



HTML och CSS

<Lektion class="nio">

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NACKADEMIN

Lektionstillfällets mål

Mål med lektionen

- Arbeta med CSS-Layouter (del 3 av 3)
- Arbeta med flexbox
- CSS Grid
- Skapa multikolumnlayout
- Att läsa:
 - https://www.w3schools.com/css/css3_flexbox.asp
 - https://www.w3schools.com/css/css_grid.asp

Kort summering av föregående lektion

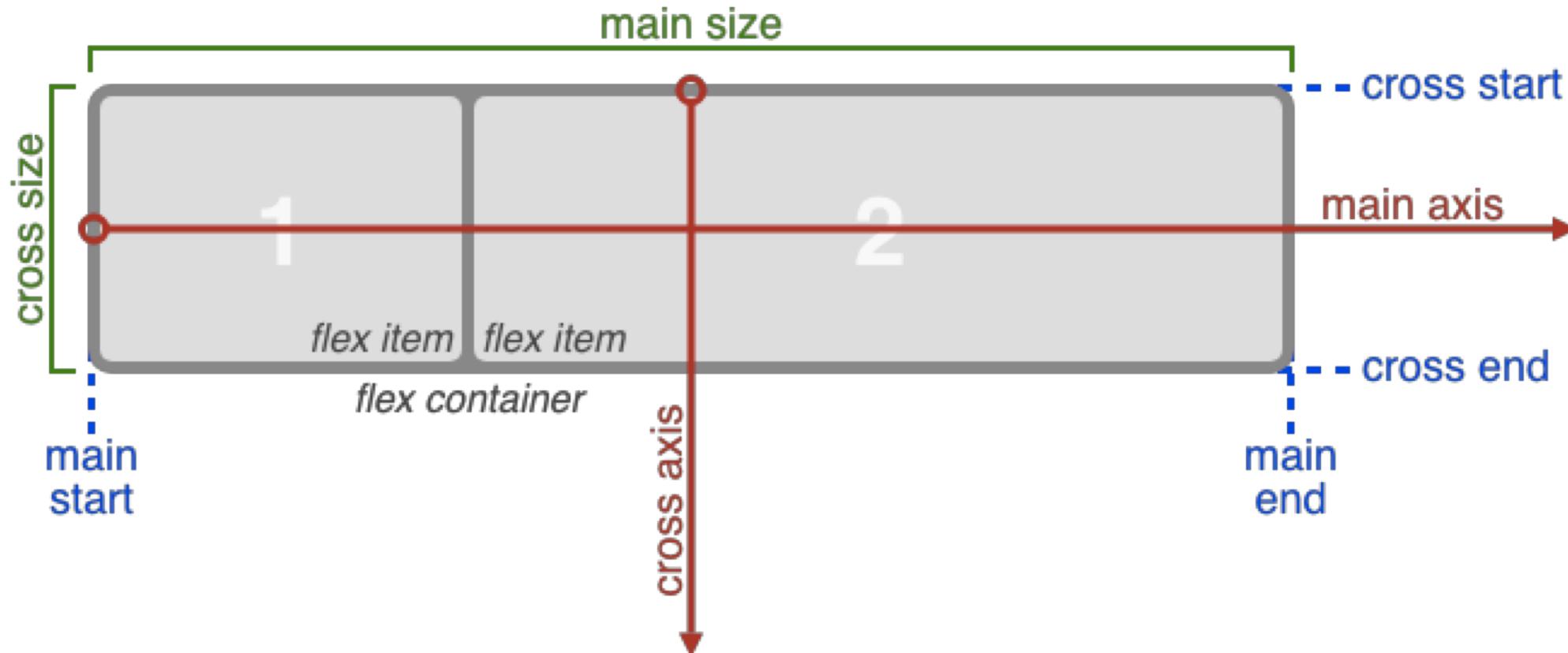
Föregående lektion:

- Vi har jobbat med Mobile-First och Responsive Web.
- Vi har gått igenom grunderna i Bootstrap.

Flexbox (Flexible Box)

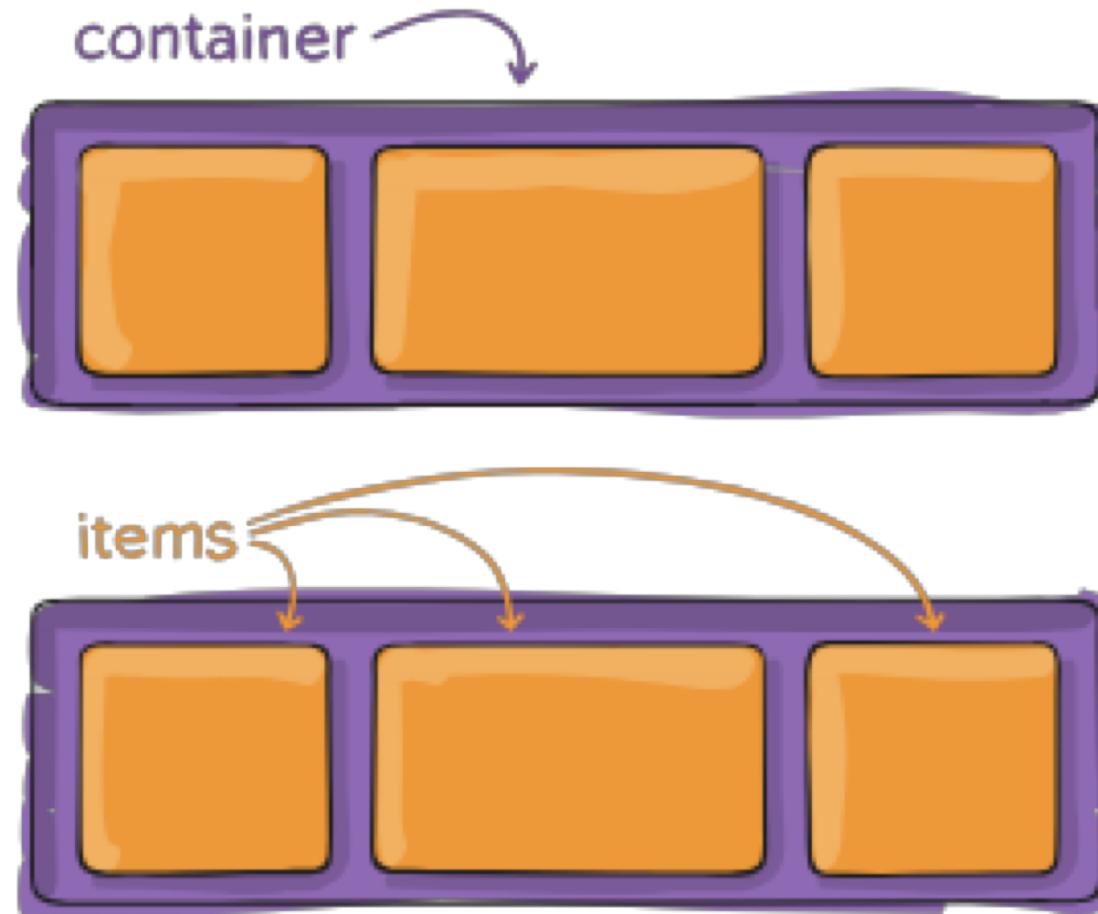
- Flexbox (Flexible Box) är en layoutmodell från W3C
<https://www.w3.org/TR/css-flexbox/>
- Vi har hittills jobbat med följande s.k. "layout modes"
 - Tabeller (OBS! Används enbart för tabulär data).
 - Block, inline och inline-block.
 - Positionering för explicit placering av element.
 - Floatmodellen.
- Flexbox är en nyare modell som gör det enklare att designa flexibel och responsiv layoutstruktur utan att använda positionering eller float.

Flexbox – Grundläggande terminologi



*An illustration of the various directions and sizing terms as applied to a **row** flex container.*
<https://www.w3.org/TR/css-flexbox/>

Flexbox container

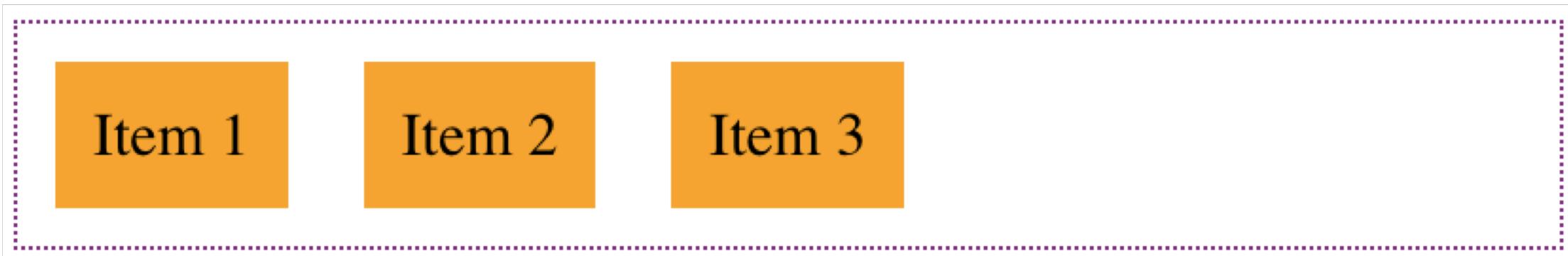


<https://css-tricks.com/snippets/css/a-guide-to-flexbox/>

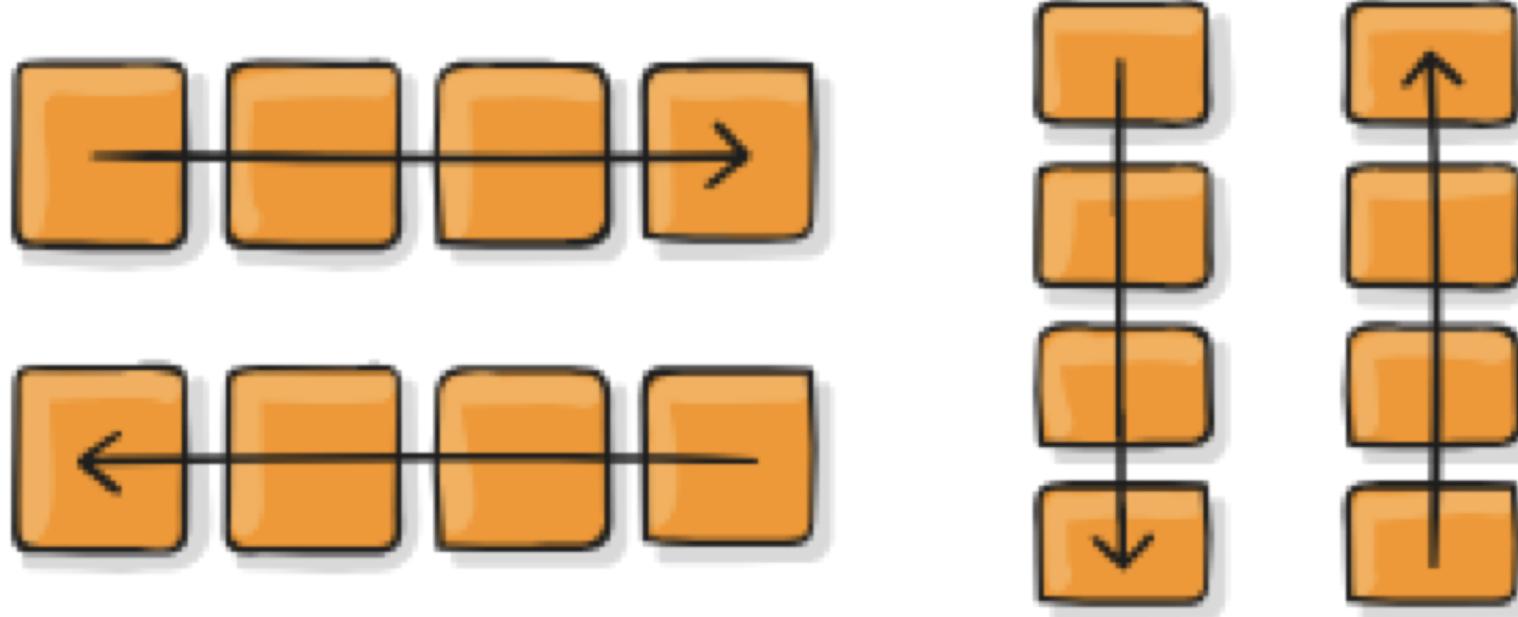
Flexbox container – Exempel

```
.container {  
    display: flex;  
    border: 1px dotted purple;  
}  
  
.container > div {  
    background-color: orange;  
    margin: 10px;  
    padding: 10px;  
}
```

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

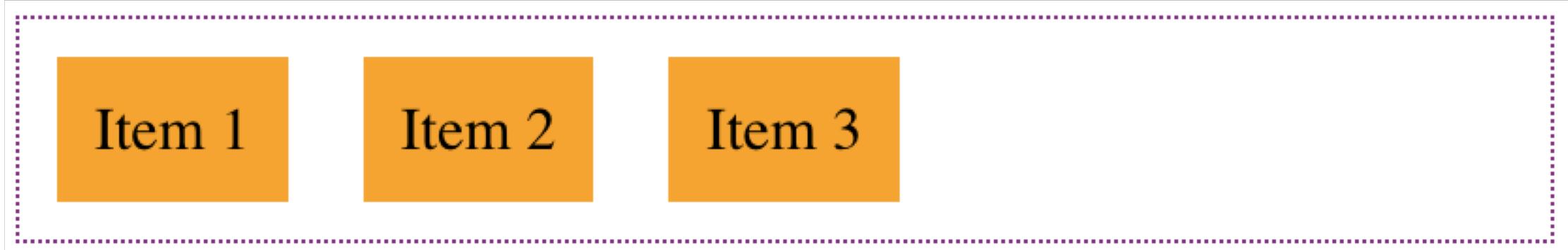


flex-direction



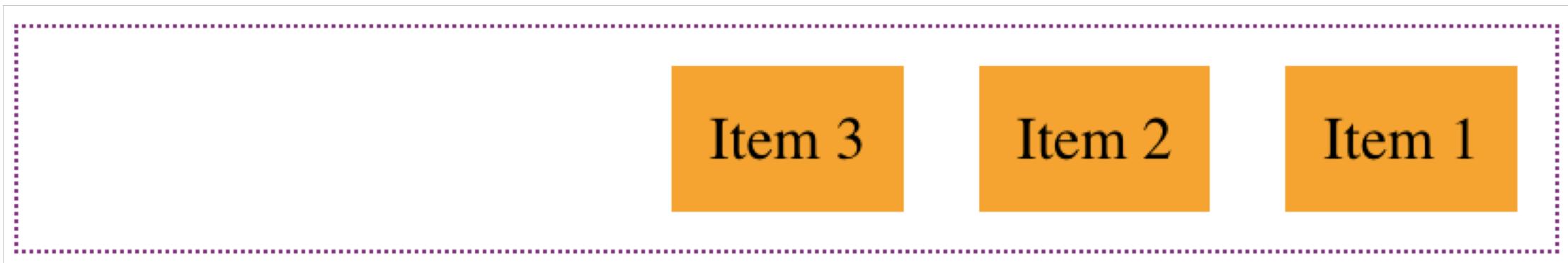
flex-direction:row

```
.container {  
    display: flex;  
    flex-direction: row; /* default */  
    border: 1px dotted purple;  
}
```



