

A light blue background with a network pattern of white dots connected by thin white lines, creating a mesh-like structure.

# 기초 웹

22 Winter CNU 기초 스터디

21 남정연

21 박준서

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# CSS Layouts

- Normal Flow
- Display Property
- Flexbox
- Grid
- Floats
- Positioning
- Table Layout
- ~~- Multiple-column Layout~~

# CSS Floats

## Simple float example

Float

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla luctus aliquam dolor, eu lacinia lorem placerat vulputate. Duis felis orci, pulvinar id metus ut, rutrum luctus orci. Cras porttitor imperdiet nunc, at ultricies tellus laoreet sit amet.

Sed auctor cursus massa at porta. Integer ligula ipsum, tristique sit amet orci vel, viverra egestas ligula. Curabitur vehicula tellus neque, ac ornare ex malesuada et. In vitae convallis lacus. Aliquam erat volutpat. Suspendisse ac imperdiet turpis. Aenean

finibus sollicitudin eros pharetra congue. Duis ornare egestas augue ut luctus. Proin blandit quam nec lacus varius commodo et a urna. Ut id ornare felis, eget fermentum sapien.

Nam vulputate diam nec tempor bibendum. Donec luctus augue eget malesuada ultrices. Phasellus turpis est, posuere sit amet dapibus ut, facilisis sed est. Nam id risus quis ante semper consectetur eget aliquam lorem. Vivamus tristique elit dolor, sed pretium metus suscipit vel. Mauris ultricies lectus sed lobortis finibus. Vivamus eu urna eget velit cursus viverra quis vestibulum sem. Aliquam tincidunt eget purus in interdum. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.

```
.box {  
  float: left;  
  margin-right: 15px;  
  width: 150px;  
  height: 100px;  
  border-radius: 5px;  
  background-color: rgb(207,232,220);  
  padding: 1em;  
}
```

# CSS Floats

## Simple float example

Float

>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla luctus aliquam dolor, eu lacinia lorem placerat vulputate. Duis felis orci, pulvinar id metus ut, rutrum luctus orci. Cras porttitor imperdiet nunc, at ultricies tellus laoreet sit amet.

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```
body {  
  width: 90%;  
  max-width: 900px;  
  margin: 0 auto;  
  font: .9em/1.2 Arial, Helvetica, sans-serif  
}  
  
.box {  
  width: 150px;  
  height: 100px;  
  border-radius: 5px;  
  background-color: ■rgb(207,232,220);  
  padding: 1em;  
}  
  
.box {  
  float: left;  
  width: 150px;  
  height: 100px;  
  border-radius: 5px;  
  background-color: ■rgb(207,232,220);  
  padding: 1em;  
  margin-left: 10px;  
}  
  
.special {  
  background-color: ■rgb(79,185,227);  
  padding: 10px;  
  color: ■#fff;  
}
```

# CSS Floats

## Simple float example

Float

>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla luctus aliquam dolor, eu lacinia lorem placerat vulputate. Duis felis orci, pulvinar id metus ut, rutrum luctus orci. Cras porttitor imperdiet nunc, at ultricies tellus laoreet sit amet.

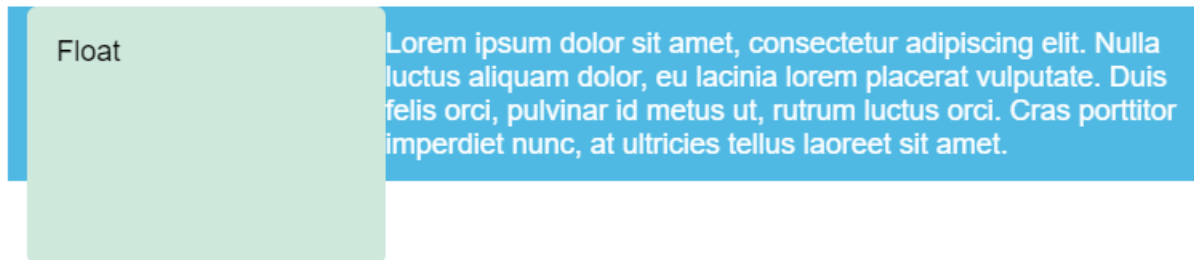
Sed auctor cursus massa at porta. Integer ligula ipsum, tristique sit amet orci vel, viverra egestas ligula. Curabitur vehicula tellus neque, ac ornare ex malesuada et. In vitae convallis lacus. Aliquam erat volutpat. Suspendisse ac imperdiet turpis. Aenean finibus sollicitudin eros pharetra congue. Duis ornare egestas augue ut luctus. Proin blandit quam nec lacus varius commodo et a urna. Ut id ornare felis, eget fermentum sapien.

Nam vulputate diam nec tempor bibendum. Donec luctus augue eget malesuada ultrices. Phasellus turpis est, posuere sit amet dapibus ut, facilisis sed est. Nam id risus quis ante semper consectetur eget aliquam lorem. Vivamus tristique elit dolor, sed pretium metus suscipit vel. Mauris ultricies lectus sed lobortis finibus. Vivamus eu urna eget velit cursus viverra quis vestibulum sem. Aliquam tincidunt eget purus in interdum. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.

