

2024년 상반기 K-디지털 트레이닝

flex

[KB] IT's Your Life

✎ flex01.html

```
<style>
.flex-container {
  display: flex;
  flex-wrap: nowrap;
  background-color: DodgerBlue;
}

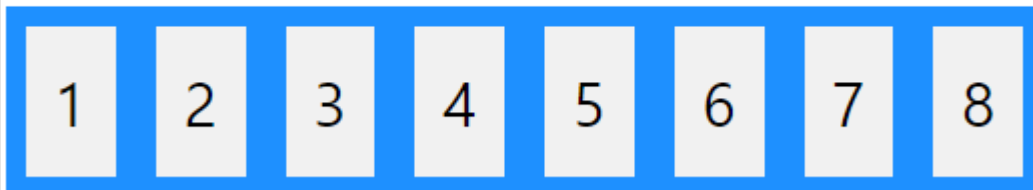
.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<body>
<h1>Flexible Boxes</h1>

<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
</div>

</body>
```

Flexible Boxes



✓ Flexbox Elements

```
<style>
.flex-container {
  display: flex;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  margin: 10px;
  padding: 20px;
  font-size: 30px;
}
</style>
```

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



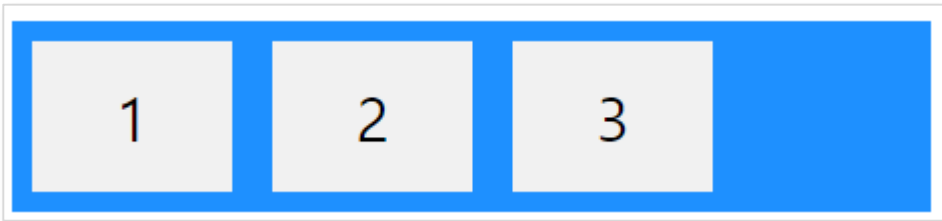
✓ Parent Element (Container)

- `display: flex`
- 같이 지정하는 속성
 - `flex-direction`
 - `flex-wrap`
 - `flex-flow`
 - `justify-content`
 - `align-items`
 - `align-content`

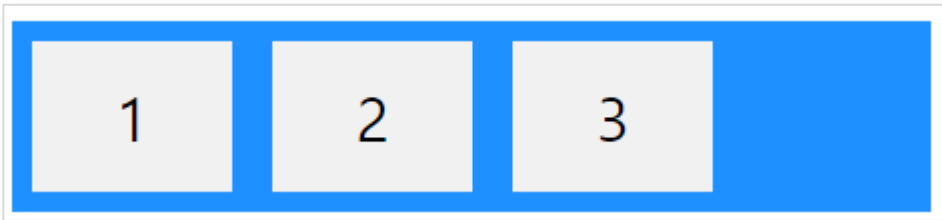
✓ flex-direction

- 자식 배치 방향 설정
- row | row-reverse | column | column-reverse

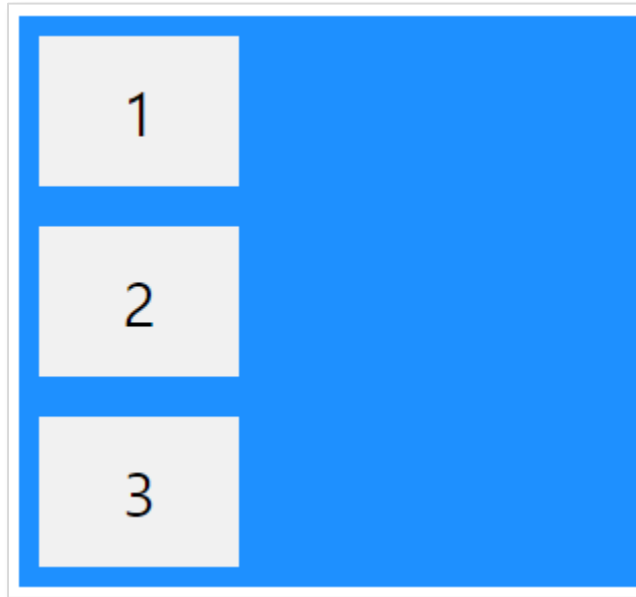
row



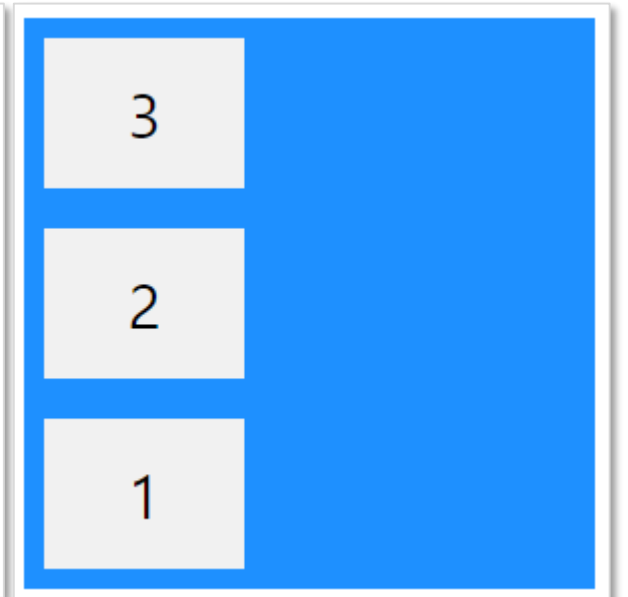
row-reverse



column



column-reverse

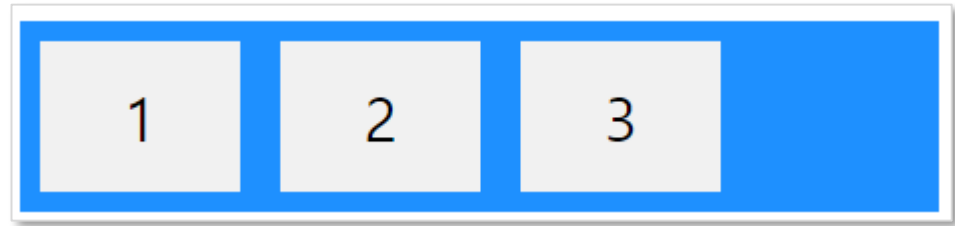


✎ flex-direction (row)

```
<style>
.flex-container {
  display: flex;
  flex-direction: row;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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



✎ flex-direction (row-reverse)

```
<style>
.flex-container {
  display: flex;
  flex-direction: row-reverse;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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