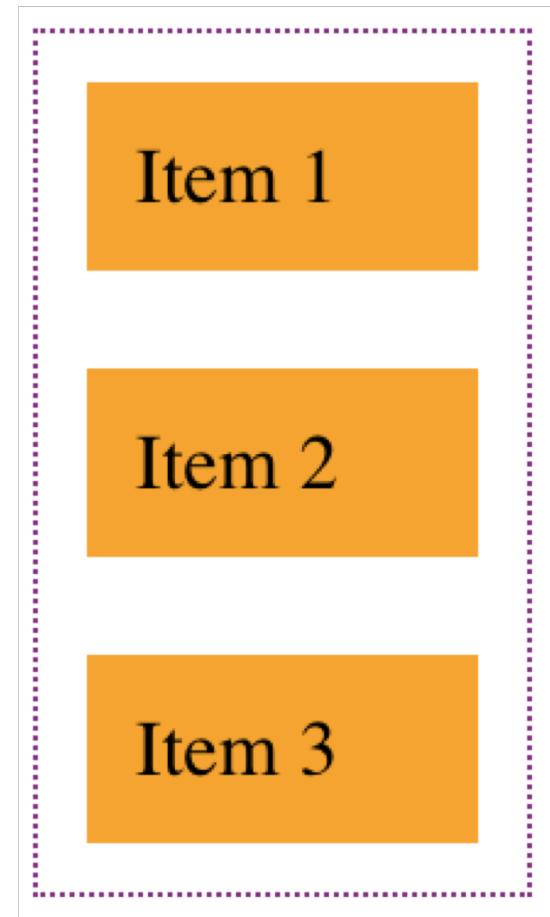
flex-direction:row-reverse

```
.container {  
    display: flex;  
    flex-direction: row-reverse;  
    border: 1px dotted purple;  
}
```



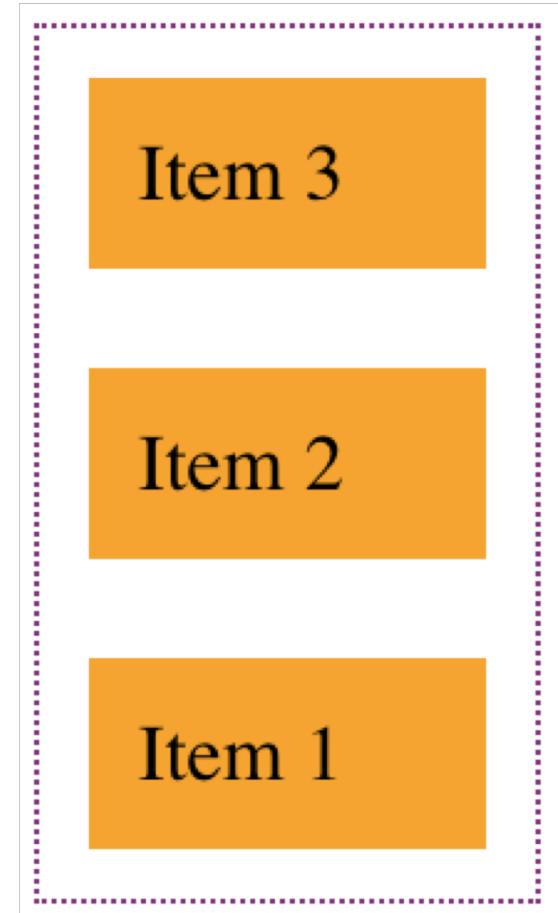
flex-direction:column

```
.container {  
  display: flex;  
  flex-direction: column;  
  width: 100px;  
  border: 1px dotted purple;  
}
```



flex-direction:column-reverse

```
.container {  
  display: flex;  
  flex-direction: column-reverse;  
  width: 100px;  
  border: 1px dotted purple;  
}
```



justify-content

flex-start



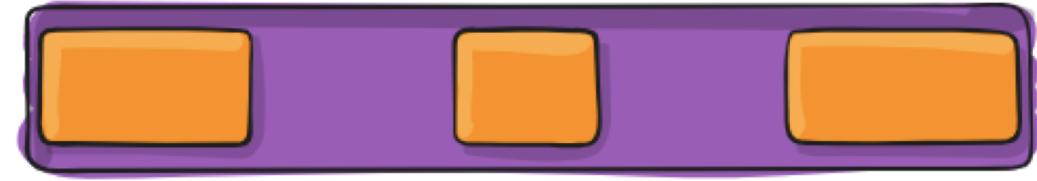
flex-end



center



space-between



space-around

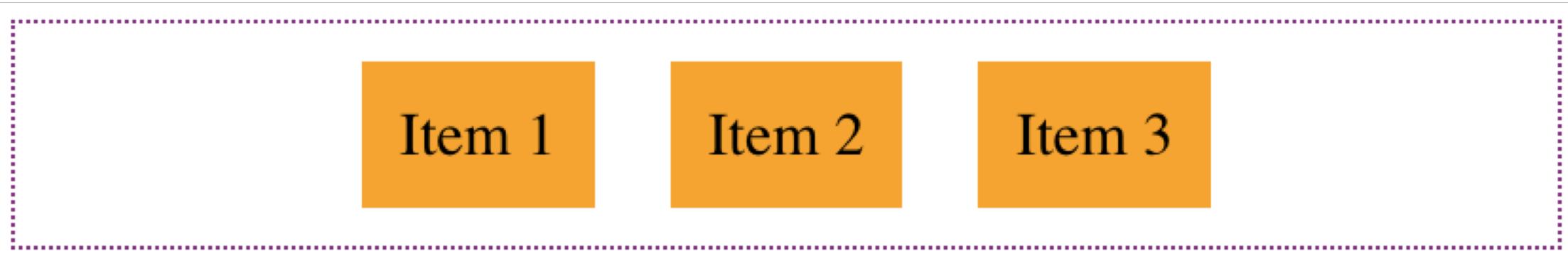


space-evenly



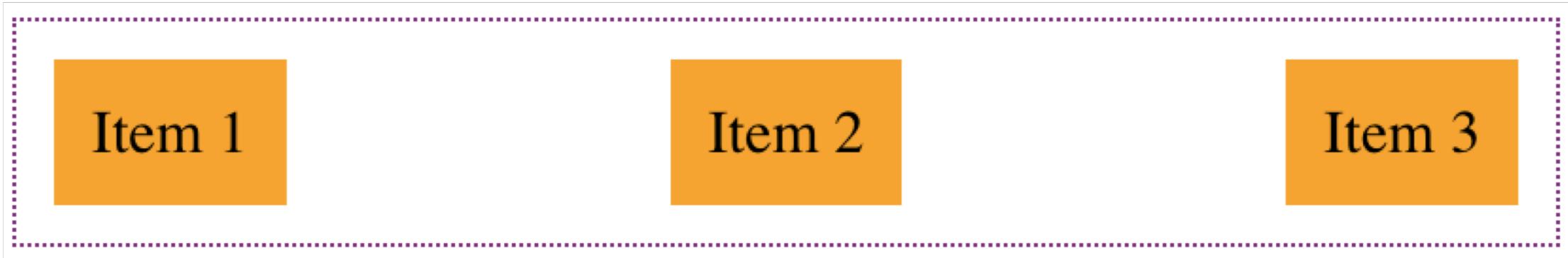
justify-content:center

```
.container {  
  display: flex;  
  justify-content: center;  
  border: 1px dotted purple;  
}
```

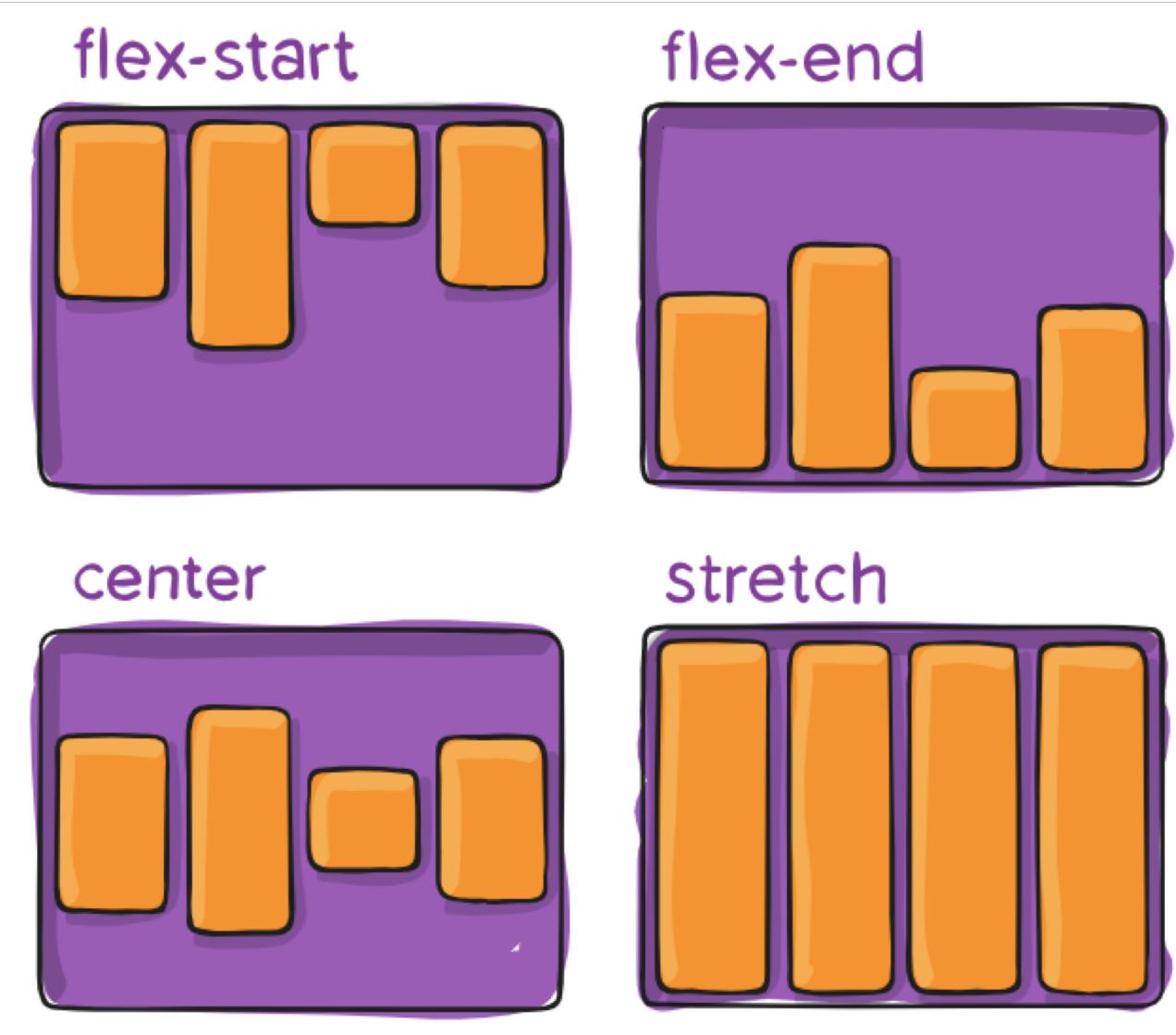


justify-content:space-between

```
.container {  
    display: flex;  
    justify-content: space-between;  
    border: 1px dotted purple;  
}
```