```
body {  
  width: 90%;  
  max-width: 900px;  
  margin: 0 auto;  
  font: .9em/1.2 Arial, Helvetica, sans-serif  
}  
  
.box {  
  width: 150px;  
  height: 100px;  
  border-radius: 5px;  
  background-color: ■rgb(207,232,220);  
  padding: 1em;  
}  
  
.box {  
  float: left;  
  width: 150px;  
  height: 100px;  
  border-radius: 5px;  
  background-color: ■rgb(207,232,220);  
  padding: 1em;  
  margin-left: 10px;  
}  
  
.special {  
  background-color: ■rgb(79,185,227);  
  padding: 10px;  
  color: ■#fff;  
}
```

# CSS Floats

## Simple float example



Sed auctor cursus massa at porta. Integer ligula ipsum, tristique sit amet orci vel, viverra egestas ligula. Curabitur vehicula tellus neque, ac ornare ex malesuada et. In vitae convallis lacus. Aliquam erat volutpat. Suspendisse ac imperdiet turpis. Aenean finibus sollicitudin eros pharetra congue. Duis ornare egestas augue ut luctus. Proin blandit quam nec lacus varius commodo et a urna. Ut id ornare felis, eget fermentum sapien.

Nam vulputate diam nec tempor bibendum. Donec luctus augue eget malesuada ultrices. Phasellus turpis est, posuere sit amet dapibus ut, facilisis sed est. Nam id risus quis ante semper consectetur eget aliquam lorem. Vivamus tristique elit dolor, sed pretium metus suscipit vel. Mauris ultricies lectus sed lobortis finibus. Vivamus eu urna eget velit cursus viverra quis vestibulum sem. Aliquam tincidunt eget purus in interdum. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.

