

Session: 8

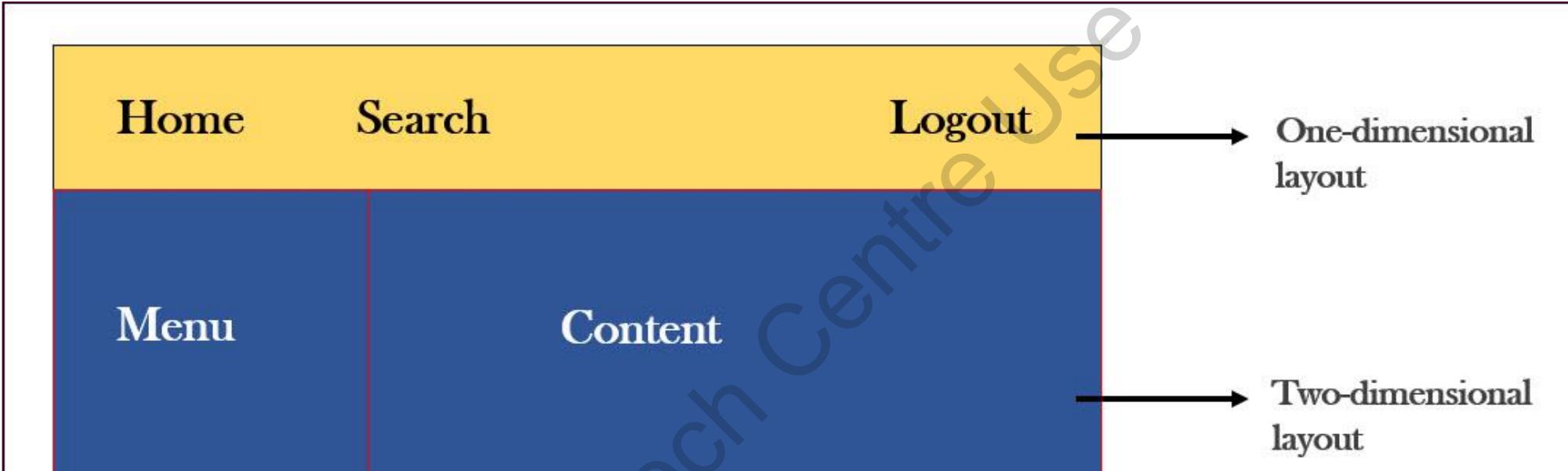
Understanding Layouts in CSS3

For Aptech Centre Use Only

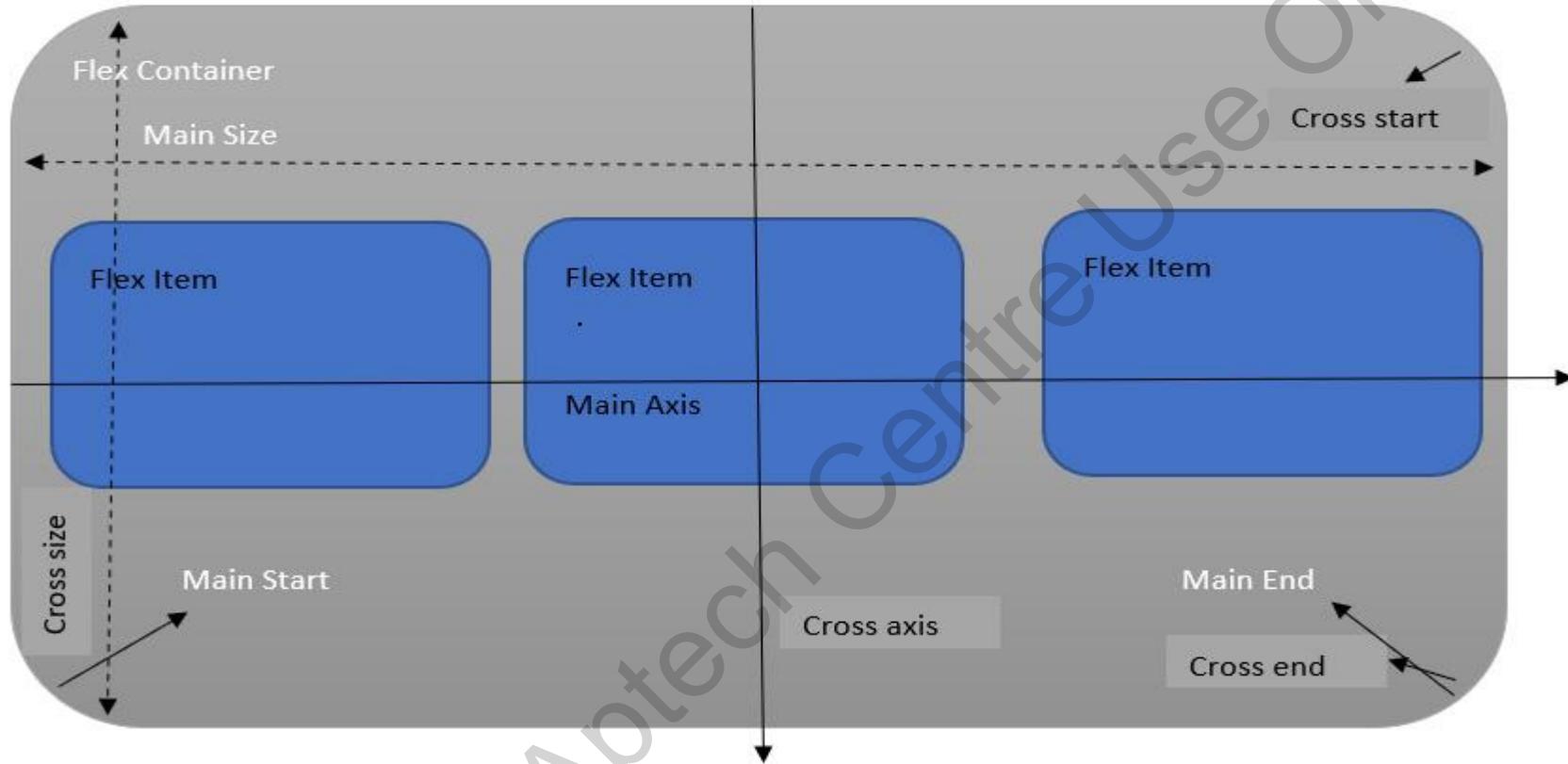
Objectives

- Describe flexbox and grid layouts
- Describe different flexbox properties
- Explain different grid properties

