Advanced CSS Techniques to Make Your Applications Look Even Better

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ORACLE
ACE Associate

CSS
IS
AWESOME

http://www.csszengarden.com

Agenda

- Writing Better CSS
- Media Queries
- Animations
- Flexbox
- Demos

https://github.com/maxime-tremblay/APEX-Advanced-CSS

Agenda

- > Writing Better CSS
- Media Queries
- Animations
- Flexbox
- Demos

Writing Better CSS

- Naming convention
- CSS architecture

Writing Better CSS

- CSS Preprocessors
  - Sass
  - LESS

Writing Better CSS

- CSS Preprocessors
  - Variables
  - Nesting
  - Mixins
  - Extends
  - Imports
  - Color Operations
  - If/Else Statements
  - Math
  - Loops

Writing Better CSS

- Compatibility
  - caniuse.com

Can I use _____ ? Settings

Legend

= Supported

= Not supported

= Partial support

= Support unknown

Writing Better CSS

- Autoprefixer
  - Adds vendor prefixes
    - Autoprefixer CSS online
    - Text editor plugin (Atom, VSC, Sublime)

Writing Better CSS

- Autoprefixer

```
.example {
    display: flex;
    transition: all .5s;
    user-select: none;
}
```

```
.example {
    display: -webkit-box;
    display: -ms-flexbox;
    display: flex;
    -webkit-transition: all .5s;
    transition: all .5s;
    -webkit-user-select: none;
       -moz-user-select: none;
        -ms-user-select: none;
            user-select: none;
}
```

Writing Better CSS

- Use it all together

Agenda

- ✓ Writing Better CSS
- > Media Queries
- ☐ Animations
- ☐ Flexbox
- ☐ Demos

Media Queries

- Media Types
  - Introduced in CSS2
  - CSS rules by media types

Media Queries

- Media Queries
  - Introduced in CSS3
  - CSS rules by media types

Media Queries

- Media Queries

Value	Description
all	Used for all media type devices
print	Used for printers
screen	Used for computer screens, tablets, smart-phones etc.
speech	Used for screenreaders that "reads" the page out loud

Media Queries

- Media Queries

```
@media not|only mediatype and (expressions) {
    CSS-Code;
}
```

```
<link rel="stylesheet" media="mediatype and|not|only (expressions)" href="print.css">
```

```
@import url("print.css") mediatype and|not|only (expressions)
```

Media Queries

Media Queries

```
.example {
   background-color: blue;
}
@media (min-width: 641px) {
   .example {
      background-color: green;
   }
}
@media (min-width: 768px) {
   .example {
      background-color: yellow;
   }
}
@media (min-width: 1200px) {
   .example {
      background-color: orange;
   }
}
```

Agenda

- ✓ Writing Better CSS
- ✓ Media Queries
- > Animations
- ☐ Flexbox
- ☐ Demos

Animations

- Change from one style to another
- As many properties, as many times

Animations

- Properties that animate well
  - Opacity
  - Transform

Animations

- Transform
  - Translate
  - Rotating
  - Scaling
  - Matrix

Animations

- Defining an animation

```
@keyframes fade-slide-down {
  0% {
    opacity: 0;
    transform: translateY(-4rem);
  }
  100% {
    opacity: 1;
    transform: none;
  }
}
```

Animations

- Animation properties
  - Name
  - Duration
  - Timing
  - Delay
  - Iteration Count
  - Direction

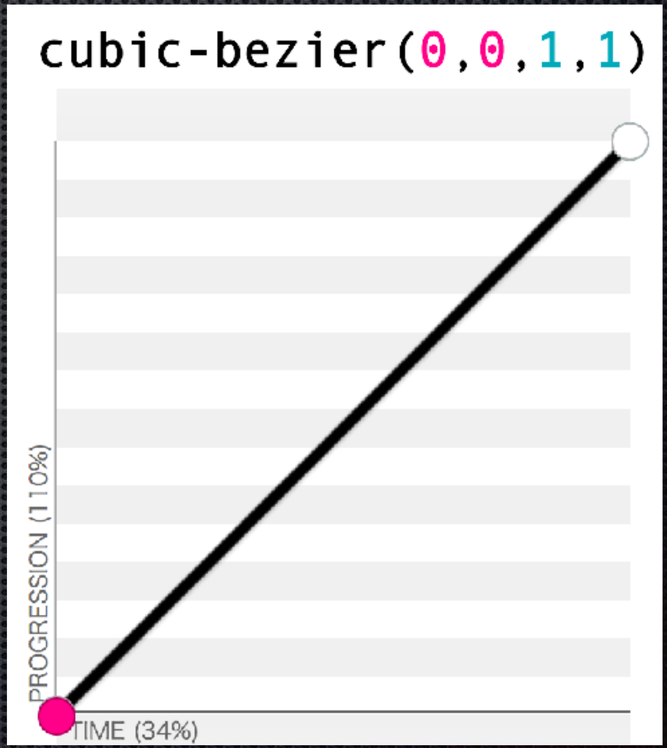
```
div {
    animation-name: animation-name;
    animation-duration: 5s;
    animation-timing-function: linear;
    animation-delay: 2s;
    animation-iteration-count: infinite;
    animation-direction: alternate;
}
```

Animations

- Timing functions
  - Pre-built timing function
    - Linear
    - Ease-in
    - Ease-out
    - Ease-in-out