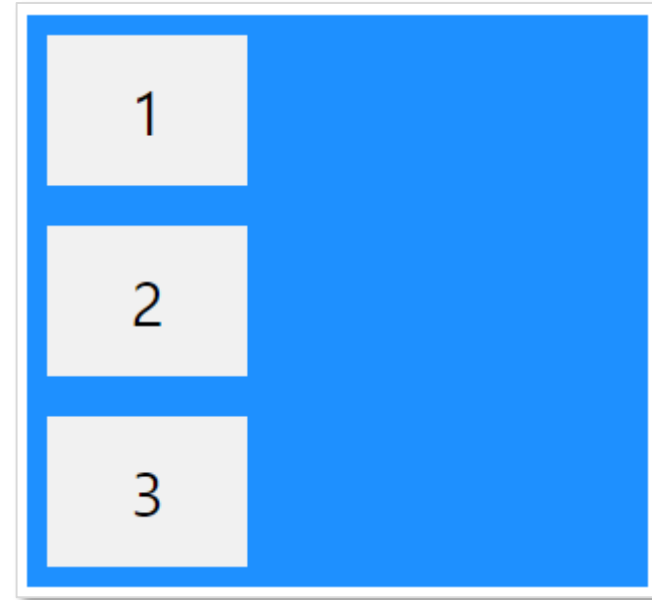


✎ flex-direction (column)

```
<style>
.flex-container {
  display: flex;
  flex-direction: column;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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

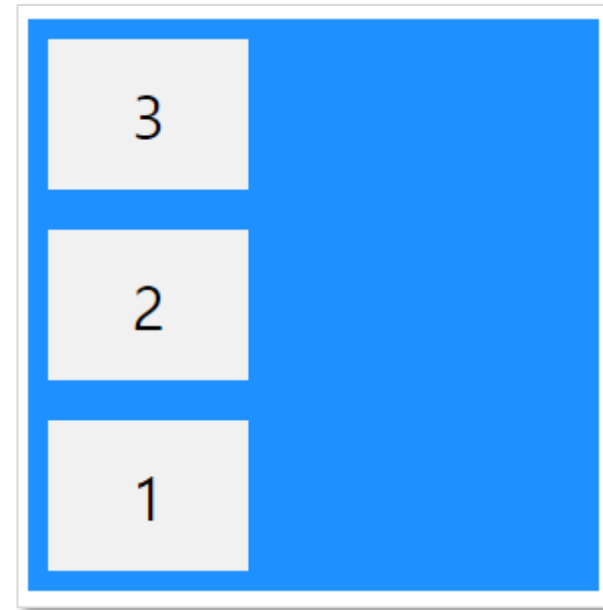


✎ flex-direction (column-reverse)

```
<style>
.flex-container {
  display: flex;
  flex-direction: column-reverse;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

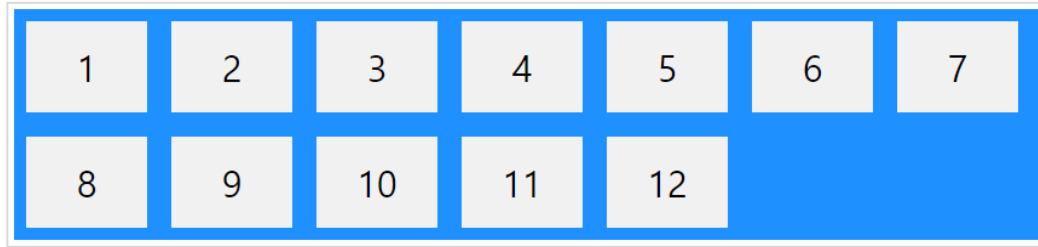
```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
</div>
```



✓ flex-wrap

- 영역이 부족할 때 자식을 어떻게(크기 변경, 다음 줄 넘김 등) 할지 결정
- wrap | nowrap | wrap-reverse

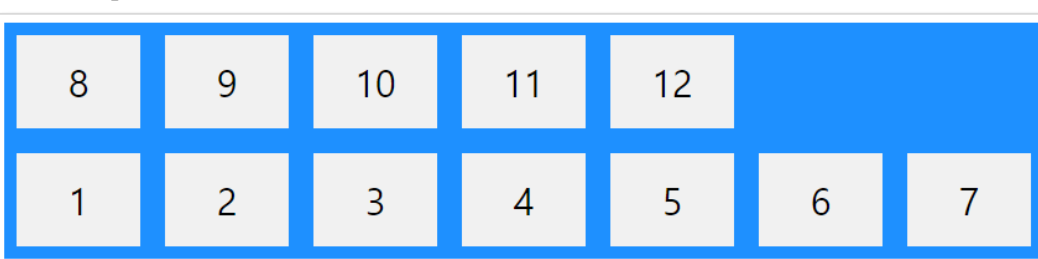
wrap



nowrap



wrap-reverse

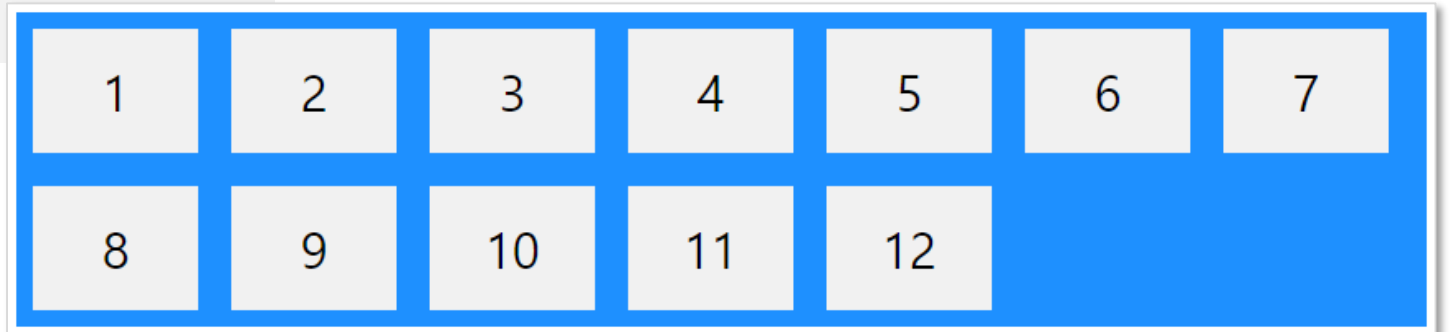


✎ flex-wrap (wrap)

```
<style>
.flex-container {
  display: flex;
  flex-wrap: wrap;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
  <div>11</div>
  <div>12</div>
</div>
```



✎ flex-wrap (nowrap)

```
<style>
.flex-container {
  display: flex;
  flex-wrap: nowrap;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
  <div>11</div>
  <div>12</div>
</div>
```

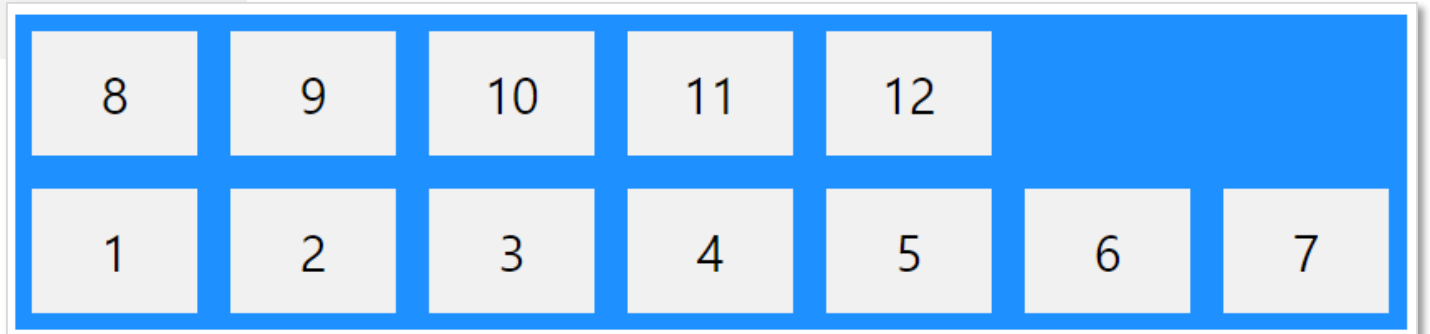


✎ flex-wrap (wrap-reverse)

```
<style>
.flex-container {
  display: flex;
  flex-wrap: wrap-reverse;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
  <div>11</div>
  <div>12</div>
</div>
```



