SARDAR PATEL COLLEGE OF ADMINSTRATION & MANAGEMENT

Unit:- 1

US02SEBCA09

Information Technology Fundamental-II

Unit	Description
1.	**Internet Usage for E-learning** • Introduction to Internet and Web Browsers • Basics of search engines and their functionalities, Searching Information, Saving web pages, downloading files, etc. • Open learning sites-Wikipedia, Wikispaces, wikieducator etc. • Open freeware-Introduction and Examples. • Advance Social Networking.

Introduction to Internet and Web Browsers

The Internet is a global System of interconnected computer networks that use the standard Internet protocol suite (TCP/IP) to serve several billion users worldwide.

The internet is an electronic communications network that connects computer facilities around the world.

The advent of the internet is heavily influencing most traditional communication methods such as newspapers, telephones, television, etc. They are giving rise to new services such as internet phones and internet tv. The exchange of information has

been accelerated exponentially and consequentially the exchange of information has led to an improvement in the standard of life for many people across the globe.

Internet is set up by using wireless, networking and electronic technologies. It is the fastest medium to send and exchange data and information among the computers throughout the world.

Web Browsers

Web Browser is a common term which is frequently used by people while discussing the Internet. However, the exact definition of a web browser is known by few only.

Web Browser Definition: A software application used to access information on the World Wide Web is called a Web Browser. When a user requests some information, the web browser fetches the data from a web server and then displays the webpage on the user's screen.

Earlier the web browsers were text-based while now a days graphical-based or voice-based web browsers are also available. Following are the most common web browser available today:

Browser	Vendor
Internet Explorer	Microsoft
Google Chrome	Google
Mozilla Firefox	Mozilla
Opera	Opera Software
Safari	Apple

Architecture

There are a lot of web browser available in the market. All of them interpret and display information on the screen however their capabilities and structure varies depending upon implementation. But the most basic component that all web browser must exhibit are listed below:

- Controller/Dispatcher
- Interpreter
- Client Programs

Controller works as a control unit in CPU. It takes input from the keyboard or

mouse, interpret it and make other services to work on the basis of input it receives.

Interpreter receives the information from the controller and execute the instruction line by line. Some interpreter are mandatory while some are optional For example, HTML interpreter program is mandatory and java interpreter is optional.

Client Program describes the specific protocol that will be used to access a particular service. Following are the client programs that are commonly used:

- HTTP
- SMTP
- FTP
- NNTP

Search Engine

Search engines are searchable databases of web content. They're made up of two main parts:

1. **Search index.** A digital library of information about webpage.
2. **Search algorithm(s)**. Computer program(s) tasked with matching results from the search index.

Search Engine refers to a huge database of internet resources such as webpages, newsgroups, programs, images etc. It helps to locate information on World Wide Web.

User can search for any information by passing query in form of keywords or phrase. It then searches for relevant information in its database and return to the user.

Functions of search engines

The internet stores a permanent repository of valuable data and information. Search Engines offer the platform for sorting, locating, storing, and appropriately ranking the value of specific information on the Internet. Google, Bing, and Yahoo search for appropriate information and offer it to the user. Furthermore, to find out the detailed data regarding your query, know about the search engine's four functions.

Crawling

Web spider or web crawler a robust software of search engine that sorts out a website address and relevant content on the Internet for storing in a database of the search engine. The crawler can scan old website data and fresh new

information. Crawlers possess the ability to crawl websites and fetch a considerable amount of data simultaneously. It crawls until it gets to the best possible result that involves hyperlinks and external or internal links.

Indexing

The indexing function eliminates standard text that systematically stores content to easily and quickly accessible. The designers of search engines developed an algorithm to search web conferring to particular keywords or phrases. The algorithm matches up with user-specified keywords or phrases to find content on a specific website with the help of the index.

Storage

For easy and fast access to search results, the search engine database should store web content in the search engine database. Content fetched to the user the whole dependent on the storage space allocated. Search engines such as Yahoo and Google can store massive amounts of data, offering an immense source of information for the user.

