span <nama> | auto;  
}
```

- <nomor> | <nama> : mengacu pada nomor atau nama pada grid line
- Span <nomor> : item akan memanjang/melebar sampai sejumlah nomor
- Span <nama> : item akan memanjang/melebar sampai ke nama grid line tertentu

grid-column-start grid-column-end

```
.item {  
  grid-column-start: 2;  
  grid-column-end: 4;  
  grid-row-start: 1;  
  grid-row-end: 3;  
}
```

grid-row-start grid-row-end



grid-column

grid-row

Shorthand untuk start dan end pada grid column & grid row

```
.item {  
    grid-column-start: <start-line> / <end-line> | <start-line> / span <value>;  
    grid-row-end: <start-line> / <end-line> | <start-line> / span <value>;  
}
```

- Span <value> : item akan memanjang/melebar sampai sejumlah nomor

grid-area

- Menentukan nama area pada item sesuai grid-template-areas
- Shorthand untuk grid-column-start, grid-column-end, grid-row-start, dan grid-row-end

```
.item {  
    grid-area: <name> | (<row-start> / <column-start> / <row-end> / <column-end>);  
}
```

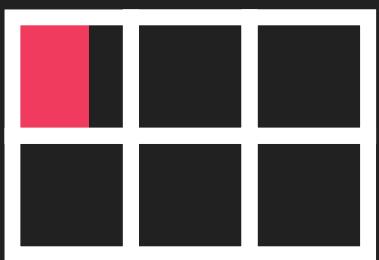
- Span <value> : item akan memanjang/melebar sampai sejumlah nomor

Justify-self

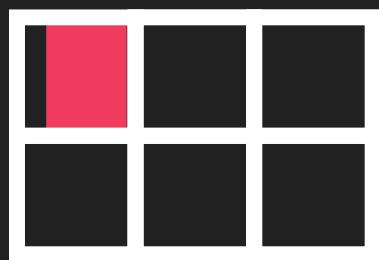
Mengatur posisi item pada sebuah cell terhadap sumbu horizontal

```
.item {  
  justify-self: start | end | center | stretch;  
}
```

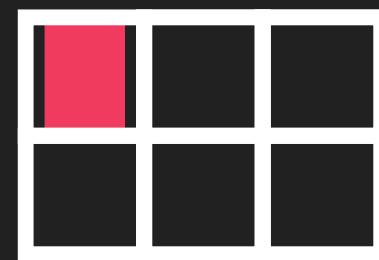
start



end



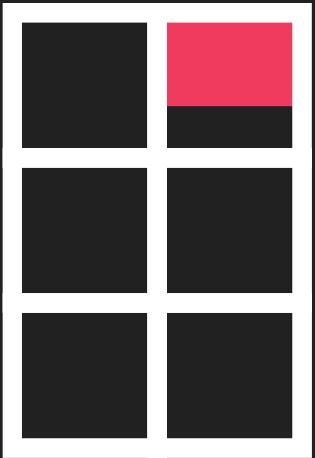
center



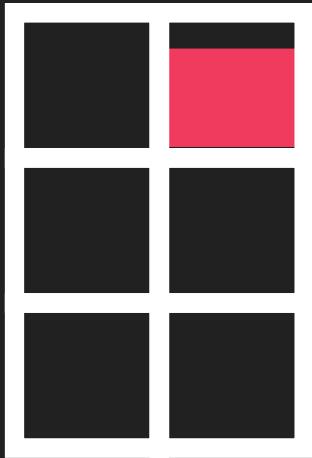
stretch



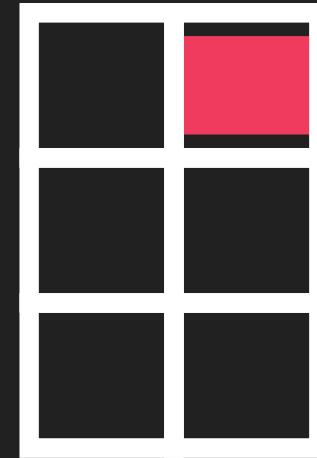
start



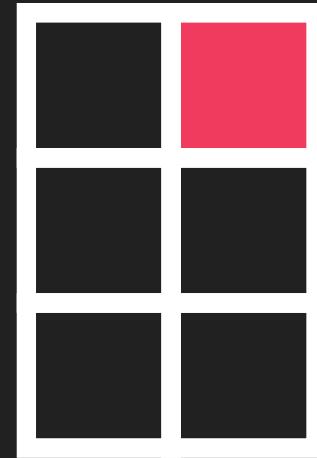
end



center



stretch



Align-self

Mengatur posisi item pada sebuah cell terhadap sumbu vertikal

