

## Important HTML Elements

<b>Title tag</b> <pre>&lt;head&gt;   &lt;title&gt;Page Title&lt;/title&gt; &lt;/head&gt;</pre>	<b>★ Best Practices</b> <ul style="list-style-type: none"> <li>★ No longer than 60-80 characters</li> <li>★ Important keywords near the beginning</li> <li>★ Each title should be unique</li> </ul>
<b>Meta Description Tag</b> <pre>&lt;head&gt;   &lt;meta name="description"   content="This is an example."&gt; &lt;/head&gt;</pre>	<ul style="list-style-type: none"> <li>★ No longer than 155 characters</li> <li>★ Each description should be unique</li> <li>★ Well written descriptions influence click-through rate</li> </ul>
<b>Image</b> <pre>&lt;img src="img/keyword.jpg" alt="keyword" width="100" height="100"&gt;</pre>	

## Hyperlinks

<b>Text Link</b> <pre>&lt;a href="http://www.example.com/webpage.html"&gt;Keyword in Anchor Text&lt;/a&gt;</pre>	<b>★ Hyperlinking Best Practices</b> <ul style="list-style-type: none"> <li>★ Limit links per page to roughly 150</li> <li>★ Use "nofollow" for paid links and untrusted content</li> <li>★ For image links, the alt attribute serves as anchor text</li> </ul>
<b>NoFollowed Link</b> <pre>&lt;a href="http://www.example.com/webpage.html" rel="nofollow"&gt;Keyword in Anchor Text&lt;/a&gt;</pre>	
<b>Image Link</b> <pre>&lt;a href="http://www.example.com/webpage.html"&gt;&lt;img src="img/keyword.jpg" alt="keyword" width="100" height="100"&gt;&lt;/a&gt;</pre>	

## HTTP Status Codes

<b>200</b>	OK/Success
<b>301</b>	Permanent Redirect
<b>302</b>	Temporary Redirect
<b>404</b>	Not Found
<b>410</b>	Gone (permanently removed)
<b>500</b>	Server Error
<b>503</b>	Unavailable (retry later)
More information at <a href="http://mz.cm/HTTP-codes">http://mz.cm/HTTP-codes</a>	

## Webmaster Tools

<b>Google Webmaster Tools</b>	
<a href="https://www.google.com/webmasters/tools/home">https://www.google.com/webmasters/tools/home</a>	
<b>Bing Webmaster Tools</b>	
<a href="http://www.bing.com/toolbox/webmaster/">http://www.bing.com/toolbox/webmaster/</a>	
<b>Yandex Webmaster Tools</b>	
<a href="http://webmaster.yandex.com/">http://webmaster.yandex.com/</a>	

## Canonicalization

<b>Common Duplicate Homepage URLs</b> <pre>http://www.example.com</pre> <pre>http://example.com</pre> <pre>http://www.example.com/index.html</pre> <pre>http://example.com/index.html</pre> <pre>http://example.com/index.html&amp;sessid=123</pre>	<b>★ Canonicalized URL Best Practices</b> <ul style="list-style-type: none"> <li>★ <code>http://www.example.com/</code></li> <li>★ <code>rel="canonical"</code></li> <li>★ <code>&lt;link href="http://www.example.com/" rel="canonical" /&gt;</code></li> </ul> <p>More information at <a href="http://mz.cm/canonical">http://mz.cm/canonical</a></p>
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## URL Best Practices

### Common URL Elements

`http://store.example.com/category/keyword?id=123#top`

**1 2 3 4 5 6 7 8**

1. Protocol
2. Subdomain
3. Root Domain
4. Top-Level Domain
5. Subfolder/Path
6. Page
7. Parameter
8. Named Anchor

### SEO Tips for URLs

- Use descriptive keywords in URLs
- Watch for duplicate content when using multiple parameters
- When possible, place content on the same subdomain to preserve domain authority
- ★ **Recommended:** `http://example.com/blog`
- Less Ideal:** `http://blog.example.com`

## Robot Control Syntax

### Robots.txt

Location: <http://example.com/robots.txt>

User-agent: googlebot

Disallow: /no-google.html

Sitemap: <http://example.com/sitemap.xml>

More information at <http://www.robotstxt.org/robotstxt.html>

### X-Robots

Location: Sent in the HTTP headers

X-Robots-Tag: noindex

More information at <http://noarchive.net/xrobots/>

### Meta Robots

Location: In the html <head>

```
<meta name="ROBOT NAME" content="ARGUMENTS" />
```

More information at <http://www.robotstxt.org/meta.html>

### ★ Robots Best Practices

★ While robots.txt may restrict crawling, only Meta Robots and X-Robots will remove URLs from search results.