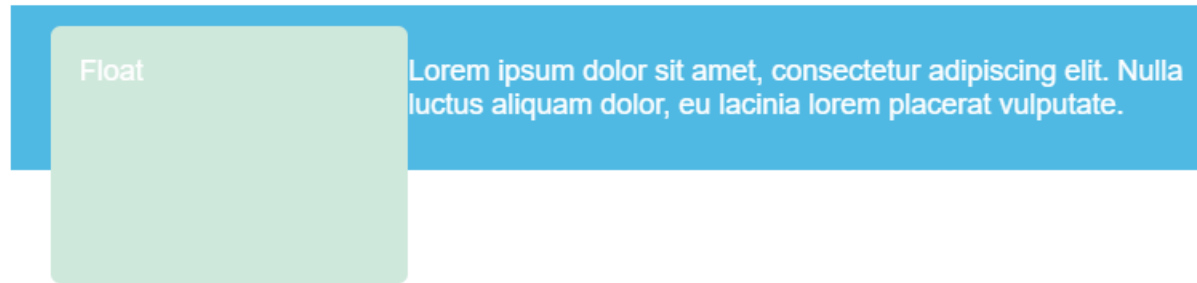
```
.cleared {  
  clear: left;  
}
```

- `left`: Clear items floated to the left.
- `right`: Clear items floated to the right.
- `both`: Clear any floated items, left or right.



# CSS Floats

## Simple float example



Sed auctor cursus massa at porta. Integer ligula ipsum, tristique sit amet orci vel, viverra egestas ligula. Curabitur vehicula tellus neque, ac ornare ex malesuada et. In vitae convallis lacus. Aliquam erat volutpat. Suspendisse ac imperdiet turpis. Aenean finibus sollicitudin eros pharetra congue. Duis ornare egestas augue ut luctus. Proin blandit quam nec lacus varius commodo et a urna. Ut id ornare felis, eget fermentum sapien.

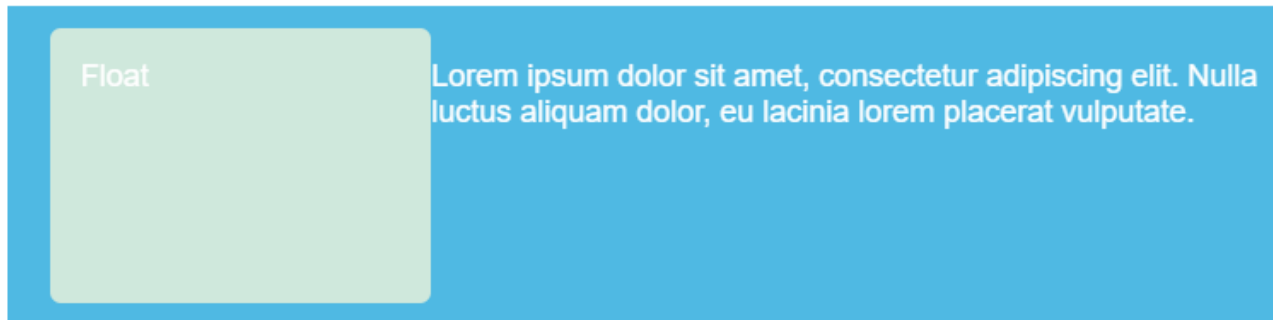
Nam vulputate diam nec tempor bibendum. Donec luctus augue eget malesuada ultrices. Phasellus turpis est, posuere sit amet dapibus ut, facilisis sed est. Nam id risus quis ante semper consectetur eget aliquam lorem. Vivamus tristique elit dolor, sed pretium metus suscipit vel. Mauris ultricies lectus sed lobortis finibus. Vivamus eu urna eget velit cursus viverra quis vestibulum sem. Aliquam tincidunt eget purus in interdum. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.

