



Search Engine Optimization (SEO), Collecting Data Analytics, and the Privacy Policy

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WHAT'S COVERED

In this lesson, you will learn about what a site map is and how it contributes to the overall success of a website. You will also learn about the concept of search engine optimization (SEO) and how it affects your site's visibility. You will learn about the value of site analytics and how the information collected can provide valuable insight into your audience. Finally, you will be introduced to the privacy statement/policy and the terms and conditions statements that should be present on a website.

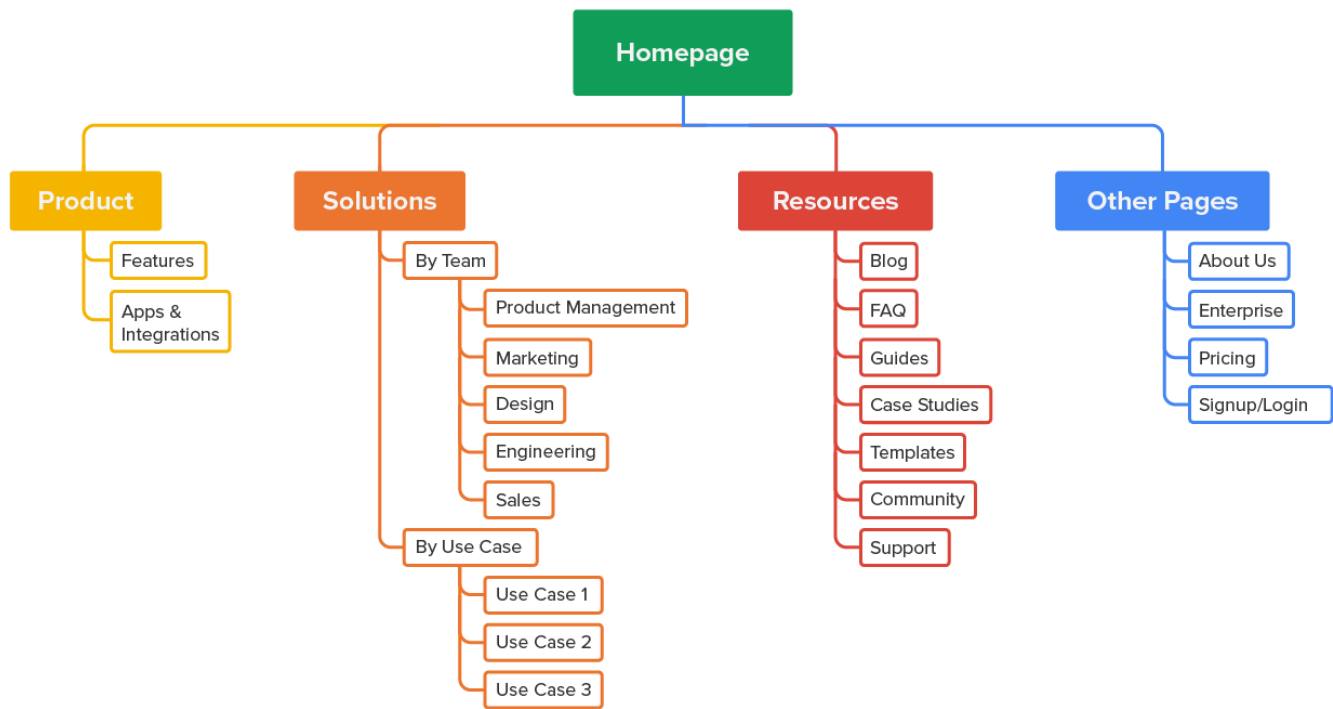
Specifically, this lesson will cover the following:

1. [Site Maps](#)
2. [Search Engine Optimization \(SEO\)](#)
3. [Analytics](#)
4. [Privacy Statement](#)
5. [Terms and Conditions](#)

1. Site Maps

A **site map** is a file that contains a master list of links to the pages on your site and can provide information about those pages, such as how often they are updated, how pages connect to each other, and how important they are relative to the other pages.

🔗 [EXAMPLE](#)



A site map can be a reference tool to **bots** that index your site for search engines and your visitors trying to find particular content. Site map files are **Extensible Markup Language (XML)** documents arranged in a hierarchical format that bots read to gain an understanding of your site layout, page relevance, and organization. The file may also be a human-readable page that diagrams how pages relate to one another and serves as a master list of the pages on your site. Site maps are best kept at the base level of your site’s file directory on the web server.

Site maps can be generated by creating a running list of all the content that you wish to include on your site.