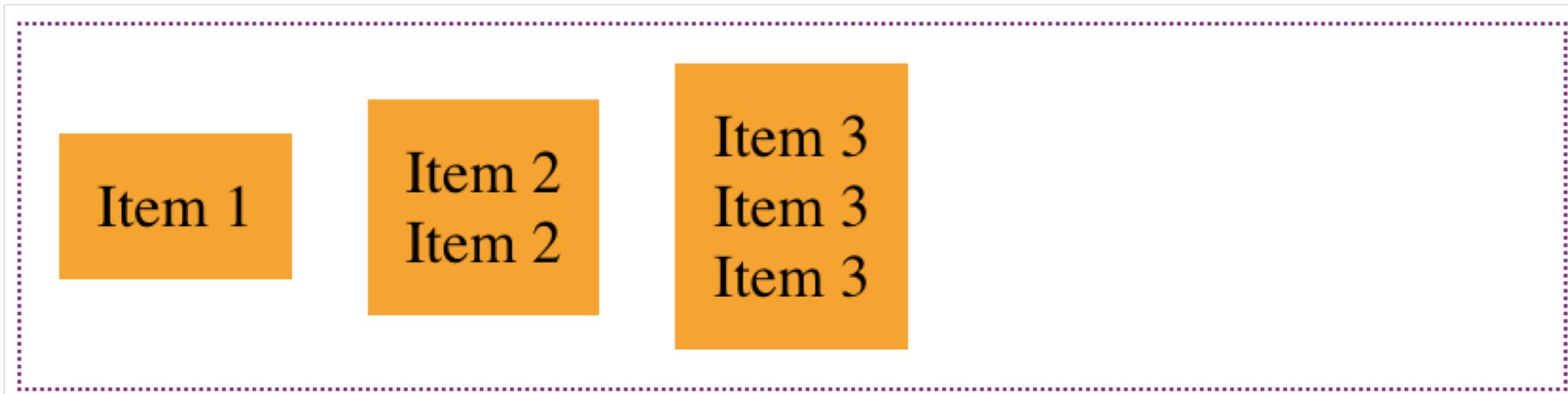


align-items



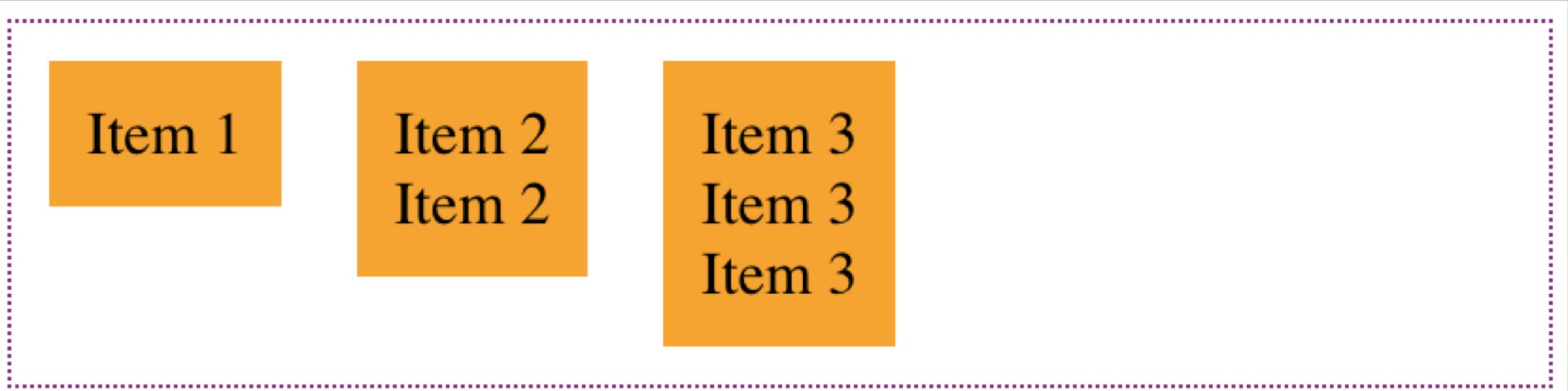
align-items:center

```
.container {  
  display: flex;  
  align-items: center;  
  border: 1px dotted purple;  
}  
  
<div class="container">  
  <div>Item 1</div>  
  <div>Item 2<br>Item 2</div>  
  <div>Item 3<br>Item 3<br>Item 3</div>  
</div>
```



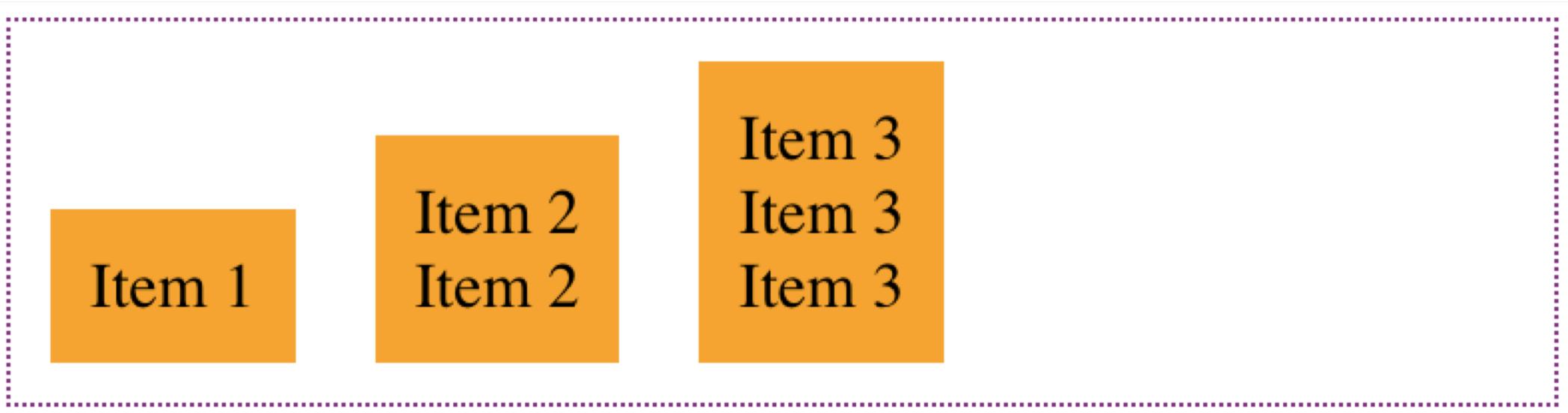
align-items:flex-start

```
.container {  
  display: flex;  
  align-items: flex-start;  
  border: 1px dotted purple;  
}
```



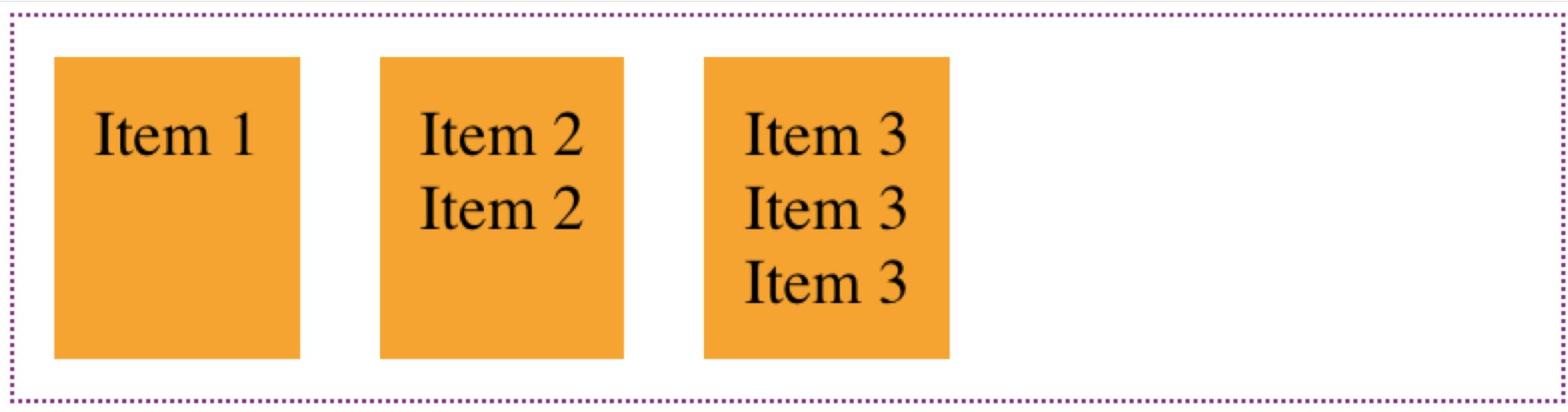
align-items:flex-end

```
.container {  
  display: flex;  
  align-items: flex-end;  
  border: 1px dotted purple;  
}
```

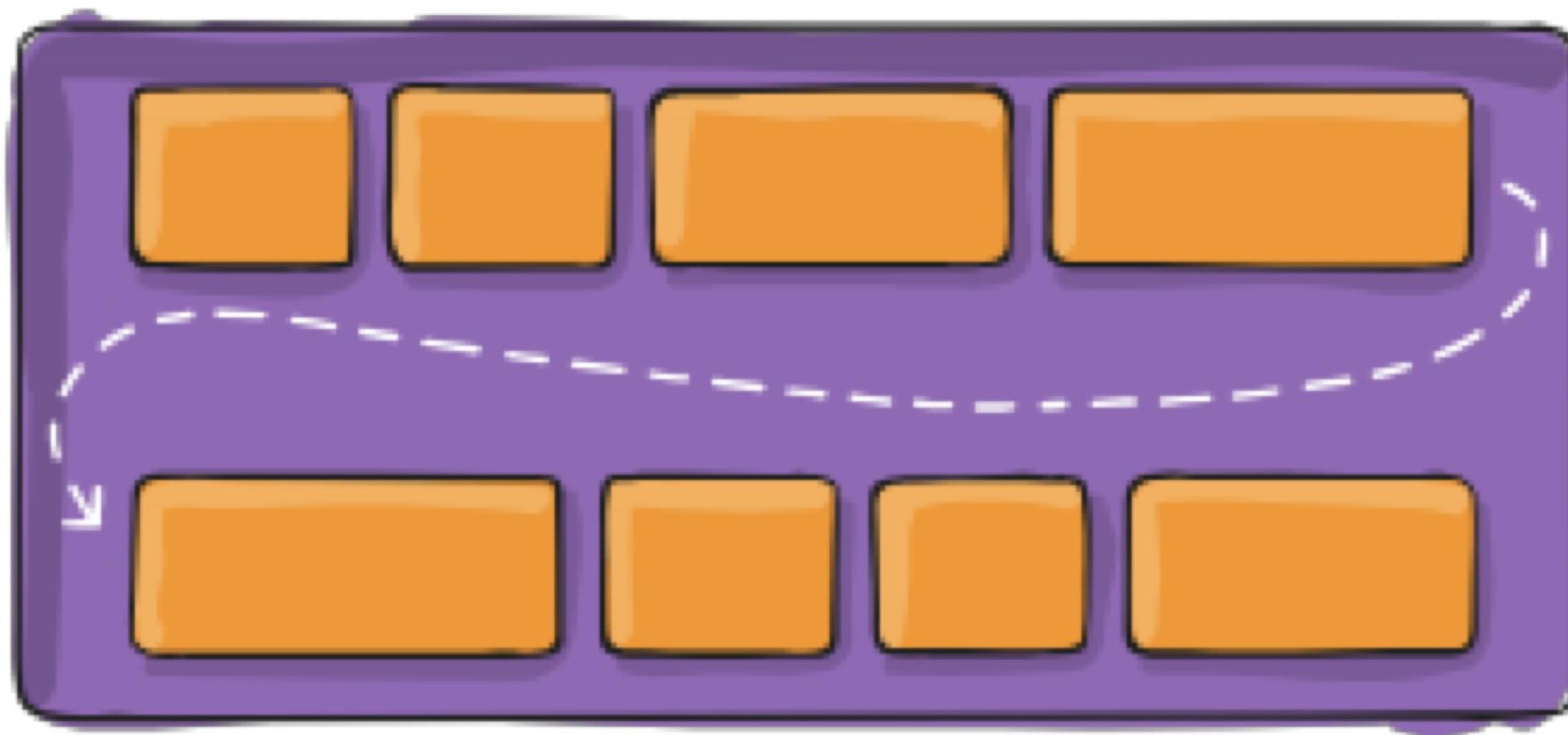


align-items:stretch

```
.container {  
    display: flex;  
    align-items: stretch;  
    border: 1px dotted purple;  
}
```



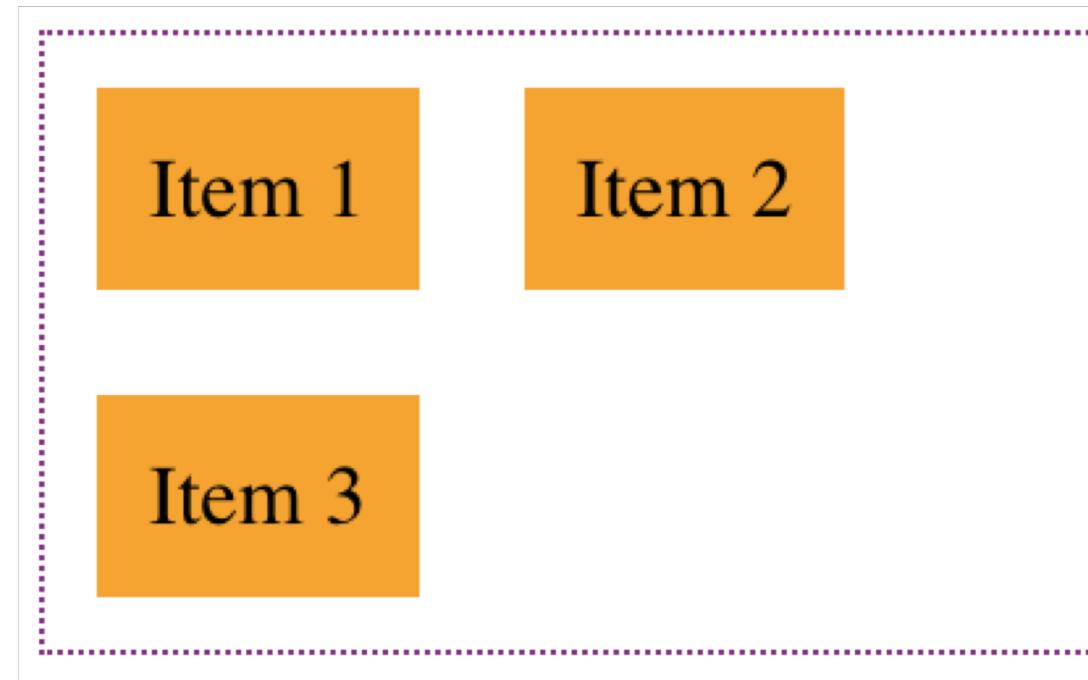
flex-wrap



<https://css-tricks.com/snippets/css/a-guide-to-flexbox/>

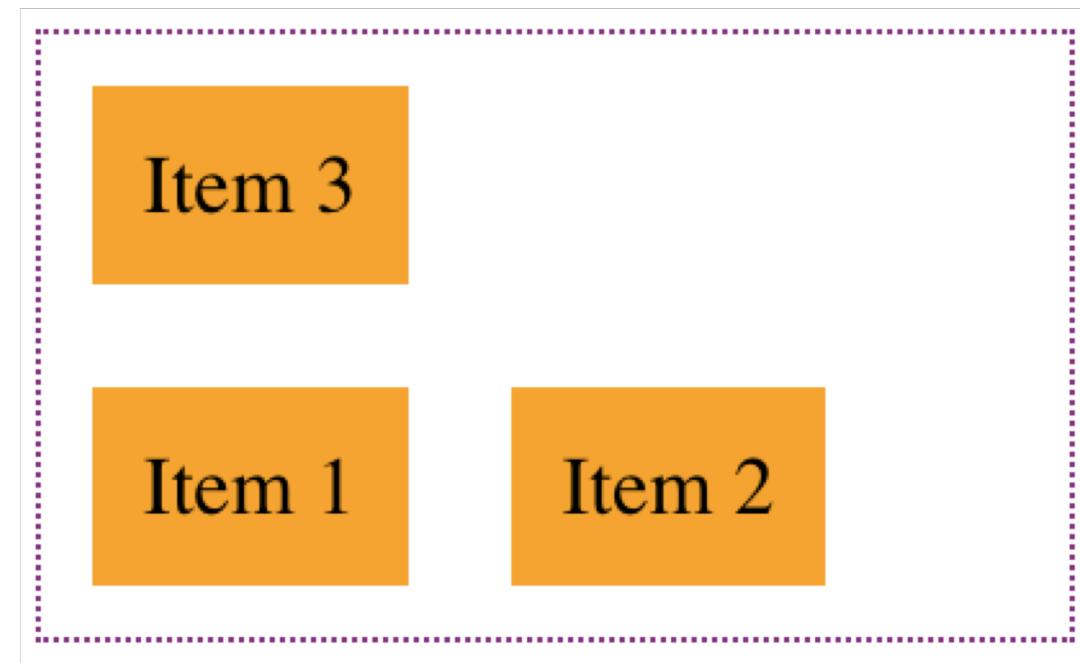
flex-wrap:wrap

```
.container {  
    display: flex;  
    flex-wrap: wrap;  
    width: 200px;  
    border: 1px dotted purple;  
}
```