```
<div class="wrapper">
  <div class="box">Float</div>

  <p>Lorem ipsum dolor sit amet, cons</p>
</div>
```

# CSS Floats

## Simple float example



Sed auctor cursus massa at porta. Integer ligula ipsum, tristique sit amet orci vel, viverra egestas ligula. Curabitur vehicula tellus neque, ac ornare ex malesuada et. In vitae convallis lacus. Aliquam erat volutpat. Suspendisse ac imperdiet turpis. Aenean finibus sollicitudin eros pharetra congue. Duis ornare egestas augue ut luctus. Proin blandit quam nec lacus varius commodo et a urna. Ut id ornare felis, eget fermentum sapien.

Nam vulputate diam nec tempor bibendum. Donec luctus augue eget malesuada ultrices. Phasellus turpis est, posuere sit amet dapibus ut, facilisis sed est. Nam id risus quis ante semper consectetur eget aliquam lorem. Vivamus tristique elit dolor, sed pretium metus suscipit vel. Mauris ultricies lectus sed lobortis finibus. Vivamus eu urna eget velit cursus viverra quis vestibulum sem. Aliquam tincidunt eget purus in interdum. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.

```
<div class="wrapper">
  <div class="box">Float</div>

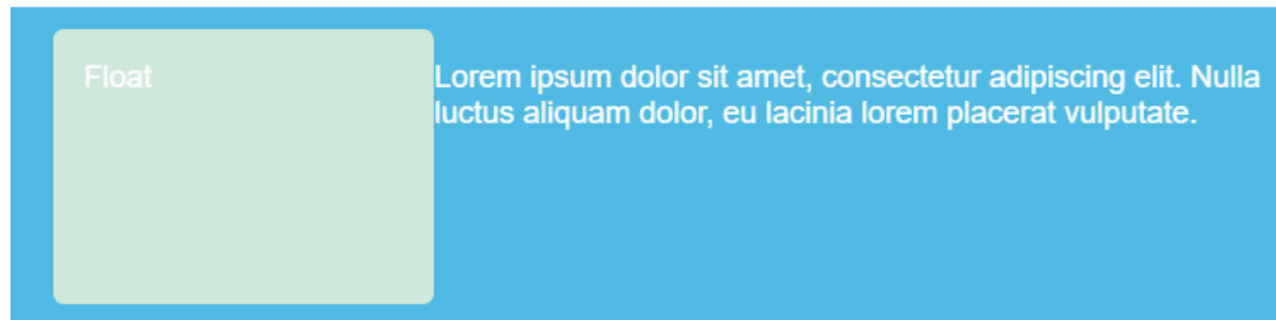
  <p>Lorem ipsum dolor sit amet, consectetur ad

  <div class="cleared"></div>
</div>
```



# Clearfix hack

## Simple float example



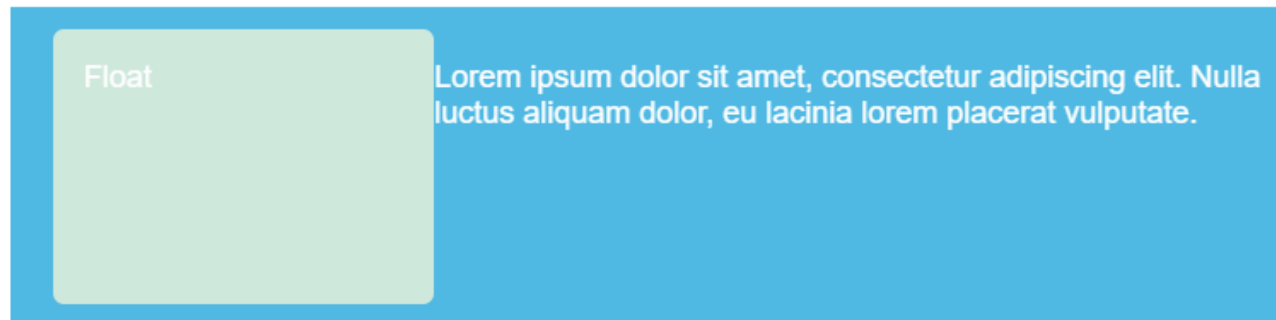
Sed auctor cursus massa at porta. Integer ligula ipsum, tristique sit amet orci vel, viverra egestas ligula. Curabitur vehicula tellus neque, ac ornare ex malesuada et. In vitae convallis lacus. Aliquam erat volutpat. Suspendisse ac imperdiet turpis. Aenean finibus sollicitudin eros pharetra congue. Duis ornare egestas augue ut luctus. Proin blandit quam nec lacus varius commodo et a urna. Ut id ornare felis, eget fermentum sapien.

Nam vulputate diam nec tempor bibendum. Donec luctus augue eget malesuada ultrices. Phasellus turpis est, posuere sit amet dapibus ut, facilisis sed est. Nam id risus quis ante semper consectetur eget aliquam lorem. Vivamus tristique elit dolor, sed pretium metus suscipit vel. Mauris ultricies lectus sed lobortis finibus. Vivamus eu urna eget velit cursus viverra quis vestibulum sem. Aliquam tincidunt eget purus in interdum. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.

