

HTML Basics Elements vs. Tags Intro to MDN HTML Boilerplate Common HTML Elements

MARKUP LANGUAGE

How would you describe this paper's structure to someone over the phone so that they could reproduce it? What about morse code?



The Anatomy of a Large-Scale Hypertextual Web Search Engine

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Abstract

In this paper, we present Google, a prototype of a large-scale search engine which makes heavy use of the structure present in hypertext. Google is designed to crawl and index the Web efficiently and produce much more satisfying search results than existing systems. The prototype with a full text and hyperlink database of at least 24 million pages is available at http://google.stanford.edu/ To engineer a search engine is a challenging task. Search engines index tens to hundreds of millions of web pages involving a comparable number of distinct terms. They answer tens of millions of queries every day. Despite the importance of large-scale search engines on the web, very little academic research has been done on them. Furthermore, due to rapid advance in technology and web proliferation, creating a web search engine today is very different from three years ago. This paper provides an in-depth description of our large-scale web search engine -- the first such detailed public description we know of to date. Apart from the problems of scaling traditional search techniques to data of this magnitude, there are new technical challenges involved with using the additional information present in hypertext to produce better search results. This paper addresses this question of how to build a practical large-scale system which can exploit the additional information present in hypertext. Also we look at the problem of how to effectively deal with uncontrolled hypertext collections where anyone can publish anything they want.

Keywords

World Wide Web, Search Engines, Information Retrieval, PageRank, Google

1. Introduction

(Note: There are two versions of this paper -- a longer full version and a shorter printed version. The full version is available on the web and the conference CD-ROM.)

The web creates new challenges for information retrieval. The amount of information on the web is growing rapidly, as well as the number of new users inexperienced in the art of web research. People are likely to surf the web using its link graph, often starting with high quality human maintained indices such as Yahoo! or with search engines. Human maintained lists cover popular topics effectively but are subjective, expensive to build and maintain, slow to improve, and cannot cover all esoteric topics. Automated search engines that rely on keyword matching usually return too many low quality matches. To make matters worse, some advertisers attempt to gain people's attention by taking measures meant to mislead automated search engines. We have built a large-scale search engine which addresses many of the problems of existing systems. It makes especially heavy use of the additional structure present in hypertext to provide much higher quality search results. We chose our system name, Google, because it is a common spelling of googol, or 10^{100} and fits well with our goal of building very large-scale search

HTML ISA MARKUP LANGUAGE

What is Markup Language

A markup language is a type of computer language used to define the structure and formatting of text within a document.

Ex: HTML, XML, LATEX etc

Structure - HTML

buns

CSS is responsible for the styling









HTML + CSS



HTML + CSS + JAVA SCRIPT





HTML SKELETON

We write our HTML in a standard "skeleton"

```
document type and
                                    version of HTML
<!DOCTYPE html>
                                 root element specifies
<html>
<head>
                                      the language
 <title>My First Page</title>
</head>
                                   Metadata & Page
<body>
 <!-- Content Goes Here -->
                                        Settings
</body>
</html>
                                Content of the Webpage
```

HTML ELEMENTS

To write HTML, we pick from a set of standard

Elements that all browsers recognize Common Elements include:

- element represents a paragraph of text
- <h1> element represents the main header on a page
- element embeds an image
- <form> element represents a form

00

HTML TAGS

We create elements by writing *tags*. Most (but not all) elements consist of an opening and closing tag.

Opening Tag
I am a paragraph

Closing Tag

Basic HTML Tags

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- > → Paragraph of text.
- **
br>** → Line break (new line).
- **hr>** → Horizontal line (used to separate content).
- → Bold text.
- → Italicized text.
- <u> → Underlined text.
- → Inline container
 for styling small parts of
 text.



List Tags

Unordered list (bullet points).

→ Ordered list (numbered list).

> → List item (used inside or).

00

<div> → Block-level
 container for
grouping content.