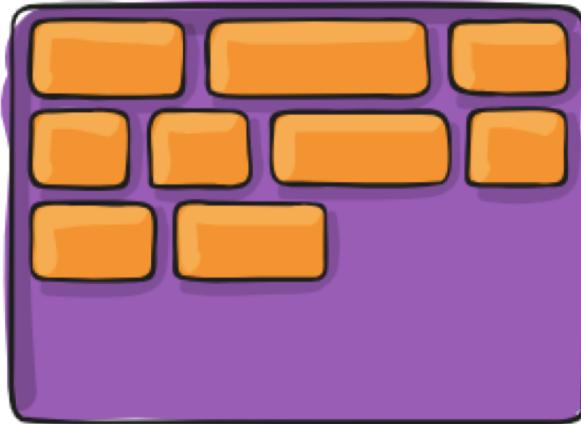
flex-wrap:wrap-reverse

```
.container {  
    display: flex;  
    flex-wrap: wrap-reverse;  
    width: 200px;  
    border: 1px dotted purple;  
}
```

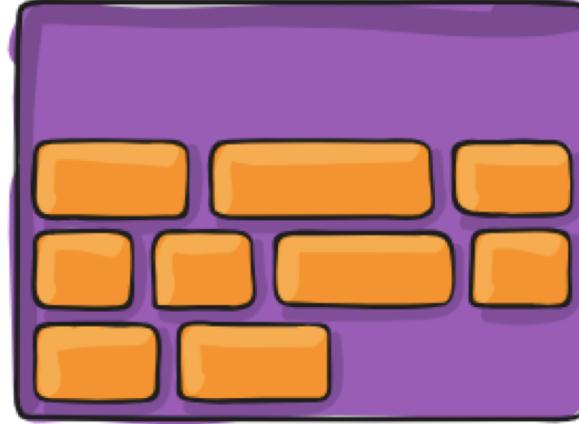


align-content

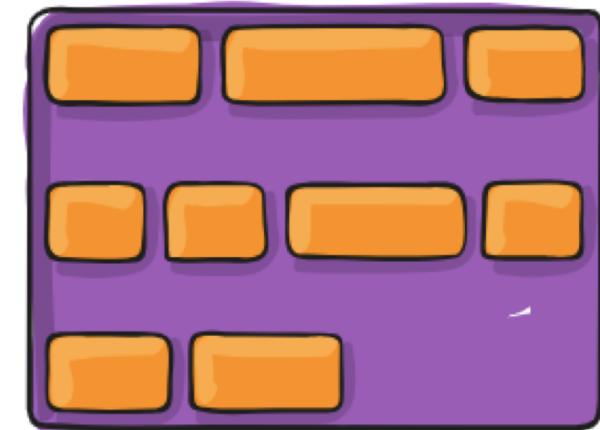
flex-start



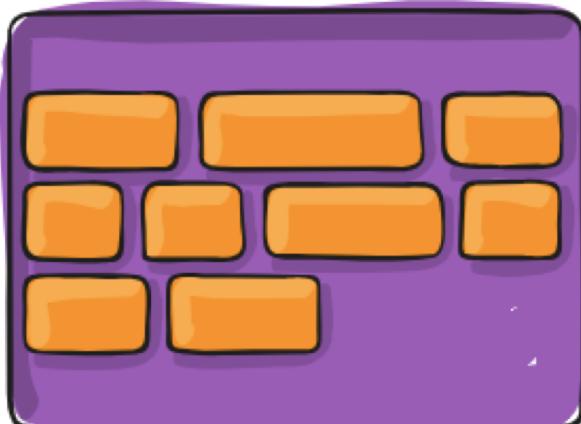
flex-end



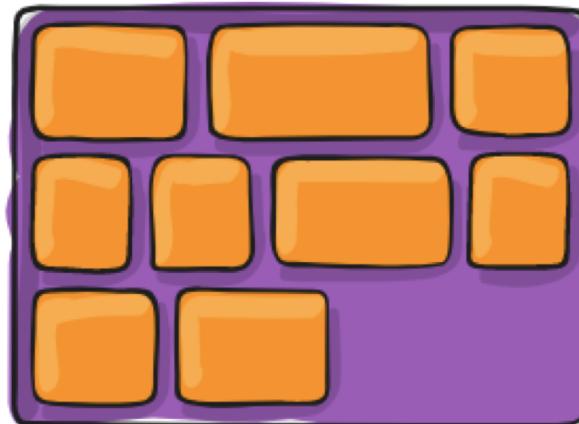
space-between



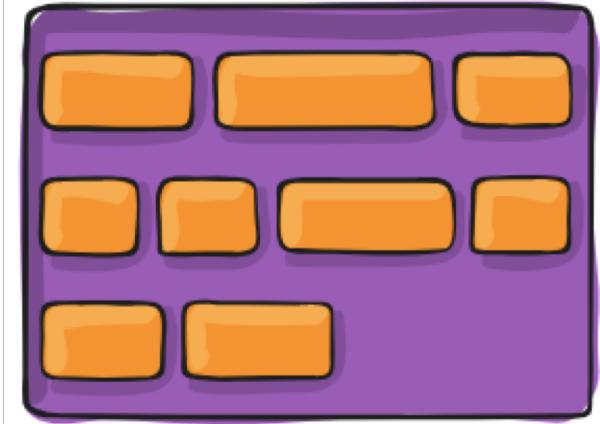
center



stretch

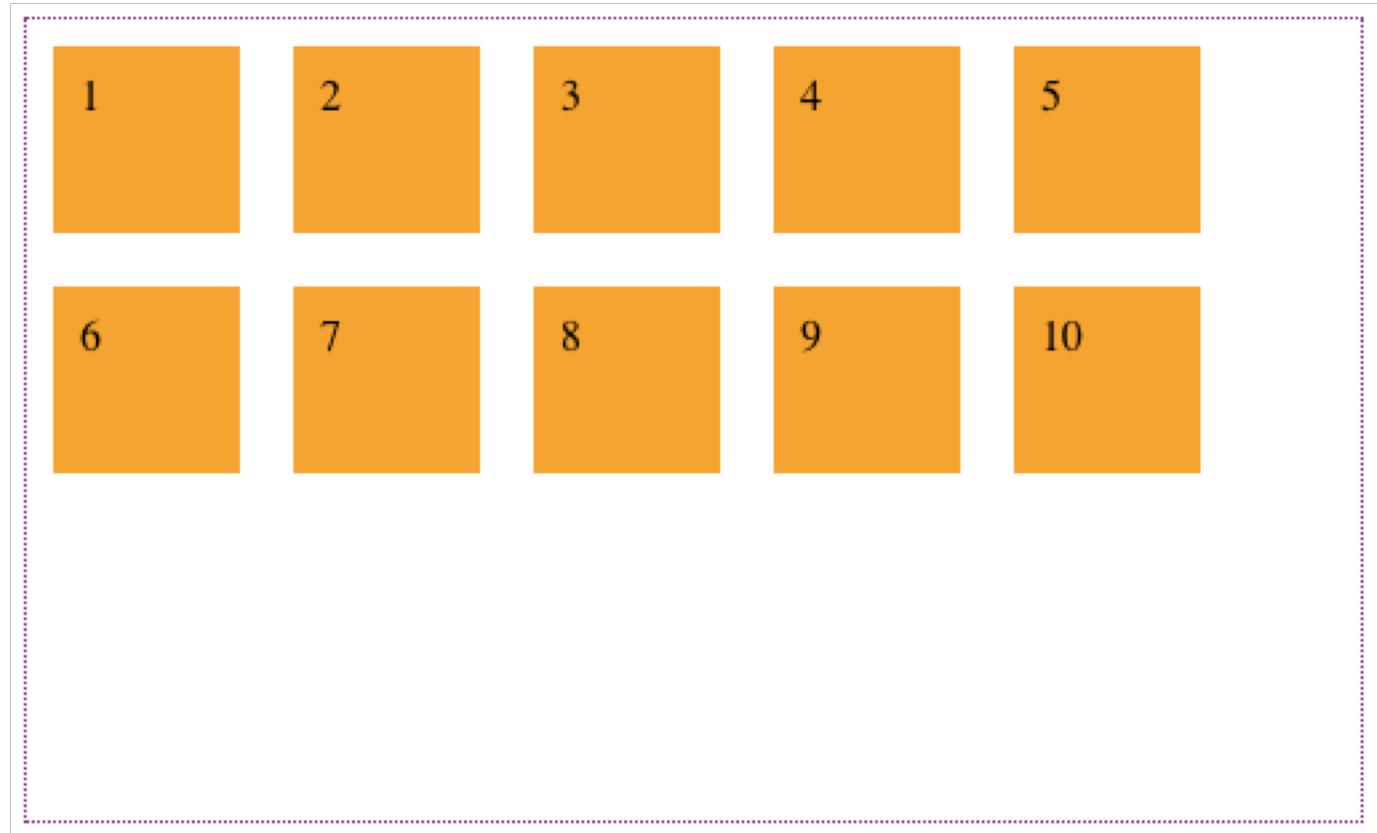


space-around



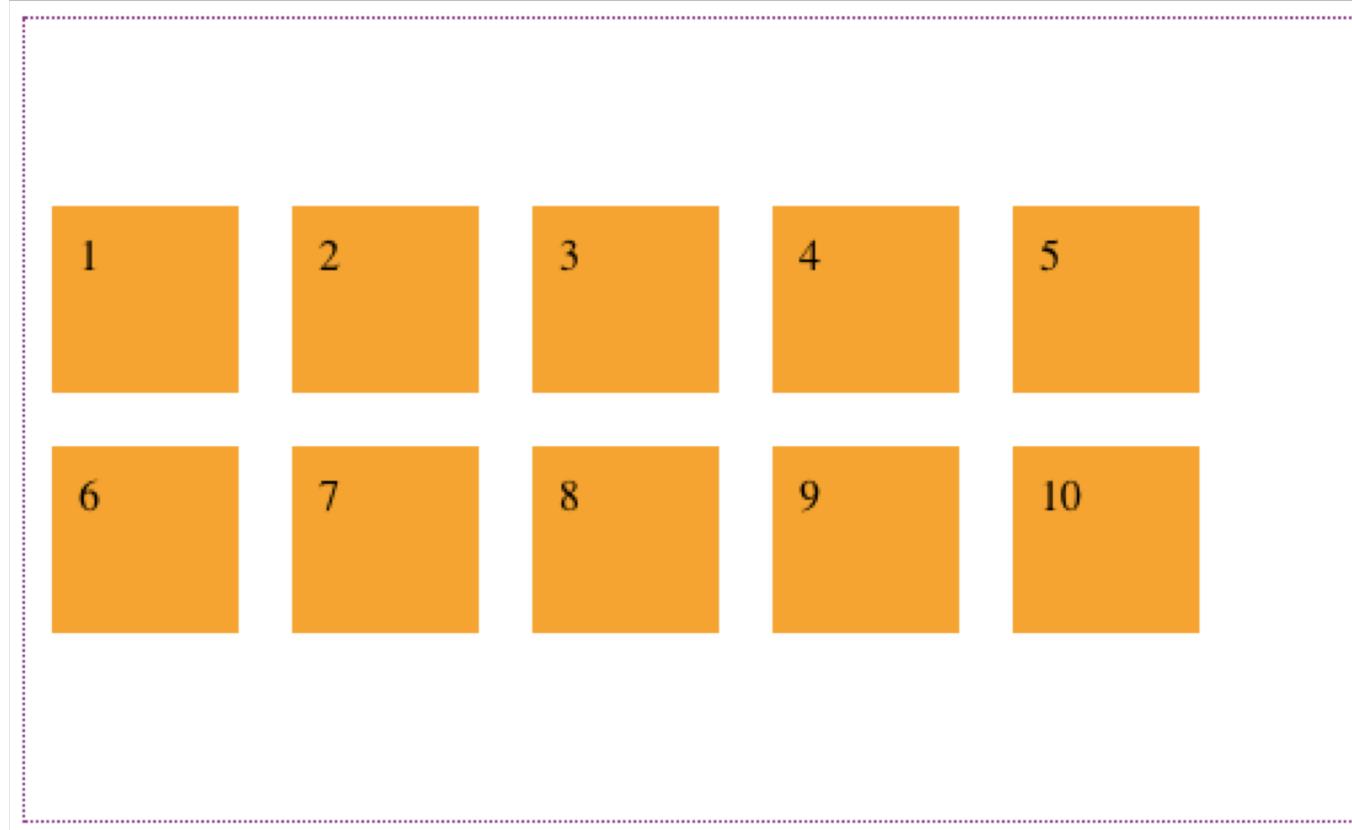
align-content:flex-start

```
.container {  
    display: flex;  
    flex-wrap: wrap;  
    align-content: flex-start;  
    border: 1px dotted purple;  
    height: 300px; width: 500px;  
}  
.container > div {  
    background-color: orange;  
    margin: 10px; padding: 10px;  
    width: 50px; height: 50px;  
}
```