✓ flex-flow

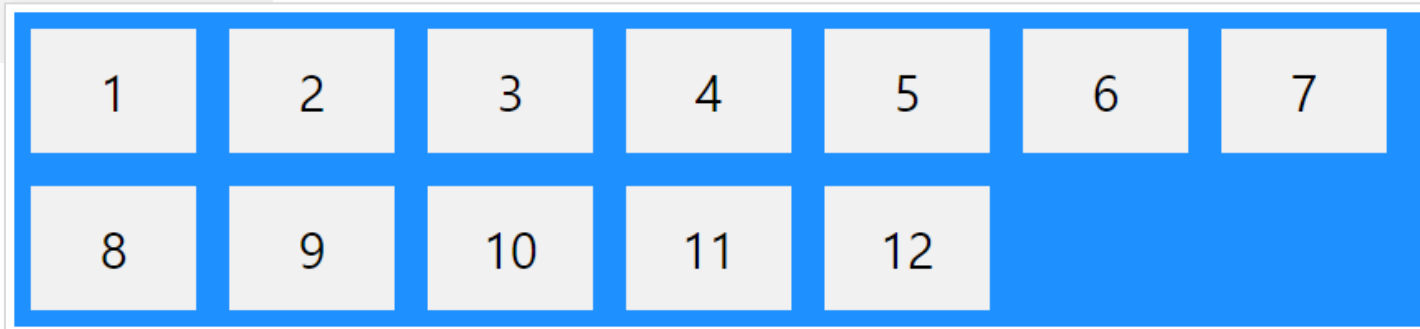
- flex-direction과 flex-wrap을 한 번에 지정

flex-flow

```
<style>
.flex-container {
  display: flex;
  flex-flow: row wrap;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

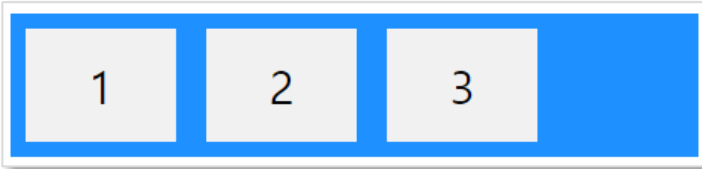
```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
  <div>11</div>
  <div>12</div>
</div>
```



✓ justify-content

- 자식들의 주축 방향 정렬 방법 지정
- flex-start | center | flex-end

flex-start



center



flex-end



- space-between | space-around

space-between



space-around

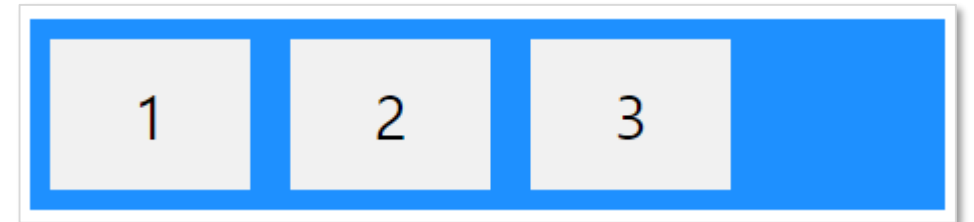


✎ justify-content (flex-start)

```
<style>
.flex-container {
  display: flex;
  justify-content: flex-start;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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



✎ justify-content (center)

```
<style>
.flex-container {
  display: flex;
  justify-content: center;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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

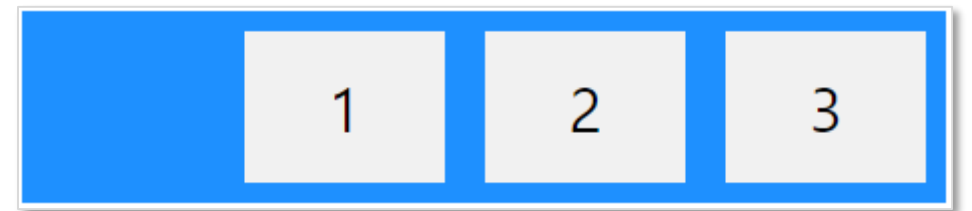


✎ justify-content (flex-end)

```
<style>
.flex-container {
  display: flex;
  justify-content: flex-end;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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



✎ justify-content (space-around)

```
<style>
.flex-container {
  display: flex;
  justify-content: space-around;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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



✍ justify-content (space-between)

```
<style>
.flex-container {
  display: flex;
  justify-content: space-between;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

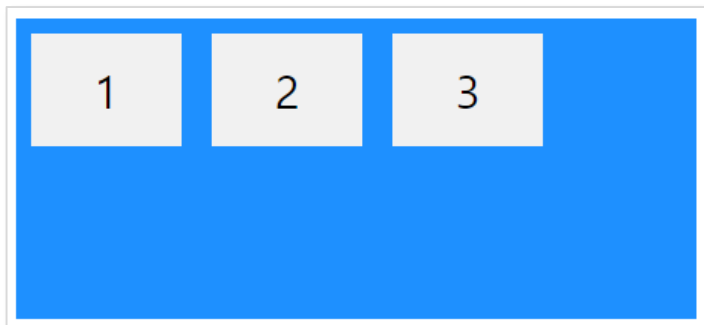
```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
</div>
```