```
.wrapper::after {  
  content: "";  
  clear: both;  
  display: block;  
}
```

# Using overflow

## Simple float example



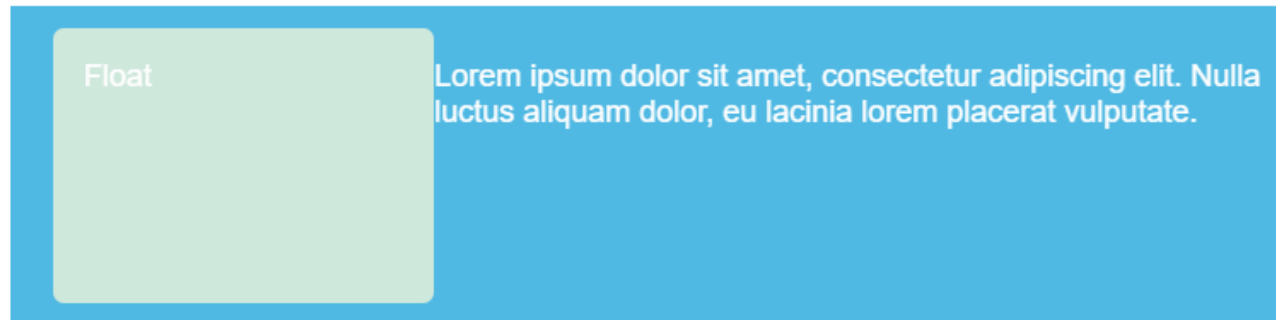
Sed auctor cursus massa at porta. Integer ligula ipsum, tristique sit amet orci vel, viverra egestas ligula. Curabitur vehicula tellus neque, ac ornare ex malesuada et. In vitae convallis lacus. Aliquam erat volutpat. Suspendisse ac imperdiet turpis. Aenean finibus sollicitudin eros pharetra congue. Duis ornare egestas augue ut luctus. Proin blandit quam nec lacus varius commodo et a urna. Ut id ornare felis, eget fermentum sapien.

Nam vulputate diam nec tempor bibendum. Donec luctus augue eget malesuada ultrices. Phasellus turpis est, posuere sit amet dapibus ut, facilisis sed est. Nam id risus quis ante semper consectetur eget aliquam lorem. Vivamus tristique elit dolor, sed pretium metus suscipit vel. Mauris ultricies lectus sed lobortis finibus. Vivamus eu urna eget velit cursus viverra quis vestibulum sem. Aliquam tincidunt eget purus in interdum. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.

```
.wrapper {  
  background-color: rgb(79,185,227);  
  padding: 10px;  
  color: #fff;  
  overflow: auto;  
}
```

# Display: flow-root

## Simple float example



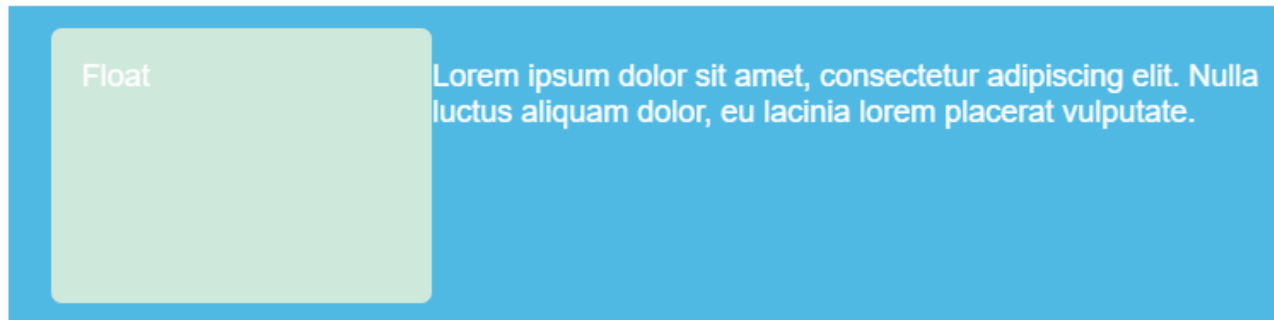
Sed auctor cursus massa at porta. Integer ligula ipsum, tristique sit amet orci vel, viverra egestas ligula. Curabitur vehicula tellus neque, ac ornare ex malesuada et. In vitae convallis lacus. Aliquam erat volutpat. Suspendisse ac imperdiet turpis. Aenean finibus sollicitudin eros pharetra congue. Duis ornare egestas augue ut luctus. Proin blandit quam nec lacus varius commodo et a urna. Ut id ornare felis, eget fermentum sapien.

Nam vulputate diam nec tempor bibendum. Donec luctus augue eget malesuada ultrices. Phasellus turpis est, posuere sit amet dapibus ut, facilisis sed est. Nam id risus quis ante semper consectetur eget aliquam lorem. Vivamus tristique elit dolor, sed pretium metus suscipit vel. Mauris ultricies lectus sed lobortis finibus. Vivamus eu urna eget velit cursus viverra quis vestibulum sem. Aliquam tincidunt eget purus in interdum. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.

