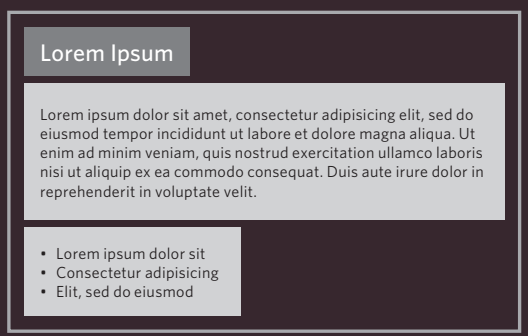
KEY CONCEPTS IN POSITIONING ELEMENTS

BUILDING BLOCKS

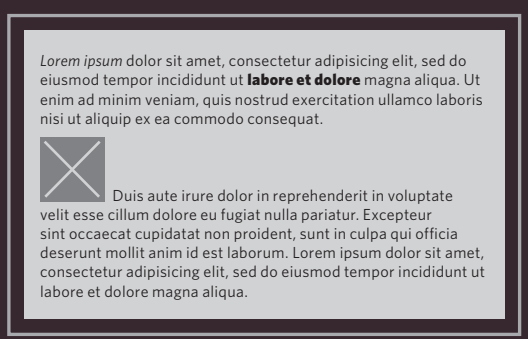
CSS treats each HTML element as if it is in its own box. This box will either be a **block-level** box or an **inline** box.

Block-level boxes start on a new line and act as the main building blocks of any layout, while inline boxes flow between surrounding text. You can control how much space each box takes up by setting the width of the boxes (and sometimes the height, too). To separate boxes, you can use borders, margins, padding, and background colors.

BLOCK-LEVEL ELEMENTS
START ON A NEW LINE
Examples include:
`<h1> <p> <ul> <li>`



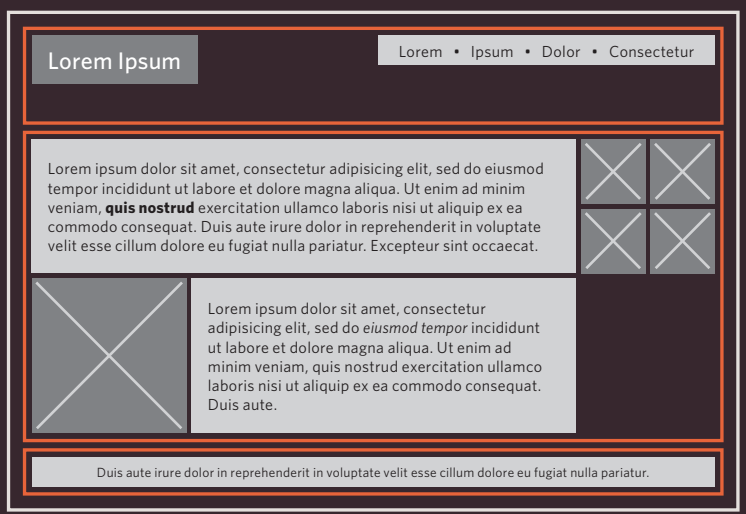
INLINE ELEMENTS
FLOW IN BETWEEN SURROUNDING TEXT
Examples include:
`<img> <b> <i>`



CONTAINING ELEMENTS

If one block-level element sits inside another block-level element then the outer box is known as the **containing** or **parent** element.

It is common to group a number of elements together inside a `<div>` (or other block-level) element. For example, you might group together all of the elements that form the header of a site (such as the logo and the main navigation). The `<div>` element that contains this group of elements is then referred to as the **containing** element.



A box may be nested inside several other block-level elements. The containing element is always the **direct parent** of that element.

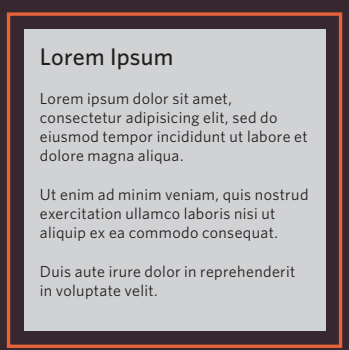
The orange lines in this diagram represent `<div>` elements. The header (containing the logo and navigation) are in one `<div>` element, the main content of the page is in another, and the footer is in a third. The `<body>` element is the containing element for these three `<div>` elements. The second `<div>` element is the containing element for two paragraphs of Latin text and images (represented by crossed squares).