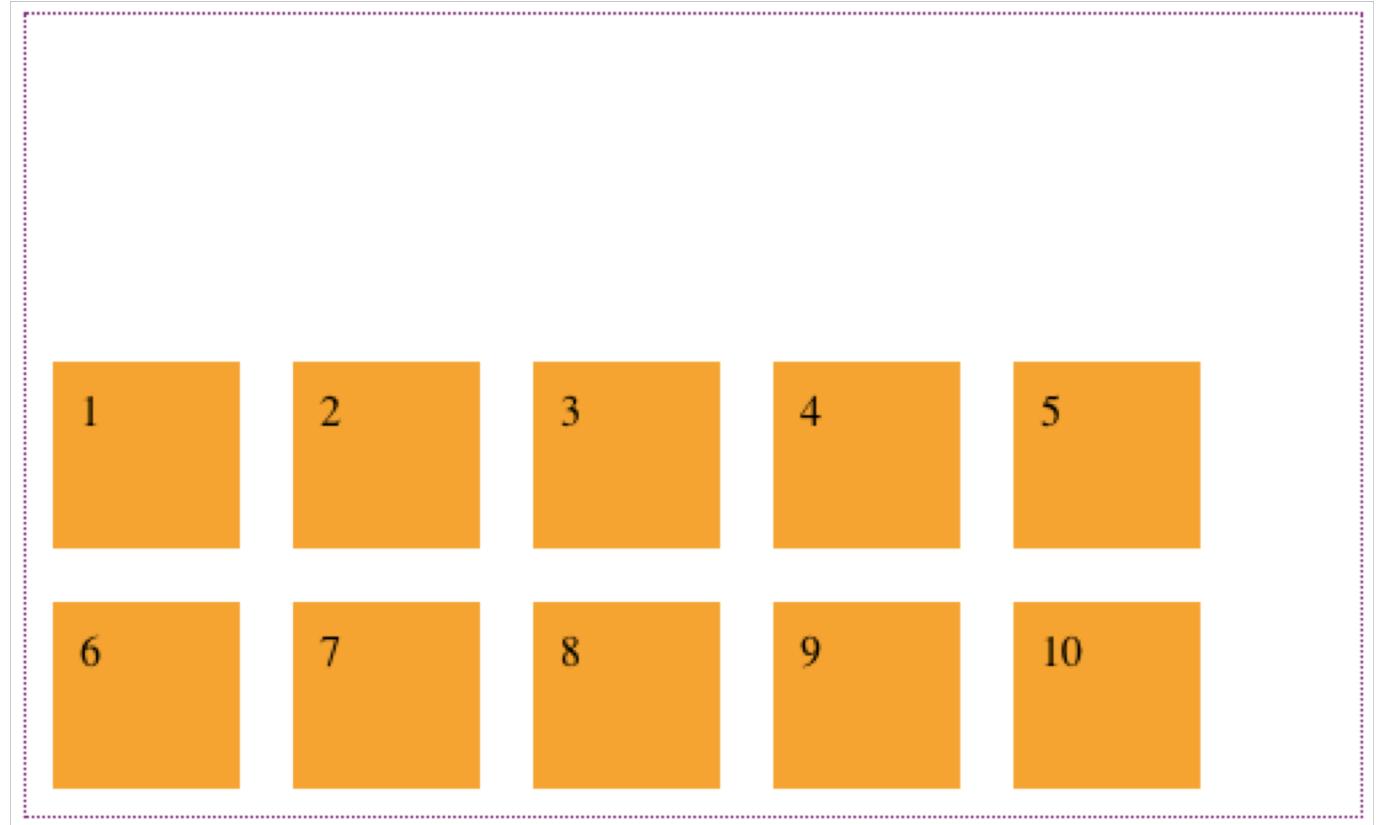
align-content:center

```
.container {  
    display: flex;  
    flex-wrap: wrap;  
    align-content: center;  
    border: 1px dotted purple;  
    height: 300px; width: 500px;  
}  
.container > div {  
    background-color: orange;  
    margin: 10px; padding: 10px;  
    width: 50px; height: 50px;  
}
```



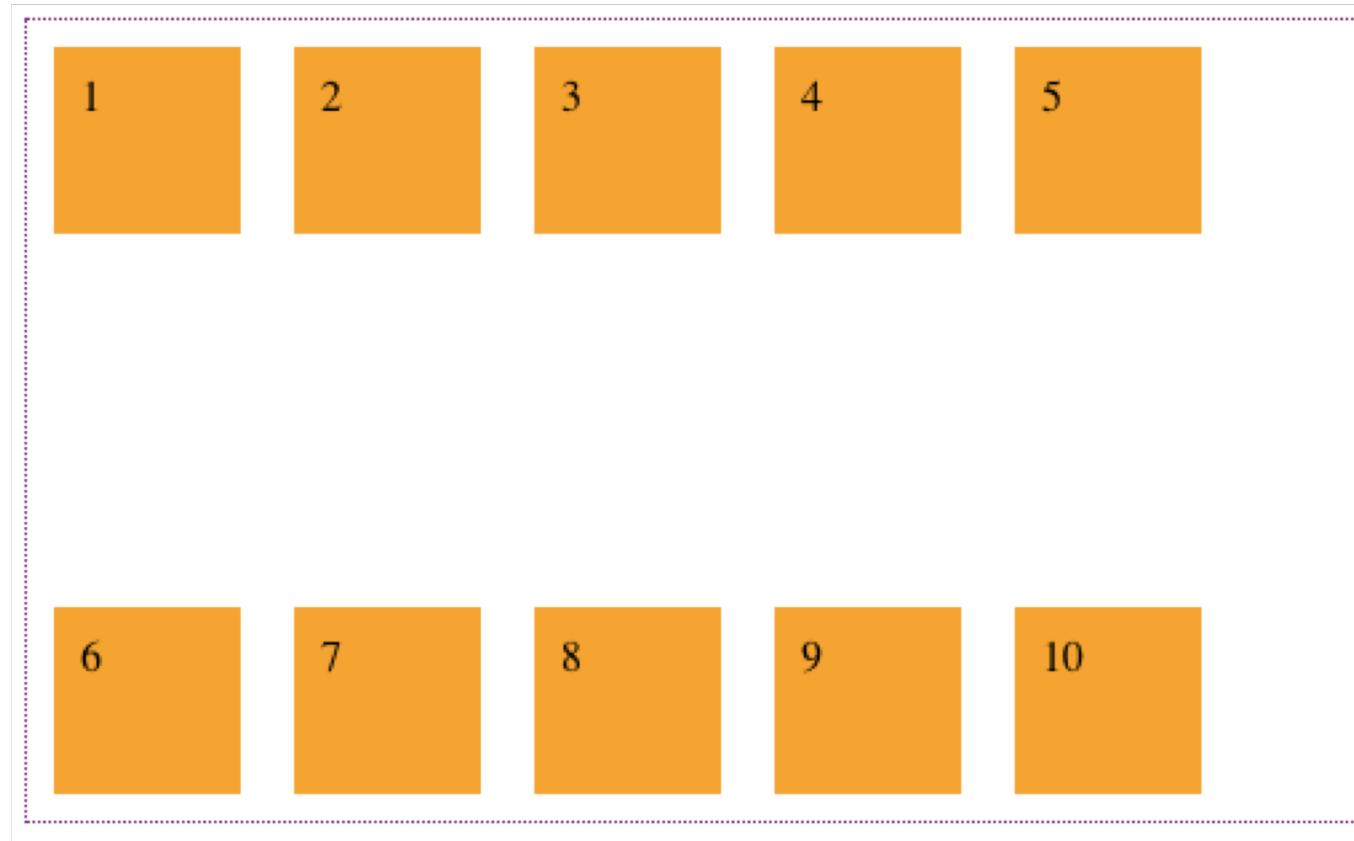
align-content:flex-end

```
.container {  
    display: flex;  
    flex-wrap: wrap;  
    align-content: flex-end;  
    border: 1px dotted purple;  
    height: 300px; width: 500px;  
}  
.container > div {  
    background-color: orange;  
    margin: 10px; padding: 10px;  
    width: 50px; height: 50px;  
}
```



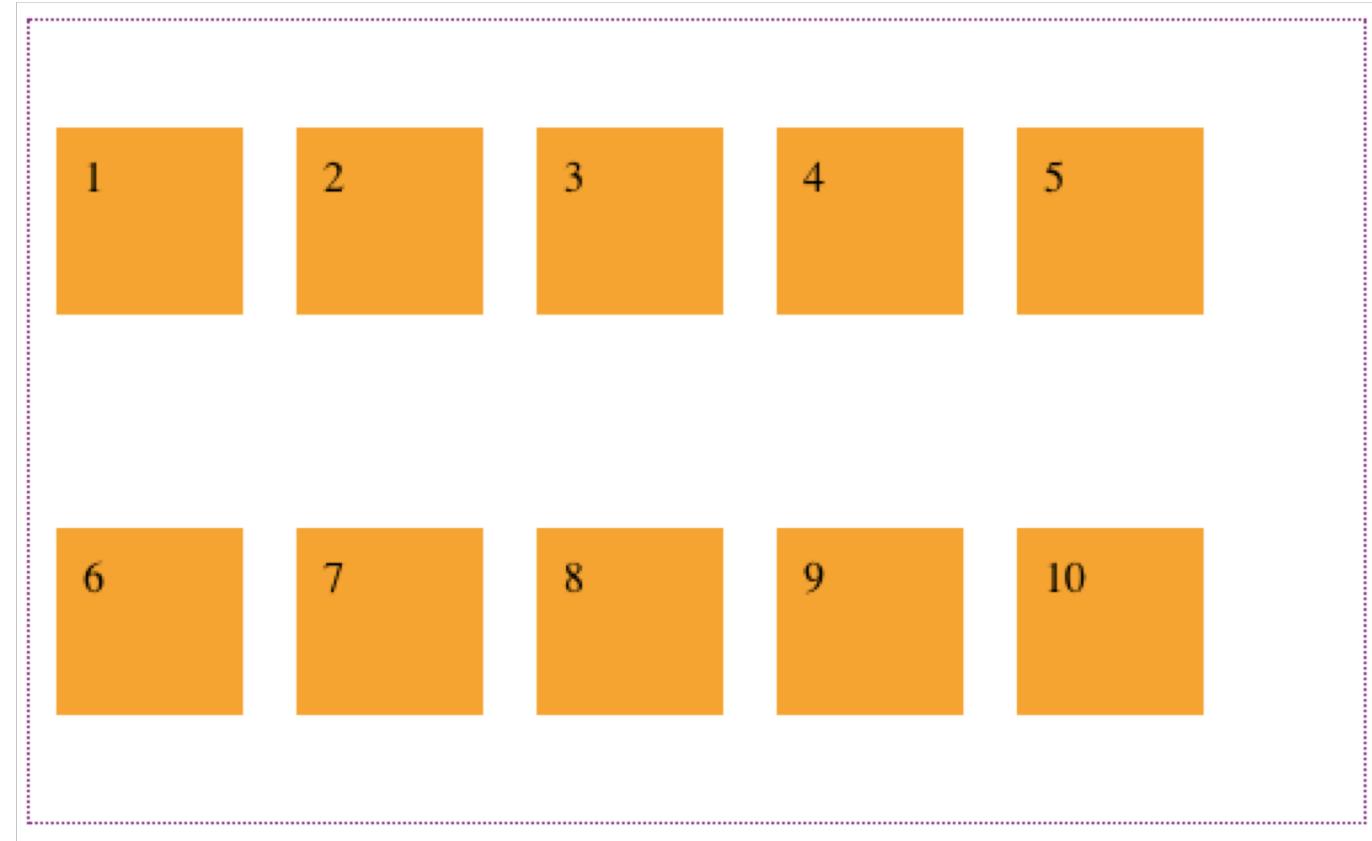
align-content:space-between

```
.container {  
    display: flex;  
    flex-wrap: wrap;  
    align-content: space-between;  
    border: 1px dotted purple;  
    height: 300px; width: 500px;  
}  
.container > div {  
    background-color: orange;  
    margin: 10px; padding: 10px;  
    width: 50px; height: 50px;  
}
```



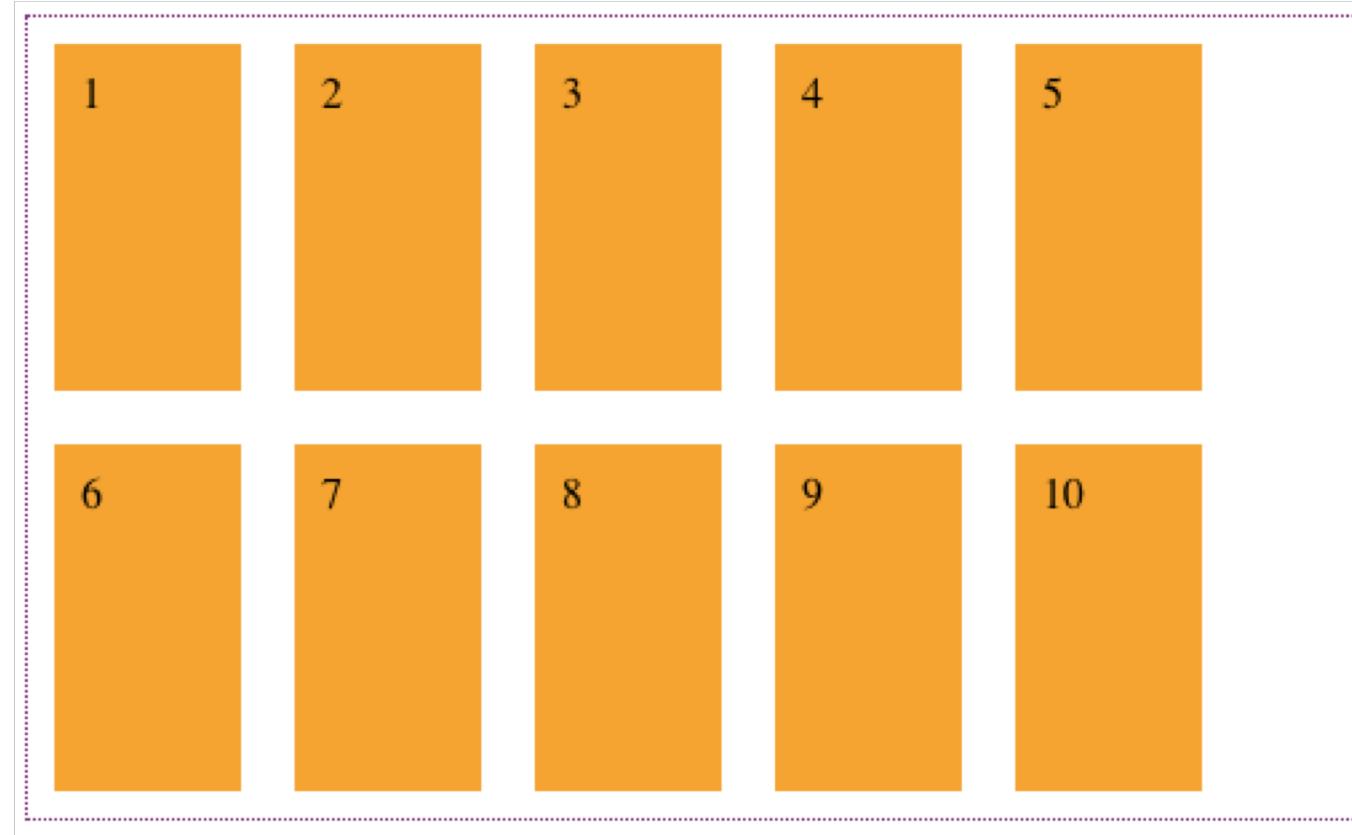
align-content:space-around

```
.container {  
    display: flex;  
    flex-wrap: wrap;  
    align-content: space-around;  
    border: 1px dotted purple;  
    height: 300px; width: 500px;  
}  
.container > div {  
    background-color: orange;  
    margin: 10px; padding: 10px;  
    width: 50px; height: 50px;  
}
```