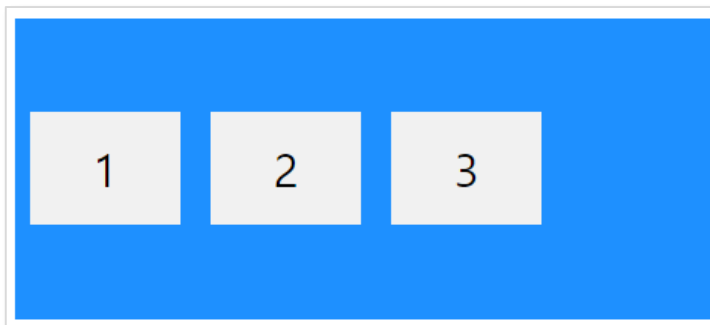
✓ align-items

- 자식들의 교차축 방향 정렬 방법 지정
- flex-start | center | flex-end | stretch | baseline

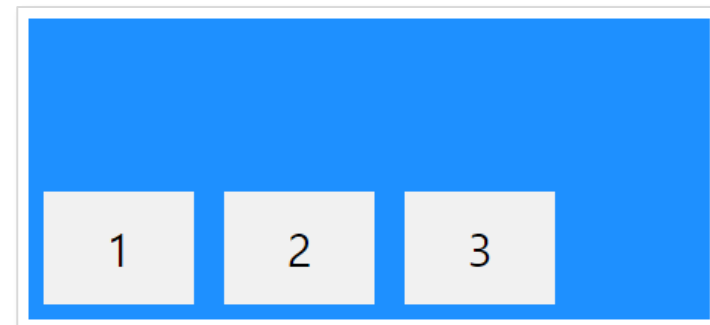
flex-start



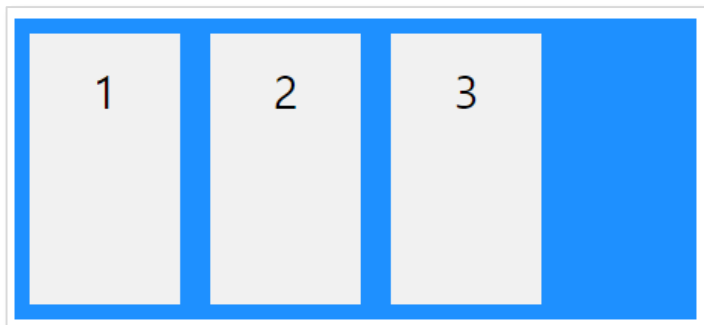
center



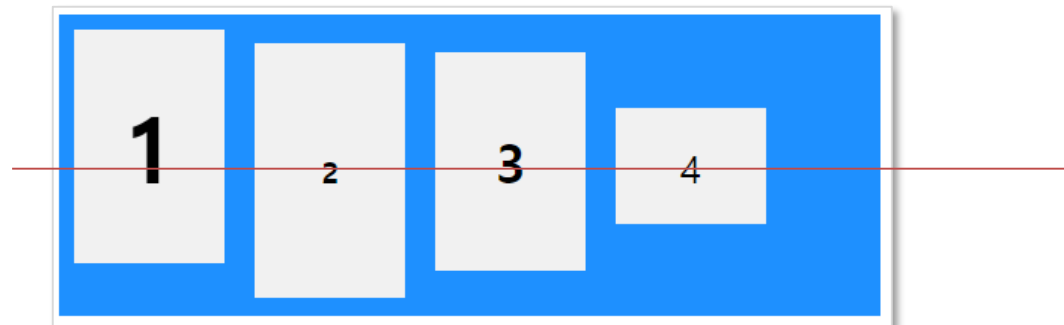
flex-end



stretch



baseline

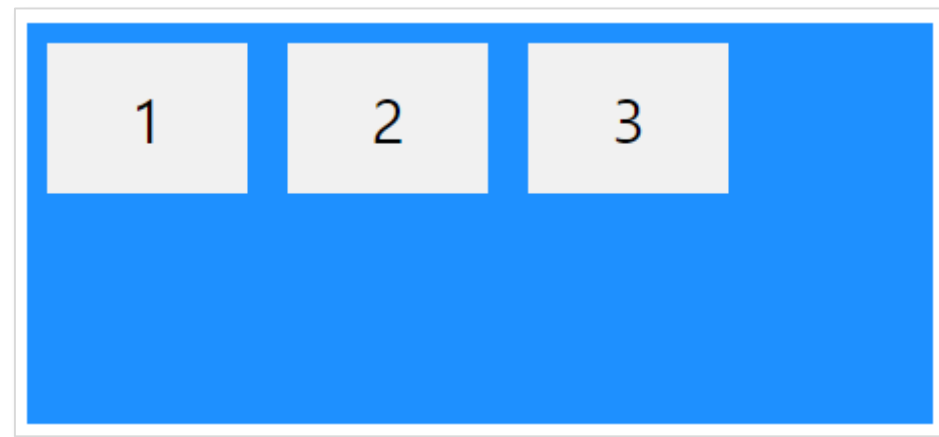


✎ align-items (flex-start)

```
<style>
.flex-container {
  display: flex;
  height: 200px;
  align-items: flex-start;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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

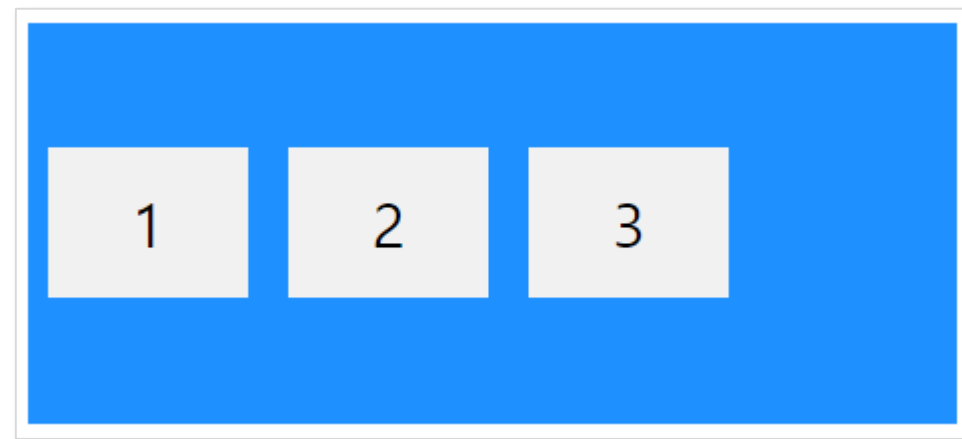


✎ align-items (center)

```
<style>
.flex-container {
  display: flex;
  height: 200px;
  align-items: center;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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

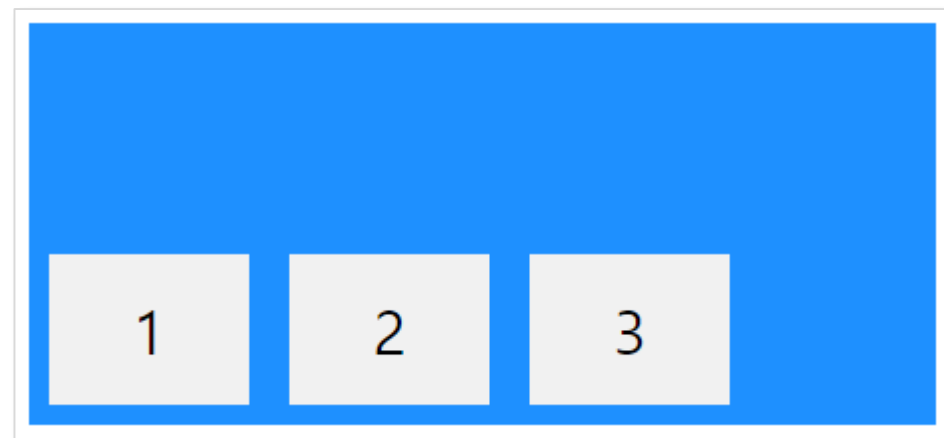


✎ align-items (flex-end)

```
<style>
.flex-container {
  display: flex;
  height: 200px;
  align-items: flex-end;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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

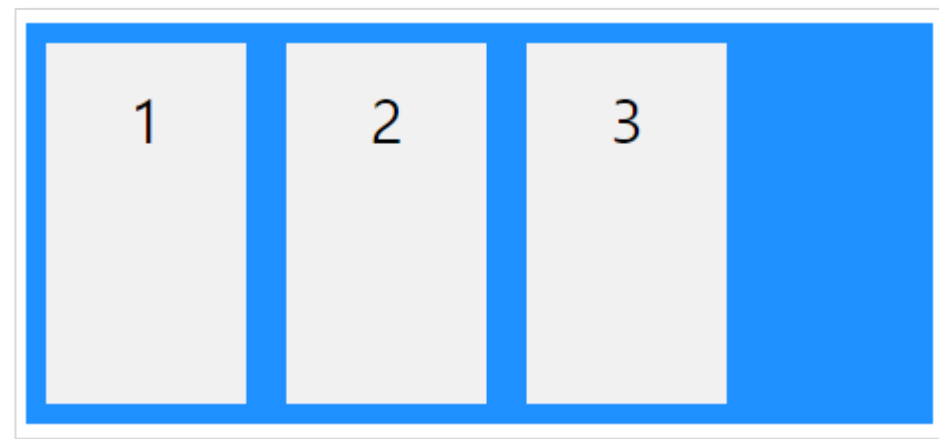


✎ align-items (stretch)

```
<style>
.flex-container {
  display: flex;
  height: 200px;
  align-items: stretch;
  background-color: DodgerBlue;
}
```