```
.item {  
  align-self: start | end | center | stretch;  
}
```

Place-self

Shorthand untuk posisi item pada sebuah cell terhadap sumbu vertical dan horizontal

```
.item {  
    place-self: <align-self> <justify-self>;  
}
```

REVIEW GRID ITEM PROPERTIES

- Grid-column-start
- Grid-column-end
- Grid-row-start
- Grid-row-end
- Grid-column
- Grid-row
- Grid-area
- Justify-self
- Align-self
- Place-self

HTML5 Template

```
<!DOCTYPE html>
<html lang="id">
<head>
  <meta charset="UTF-8">
  <meta name="description" content="CSS Grid">
  <meta name="keywords" content="HTML5, CSS3, CSS Grid">
  <meta name="author" content="Danu Ihza pamungkas">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <!--Custom CSS-->
  <link rel="stylesheet" href="mystyle.css">

  <title>Ngobar #1</title>
</head>
```

REFERENCES

1. https://www.w3schools.com/cssref/css3_pr_mediaquery.asp
2. <https://www.youtube.com/playlist?list=PLFIM0718LjIXmbwX0dEsoRVX-PC16vmuw>

API

<https://indonesia-covid-19.mathdro.id/api>



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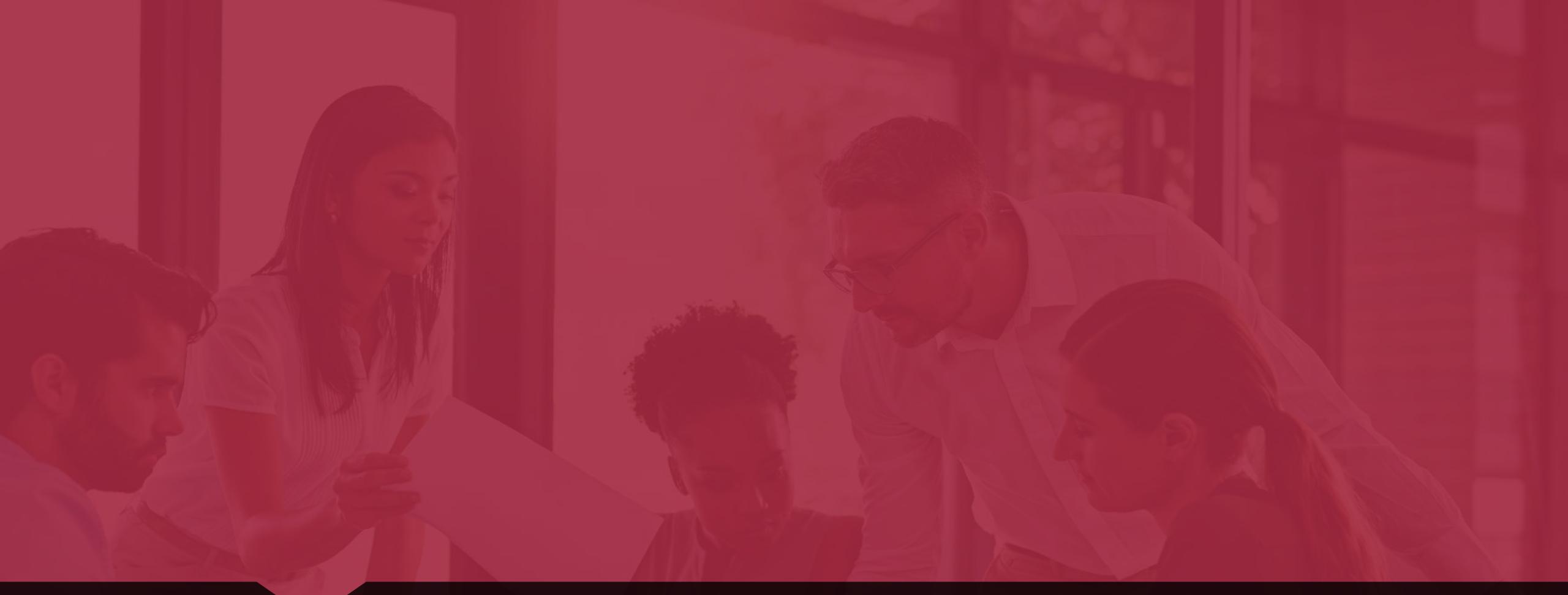
DANU_IP



DANU IHZA
PAMUNGKAS



DANUIHZAP



Terima Kasih

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