- 🔗 **EXAMPLE**
- Homepage
 - Products
 - Latest Deals & New Products
 - Compare Products
 - Products by Application
 - Products by Category
 - About Us
 - Mission & Vision
 - Privacy
 - SignUp/Login
 - Account Profile
 - Shipping and Billing
 - Order History
 - ...

This list can then be used to create a visual representation of the content that illustrates what goes where and when.

⇒ EXAMPLE

Homepage

- SignUp/Login
- Latest Deals
- New Products

Products

- Latest Deals & New Products
- Compare Products
- Products by Application
- Products by Category

About Us

- Mission
- Vision
- Privacy

Account

- Profile
- Shipping and Billing
- Order History

The process of organizing the content and grouping it together into the appropriate pages may take a couple of tries. Depending on the size of the site and the amount of content, there may be multiple ways to organize the elements; thus, you may find that your first attempt does not make the most sense or it could be better.



You may have to start over a couple of times to get a strategy that makes the most sense. However, the final output is not only useful to visitors and search engines but also valuable to the development process as developers and stakeholders can collaborate and vet the content and its placement within the site.

Site maps are becoming less important because of search engine bots' ability to examine your site and make an index of the pages, headings, and content, all without a site map. Smaller sites and sites where all internal pages are properly linked may have no need for a site map. However, larger site projects and sites with lots of rich media content such as videos, images, and other multimedia still benefit from a site map. Additionally, if a site is relatively new and there are few external links that point to your site, you would also want to include a site map as this will help search engine bots find your site and examine the pages.



TERMS TO KNOW

Site Map

A file that contains a master list of links to the pages on your site.

Bots

Software that is programmed to autonomously perform programmed operations on behalf of a site, application, or organization.

2. Search Engine Optimization (SEO)

Search engine optimization (SEO) is the process of making your site the best possible candidate for favorable listing placement on the **search engine results page (SERP)**. The SERP displays results based on the search term or phrases that are used when a user makes a search query. This page can include both organic and paid search results. The factors that influence a site's SEO score and thus its ranking on SERP are constantly growing and evolving, and they are far greater than just the correspondence between a searched word or phrase and the page content in your site.

Covering all aspects of SEO for just one search engine is a complex task. Accounting for the differences between major search engines like Google, Yahoo, and Bing could fill a textbook, and it would be out of date before the printer finished the first page.

True SEO optimization is an almost daily task, involving monitoring changes in algorithms, refining the site as content changes, and using systems like Google's AdSense for commercial placements on search results pages. Additionally, keep in mind that portions of today's SEO algorithms are out of your control as they take into account things like previous traffic, outside links, and more. Start with these basics first:

1. Make sure you are mobile optimized.
2. Use meta tags to provide keywords and page descriptions.
3. Properly use sequential <h> tags to emphasize important content and provide structure.
4. Use those same keywords as page titles.
5. Do not include too many keywords in your meta tags.
6. Update your content regularly.
7. Integrate with social media for exposure.