```
.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

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

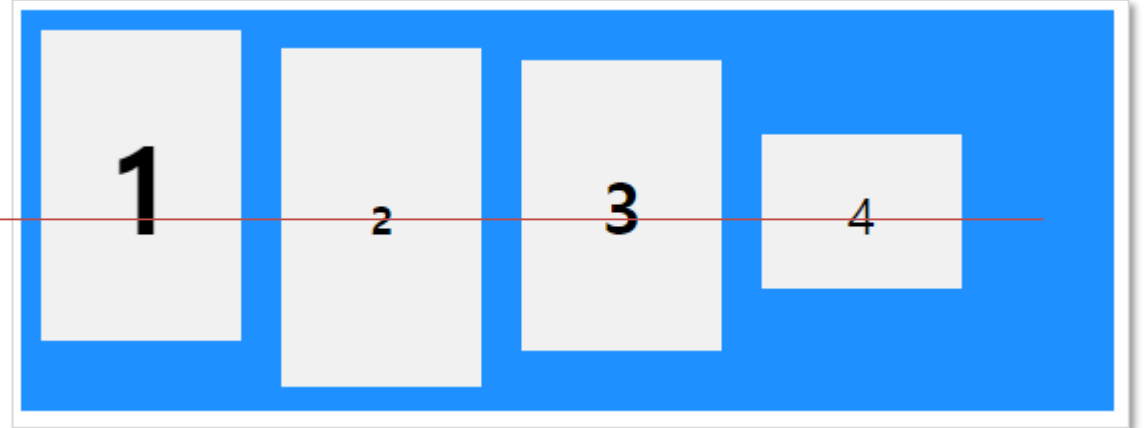


✎ align-items (baseline)

```
<style>
.flex-container {
  display: flex;
  height: 200px;
  align-items: baseline;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

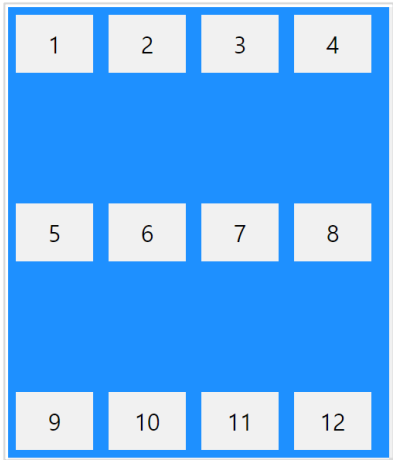
```
<div class="flex-container">
  <div><h1>1</h1></div>
  <div><h6>2</h6></div>
  <div><h3>3</h3></div>
  <div><small>4</small></div>
</div>
```



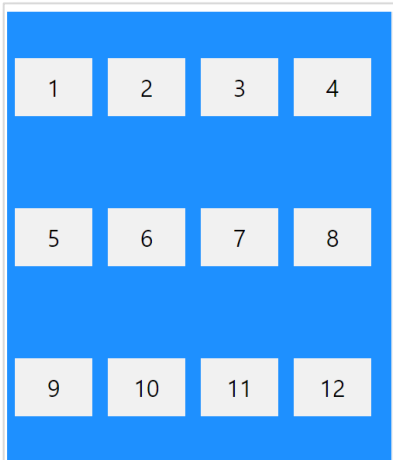
✓ align-content

- 자식들의 교차축 정렬 방법 지정
- 높이가 지정되어야 하며, flex-wrap 속성은 wrap으로 지정해야 함
- space-between | space-around | stretch | flex-start | center | flex-end

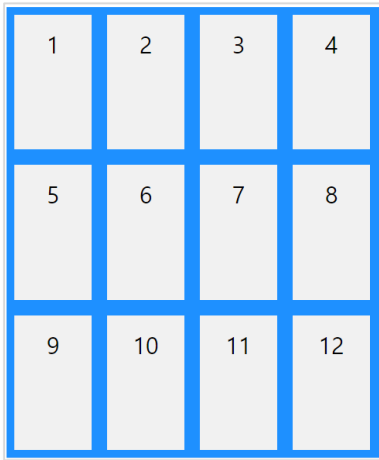
space-between



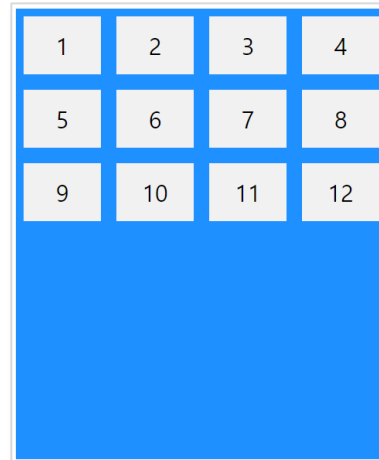
space-around



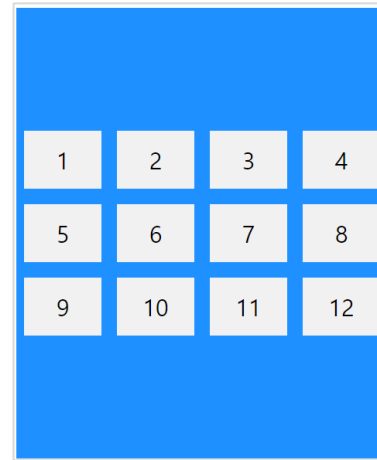
stretch



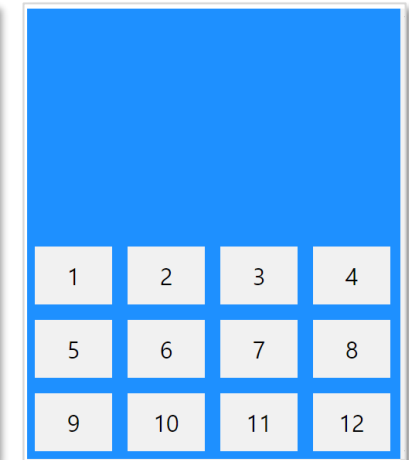
flex-start



center



flex-end

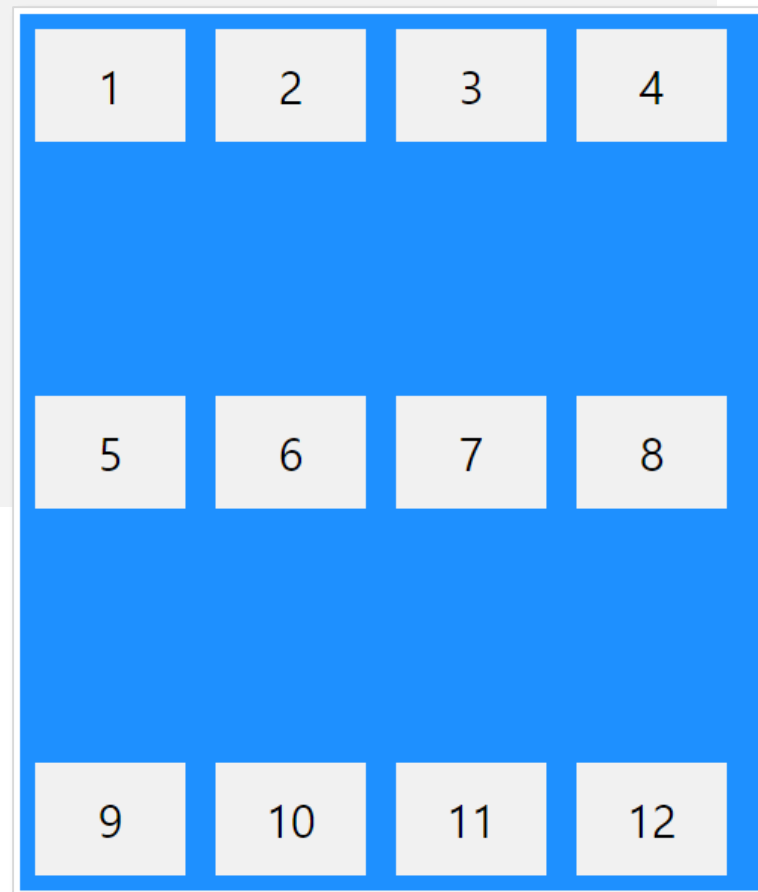


✎ align-content (space-between)