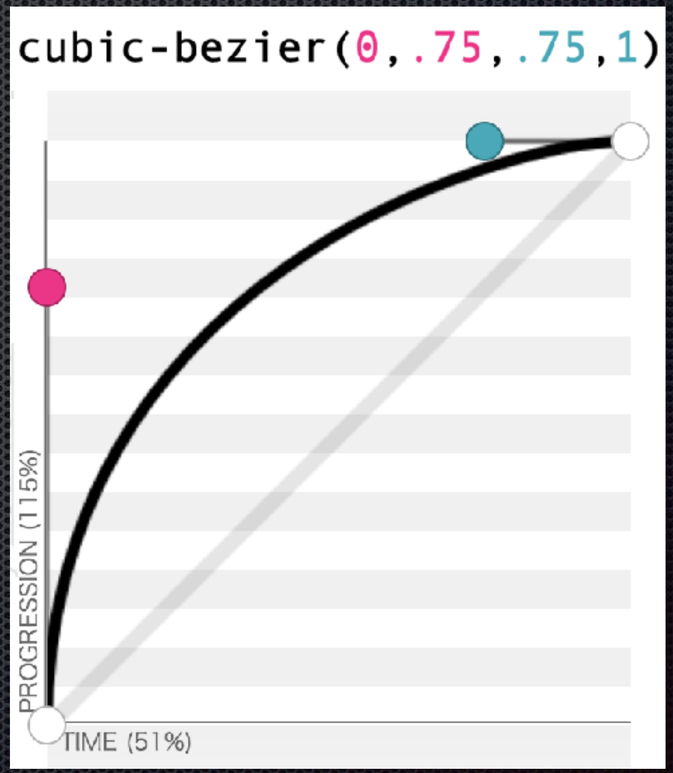
Animations

- Timing functions
  - Custom timing function
    - Cubic-bezier



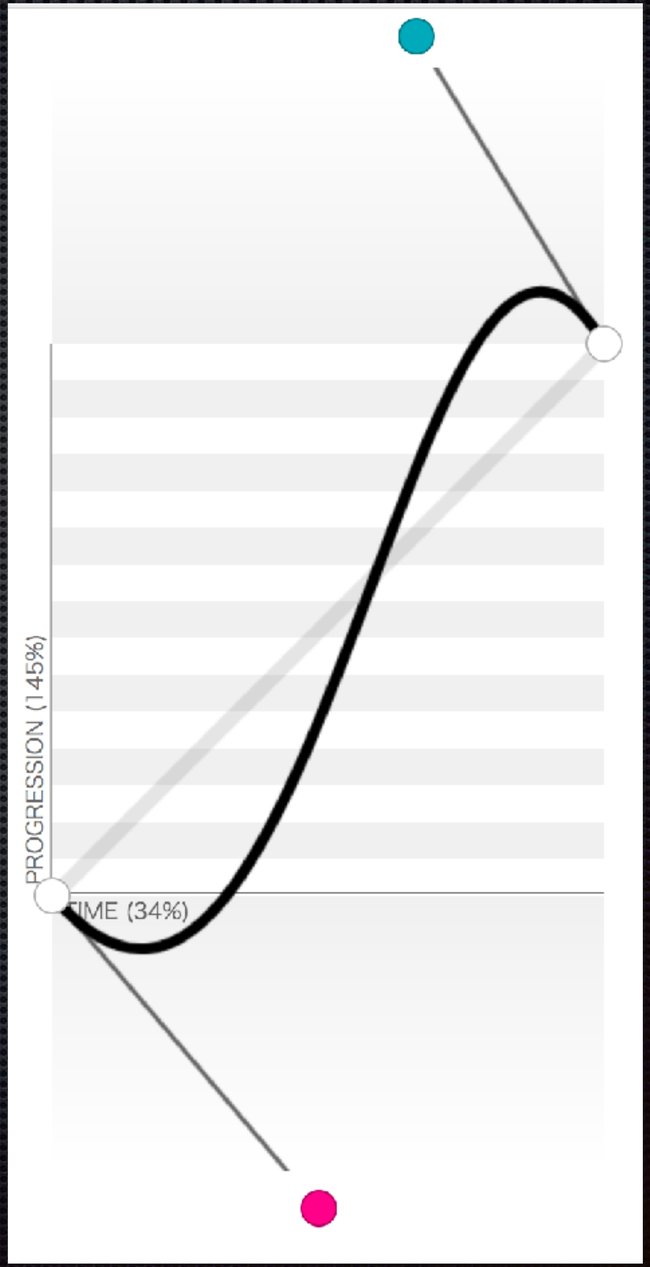
Animations

- Timing functions
  - Custom timing function
    - Cubic-bezier



Animations

- Timing functions
  - Custom timing function
    - Cubic-bezier



Animations

- Timing functions
  - Custom timing function
    - Cubic-bezier

Animations

- Delay
  - Time before animation starts

Animations

- Iteration Count
  - Number
  - Infinite

Animations

- Direction
  - Normal
  - Reverse
  - Alternate
  - Alternate-reverse

Animations

- Shorthand

```
div {
    animation-name: animation-name;
    animation-duration: 5s;
    animation-timing-function: linear;
    animation-delay: 2s;
    animation-iteration-count: infinite;
    animation-direction: alternate;
}
```

```
div {
    animation: animation-name 5s linear 2s infinite alternate;
}
```

Animations

- Transition
  - Transitioning from one state to another

Animations

- Transition
  - Transition-property
  - Transition-duration
  - Transition-timing-function
  - Transition-delay

Animations

- Transition

```
.example {
    width: 100px;
    transition: width 2s;
}
.example:hover {
    width: 300px;
}
```

Animations

- Transition

```
.example {
    width: 100px;
    height: 100px;
    transition: width 2s,
                height 4s;
}
```

Animations

- Transition

```
.example {
    width: 100px;
    height: 100px;
    transition: all 2s;
}
```

Animations

- Existing libraries
  - Animate CSS
  - Font Awesome Animation
  - AnimAPEX
  - Hover.css