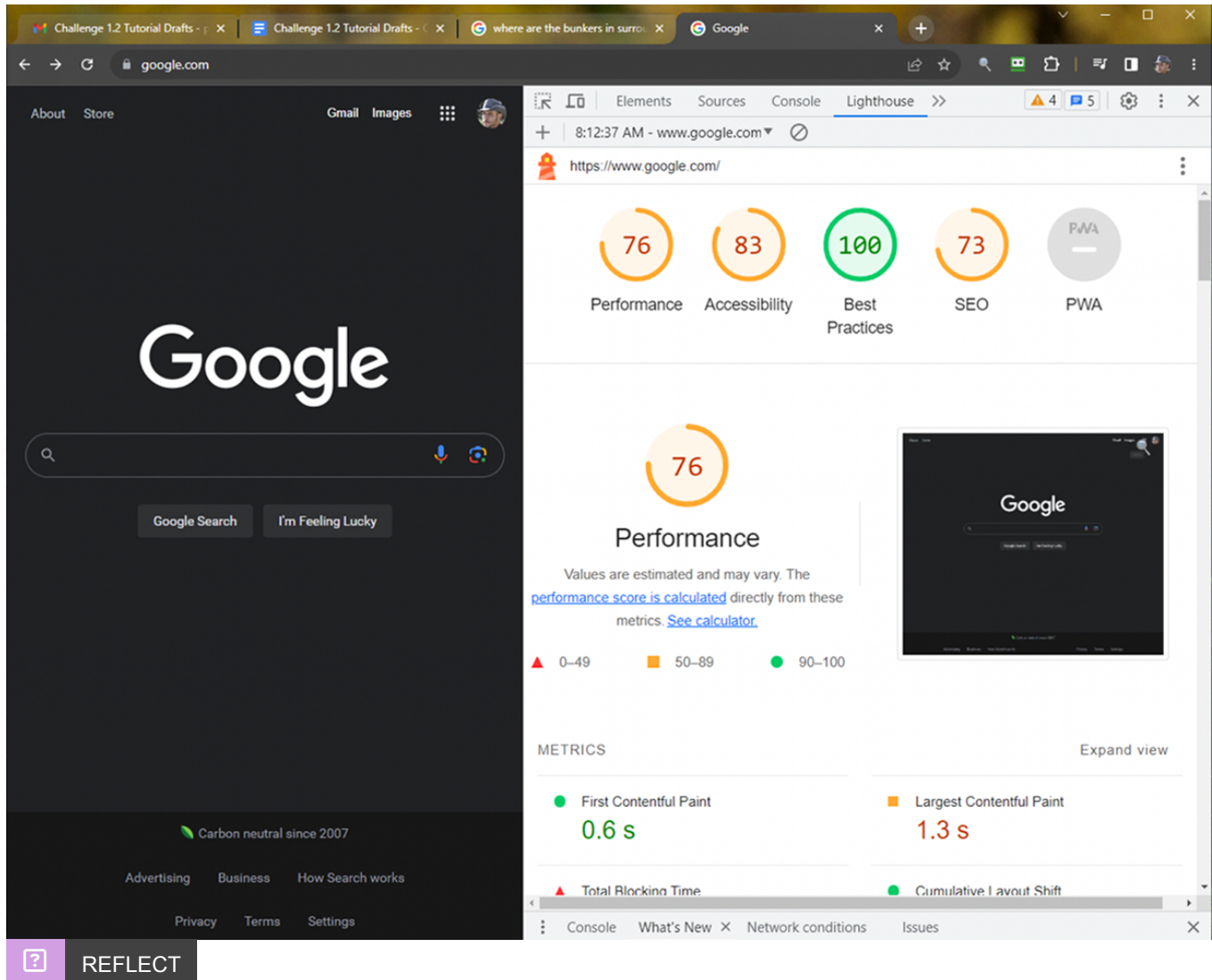
There are tools available that do their best to analyze your site and provide you with an estimation of the SEO score. Such tools, like Lighthouse for Google Chrome browsers, often provide categorized elements to consider and recommendations for various aspects of the site that will improve the score. Lighthouse is free to use, comes pre-installed in the Google Chrome web browser, and conducts a number of quality performance and SEO tests on a site. Another of the top examples of these tools is Yoast SEO, a paid service that analyzes your site and provides comprehensive suggestions, recommendations, and tools for optimizing your site.



Directions: Open the Google Chrome web browser and navigate to a website that you frequently visit. Next, complete the following steps to analyze your selected website's metrics:

1. Open the Chrome Developer Tools (DevTools) by performing one of the following steps:
 - a. Press "F12."
 - b. Press "Ctrl-Shift-I" on PC or "Cmd-Option-I" for Mac.

- c. Click on the three-dots menu > “More Tools” > “Developer Tools.”
2. In the upper right corner of the DevTools pane, locate and click on the right chevron “>>” and select “Lighthouse.”
 - a. Set the desired values for the options on the Lighthouse pane. If you are on a valid page, the “Analyze Page Load” button will appear blue. If the button doesn’t appear, visit a different website.
 - b. Click the “Analyze Page Load” button to begin the analysis process and see the results of the page.
 - c. Examine the different types of information and metrics provided and how they could be helpful in improving the overall quality of the site.



REFLECT

How do you see yourself utilizing Lighthouse in your web development projects? Did this tool point out any aspects of SEO, or the other categories, that you were unaware of or had not considered?

TERMS TO KNOW

Search Engine Optimization (SEO)

The process of optimizing a website to improve the overall quality and quantity of visitor traffic by enabling search engines to better understand and categorize the site and its content.

Search Engine Results Page (SERP)

A search engine's response to a user's search query that displays the relevant results of the search.

3. Analytics

A close cousin to the tasks of optimizing your site for search engines is optimizing it for your target audience. There is no better way to do this than to understand who your audience is, which you can find in your **website log**. Additionally, there are several website plugins, such as Google Analytics, that can be embedded into your pages. These website plugins will collect a wide array of data on your visitors like the system they are using and how long they stay on a page. These analytic plugins also include dashboard and summary tools that help website administrators make sense of the data analytics report.

You can learn surprising and helpful things with analytics.