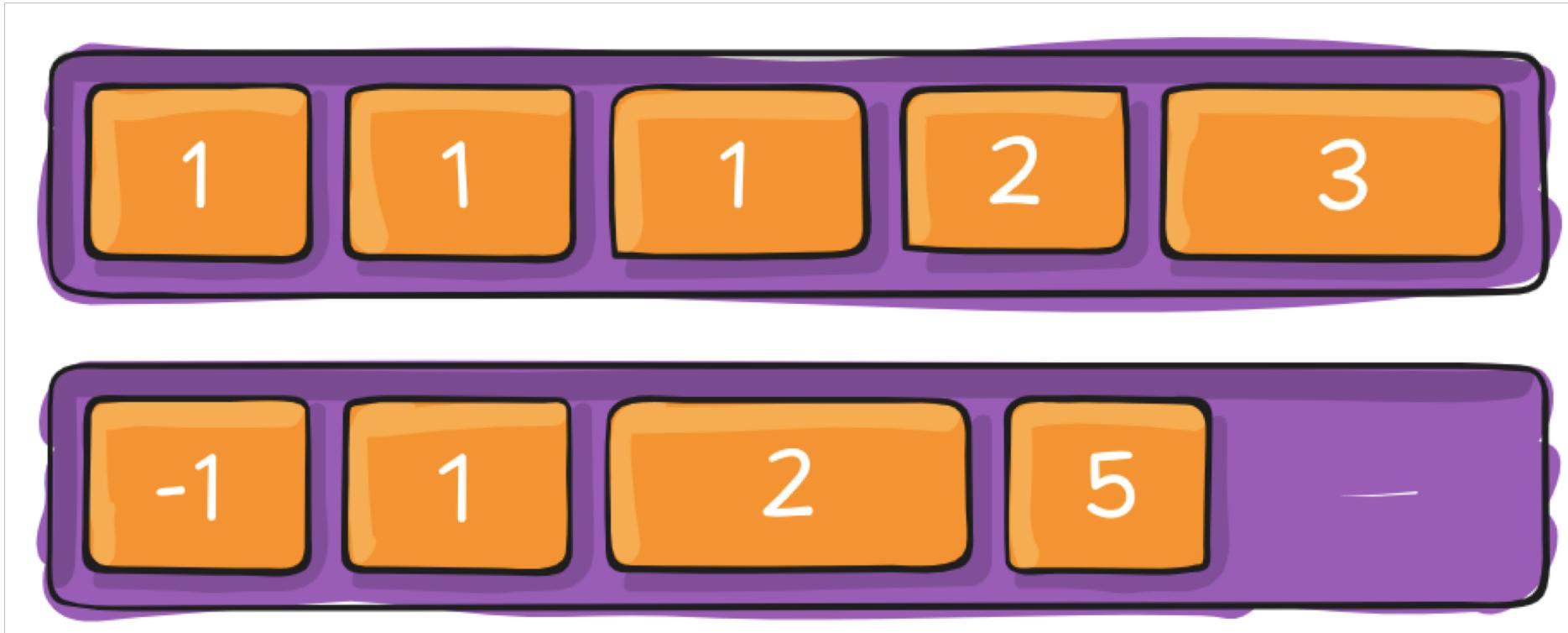


align-content:stretch

```
.container {  
    display: flex;  
    flex-wrap: wrap;  
    align-content: stretch;  
    border: 1px dotted purple;  
    height: 300px; width: 500px;  
}  
.container > div {  
    background-color: orange;  
    margin: 10px; padding: 10px;  
    width: 50px;  
}
```



order



<https://css-tricks.com/snippets/css/a-guide-to-flexbox/>

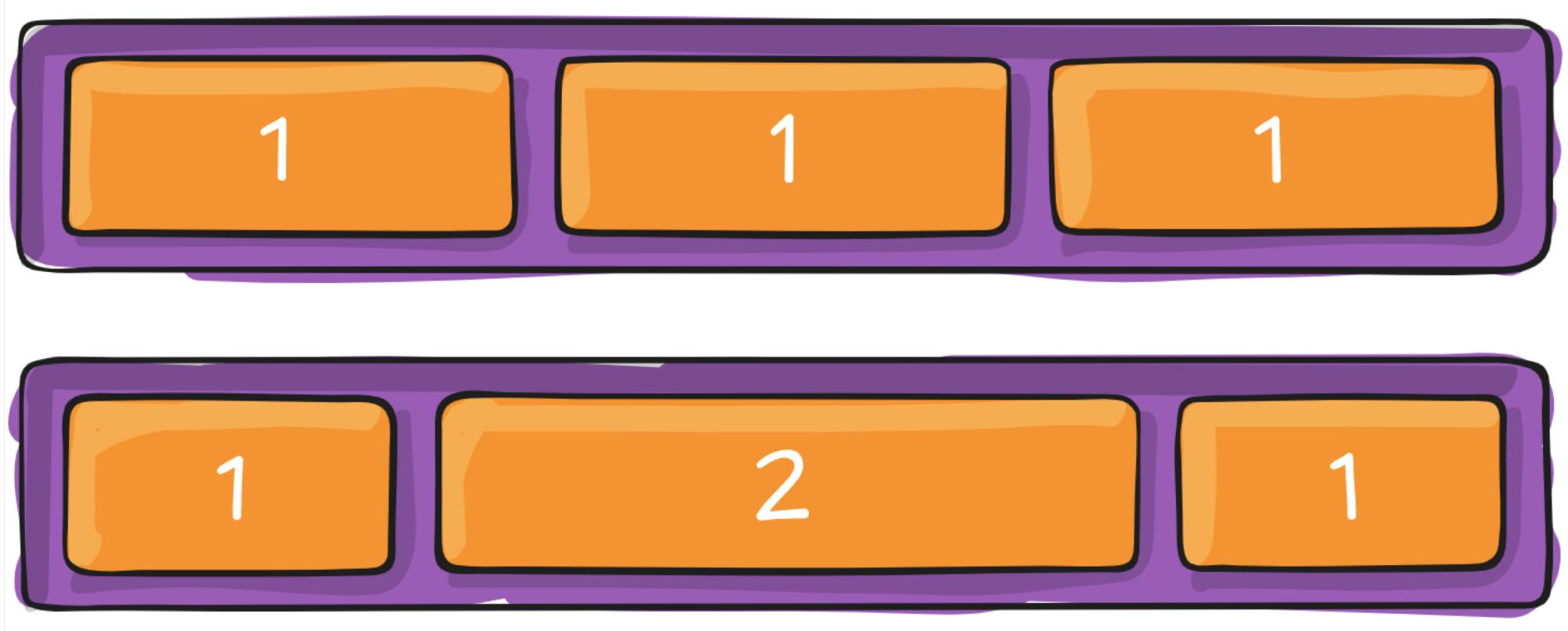
Order – Exempel

```
.container {  
    display: flex;  
}  
.container > div {  
    background-color: orange;  
    margin: 10px; padding: 10px;  
    font-size: 50px;  
}  
.item1 {  
    order: 1;  
}  
.item5{  
    order: -1;  
}
```

```
<body class="container">  
    <div class="item1">1</div>  
    <div class="item2">2</div>  
    <div class="item3">3</div>  
    <div class="item4">4</div>  
    <div class="item5">5</div>  
</body>
```



flex-grow



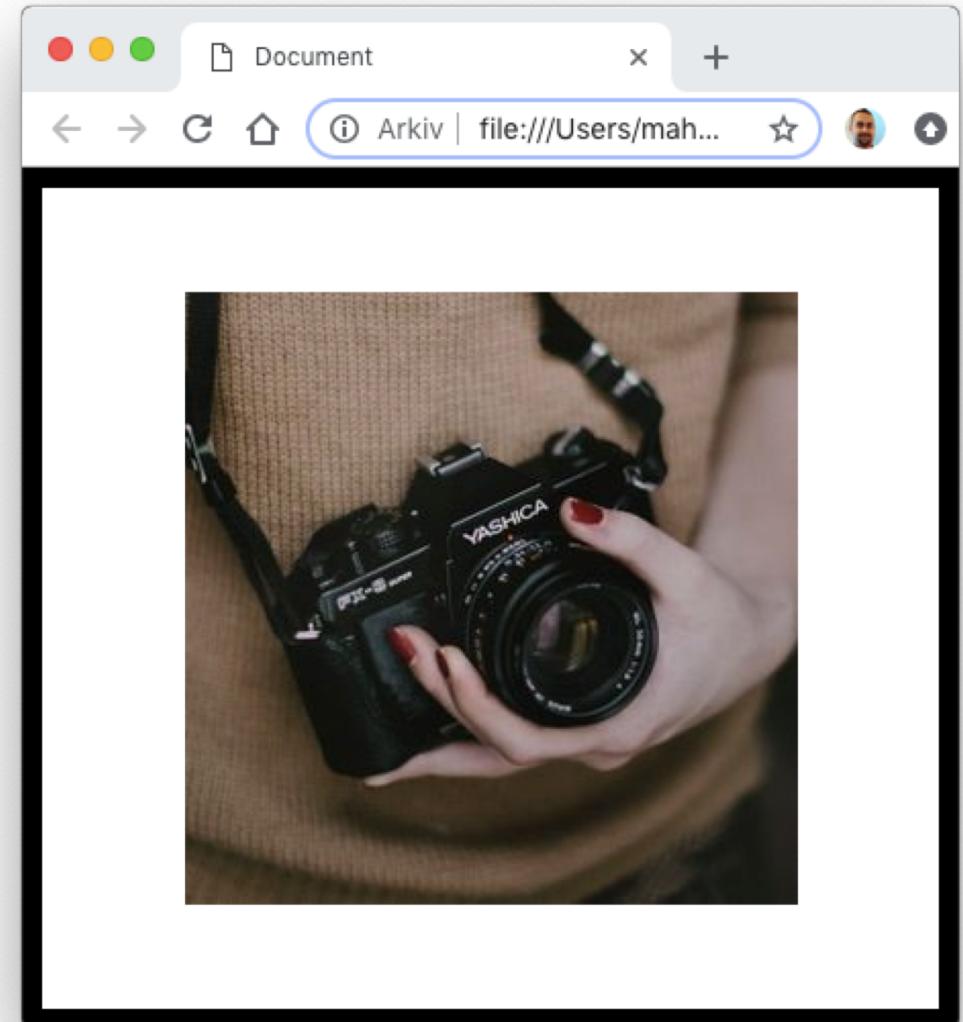
<https://css-tricks.com/snippets/css/a-guide-to-flexbox/>

flex-grow – Exempel

```
.container {  
    display: flex;  
}  
  
.container > div {  
    background-color: orange;  
    margin: 10px; padding: 10px;  
    font-size: 50px;  
}  
  
<body class="container">  
  <div class="item1">1</div>  
  <div class="item2">2</div>  
  <div class="item3">3</div>  
</body>  
  
.item1 {  
    flex-grow: 1;  
}  
  
.item2 {  
    flex-grow: 2;  
}  
  
.item3 {  
    flex-grow: 1;  
}
```

“Perfect Centering”

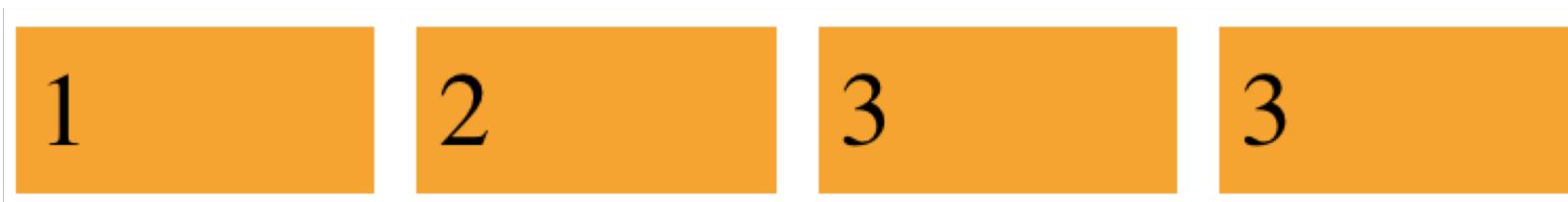
```
body {  
  display: flex;  
  justify-content: center;  
  align-items: center;  
  border: 10px solid black;  
  box-sizing: border-box;  
  height: 100vh;  
}  
  
img {  
  max-width: 100%;  
  height: auto;  
}  
  
<body>  
    
</body>
```



Egenskapen flex

```
.container {  
    display: flex;  
}  
  
.container > div {  
    background-color: orange;  
    margin: 10px;  
    padding: 10px;  
    font-size: 50px;  
    flex: 25%;  
}
```

```
<body class="container">  
    <div>1</div>  
    <div>2</div>  
    <div>3</div>  
    <div>4</div>  
</body>
```



