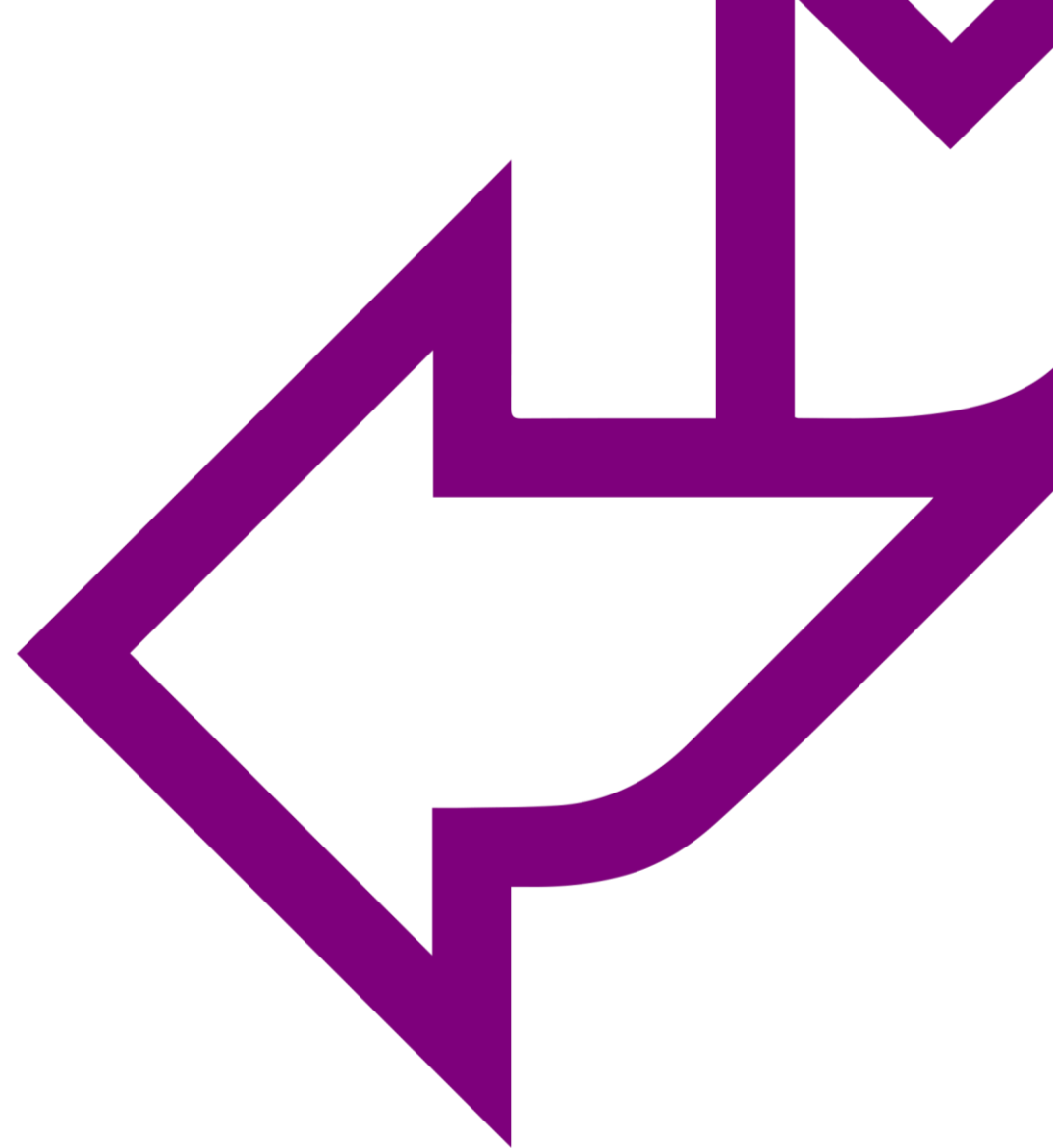




Grids

Responsive Web Design



QA Changing Layouts – Grid View

- Modern websites often based on a grid view
- Pages are divided into (usually 12) equal columns

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

This is helpful when designing pages for different devices, as it's easier to place elements on page.