### Arguments can be:

Nofollow (do not follow links)

Noindex (do not index)

Noarchive (do not archive)

NoODP (Do not show Open Directory Project description)

...Or combined (noindex, nofollow)

If the robots <META> tag is not defined, the default is "INDEX,FOLLOW"

## Sitemap Syntax

### XML Sitemaps

```
<?xml version="1.0" encoding="UTF-8"?>
<urlset xmlns="http://www.sitemaps.org/schemas/sitemap/0.9">
  <url>
    <loc>http://www.example.com/</loc>
    <lastmod>1970-01-01</lastmod>
    <changefreq>monthly</changefreq>
    <priority>0.8</priority>
  </url>
</urlset>
```

### Sitemap Index File

```
<?xml version="1.0" encoding="UTF-8"?>
<sitemapindex xmlns="http://www.sitemaps.org/schemas/sitemap/0.9">
  <sitemap>
    <loc>http://www.example.com/sitemap1.xml.gz</loc>
    <lastmod>2004-10-01T18:23:17+00:00</lastmod>
  </sitemap>
  <sitemap>
    <loc>http://www.example.com/sitemap2.xml.gz</loc>
    <lastmod>2005-01-01</lastmod>
  </sitemap>
</sitemapindex>
```

### Default Locations

<http://www.example.com/sitemap.xml>

<http://www.example.com/sitemap.xml.gz>

<http://www.example.com/sitemap.gz>

### Other Common Sitemap Types:

- Mobile
- News
- Image
- Video

## Important User-agents

### For robots.txt, robots meta tags & X-Robots-Tag

Googlebot (can be used as default for most Google crawlers)

Googlebot-News

Googlebot-Image

Googlebot-Mobile

Googlebot (Mobile Smartphones)

Mediapartners-Google (Mobile AdSense) or Mediapartners

Mediapartners (AdSense)

Bingbot

Baiduspider

Yandexbot

FacebookExternalHit

Rogerbot

### User-agent in HTTP(S) requests

Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)

Googlebot-News

Googlebot-Image/1.0

[various mobile device types] (compatible; Googlebot-Mobile/2.1; +http://www.google.com/bot.html)

Mozilla/5.0 (iPhone; CPU iPhone OS 6\_0 like Mac OS X) AppleWebKit/536.26 (KHTML, like Gecko) Version/6.0 Mobile/10A5376e Safari/8536.25 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)

[various mobile device types] (compatible; Mediapartners-Google/2.1; +http://www.google.com/bot.html)

Mediapartners-Google

Mozilla/5.0 (compatible; bingbot/2.0; +http://www.bing.com/bingbot.htm)

Mozilla/5.0 (compatible; Baiduspider/2.0; +/web/20130307230956/http://www.baidu.com/search/spider.html)

Mozilla/5.0 (compatible; YandexBot/3.0; +http://yandex.com/bots)

facebookexternalhit/1.1 (+http://www.facebook.com/externalhit\_uatext.php)

Mozilla/5.0 (compatible; rogerBot/1.0; UrlCrawler; http://moz.com/help/pro/rogerbot-crawler)

## Important Metadata

### Facebook Open Graph

```
<head>
<meta property="og:title" content="Title Goes Here">
<meta property="og:description" content="description-goes-here">
<meta property="og:type" content="your-content-type-goes-here"> (e.g., "article")
<meta property="og:url" content="http://www.your-site.com/">
<meta property="og:image" content="http://www.your-site.com/image.jpg">
<meta property="og:site_name" content="your-site-name">
<meta property="fb:admins" content="your-Facebook-page-user-ID">
</head>
```

More information at <https://developers.facebook.com/docs/opengraph/>

### Twitter Cards

```
<head>
<meta name="twitter:card" content="summary">
<meta name="twitter:url" content="http://www.example.com/your-url-goes-here/">
<meta name="twitter:title" content="Title Goes Here">
<meta name="twitter:description" content="Your description goes here.">
<meta name="twitter:image" content="http://example.com/image.jpg">
</head>
```

More information at <https://dev.twitter.com/docs/cards>

### Google+

Google+ will extract information from Open Graph properties, title and meta description tags, or Schema.org microdata (recommended).

```
<html itemscope itemtype="http://schema.org/Article">
<head>
<meta itemprop="name" content="Title Goes Here">
<meta itemprop="description" content="Description Goes Here">
<meta itemprop="image" content="http://example.com/image.jpg">
</head>
```