Agenda

- ✓ Writing Better CSS
- ✓ Media Queries
- ✓ Animations
- > Flexbox
- ☐ Demos

Flexbox

- What is Flexbox
  - The CSS3 Flexible Box, or flexbox, is a layout mode providing for the arrangement of elements on a page such that the elements behave predictably when the page layout must accommodate different screen sizes and different display devices. For many applications, the flexible box model provides an improvement over the block model in that it does not use floats, nor do the flex container's margins collapse with the margins of its contents

Flexbox

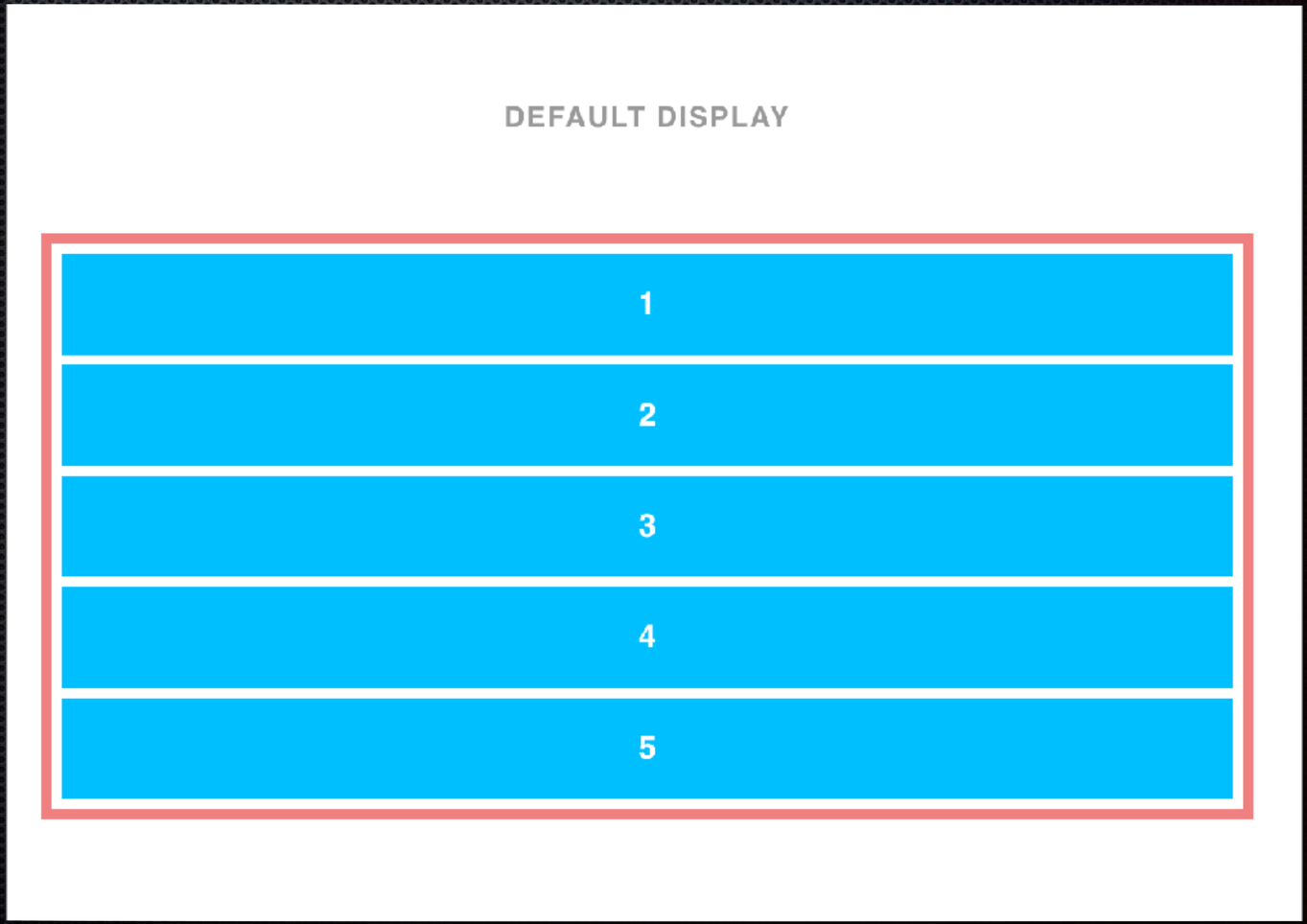
- What is Flexbox
  - Provides a more efficient way to lay out, align and distribute space among items in a container

Flexbox

- Properties
  - Parent (flex container)
  - Children (flex items)