```
<style>
.flex-container {
  display: flex;
  height: 600px;
  flex-wrap: wrap;
  align-content: space-between;
  overflow: scroll;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
  <div>11</div>
  <div>12</div>
</div>
```

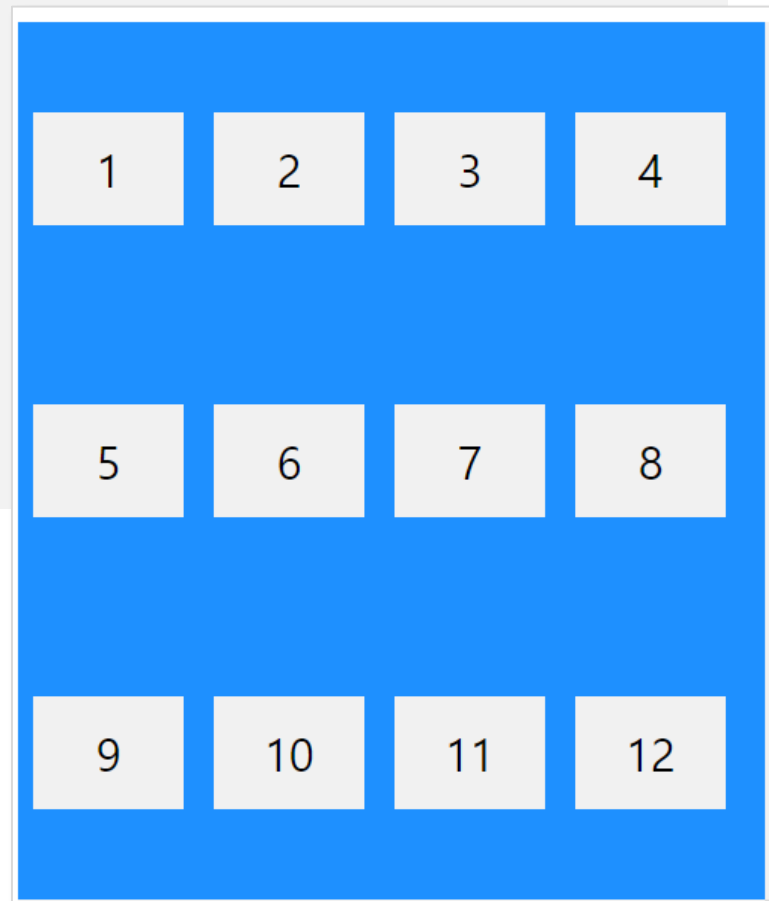


✎ align-content (space-around)

```
<style>
.flex-container {
  display: flex;
  height: 600px;
  flex-wrap: wrap;
  align-content: space-around;
  overflow: scroll;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
  <div>11</div>
  <div>12</div>
</div>
```

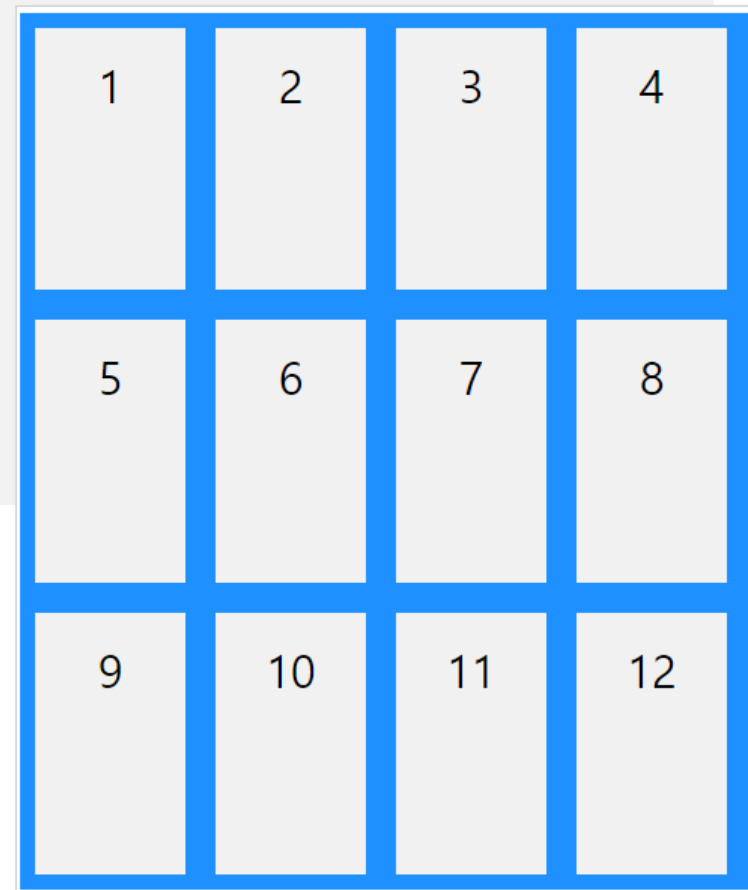


✎ align-content (stretch)

```
<style>
.flex-container {
  display: flex;
  height: 600px;
  flex-wrap: wrap;
  align-content: stretch;
  overflow: scroll;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
  <div>11</div>
  <div>12</div>
</div>
```



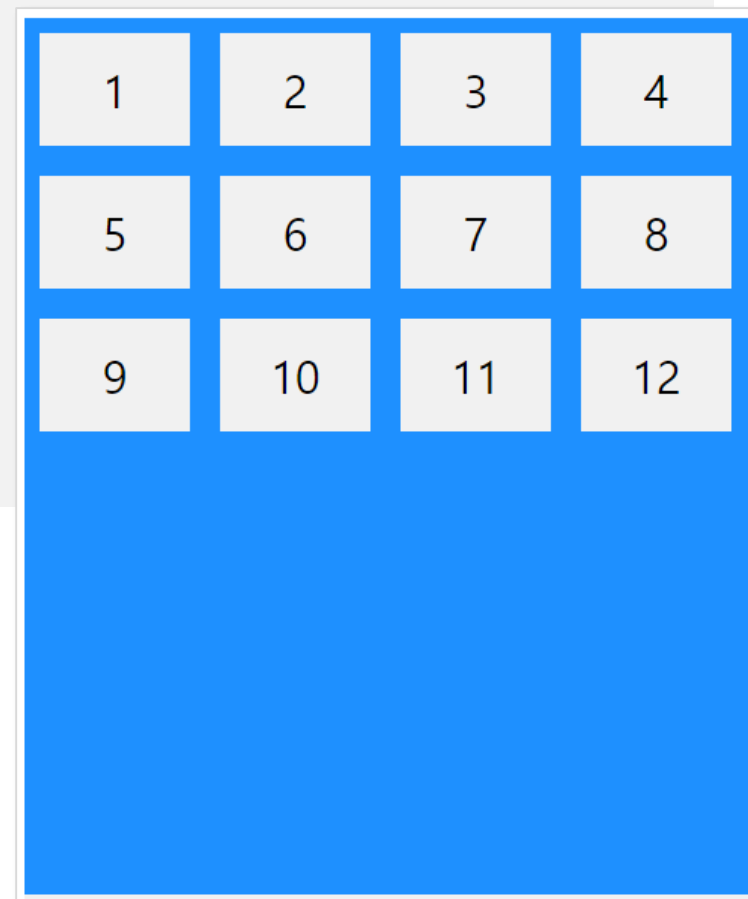
1	2	3	4
5	6	7	8
9	10	11	12

✎ align-content (flex-start)