More information at <https://developers.google.com/+web/snippet/>

## Google Authorship & Publisher

	Google+ Authorship	Google+ Publisher
<b>For</b>	author information in Google search results:	businesses, brands, products and organizations:
<b>1</b>	<b>Link your content to your Google+ profile</b>	<b>Link your homepage to your Google+ profile</b>
	<code>&lt;a href="[profile_url]?rel=author"&gt;Google&lt;/a&gt;</code>	<code>&lt;a href="[profile_url]?rel=publisher"&gt;Google&lt;/a&gt;</code>
<b>2</b>	<b>Link back to your site from the 'Contributor' section of your Google+ profile</b>	<b>Link to your website from your Google+ page's profile</b>
	More information at <a href="http://mz.cm/google-author">http://mz.cm/google-author</a>	More information at <a href="http://mz.cm/google-publisher">http://mz.cm/google-publisher</a>

## Pagination

- Use **rel="next"** and **rel="prev"** in the `<head>` section to indicate the relationship between paginated URLs

**First Page** - <http://example.com/article>

```
<link rel="next" href="http://example.com/article?pg=2">
```

**Second Page** - <http://example.com/article?pg=2>

```
<link rel="prev" href="http://example.com/article">
<link rel="next" href="http://example.com/article?pg=3">
```

**Final Page** - <http://example.com/article?pg=3>

```
<link rel="prev" href="http://example.com/article?pg=2">
```

More information at <http://mz.cm/rel-next>

# Targeting Multiple Languages

## Declare language attribute in the HTML element

```
<html lang="fr">
```

## URL Structures for Country & Language Targeting

ccTLDs (Country Level Only)	Subdomains with gTLDs
example.de	de.example.com/
Subdirectories with gTLDs	
example.com/de/	

## rel="alternate" hreflang="x"

Annotate alternate language & country versions of content

### HTML version in <head>

```
<link rel="alternate" hreflang="x-default" href="http://www.example.com/" /> (Specifies Default)
<link rel="alternate" hreflang="de" href="http://example.com/de/" /> (Specifies Language)
<link rel="alternate" hreflang="de-ES" href="http://example.com/de-es/" /> (Specifies Language + Region)
```

### Sitemap version

```
<?xml version="1.0" encoding="UTF-8"?>
<urlset xmlns="http://www.sitemaps.org/schemas/sitemap/0.9"
  xmlns:xhtml="http://www.w3.org/1999/xhtml">
  <url>
    <loc>http://example.com/english</loc>
    <xhtml:link rel="alternate" hreflang="de" href="http://example.com/deutsch/" />
    <xhtml:link rel="alternate" hreflang="en" href="http://example.com/english/" />
  </url>
  <url>
    <loc>http://example.com/deutsch/</loc>
    <xhtml:link rel="alternate" hreflang="en" href="http://example.com/english/" />
    <xhtml:link rel="alternate" hreflang="de" href="http://www.example.com/deutsch/" />
  </url>
</urlset>
```

Popular Languages	Popular Regions
<b>zh</b> Chinese	<b>CN</b> China
<b>es</b> Spanish	<b>US</b> United States
<b>en</b> English	<b>IN</b> India
<b>ar</b> Arabic	<b>JP</b> Japan
<b>hi</b> Hindi	<b>BR</b> Brazil

More language codes can be found at [http://en.wikipedia.org/wiki/List\\_of\\_ISO\\_639-1\\_codes](http://en.wikipedia.org/wiki/List_of_ISO_639-1_codes)

More region codes can be found at [http://en.wikipedia.org/wiki/ISO\\_3166-1\\_alpha-2](http://en.wikipedia.org/wiki/ISO_3166-1_alpha-2)

# Mobile Web Development

## 1 Responsive Design

- Uses CSS to alter the rendering of the page on the device using media queries

### Example:

```
/* Phones */
@media (max-width: 767px) { ... }

/* Tablets to Desktops */
@media (min-width: 768px) and (max-width: 992px) { ... }

/* Large devices */
@media (min-width: 1200px) { ... }
```

## 2 Dynamic Serving via Vary HTTP Header

- Serves different HTML and CSS on the same URL, varied by user agent

```
HTTP/1.1 200 OK
Content-Type: text/html
Vary: User-Agent
Content-Length: 5710
```

(...rest of HTTP response headers...)

## 3 Separate URLs

- Identify mobile and desktop versions using rel="alternate" and rel="canonical"

Desktop page: <http://example.com/>  
<link rel="alternate" media="only screen and (max-width: 640px)" href="http://m.example.com/">

Mobile page: <http://m.example.com/>  
<link rel="canonical" href="http://example.com/">