Egenskapen flex – Exempel

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_image_gallery

Result Size: 640 x 597

```
<!DOCTYPE html>
<html>
<style>
* {
    box-sizing: border-box;
}

body {
    margin: 0;
    font-family: Arial;
}

.header {
    text-align: center;
    padding: 32px;
}

.row {
    display: flex;
    flex-wrap: wrap;
    padding: 0 4px;
}

/* Create four equal columns that sits next to each other */
.column {
    flex: 25%;
    max-width: 25%;
    padding: 0 4px;
}

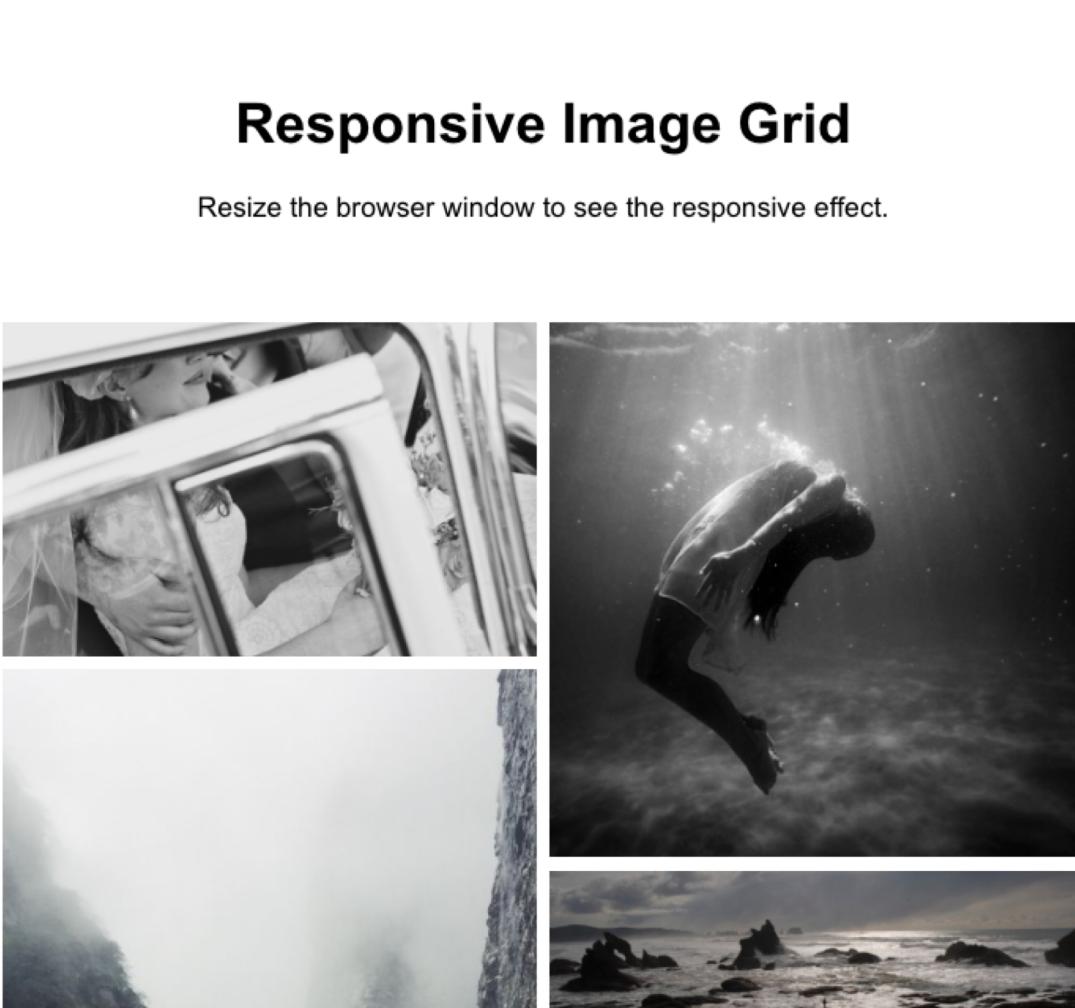
.column img {
    margin-top: 8px;
    vertical-align: middle;
}

/* Responsive layout - makes a two column-layout instead of four
   (This should be removed when you select "Layout" - "Grid" ) */

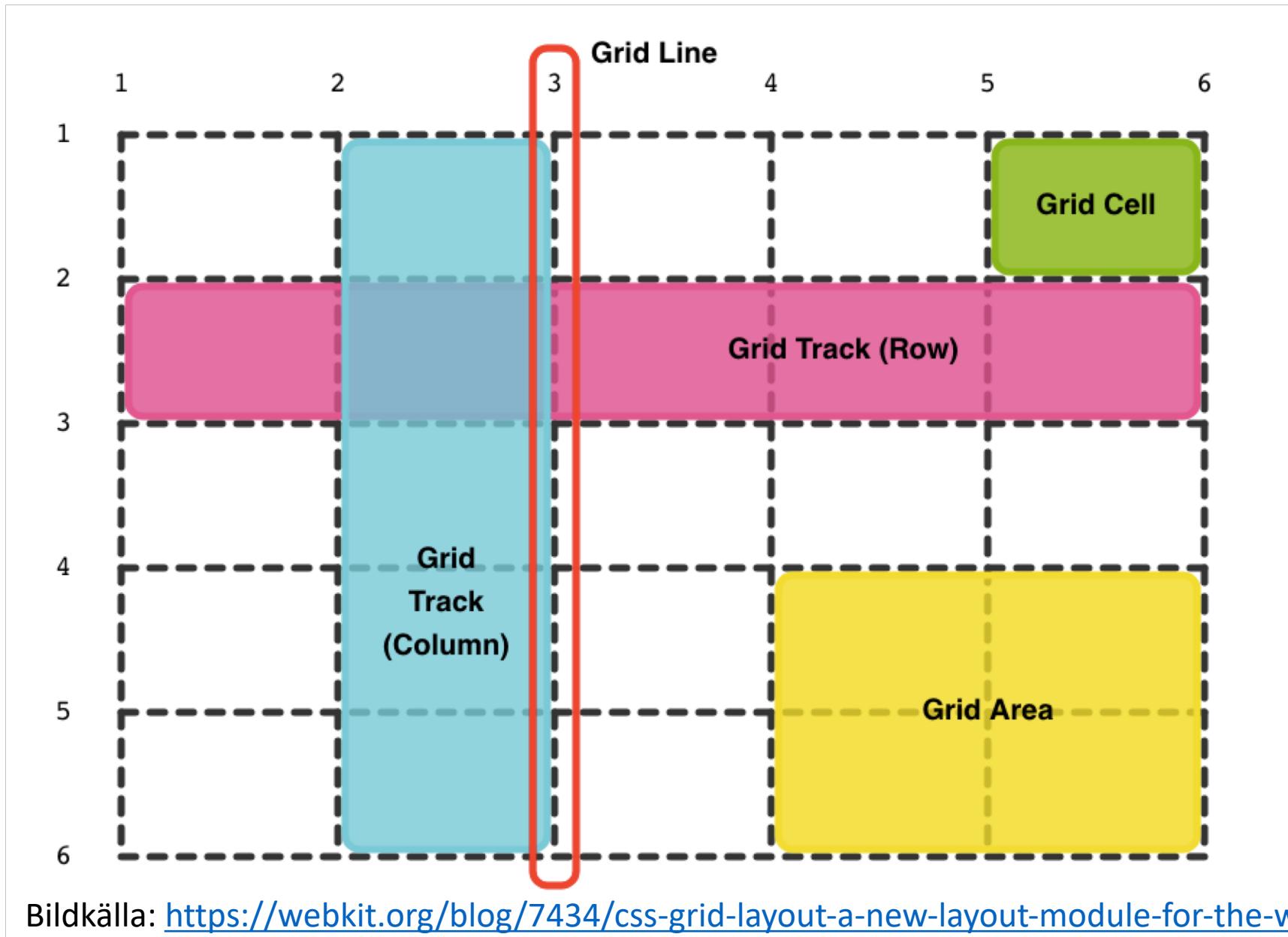
```

Responsive Image Grid

Resize the browser window to see the responsive effect.



CSS Grid – En layoutmodell som byggs upp med ett rutnät.



Grid Container

```
.grid-container {  
    display: grid;  
}  
  
.grid-item {  
    background-color: orange;  
    border: 1px solid black;  
    font-size: 50px;  
}
```

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



grid-template-columns

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



grid-template-columns – The fr Unit

```
.grid-container {  
    display: grid;  
    grid-template-columns: 1fr 2fr 1fr;  
}
```



grid-template-columns – repeat()

```
.grid-container {  
  display: grid;  
  grid-template-columns: repeat(3, 1fr);  
}
```



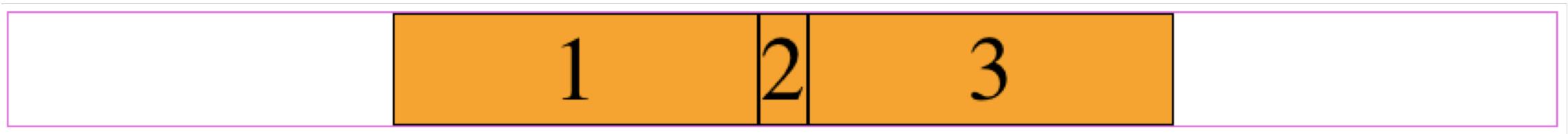
grid-template-rows

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

1	2	3
4	5	6

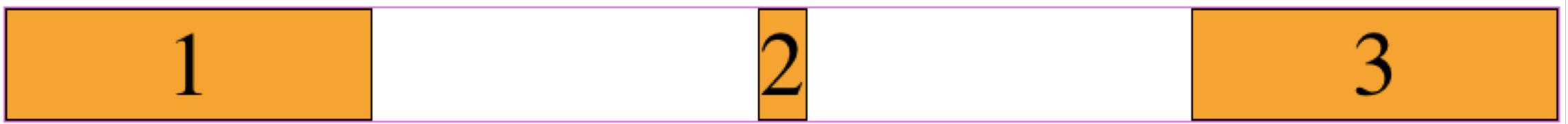
justify-content:center

```
.grid-container {  
    display: grid;  
    grid-template-columns: 200px auto 200px;  
    justify-content: center;  
    border: 1px solid orchid;  
}
```



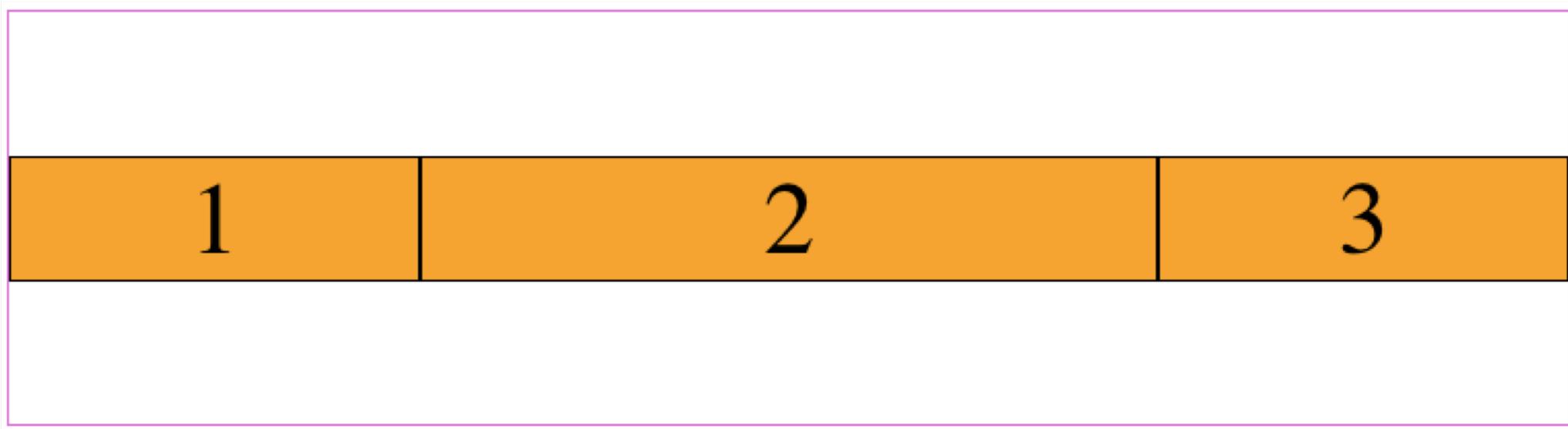
justify-content:space-between

```
.grid-container {  
    display: grid;  
    grid-template-columns: 200px auto 200px;  
    justify-content: space-between;  
    border: 1px solid orchid;  
}
```



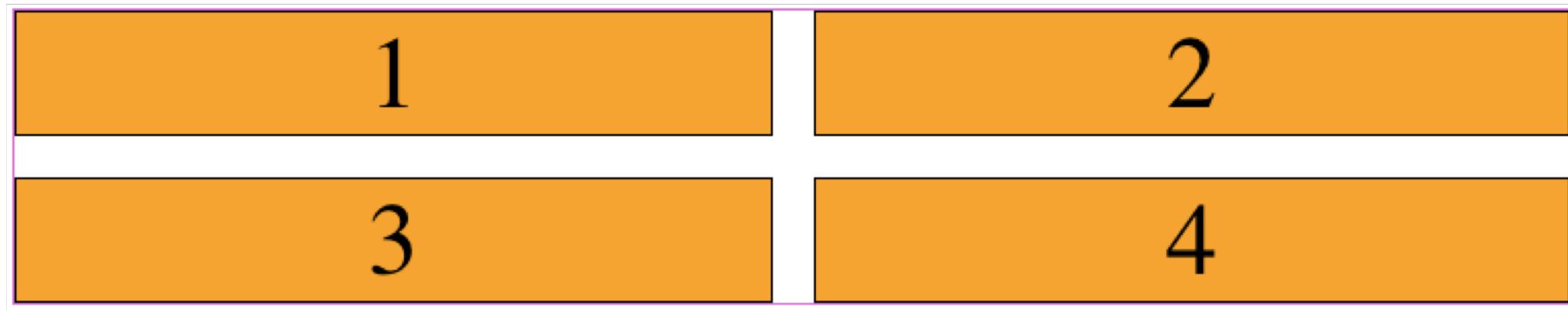
align-content: center

```
.grid-container {  
    display: grid;  
    grid-template-columns: 200px auto 200px;  
    align-content: center;  
    height: 200px;  
    border: 1px solid orchid;  
}
```