```
<style>
.flex-container {
  display: flex;
  height: 600px;
  flex-wrap: wrap;
  align-content: flex-start;
  overflow: scroll;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
  <div>11</div>
  <div>12</div>
</div>
```

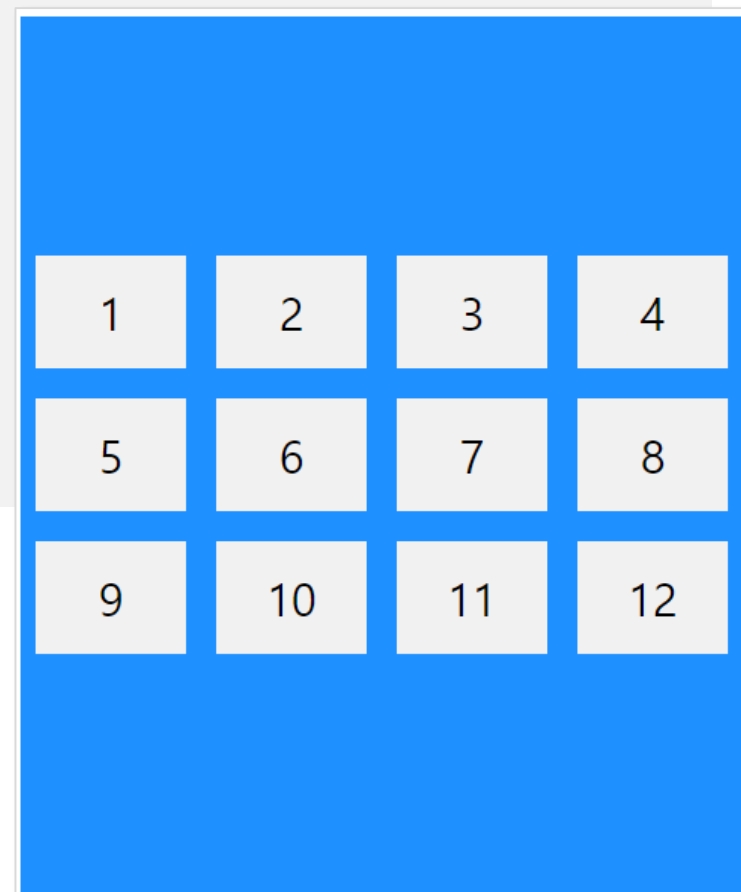


✎ align-content (center)

```
<style>
.flex-container {
  display: flex;
  height: 600px;
  flex-wrap: wrap;
  align-content: center;
  overflow: scroll;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
  <div>11</div>
  <div>12</div>
</div>
```

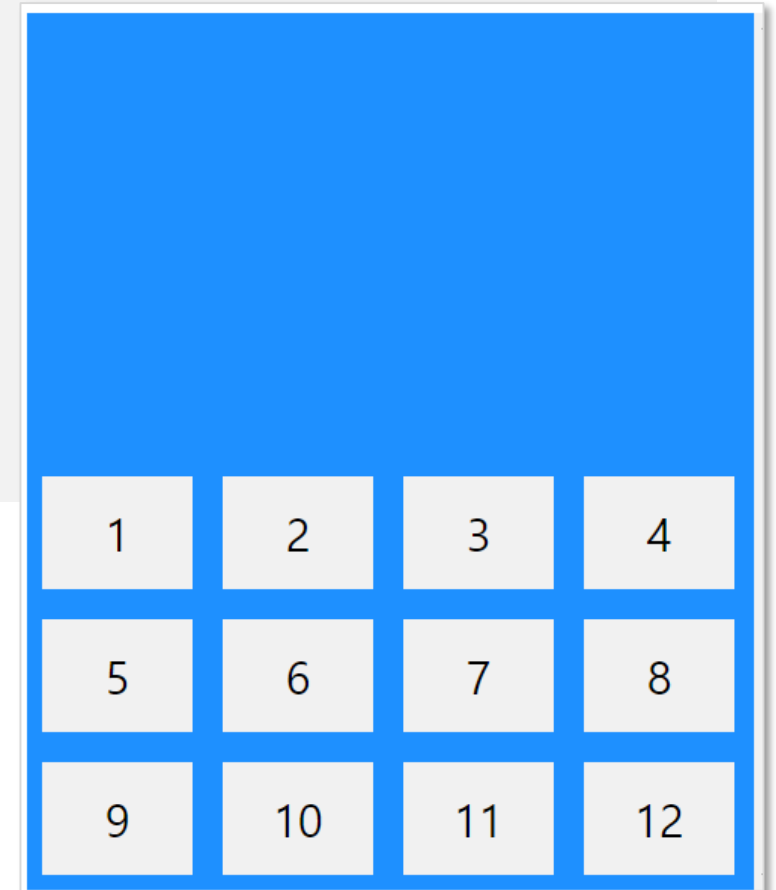


✎ align-content (flex-end)

```
<style>
.flex-container {
  display: flex;
  height: 600px;
  flex-wrap: wrap;
  align-content: flex-end;
  overflow: scroll;
  background-color: DodgerBlue;
}

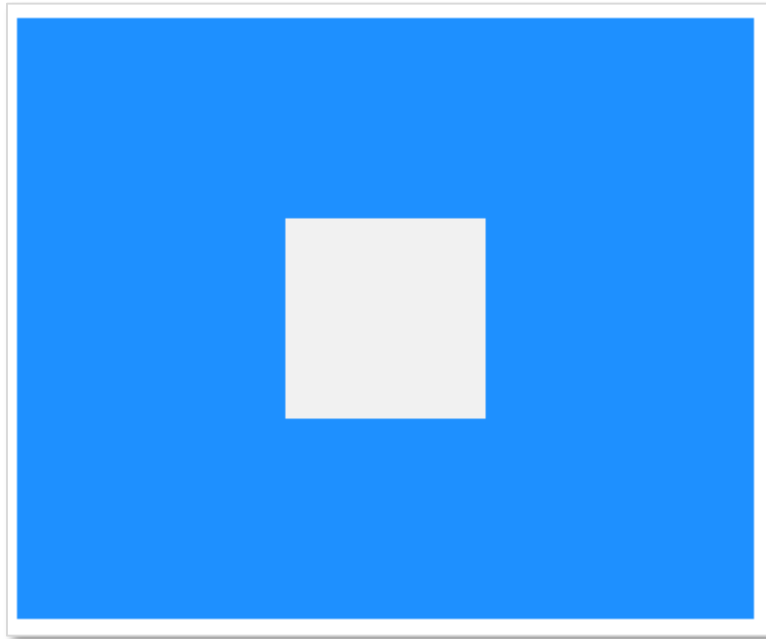
.flex-container > div {
  background-color: #f1f1f1;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
  <div>11</div>
  <div>12</div>
</div>
```



✓ 정 가운데 배치하기

- 주축 정렬: `justify-content: center;`
- 교차축 정렬: `align-items: center;`



Perfect Centering

```
<style>
.flex-container {
  display: flex;
  justify-content: center;
  align-items: center;
  height: 300px;
  background-color: DodgerBlue;
}

.flex-container > div {
  background-color: #f1f1f1;
  color: white;
  width: 100px;
  height: 100px;
}
</style>
```