Introduction



CSS Flexbox Layout Module



Properties of Flexbox Container 1-3

display

flex-direction

flex-wrap

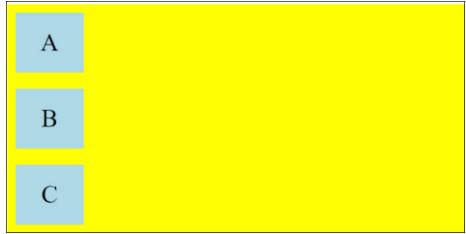
flex-flow

justify-content

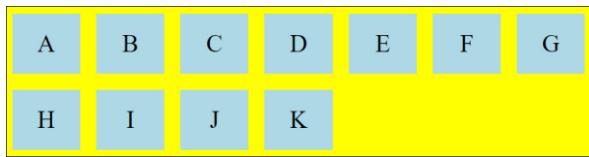
align-items

align-content

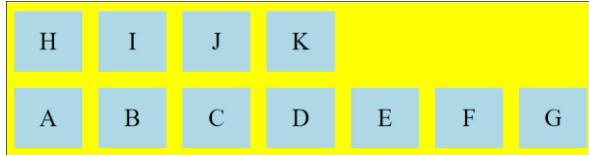
Properties of Flexbox Container 2-3



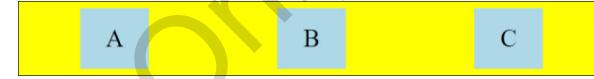
Example of Flex Direction - column



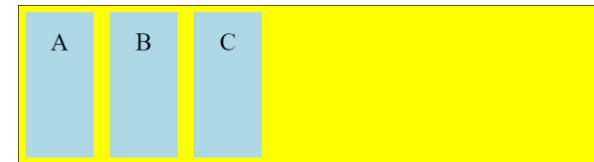
flex-flow Property: row wrap



**flex-wrap Property:
wrap-reverse**

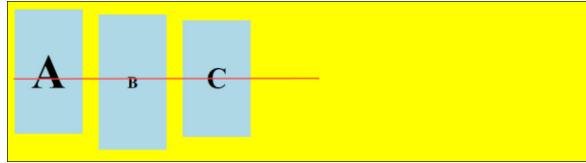


**space-around Attribute
Of justify-content
Property**

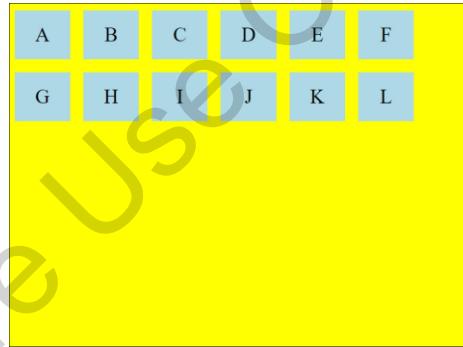


**stretch Attribute of
align-items Property**

Properties of Flexbox Container 3-3



**baseline Attribute of
align-items Property**



**flex-start Attribute of
align-content Property**

Properties of Flexbox Item 1-4

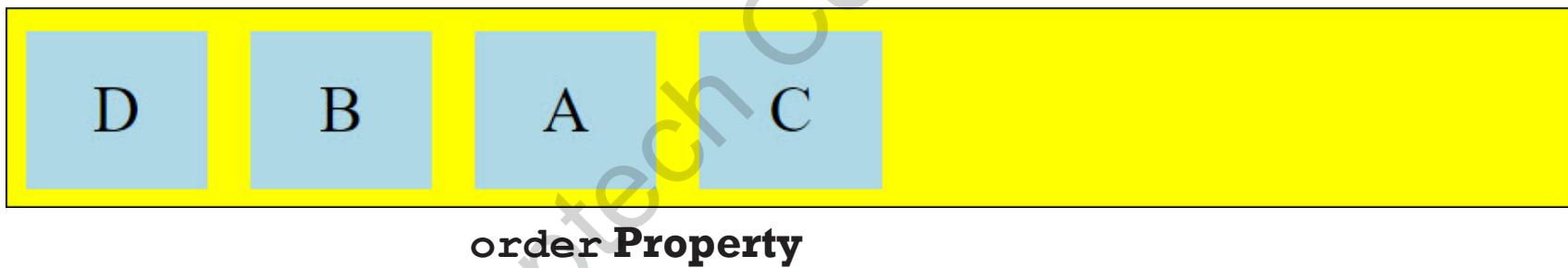
order

flex-grow

flex-shrink

Properties of Flexbox Item 2-4

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



Properties of Flexbox Item 3-4

```
<div class="flex-container">  
  <div style="flex-grow:  
  1">A</div>  
  <div style="flex-grow:  
  6">B</div>  
  <div style="flex-grow:  
  2">C</div>  
</div>
```



flex-grow Property

Properties of Flexbox Item 4-4

```
<div class="flex-container">  
  <div>A</div>  
  <div>B</div>  
  <div style="flex-shrink: 0">  
    C</div>  
  <div style="flex-shrink: 0">  
    D</div>  
  <div>E</div>  
  <div>F</div>  
  <div>G</div>  
  <div>H</div>  
  <div>I</div></div>
```