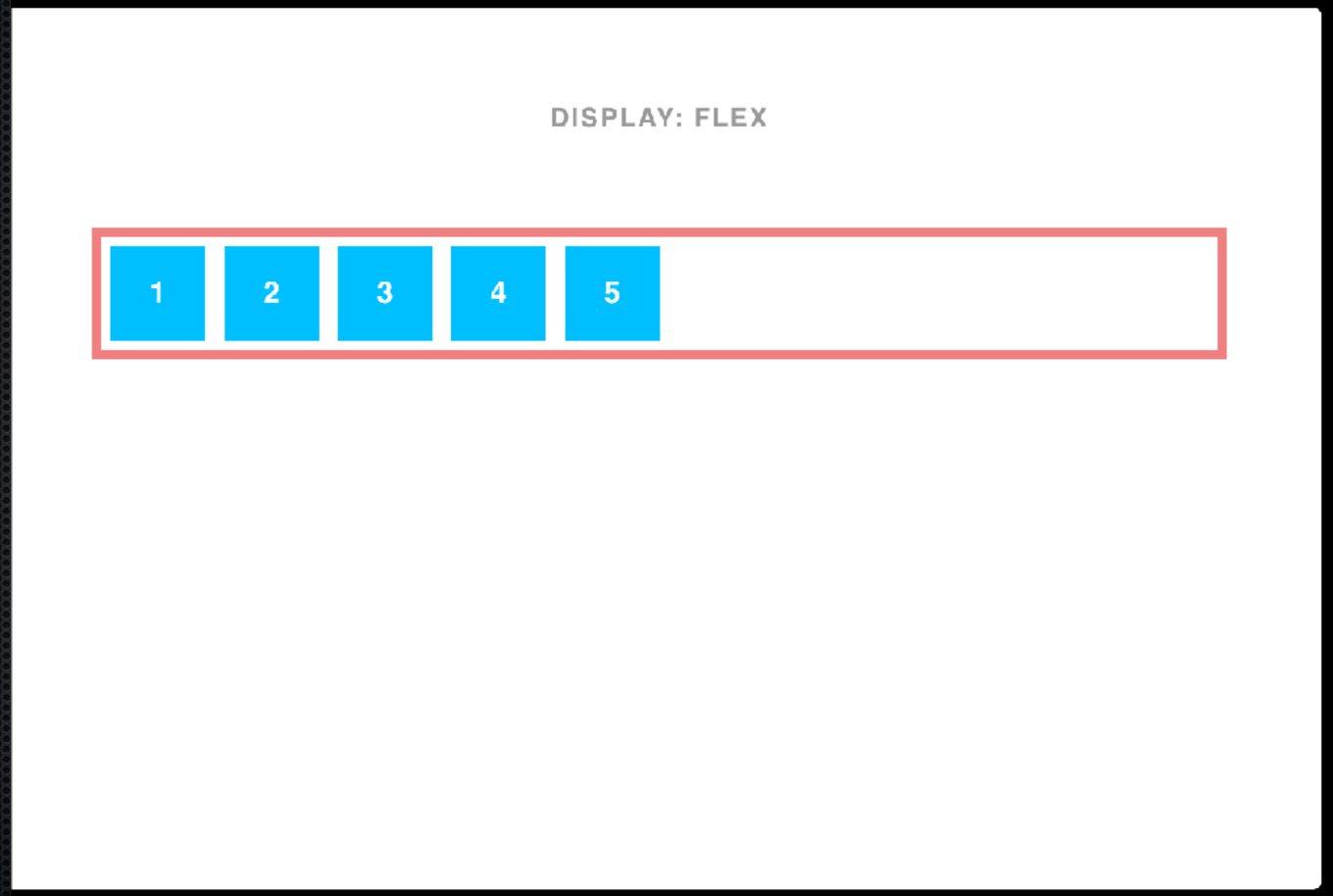
Flexbox

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



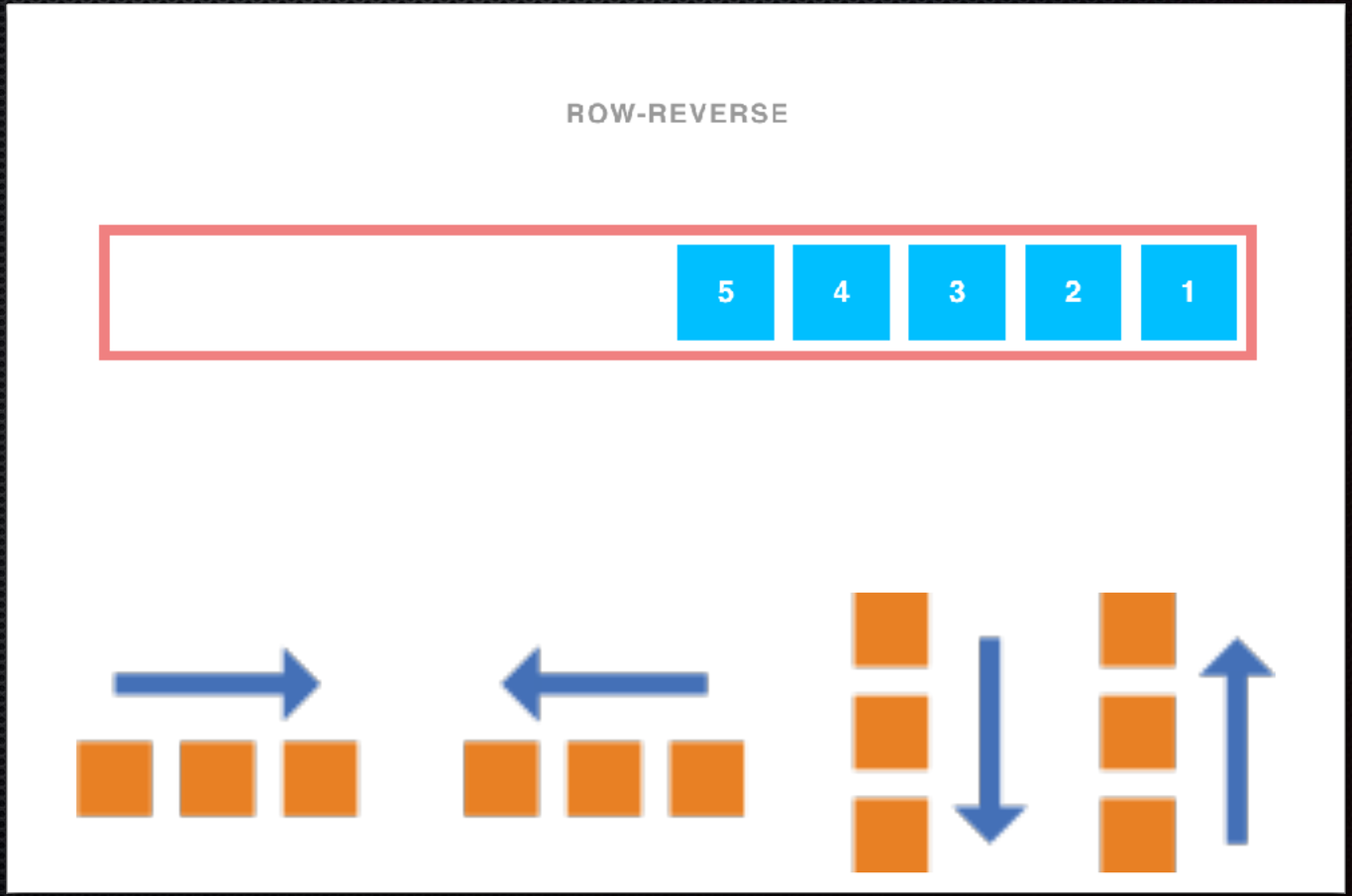
Flexbox