00

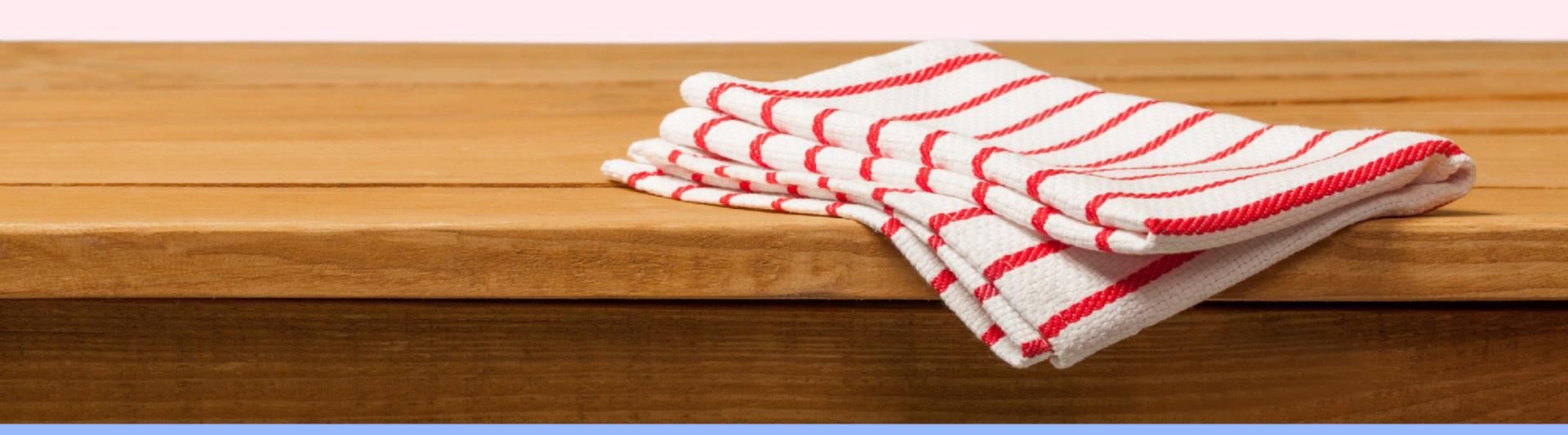
Link & Image Tags

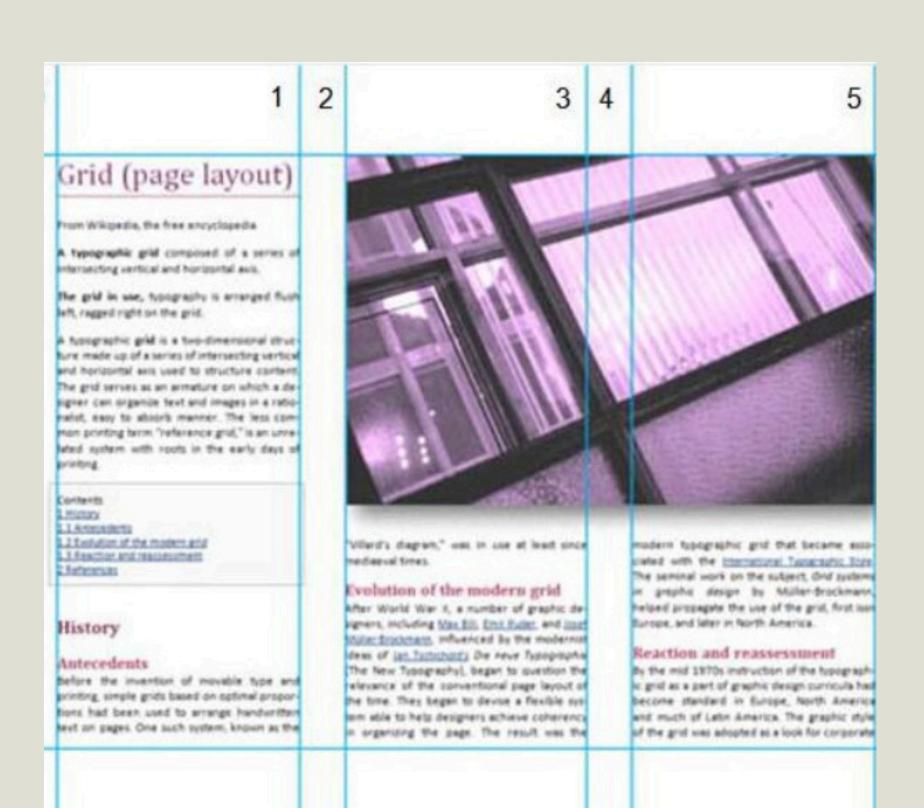
 → Creates a hyperlink.