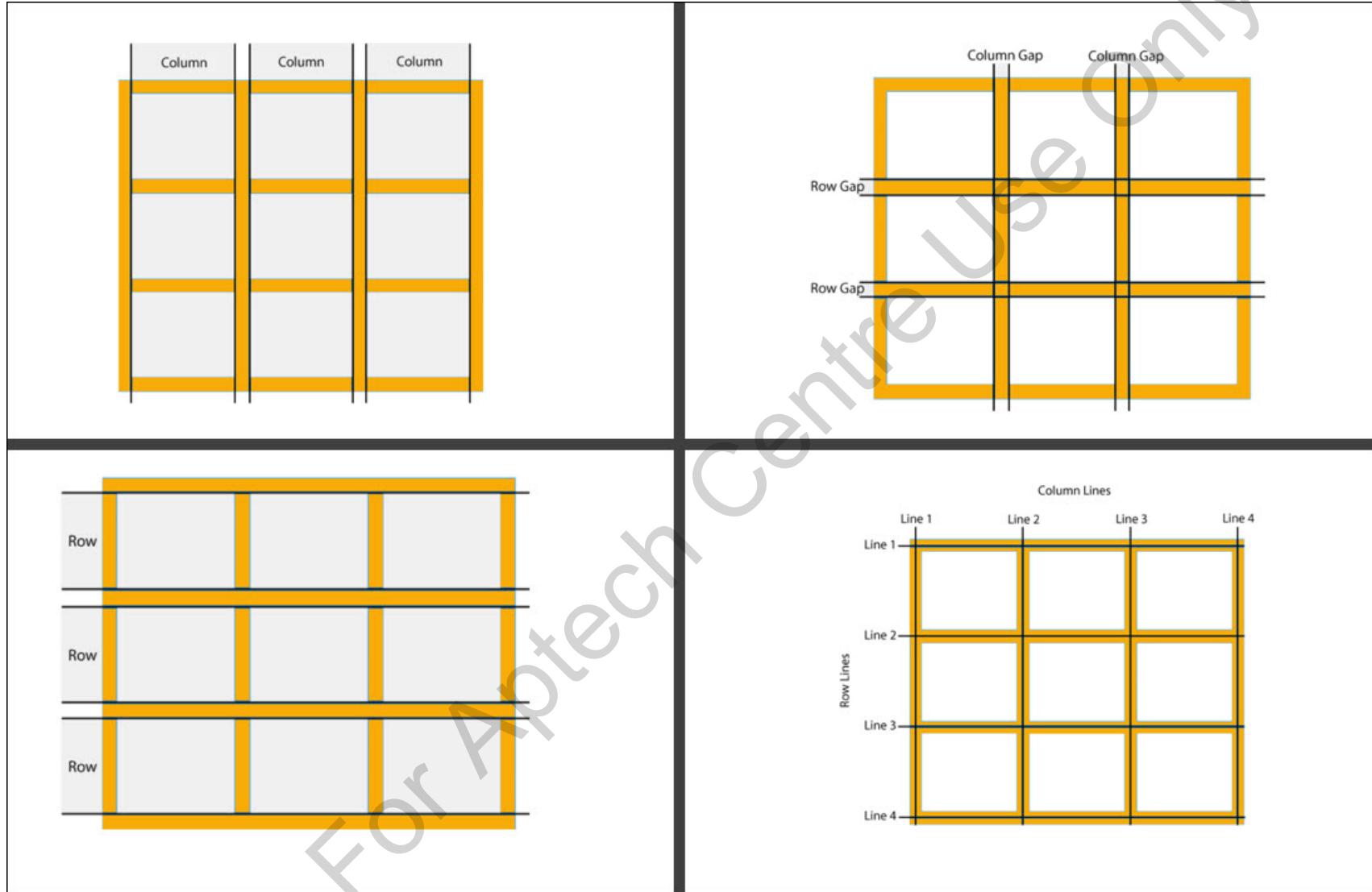
flex-shrink Property

CSS Grid Layout Module 1-2



Grid Layout

CSS Grid Layout Module 2-2



Grid Container Properties 1-2

grid-template-columns

grid-template-rows

grid-column-gap

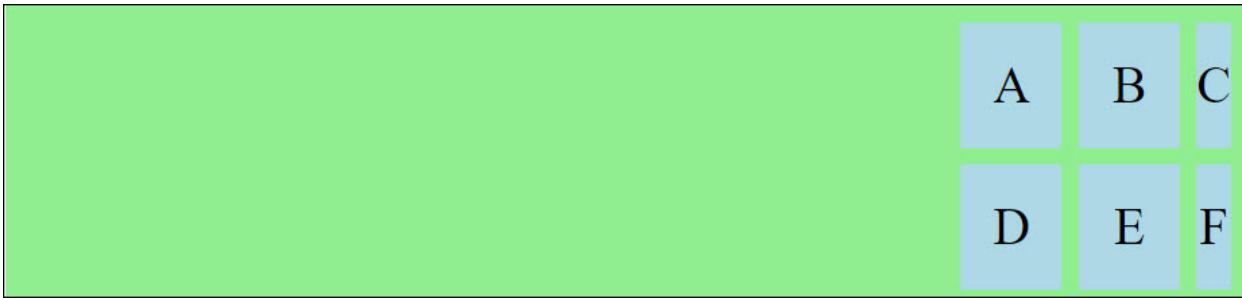
grid-row-gap

grid-gap

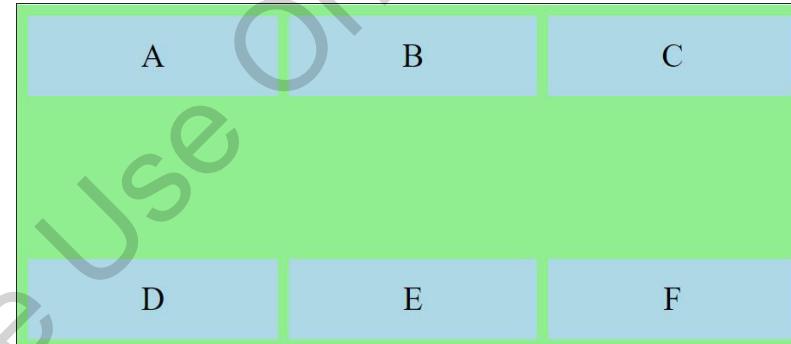
justify-content

align-content

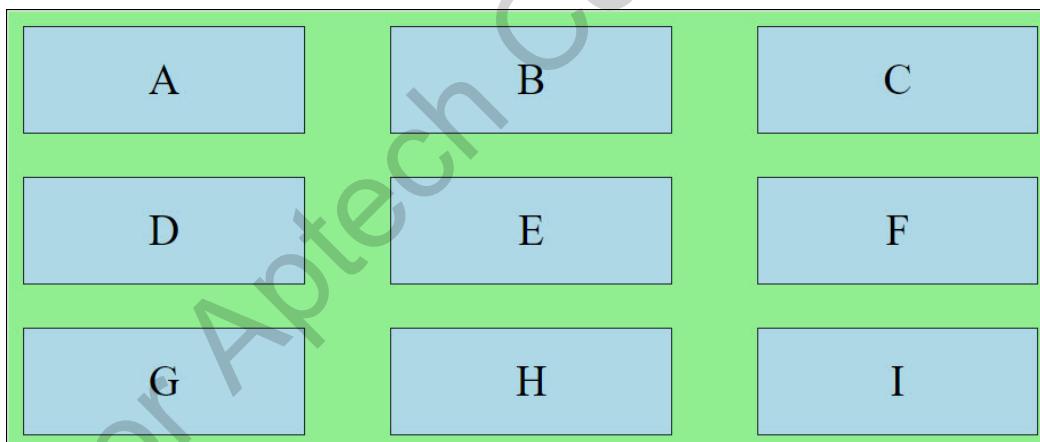
Grid Container Properties 2-2



**justify-content, grid-template-columns,
and grid-gap Properties**

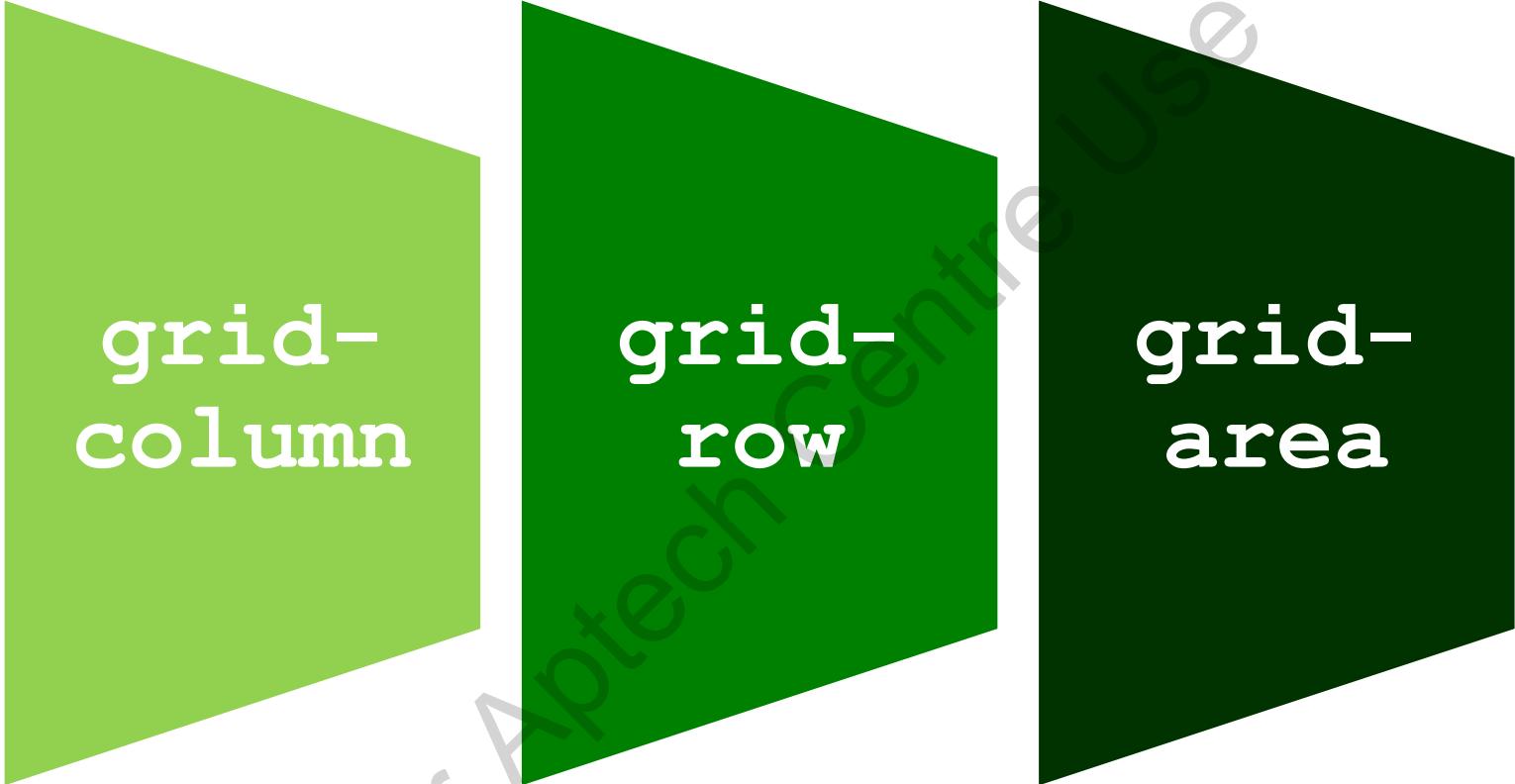


align-content Property



grid-gap Property

Grid Items 1-4



Grid Items 2-4

```
<!DOCTYPE html>
<html>
<head>
<style>
.grid-container {
display: grid;
grid-template-columns: auto auto auto auto auto auto;