```
.wrapper {  
  background-color: rgb(79,185,227);  
  padding: 10px;  
  color: #fff;  
  display: flow-root;  
}
```

# Display: flow-root

## Simple float example



Sed auctor cursus massa at porta. Integer ligula ipsum, tristique sit amet orci vel, viverra egestas ligula. Curabitur vehicula tellus neque, ac ornare ex malesuada et. In vitae convallis lacus. Aliquam erat volutpat. Suspendisse ac imperdiet turpis. Aenean finibus sollicitudin eros pharetra congue. Duis ornare egestas augue ut luctus. Proin blandit quam nec lacus varius commodo et a urna. Ut id ornare felis, eget fermentum sapien.

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```
.wrapper {  
  background-color: rgb(79,185,227);  
  padding: 10px;  
  color: #fff;  
  display: flow-root;  
}
```

# Static positioning

```
.positioned {  
  position: static;  
  background: yellow;  
}
```


# Relative positioning

## Relative positioning

I am a basic block level element. My adjacent block level elements sit on new lines below me.

By default we span 100% of the width of our parent element, and we are as tall as our child content. Our total width and height is our content + padding + border width/height.

We are separated by our margins. Because of margin collapsing, we are separated by the width of one of our margins, not both.

inline elements **like this one** and **this one** sit on the same line as one another, and adjacent text nodes, if there is space on the same line. Overflowing inline elements **wrap onto a new line if possible — like this one containing text**, or just go on to a new line if not, much like this image will do: 

```
position: relative;
```

```
top: 30px;  
left: 30px;
```




# Absolute positioning

## Relative positioning

I am a basic block level element. My adjacent block level elements sit on new lines below me.

By default we span 100% of the width of our parent element, and we are as tall as our child content. Our total width and height is our content + padding + border width/height.

We are separated by our margins. Because of margin collapsing, we are separated by the width of one of our margins, not both.

inline elements **like this one** and **this one** sit on the same line as one another, and adjacent text nodes, if there is space on the same line. Overflowing inline elements **wrap onto a new line if possible — like this one containing text**, or just go on to a new line if not, much like this image will do: 

```
position: absolute;
```

```
top: 30px;  
left: 30px;
```

# Containing block

## Identifying the containing block

The process for identifying the containing block depends entirely on the value of the element's `position` property:

1. If the `position` property is `static`, `relative`, or `sticky`, the containing block is formed by the edge of the *content box* of the nearest ancestor element that is either **a block container** (such as an inline-block, block, or list-item element) or **establishes a formatting context** (such as a table container, flex container, grid container, or the block container itself).
2. If the `position` property is `absolute`, the containing block is formed by the edge of the *padding box* of the nearest ancestor element that has a `position` value other than `static` (`fixed`, `absolute`, `relative`, or `sticky`).
3. If the `position` property is `fixed`, the containing block is established by the [viewport](#) (in the case of continuous media) or the page area (in the case of paged media).
4. If the `position` property is `absolute` or `fixed`, the containing block may also be formed by the edge of the *padding box* of the nearest ancestor element that has the following:
  1. A [transform](#) or [perspective](#) value other than `none`
  2. A [will-change](#) value of `transform` or `perspective`
  3. A [filter](#) value other than `none` or a `will-change` value of `filter` (only works on Firefox).
  4. A [contain](#) value of `paint` (e.g. `contain: paint;`)

**Note:** The containing block in which the root element (`<html>`) resides is a rectangle called the **initial containing block**. It has the dimensions of the viewport (for continuous media) or the page area (for paged media).