Grid Gaps

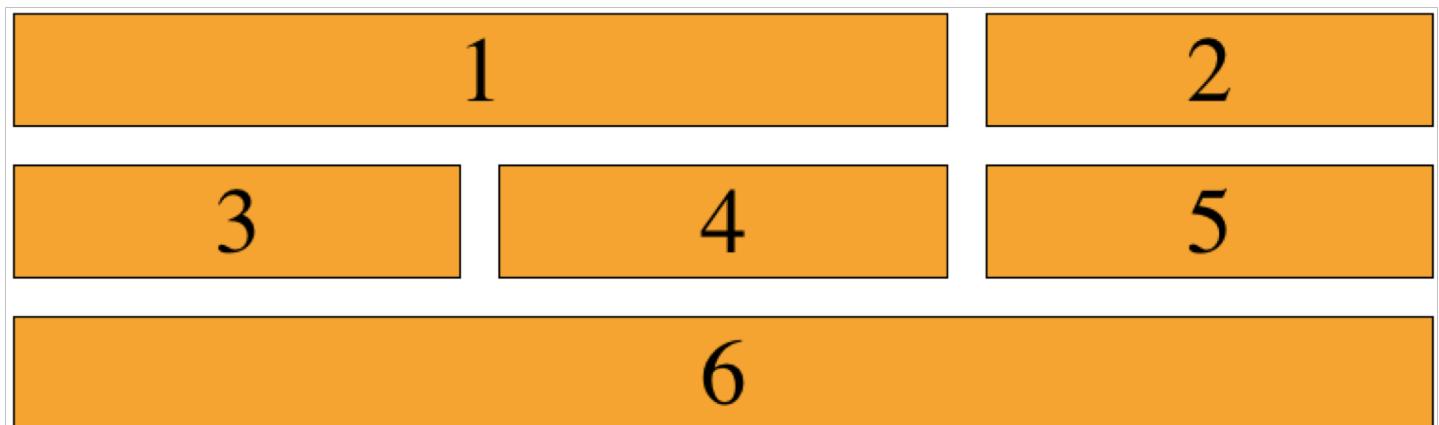
```
.grid-container {  
  display: grid;  
  grid-template-columns: auto auto;  
  column-gap: 20px;  
  row-gap: 20px;  
  /* gap: 20px; */  
}
```



grid-column-start & grid-column-end

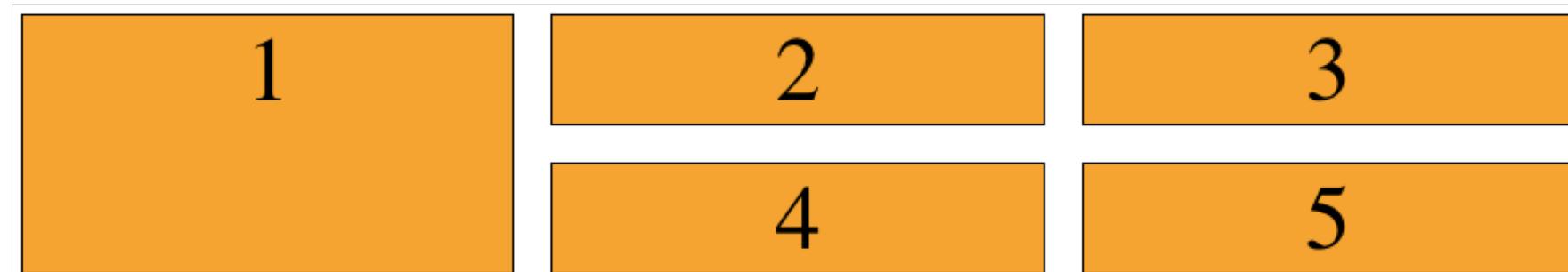
```
.grid-container {  
    display: grid;  
    grid-template-columns: auto auto auto;  
    gap: 20px;  
}  
  
.grid-item {  
    background-color: orange;  
    border: 1px solid black;  
    font-size: 50px;  
    text-align: center;  
}
```

```
.item1 {  
    grid-column-start: 1;  
    grid-column-end: 3;  
}  
  
.item6 {  
    grid-column-start: 1;  
    grid-column-end: 4;  
}
```



grid-row-start & grid-row-end

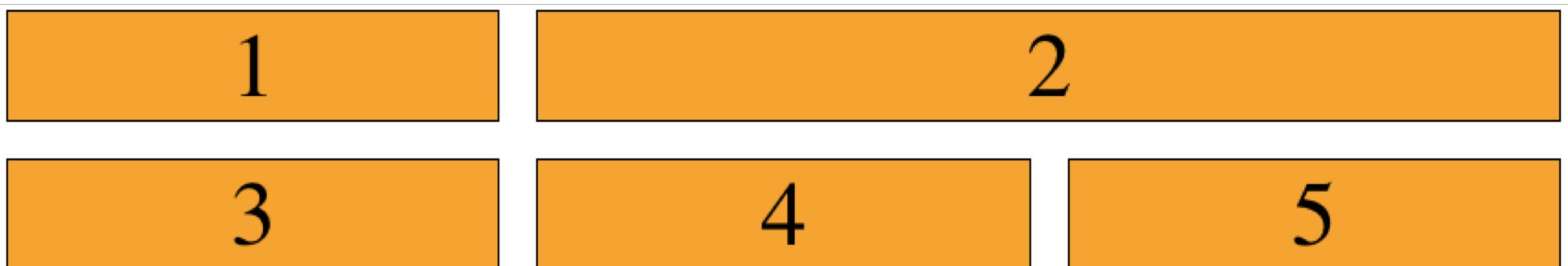
```
.grid-container {  
  display: grid;  
  grid-template-columns: auto auto auto;  
  gap: 20px;  
}  
  
.grid-item {  
  background-color: orange;  
  border: 1px solid black;  
  font-size: 50px;  
  text-align: center;  
}
```



grid-column (shorthand property)

```
.grid-container {  
  display: grid;  
  grid-template-columns: auto auto auto;  
  gap: 20px;  
}  
.item2 {  
  grid-column: 2/4; /* 2/span 2 */  
}
```

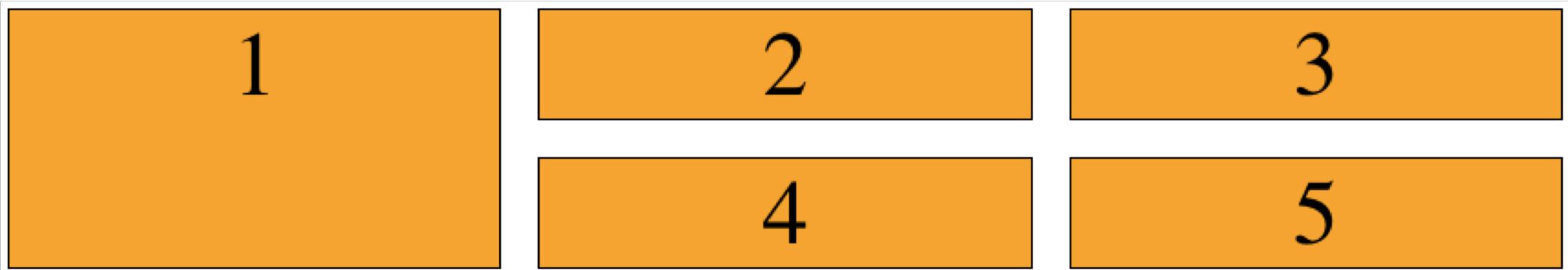
```
<div class="grid-container">  
  <div class="grid-item">1</div>  
  <div class="grid-item item2">2</div>  
  <div class="grid-item">3</div>  
  <div class="grid-item">4</div>  
  <div class="grid-item">5</div>  
</div>
```



grid-row (shorthand property)

```
.grid-container {  
  display: grid;  
  grid-template-columns: auto auto auto;  
  gap: 20px;  
}  
.item1 {  
  grid-row: 1/3; /* 1/span 2 */  
}
```

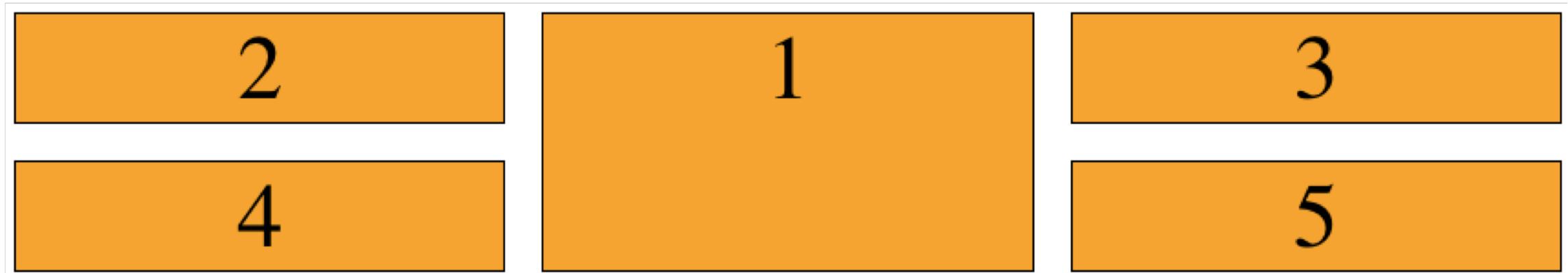
```
<div class="grid-container">  
  <div class="grid-item item1">1</div>  
  <div class="grid-item">2</div>  
  <div class="grid-item">3</div>  
  <div class="grid-item">4</div>  
  <div class="grid-item">5</div>  
</div>
```



grid-area (shorthand property)

```
.grid-container {  
  display: grid;  
  grid-template-columns: auto auto auto;  
  gap: 20px;  
}
```

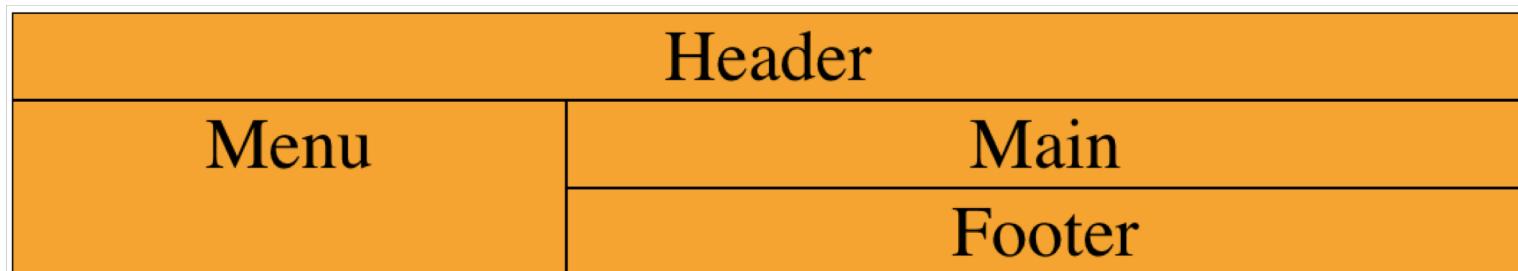
```
.item1 {  
  grid-area: 1/2/3/3;  
  /* grid-row-start: 1;  
   grid-column-start: 2;  
   grid-row-end: 3;  
   grid-column-end: 3; */  
}
```



grid-template-areas

```
.grid-container {  
  display: grid;  
  grid-template-areas:  
    "header header header"  
    "menu   main   main"  
    "menu   footer footer";  
}  
  
.header { grid-area: header; }  
.menu  { grid-area: menu; }  
.main   { grid-area: main; }  
.footer { grid-area: footer; }
```

```
<div class="grid-container">  
  <div class="header">Header</div>  
  <div class="menu">Menu</div>  
  <div class="main">Main</div>  
  <div class="footer">Footer</div>  
</div>
```



<http://cssgr.id>

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C S S G R . I D

4 Number of Items

2 Number of Columns

10 Grid Gap (px)

1200 Max width of grid (px)

Use Lorem Ipsum?

Get Code

Reset

Övningar – <https://flexboxfroggy.com/#sv>

FLEXBOX FROGGY

Nivå 1 av 24 ▶

Välkommen till Flexbox Froggy, ett spel där du hjälper Froggy och vänner genom att skriva CSS-kod! Guida grodan till blombladen till höger genom att använda **justify-content** attributet, vilket justerar objekten horisontellt och accepterar följande värden:

- **flex-start**: Objekt justeras till vänster i containern.
- **flex-end**: Objekt justeras till höger i containern.
- **center**: Objekt justeras i mitten av containern.
- **space-between**: Objekt justeras med lika utrymme mellan varandra.
- **space-around**: Objekt justeras med lika utrymme runt omkring varandra.

Till exempel, **justify-content: flex-end;** flyttar grodan till höger.



Övningar – <https://cssgridgarden.com/#sv>

GRID GARDEN

Nivå 1 av 28 ▶

Välkommen till Grid Garden där du kan skriva CSS kod för att odla din trädgård med morötter! Vattna bara dom områden som har morötter genom att använda egenskapen `grid-column-start`.

T.ex. `grid-column-start: 3;` kommer vattna området som startar på tredje vertikala gridlinjen, vilket är samma sak som att säga den tredje vertikala gridlinjen från vänster.

```
1 #garden {  
2   display: grid;  
3   grid-template-columns: 20% 20% 20% 20% 20%;  
4   grid-template-rows: 20% 20% 20% 20% 20%;  
5 }  
6  
7 #water {  
8   [REDACTED]  
9 }  
10  
11  
12  
13  
14
```

Nästa



Övningar från W3Schools – Flexbox

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_flex-direction_column

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_flex-direction_column-reverse

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_flex-direction_row

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_flex-direction_row-reverse

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_flex-wrap_wrap

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_flex-wrap_nowrap

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_flex-wrap_wrap-reverse

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_flex-flow_row_wrap

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_justify-content_center

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_align-items_center

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_align-items_baseline

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_order_2

https://www.w3schools.com/css/tryit.asp?filename=trycss3_flexbox_align-self_center

Övningar från W3Schools – Grid

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_container

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_grid-template-columns1

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_grid-template-columns2

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_grid-template-rows

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_justify-content_space-evenly

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_justify-content_space-around

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_justify-content_space-between

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_align-content_center

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_align-content_end

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_grid-column

https://www.w3schools.com/css/tryit.asp?filename=trycss_grid_grid-row1

Summering av dagens lektion

- **Vi har jobbat med Flexbox och Grid.**
- 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 arbeta med Sitemap och Wireframes/designskiss