grid-gap: 10px;
background-color: lightgreen;
padding: 10px;
}
.grid-container > div {
background-color: lightblue;
text-align: center;
padding: 20px 0;
font-size: 30px;
}
.item2 {
grid-column: 2 / span 5;
}
</style>
</head>
```

```
<body>
<div class="grid-container">
<div class="item1">A</div>
<div class="item2">B</div>
<div class="item3">C</div>
<div class="item4">D</div>
<div class="item5">E</div>
<div class="item6">F</div>
<div class="item7">G</div>
<div class="item8">H</div>
<div class="item9">I</div>
<div class="item10">J</div>
<div class="item11">K</div>
<div class="item12">L</div>
</div>
</body>
</html>
```

A	B				
C	D	E	F	G	H
I	J	K	L		

grid-column Property

Grid Items 3-4

```
<!DOCTYPE html>
<html>
<head>
<style>
.grid-container {
display: grid;
grid-template-columns: auto auto auto auto auto auto;
grid-gap: 10px;
background-color: lightgreen;
padding: 10px;
}
.grid-container > div {
background-color: lightblue;
text-align: center;
padding: 20px 0;
font-size: 30px;
}
.item1 {
grid-row: 1 / span 2;
}
</style>
</head>
```

```
<body>


A



B



C



D



E



F



G



H



I



J

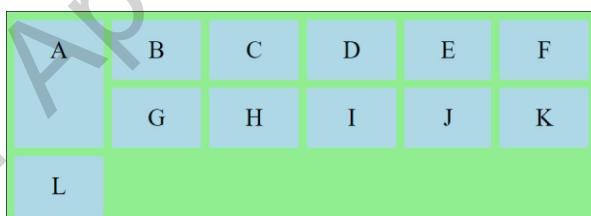


K



L

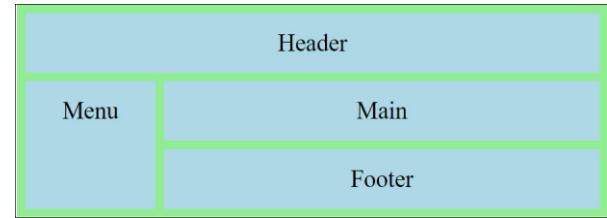

</body>
</html>
```



grid-row Property

Grid Items 4-4

```
<!DOCTYPE html>
<html>
<head>
<style>
.item1 { grid-area: header; }
.item2 { grid-area: menu; }
.item3 { grid-area: main; }
.item4 { grid-area: footer; }
.grid-container { display:
grid;
grid-template-areas:
'header header header header header header' 'menu
main main main main'
'menu footer footer footer footer footer';
grid-gap: 10px;
background-color: lightgreen;
padding: 10px;
}
```



grid-area Property

Summary

- ❖ Flexbox provides one-dimensional layout.
- ❖ Grid provides two-dimensional layout.
- ❖ A container is the parent element and child elements of the container are flex items.
- ❖ A grid layout has one parent element with one or more child elements.
- ❖ Items in a grid container are called grid items.
- ❖ All grid items are placed inside columns and rows.
- ❖ Layout of grid, flexbox, flex items, and grid items can be controlled using different properties.
- ❖ A data attribute helps store custom data or extra information on an HTML element.