About Hyperlinks (the 'H' in HTML)

Hyperlinks, or more simply links, enable users to click or tap their way from website to website, web page to web page, and from one section of a web page to another.

Hyperlinks typically have the following format:

This is an example of a link placed on text.

```
Hello, please <a href="destination">here</a>.
```

This is an example of a link placed on an image.

```
Hello, please click on this <a href="destination"><img src="assets/img/cat.jpg"
class="img-fluid" alt="cat picture">image</a>.
```

Hyperlink Destinations

Different website, same web browser tab

In this example, the linked-to web page replaces the current web page in the user's web browser tab.

```
<a href="https://www.ibat.ie/courses/web-design-diploma-course.html">IBAT Web
Design Course</a>.
```

Different website, new web browser tab

In this example, the linked-to web page opens in a new tab of the user's web browser. The original page is still displayed in a web browser tab.

```
<a href="https://www.ibat.ie/courses/web-design-diploma-course.html"
target="_blank">IBAT Web Design Course</a>.
```

Same website, different web page

In ths example, the user is taken to a different web page of the same website.

```
Read about our <a href="about-us.html">team members</a>.
```

Same web page, different section

In this example, the user is taken to a different section of the web page.

```
Read about our <a href="#summary">Summary</a>.
…
<h3 id="summary">Summary</h3>
```

Four Hyperlink States, Two Hyperlink Styles

Hyperlinks have four possible states. In most cases, it is enough to style the links for just two cases by treating the four possible states as two sets of pairs.

- **Unvisited**: The link has not been clicked/tapped by the user.

- **Visited**: The link has not been previously clicked/tapped by user.

- **Hover**: The user is hovering the mouse over the link (desktop displays only).

- **Active**: The link has just been clicked/tapped by the user.

Typically, you will want to highlight links with a different colour from their surrounding text. For example:

```
a:link, a:visited { color: blue }
```

Typically, you will want to highlight the hover and active states with a CSS style effect.

For example, with a change of text colour

```
a:link, a:visited { color: blue }
a:hover, a:active { color: red }
```

Or with a change of background and text colours:

```
a:link, a:visited { color: blue }
a:hover, a:active { color: white; background-color: red }
```

Using Non-default Underline Styles

By default, hyperlinks in text appear with an underline.

Web browsers achieve this effect by automatically assigning the following CSS property-value to all four hyperlink states:

```
a:link, a:visited, a:hover, a:active { text-decoration: underline }
```

A commonly-used web design approach is to remove the default underline for the hover and active states. For example:

```
a:link, a:visited { color: blue }
a:hover, a:active { color: red; text-decoration: none }
```

Except for the special cases of hyperlinks in menus and as buttons, the visited and unvisited states of hyperlinks within text should always be underlined.

Using Non-default Underline Styles

A more visually attractive alternative to the default underline created by the text-decoration property is to apply a bottom border with padding to the hyperlnked text. For example:

```
a:link, a:visited {
      color: blue;
      text-decoration: none;
      border-bottom: solid 1px red;
      padding-bottom: 2px
}

a:hover, a:active {
      color: red;
      text-decoration: none;
}
```

You can apply different hyperlink styles to different elements on the same web page.

```
/* Hyperlinks in sub-headings */
h3 a:link, h3 a:visited {
      ...
}

h3 a:hover, h3 a:active {
      ...
}

/* Hyperlinks in text paragraphs */
p a:link, p a:visited {
      ...
}

p a:hover, p a:active {
      ...
}
```

Hyperlinks and Images

Typically, you will not want underlines or borders to appear around hyperinked images. The solution is create aa new class and assign it to all hyperlinks around images on web pages.

```
a.img-link {
     text-decoration: none;
     border: none;
}
```

```
<a href="boo.html" class="img-link"><img src="assets/img/logo.png" alt="sample image" class="img-fluid"></a>
```

Hyperlinks Styled as Buttons

Links can be styled to look like 'click/tap me' buttons. Such links are styled differently to links within paragraphs of text.

- They do not have underlines.

- They have padding all around them to create the button appearance.

- They have bottom margins to push down whatever content follows them, and often top, left and right margins too.

- They have borders and, typically background colours too.

- Their corners can be square, rounded or semi-circular.

- Their CSS class names typically begin with 'btn'. For example, btn-solid, btn-rounded or btn-ghost.

```
a.btn {
     display: inline-block;
     padding: 15px 25px;
     text-decoration: none;
}
```

```
a.btn-blue {
     background-color: blue;
     color: #fff;
}
```

```
a.btn-blue:link, a.btn-blue:visited {
     background-color: darkblue;
     color: #fff;
}
```