# Containing block

## Identifying the containing block

The process for identifying the containing block depends entirely on the value of the element's `position` property:

1. If the `position` property is `static`, `relative`, or `sticky`, the containing block is formed by the edge of the *content box* of the nearest ancestor element that is either **a block container** (such as an inline-block, block, or list-item element) or **establishes a formatting context** (such as a table container, flex container, grid container, or the block container itself).
2. If the `position` property is `absolute`, the containing block is formed by the edge of the *padding box* of the nearest ancestor element that has a `position` value other than `static` (`fixed`, `absolute`, `relative`, or `sticky`).
3. If the `position` property is `fixed`, the containing block is established by the [viewport](#) (in the case of continuous media) or the page area (in the case of paged media).
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  1. A [transform](#) or [perspective](#) value other than `none`
  2. A [will-change](#) value of `transform` or `perspective`
  3. A [filter](#) value other than `none` or a `will-change` value of `filter` (only works on Firefox).
  4. A [contain](#) value of `paint` (e.g. `contain: paint;`)

**Note:** The containing block in which the root element (`<html>`) resides is a rectangle called the **initial containing block**. It has the dimensions of the viewport (for continuous media) or the page area (for paged media).

# Z-index

## z-index

Now I'm absolutely positioned relative to the `<body>` element, not the `<main>` element.

I am a basic block level element. My adjacent block level elements sit on new lines below me.

We are separated by our margins. Because of margin collapsing, we are separated by the width of one of our margins, not both.

inline elements **like this one** and **this one** sit on the same line as one another, and adjacent text nodes, if there is space on the same line. Overflowing inline elements **wrap onto a new line if possible — like this one containing text**, or just go on to a new line if not, much like this image will do:



```
z-index: 1;
```

# Fixed positioning

## Fixed positioning

I am a basic block level element. My adjacent block level elements sit on new lines below me.

I'm not positioned any more...

We are separated by our margins. Because of margin collapsing, we are separated by the width of one of our margins, not both.

inline elements **like this one** and **this one** sit on the same line as one another, and adjacent text nodes, if there is space on the same line. Overflowing inline elements **wrap onto a**

```
h1 {  
    position: fixed;  
    top: 0;  
    width: 500px;  
    margin-top: 0;  
    background: white;  
    padding: 10px;  
}
```

# Fixed positioning

## Fixed positioning

collapsing, we are separated by the width of one of our margins, not both.

inline elements **like this one** and **this one** sit on the same line as one another, and adjacent text nodes, if there is space on the same line. Overflowing inline elements **wrap onto a new line if possible** — like this one containing text, or just go on to a new line if not, much like this image will do:



```
h1 {  
    position: fixed;  
    top: 0;  
    width: 500px;  
    margin-top: 0;  
    background: white;  
    padding: 10px;  
}
```



# Sticky positioning

porta. integer ligula ipsum, tristique sit amet orci vel, viverra egestas ligula. Curabitur vehicula tellus neque, ac ornare ex malesuada et. In vitae convallis lacus. Aliquam erat volutpat. Suspendisse ac imperdiet turpis. Aenean finibus sollicitudin eros pharetra congue. Duis ornare egestas augue ut luctus. Proin blandit quam nec lacus varius commodo et a urna. Ut id ornare felis, eget fermentum sapien.

Sticky

```
.positioned {  
  position: sticky;  
  top: 30px;  
  left: 30px;  
}
```

# Sticky positioning

Sticky

Nam vulputate diam nec tempor bibendum. Donec luctus augue eget malesuada ultrices. Phasellus turpis est, posuere sit amet dapibus ut, facilisis sed est. Nam id risus quis ante semper consectetur eget aliquam lorem. Vivamus tristique elit dolor, sed

```
.positioned {  
  position: sticky;  
  top: 30px;  
  left: 30px;  
}
```

# Sticky positioning

Nam vulputate diam nec tempor bibendum. Donec luctus augue eget malesuada ultrices. Phasellus turpis est, posuere sit amet dapibus. **Sticky** Ut, facilisis sed est. Nam id risus quis ante semper consectetur eget aliquam lorem. Vivamus tristique elit dolor, sed pretium metus suscipit vel. Mauris ultricies lectus sed lobortis finibus. Vivamus eu urna eget velit cursus viverra quis vestibulum sem. Aliquam tincidunt eget purus in interdum. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.

```
.positioned {  
  position: sticky;  
  top: 30px;  
  left: 30px;  
}
```

# Sticky positioning



# Sticky positioning



# Sticky positioning





# Media queries

```
@media screen and (min-width: 800px) {  
  .container {  
    margin: 1em 2em;  
  }  
}
```