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



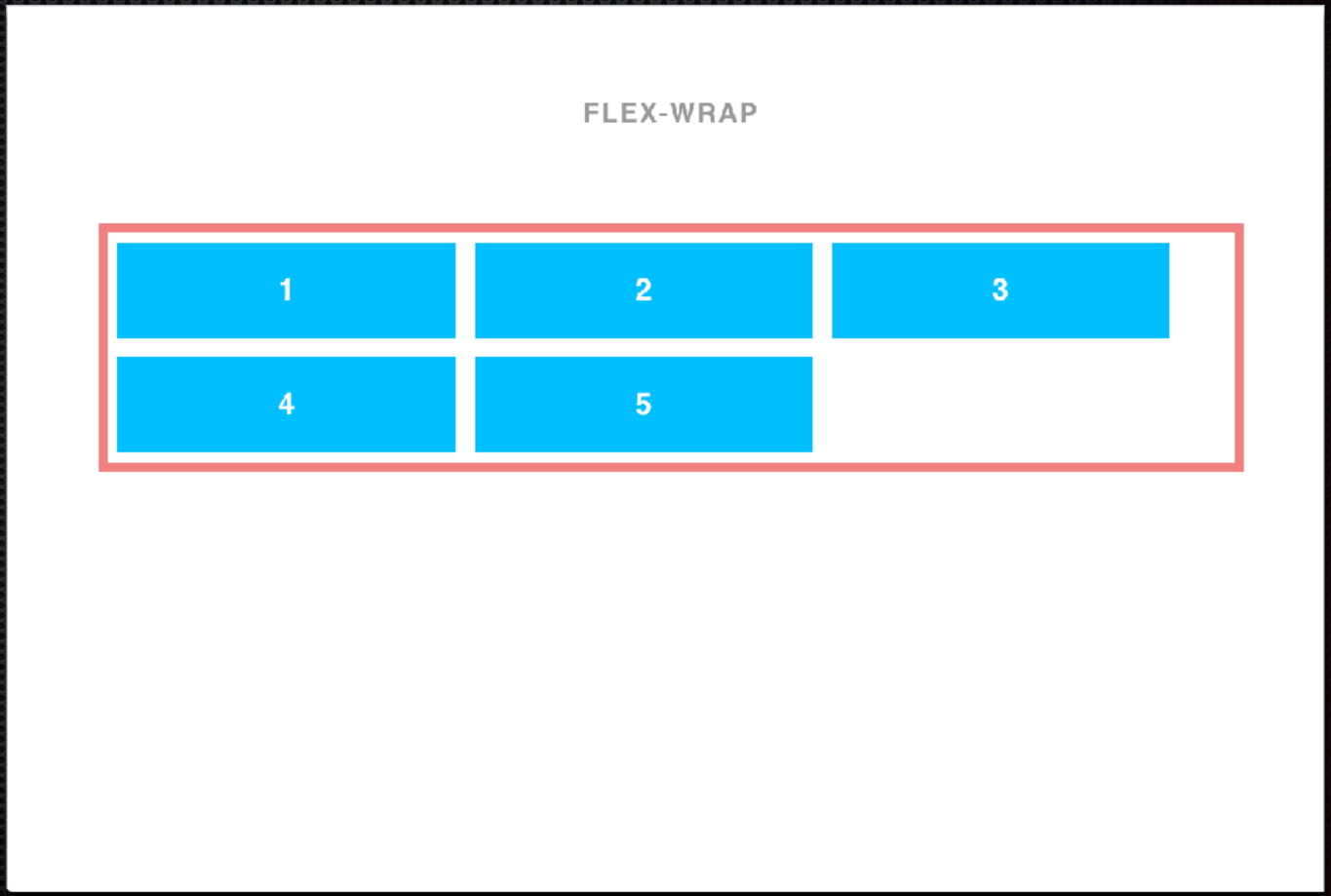
Flexbox

```
.container {
  flex-direction:
    row |
    row-reverse |
    column |
    column-reverse;
}
```