```
<div class="flex-container">
  <div></div>
</div>
```



✓ 개별 자식 요소에 지정하는 설정

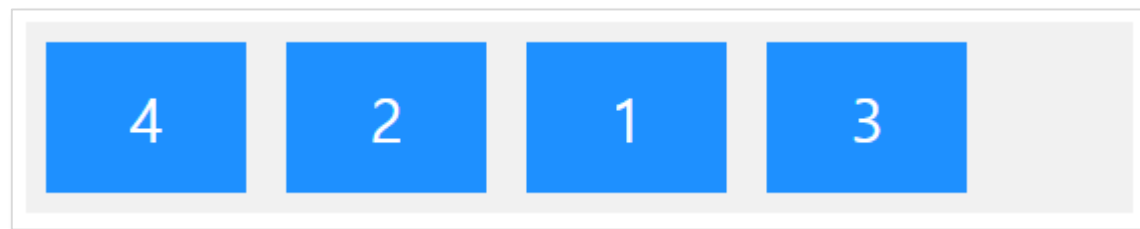
- **order**: 배치 순서를 강제 지정
- **flex-grow**: 여백이 있을 때 어떻게 확장할지 비율 지정
 - 디폴트는 같은 비율로 확대
 - 0이면 기본 크기로 고정
- **flex-shrink**: 여백이 부족할 때 어떻게 축소할지 비율 지정
 - 디폴트는 같은 비율로 축소
 - 0이면 기본 크기로 고정
- **flex-basis**
 - 자식 요소의 초기 크기 지정
- **flex**
 - flex-grow, flex-shrink, flex-basis를 한 번에 지정
- **align-self**
 - 교차축으로 여백에 어떻게 대처할 지 지정

order

```
<style>
.flex-container {
  display: flex;
  align-items: stretch;
  background-color: #f1f1f1;
}

.flex-container>div {
  background-color: DodgerBlue;
  color: white;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div style="order: 3">1</div>
  <div style="order: 2">2</div>
  <div style="order: 4">3</div>
  <div style="order: 1">4</div>
</div>
```

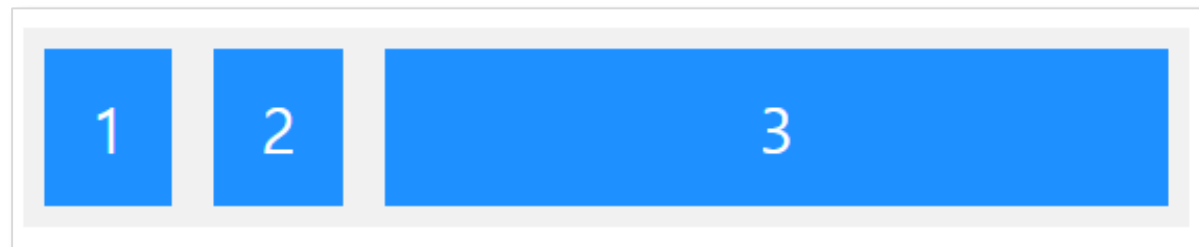


✓ flex-grow

```
<style>
.flex-container {
  display: flex;
  align-items: stretch;
  background-color: #f1f1f1;
}

.flex-container>div {
  background-color: DodgerBlue;
  color: white;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div style="flex-grow: 1">1</div>
  <div style="flex-grow: 1">2</div>
  <div style="flex-grow: 8">3</div>
</div>
```



✓ flex-shrink

```
<style>
.flex-container {
  display: flex;
  align-items: stretch;
  background-color: #f1f1f1;
}

.flex-container>div {
  background-color: DodgerBlue;
  color: white;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div style="flex-shrink: 0">3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
  <div>10</div>
</div>
```

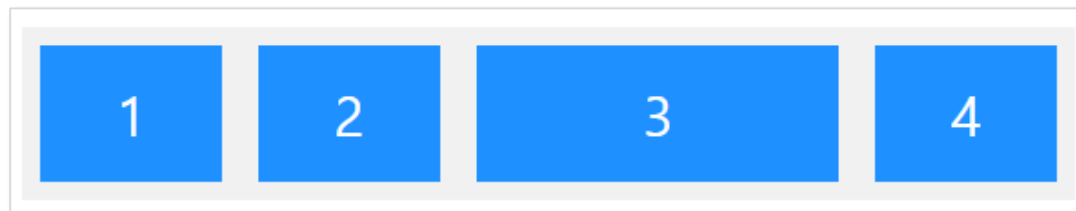


✓ flex-basis

```
<style>
.flex-container {
  display: flex;
  align-items: stretch;
  background-color: #f1f1f1;
}

.flex-container > div {
  background-color: DodgerBlue;
  color: white;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div style="flex-basis:200px">3</div>
  <div>4</div>
</div>
```

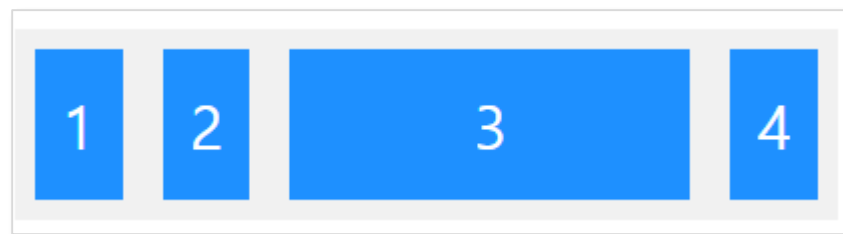


✓ flex

```
<style>
.flex-container {
  display: flex;
  align-items: stretch;
  background-color: #f1f1f1;
}

.flex-container>div {
  background-color: DodgerBlue;
  color: white;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div style="flex: 0 0 200px">3</div>
  <div>4</div>
</div>
```

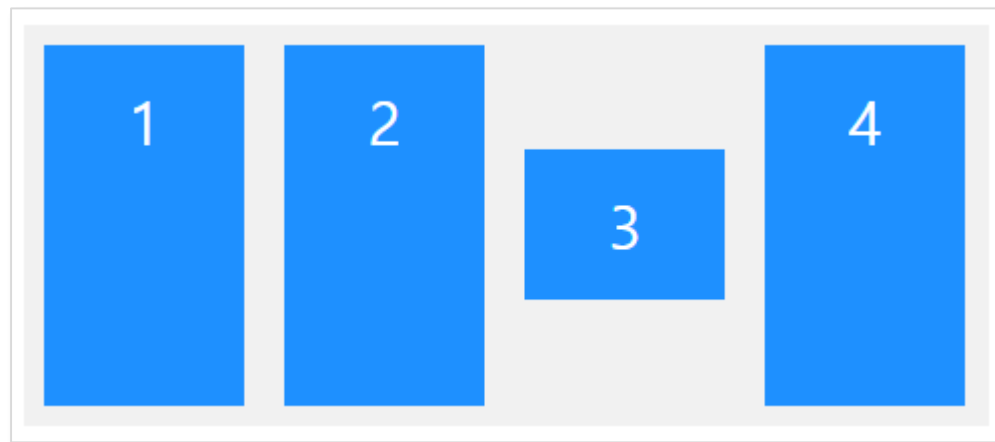


✅ align-self

```
<style>
.flex-container {
  display: flex;
  height: 200px;
  background-color: #f1f1f1;
}

.flex-container > div {
  background-color: DodgerBlue;
  color: white;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div>2</div>
  <div style="align-self: center">3</div>
  <div>4</div>
</div>
```



✓ align-self

```
<style>
.flex-container {
  display: flex;
  height: 200px;
  background-color: #f1f1f1;
}

.flex-container > div {
  background-color: DodgerBlue;
  color: white;
  width: 100px;
  margin: 10px;
  text-align: center;
  line-height: 75px;
  font-size: 30px;
}
</style>
```

```
<div class="flex-container">
  <div>1</div>
  <div style="align-self: flex-start">2</div>
  <div style="align-self: flex-end">3</div>
  <div>4</div>
</div>
```