- Total width is 100% and will shrink and expand as the browser window is resized

[illegible]

QA Responsive Grids

All HTML elements have to have box sizing set to border-box

- Ensures padding and border are included in total width and height of elements

```
* { box-sizing: border-box; }
```

Can create simple responsive page with two columns

```
.left { width: 25%; float: left; }  
.right { width: 75%; float: left; }
```

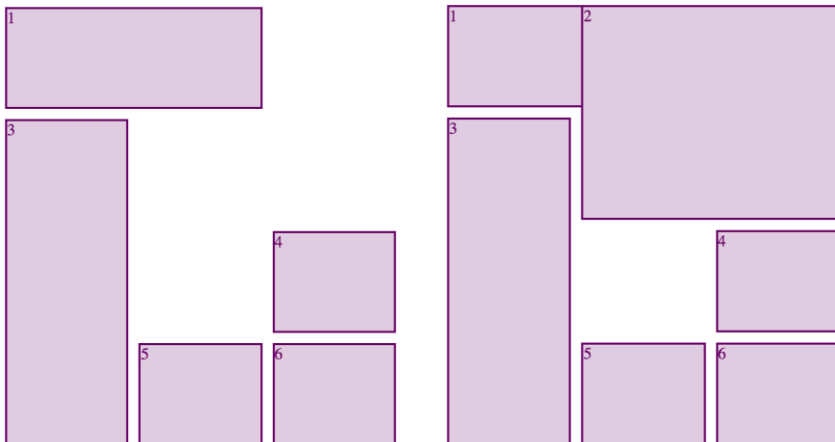
**.left
25%**

**.right
75%**

QA CSS Grid Layout Module

- Offers a grid-based layout system, with rows and columns
- **HTML**
- **CSS**

```
<div class="grid-container">  
  <div class="one">1</div>  
  <div class="two">2</div>  
  <div class="three">3</div>  
  <div class="four">4</div>  
  <div class="five">5</div>  
  <div class="six">6</div>  
</div>
```



```
.grid-container {  
  display: grid;  
  grid-template-columns: repeat(3, 1fr);  
  grid-gap: 10px;  
  grid-auto-rows: minmax(100px, auto);  
}  
.one { grid-column: 1/3; grid-row: 1 }  
.two { grid-column: 2/4; grid-row: 1/3 }  
.three { grid-column: 1; grid-row: 2/5 }  
.four { grid-column: 3; grid-row: 3 }  
.five { grid-column: 2; grid-row: 4 }  
.six { grid-column: 3; grid-row: 4 }
```

QA CSS Grid Layout Module

There are 18 different properties that can be set for the CSS Grid Layout module:

`column-gap`

`gap`

`grid`

`grid-area`

`grid-auto-columns`

`grid-auto-flow`

`grid-auto-rows`

`grid-column`

`grid-column-start`

`grid-column-end`

`grid-row`

`grid-row-end`

`grid-row-start`

`grid-template`

`grid-template-areas`

`grid-template-columns`

`grid-template-rows`

`row-gap`

There are three functions that can be used:

`fit-content()`

`minmax()`

`repeat()`



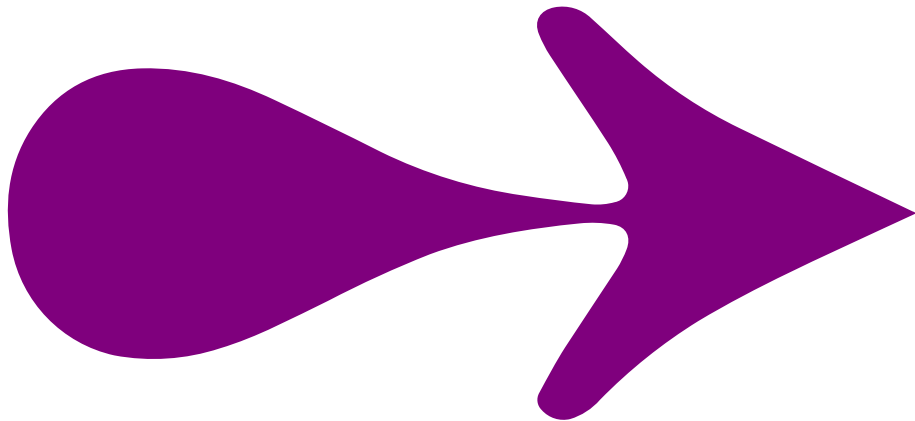
Grid Frameworks

No need to define all of the classes by hand

Several Responsive CSS Frameworks exist that already have the CSS classes defined, along with many other useful features

- All a developer has to do is add correct classes to the HTML

Examples are Bootstrap and Foundation





Quick Lab Chapter 11 - Grids

Add CSS classes to HTML elements to utilise a provided CSS grid system.