Results

Hyperlinks are directed towards the websites shown on the search engine result page when a keyword or keyword phrase is searched. After analyzing the search term, the crawler goes through indexing and finds a suitable match of typed keywords. Algorithms provide the relevant data, and every search engine works on its algorithms and appropriately returns varied results.

Conclusion

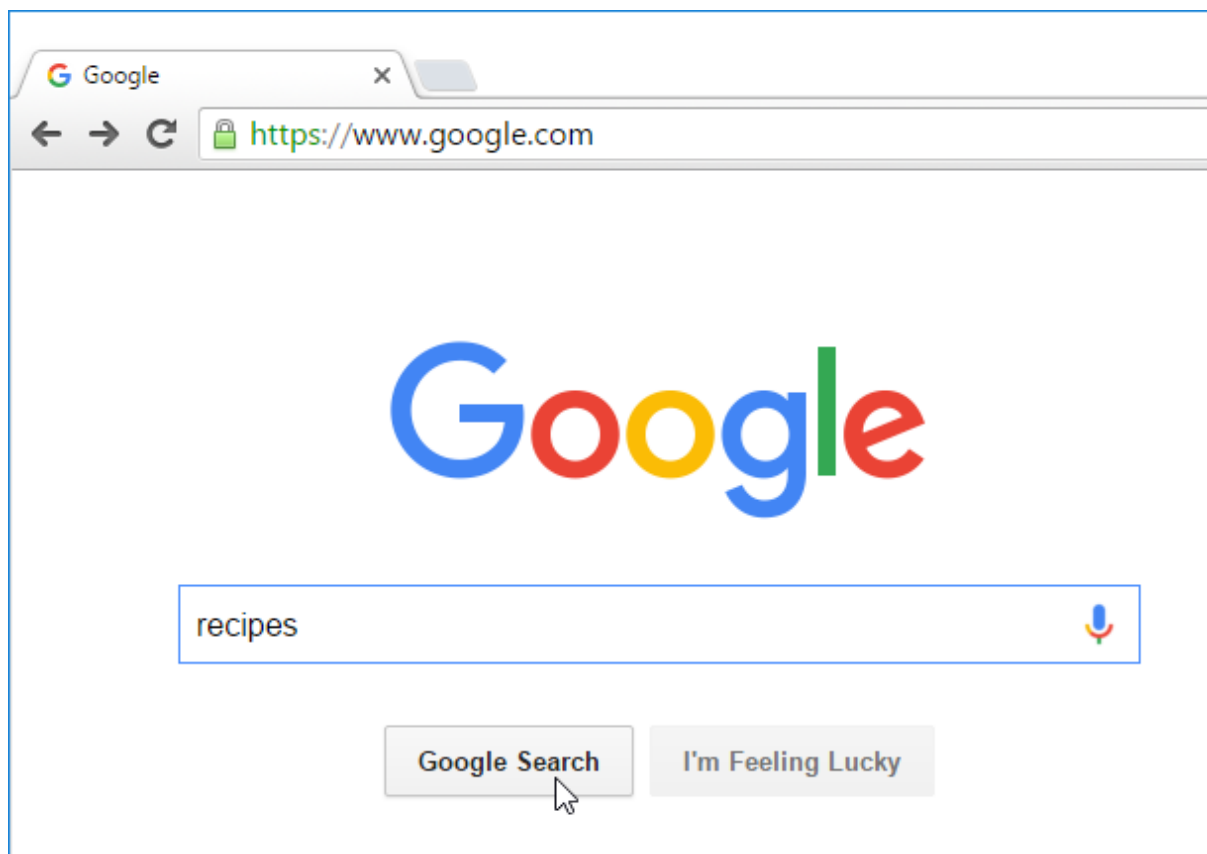Data combined and communicated via search engines and have gone across varied methods and functions.

However, This study will help you with investigations and experimentation about your search queries and get your website register on the top of the Search Engine Result Page, satisfying search functions and algorithms.