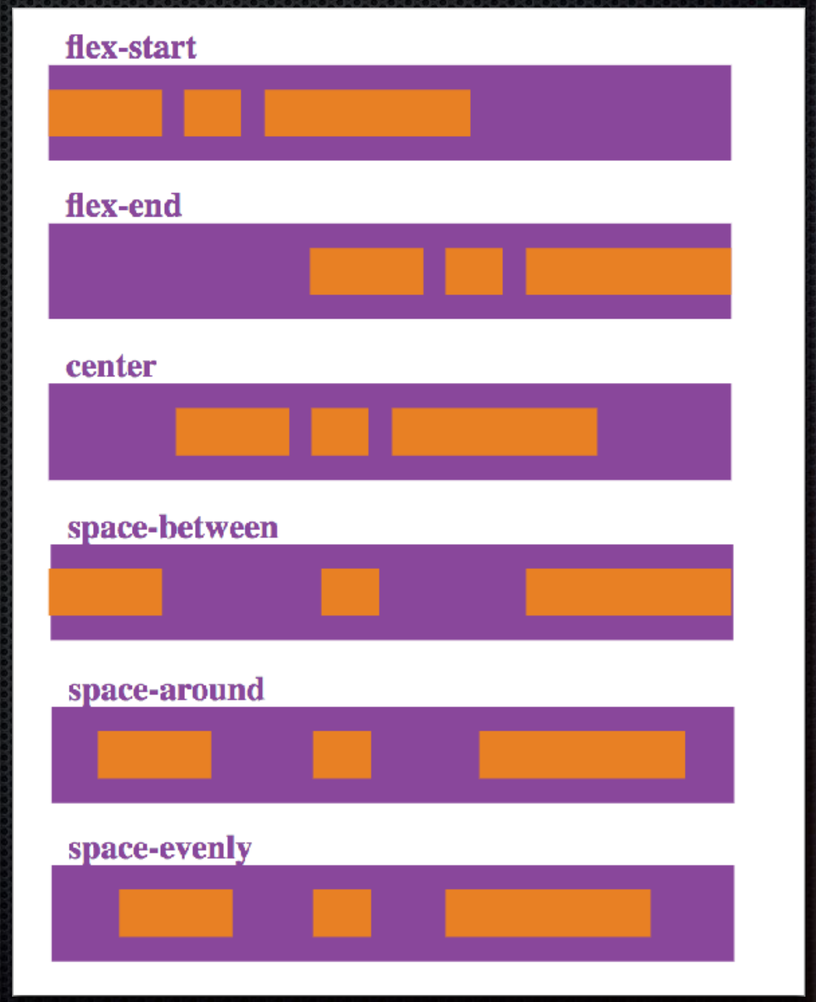
Flexbox

```
.container{
  flex-wrap:
    nowrap |
    wrap |
    wrap-reverse;
}
```