CONTROLLING THE POSITION OF ELEMENTS

CSS has the following positioning schemes that allow you to control the layout of a page: normal flow, relative positioning, and absolute positioning. You specify the positioning scheme using the `position` property in CSS. You can also float elements using the `float` property.

NORMAL FLOW

Every block-level element appears on a new line, causing each item to appear lower down the page than the previous one. Even if you specify the width of the boxes and there is space for two elements to sit side-by-side, they will not appear next to each other. This is the default behavior (unless you tell the browser to do something else).



The paragraphs appear one after the other, vertically down the page.

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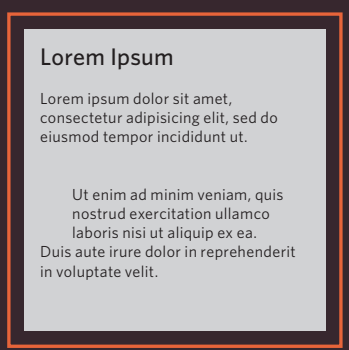
RELATIVE POSITIONING

This moves an element from the position it would be in normal flow, shifting it to the top, right, bottom, or left of where it would have been placed. This does not affect the position of surrounding elements; they stay in the position they would be in in normal flow.



The second paragraph has been pushed down and right from where it would otherwise have been in normal flow.

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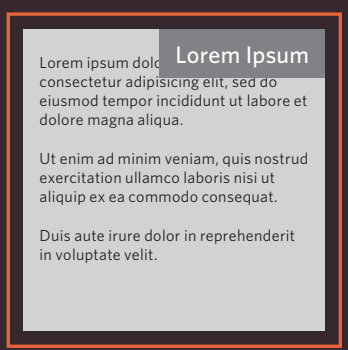
ABSOLUTE POSITIONING

This positions the element in relation to its containing element. It is taken out of normal flow, meaning that it does not affect the position of any surrounding elements (as they simply ignore the space it would have taken up). Absolutely positioned elements move as users scroll up and down the page.



The heading is positioned to the top right, and the paragraphs start at the top of the screen (as if the heading were not there).

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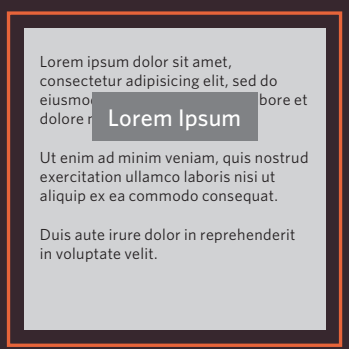
To indicate where a box should be positioned, you may also need to use box offset properties to tell the browser how far from the top or bottom and left or right it should be placed. (You will meet these when we introduce the positioning schemes on the following pages.)

FIXED POSITIONING

This is a form of absolute positioning that positions the element in relation to the browser window, as opposed to the containing element. Elements with fixed positioning do not affect the position of surrounding elements and they do not move when the user scrolls up or down the page.



The heading has been placed in the center of the page and 25% from the top of the screen. (The rest appears in normal flow.)

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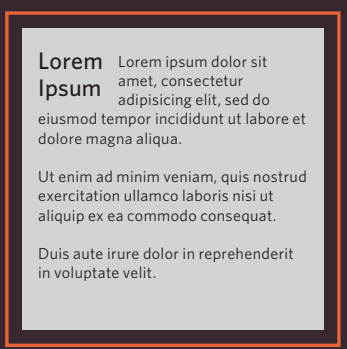
FLOATING ELEMENTS

Floating an element allows you to take that element out of normal flow and position it to the far left or right of a containing box. The floated element becomes a block-level element around which other content can flow.



The heading has been floated to the left, allowing the paragraphs of text to flow around it.

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When you move any element from normal flow, boxes can overlap. The `z-index` property allows you to control which box appears on top.