⇒ EXAMPLE

In your web server's logs or Google Analytics, you might find that your visitors are coming from countries you had not anticipated—signs that may induce you to add additional language support to improve their experience and increase your audience. You might find that your users are trying to use mobile devices that were unexpected and not supported, allowing you to redesign your site to work better on these devices.



KEY CONCEPT

Initially, the analytics provided by a new site may not provide a lot of information and insight into your audience, but as your data grows, you can aggregate the data to identify a wide range of aspects and factors about your audience and your site.

You may find that visitors spend more time on a particular page other than your homepage. This might be a good place to include new or valuable information for users. You might find that a number of visitors leave your site with items in the shopping cart. This could prompt you to design code that generates a follow-up email when this happens to remind the user, ask for feedback, and offer promotions to help encourage the shopper to complete the sale.



TERM TO KNOW

Website Log

A text-based document used to record a chronological history of activity that occurred on a specific website.

4. Privacy Statement

A **privacy statement**, also known as a privacy policy or privacy notice, is a document that outlines how a website or online service collects, uses, and protects the personal information of its users or visitors. A privacy statement is an important legal document that helps users understand the privacy practices and data handling procedures of the website. With so much concern about privacy and identity theft today, providing a privacy

statement can offer your visitors a certain level of comfort that the data they share with you will be protected from theft.

A privacy statement typically includes information about the types of personal information that may be collected, such as names, email addresses, and payment details. It also describes how the website uses the collected information. This may include uses such as providing requested services, personalizing user experiences, sending newsletters or marketing communications, processing payments, and improving the website's functionality. The privacy statement should also include how the data is protected, such as employing data encryption, secure storage solutions, and access controls.



KEY CONCEPT

All websites are strongly urged to include a privacy statement for their visitors. However, sites that collect personal data or conduct e-commerce operations are legally obligated to provide [this statement](#).

While there is no specific federal website privacy policy law regulating or requiring a website or app to post a policy, Section 5 of the Federal Trade Commission Act prohibits unfair or deceptive marketing practices and while the FTC does not regulate privacy issues, any deceptive act or practice in commerce will lead to liability under the FTC Act.



LEARN MORE

To learn more about Privacy Policies, visit privacypolicies.com.



TERM TO KNOW

Privacy Statement

A document that outlines how a website or online service collects, uses, and protects the personal information of its users or visitors. Also called *privacy policy* or *privacy notice*.

5. Terms and Conditions

Terms and conditions are a document that defines the contractual rights and obligations of any party in any contract. For a website, this is similar to the privacy policy, but it focuses on the rights and obligations of the organization and the customer or visitor. Also like a privacy policy, there is no specific law that requires a privacy policy be present on a website. For sites that engage in e-commerce, collect personal information, and offer services and software for the visitor's use, terms and conditions are strongly recommended.

A typical terms and conditions agreement should include, at a minimum, the following:

- A brief introduction
- The effective date
- Jurisdiction/governing law

- Link to your privacy policy
- Contact information
- Limitation of liability and disclaimer of warranties
- Rules of conduct
- User restrictions
- Account termination information

Additionally, if your site includes some kind of e-commerce, you may also want to include the following:

- Returns and exchanges
- Third-party terms and conditions
- Subscription information
- Payment information
- Delivery and shipping details

Like the privacy policy, there are websites and tools that help generate an appropriate terms and conditions agreement for use on your website. These tools ask you a series of questions and, based on your responses, will create a document that is ready to use.




To learn more about terms and conditions agreements, visit privacypolicies.com.



Terms and Conditions

A document that defines the contractual rights and obligations of any party in any contract.

 **SUMMARY**

In this lesson, you learned about **site maps** and how they not only aid in the development process but can improve your site's visibility by impacting your **search engine optimization (SEO)** score. You also learned about SEO along with some strategies and tools for improving your overall rating. You learned about the value of site **analytics**, the data collected about your visitors, and how it can be leveraged to make improvements and adjustments to improve the overall success of your site. Finally, you learned about the importance of including a **privacy statement** and when and why you might also include **terms and conditions**.

Source: This Tutorial has been adapted from "The Missing Link: An Introduction to Web Development and Programming " by Michael Mendez. Access for free at <https://open.umn.edu/opentextbooks/textbooks/the-missing-link-an-introduction-to-web-development-and-programming>. License: [Creative Commons attribution: CC BY-NC-SA](#).

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TERMS TO KNOW

Bots

Software that is programmed to autonomously perform programmed operations on behalf of a site, application, or organization.

Extensible Markup Language (XML)

A markup language that provides a set of rules for defining any data structure in plain text.

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