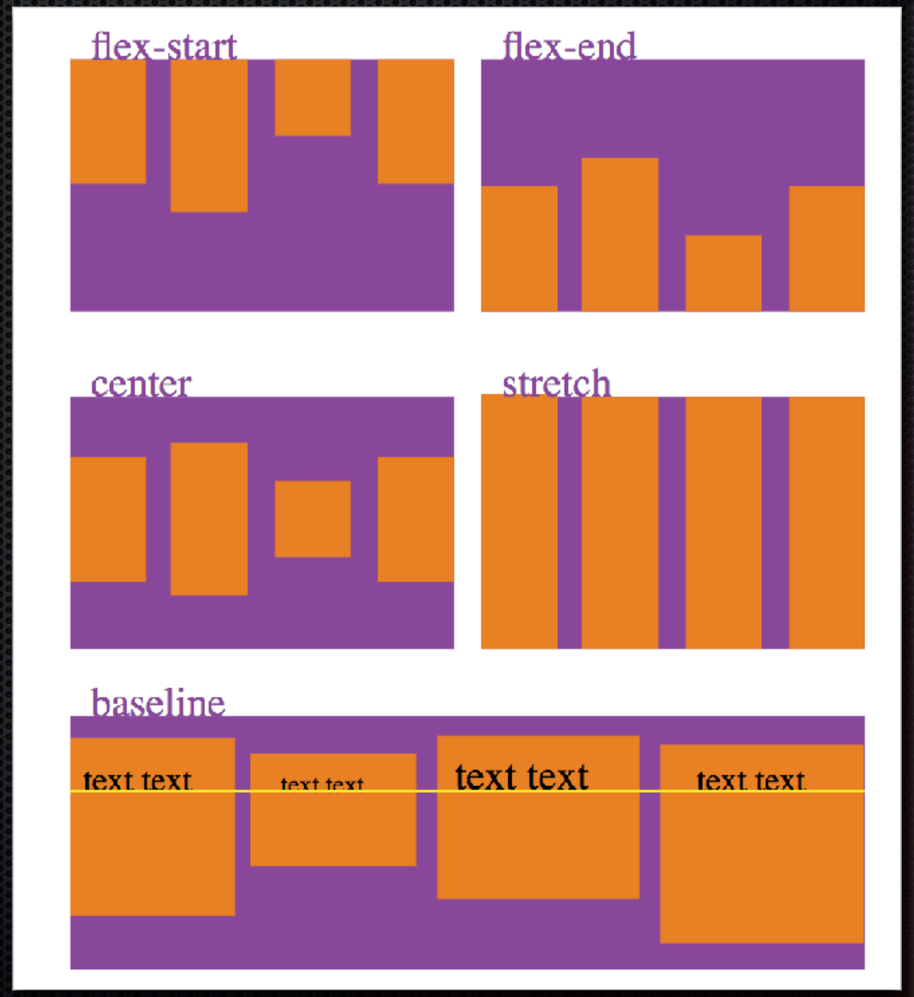
Flexbox

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



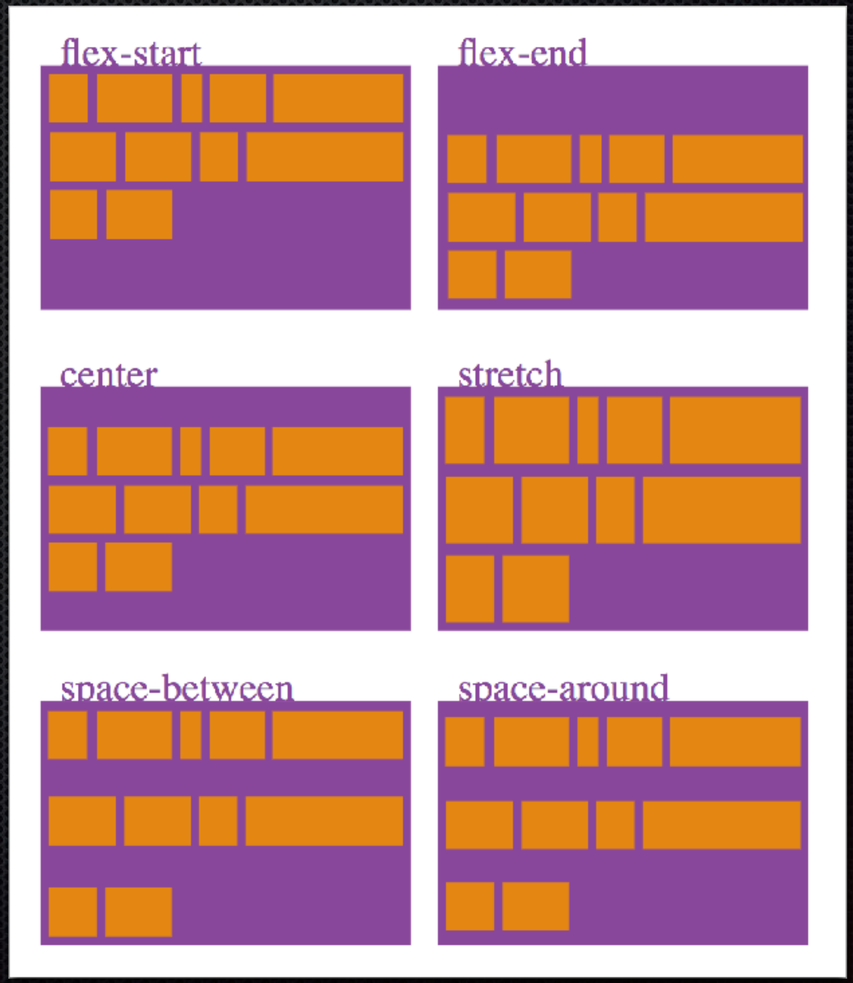
Flexbox

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



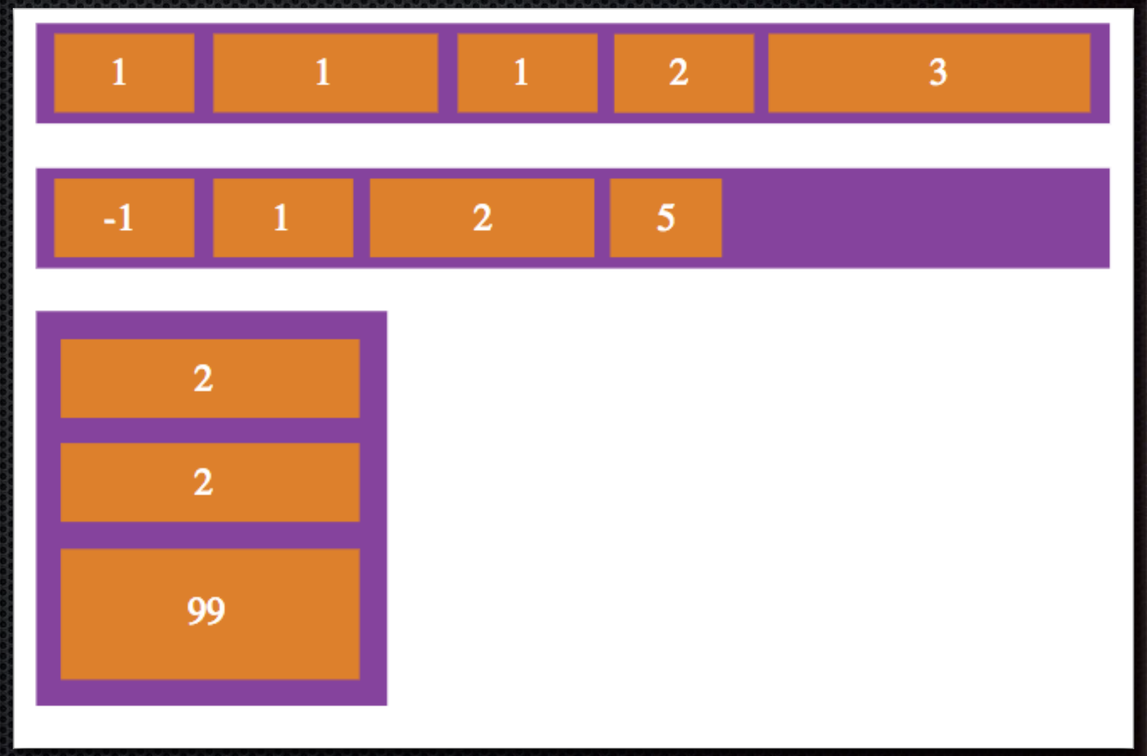
Flexbox

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



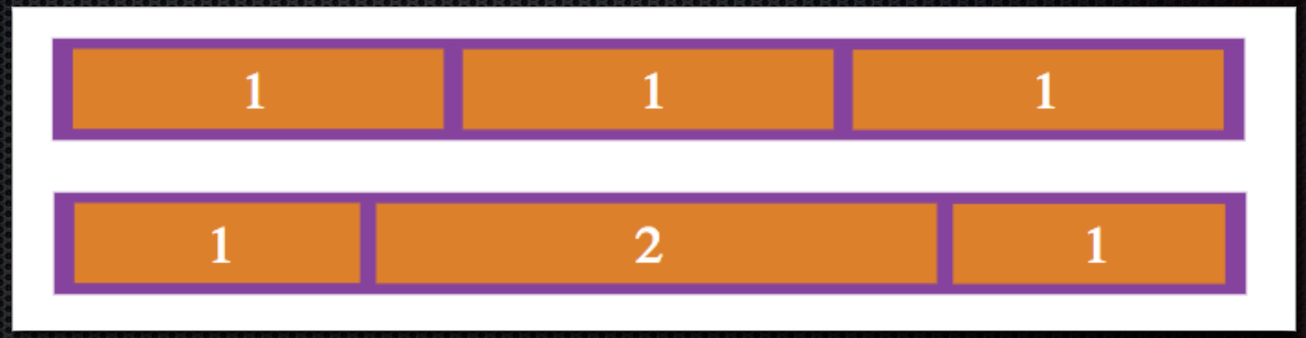
Flexbox

```
.item {
  order: <integer>;
  /* default is 0 */
}
```