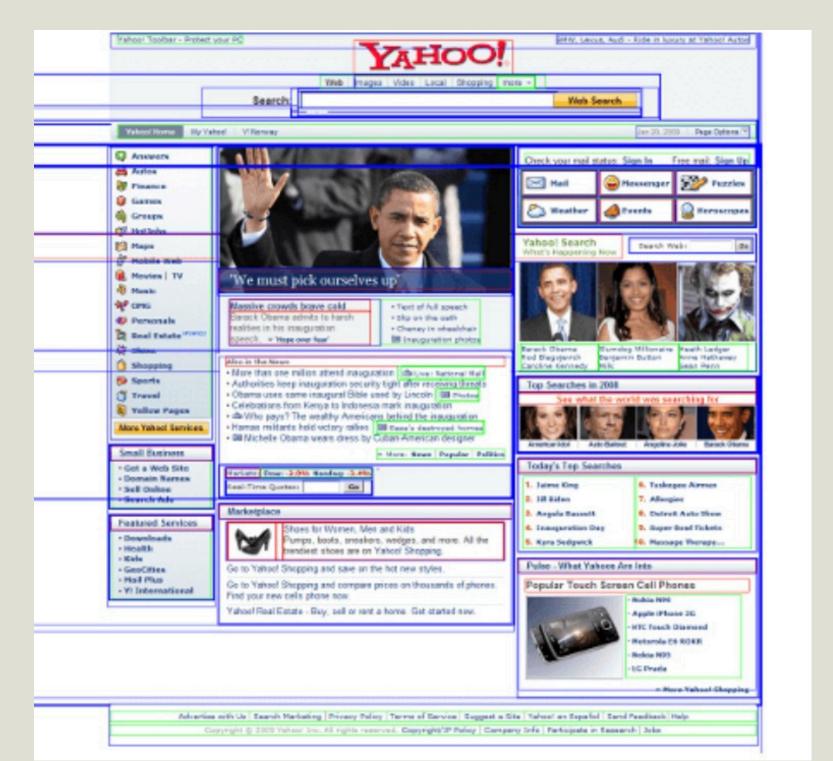
 →
Displays an image

IMOZIII a DEVELOPER NETWORK

HTML Tables





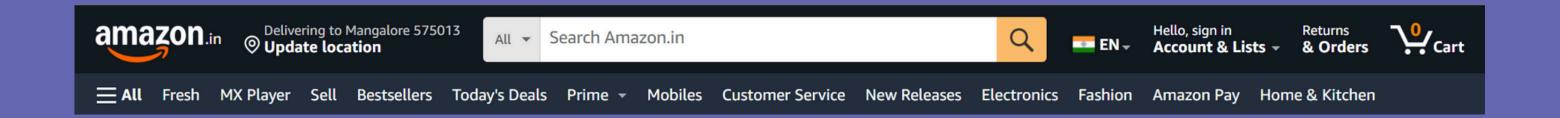


ELEMENTS

00



- - >
- <thead>
- <tfoot>



<header> – Defines the introductory section or a container for navigation links.

<nav> – Represents a navigation section with links to different parts of the site.

<main> – Specifies the main content of the document.

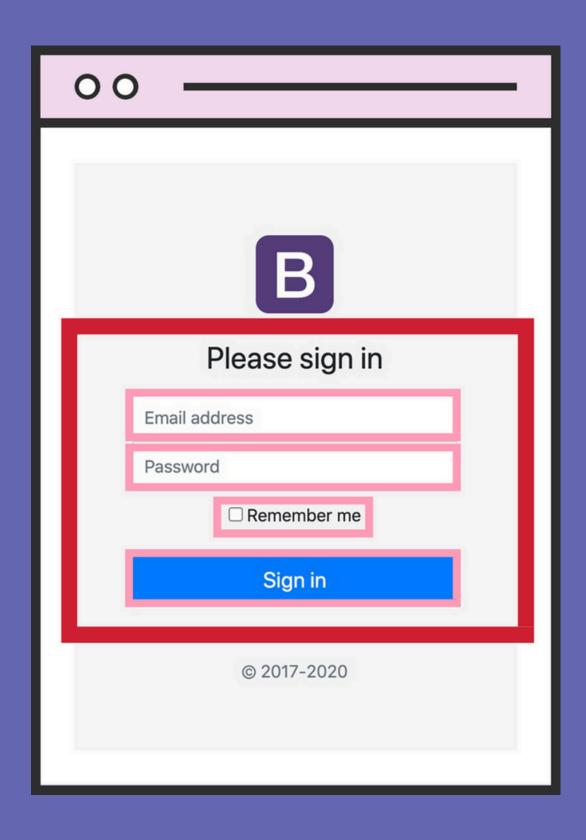
<aside> – Contains content related to the main content, like sidebars or advertisements.

<footer> – Defines the footer section, usually containing copyright info, links, and other metadata.

The <section> tag is a semantic HTML element used to group related content together within a webpage. It typically contains a heading and content that share a common theme.

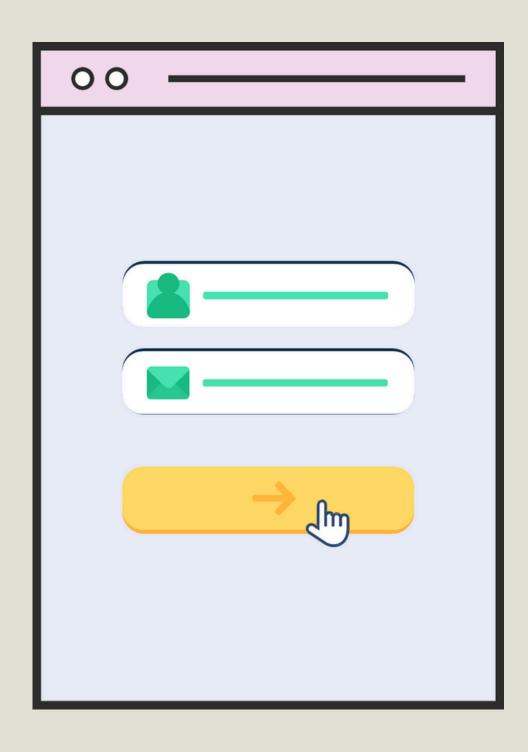
HTML Forms





CREATING FORMS

The <form> element itself is a shell or container that doesn't have any visual impact. We then fill the form with a collection of inputs, checkboxes, buttons, etc.



<input>

The input element is used to create a variety of different form controls.

We have 20+ possible types of inputs.



<form>

The form element "represents a document section containing interactive controls for submitting information." The action attribute specifies WHERE the form data should be sent. The **method** attribute specifies which HTTP method should be used





FRONT END



BACK END