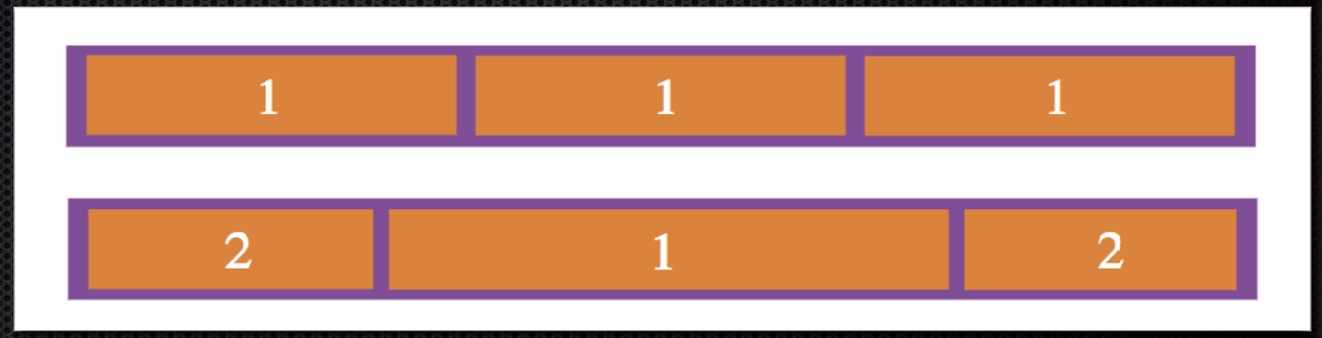
Flexbox

```
.item {
  flex-grow: <number>;
  /* default is 0 */
}
```



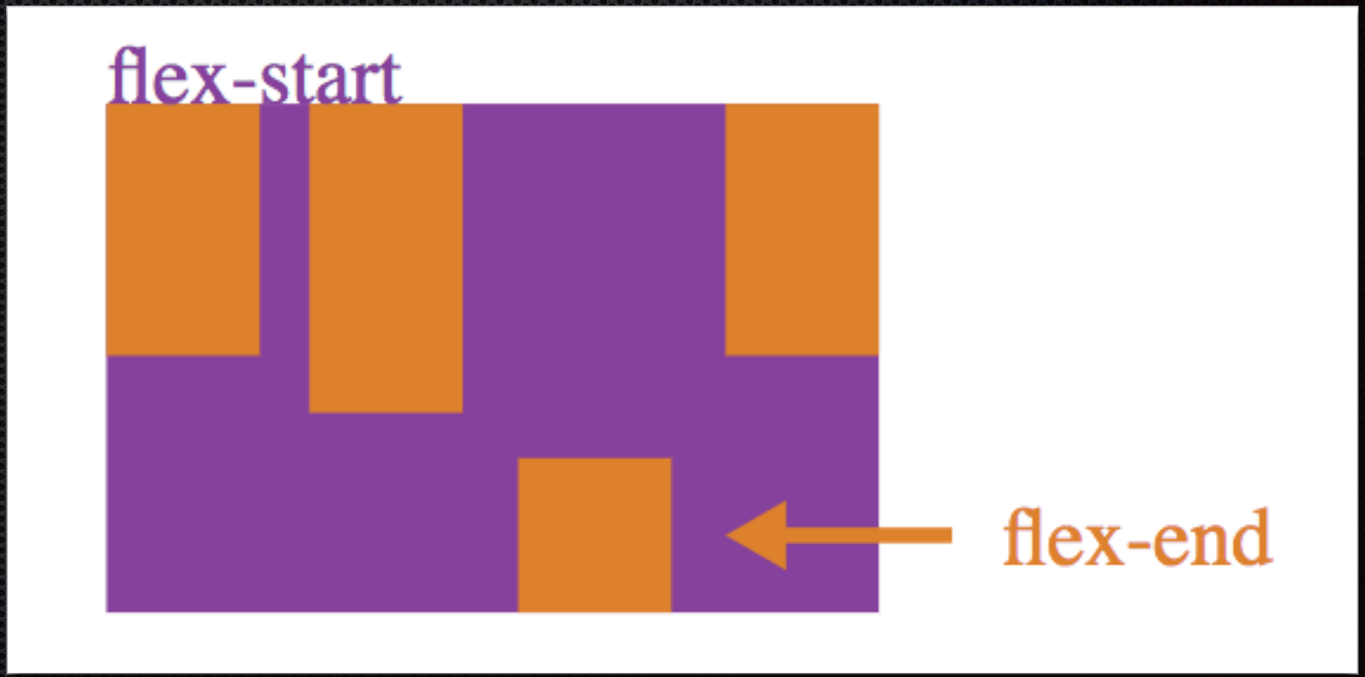
Flexbox

```
.item {
  flex-shrink: <number>;
  /* default 1 */
}
```



Flexbox

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



Flexbox

- Container
  - flex-direction
  - flex-wrap
  - justify-content
  - align-items
  - align-content
- Items
  - order
  - flex-grow
  - flex-shrink
  - align-self

Agenda

- ✓ Writing Better CSS
- ✓ Media Queries
- ✓ Animations
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- > Demos

Demos

ANY
QUESTIONS
?