Hence, Be in touch for further assistance and make your online business successful and trending with such adequate information.
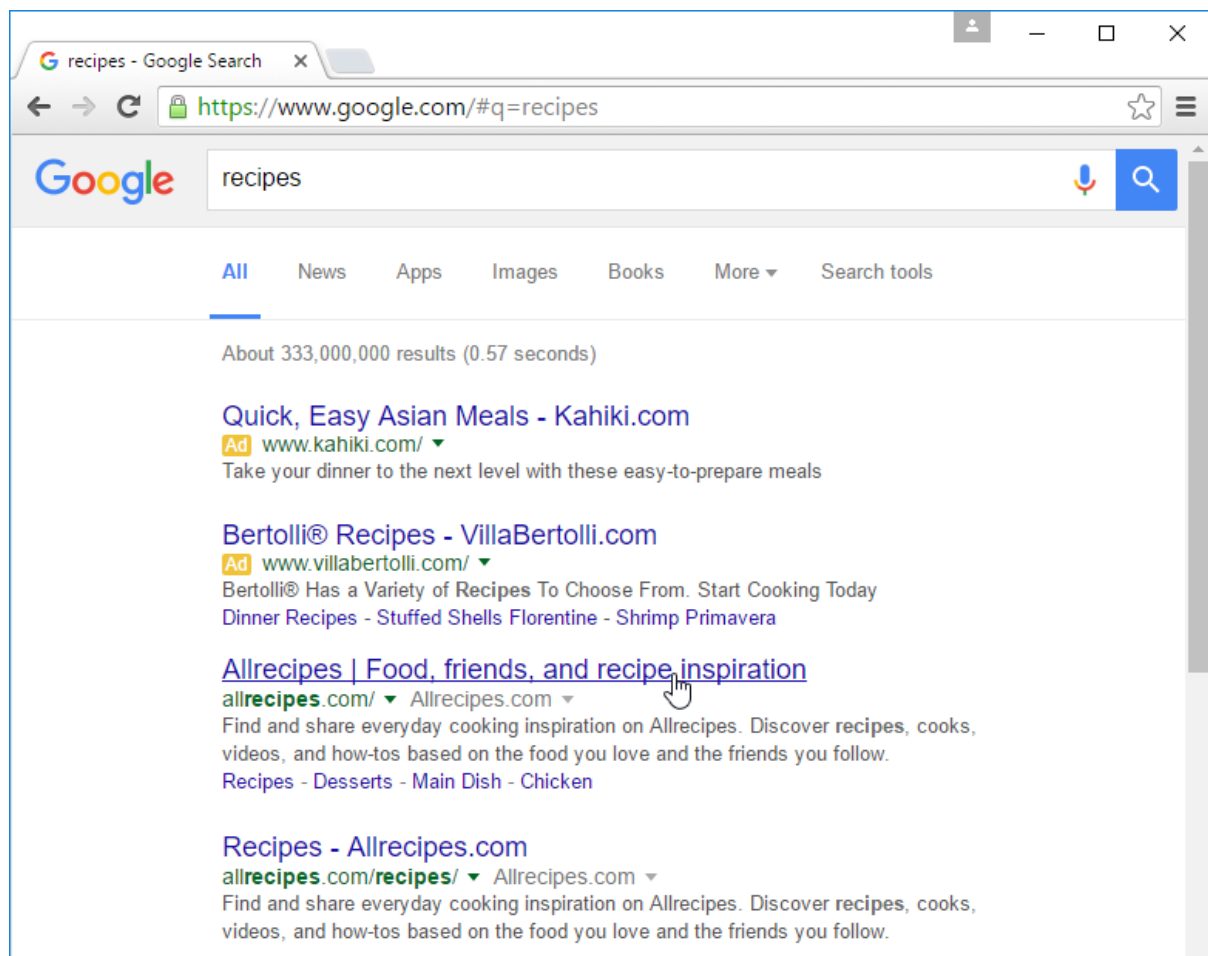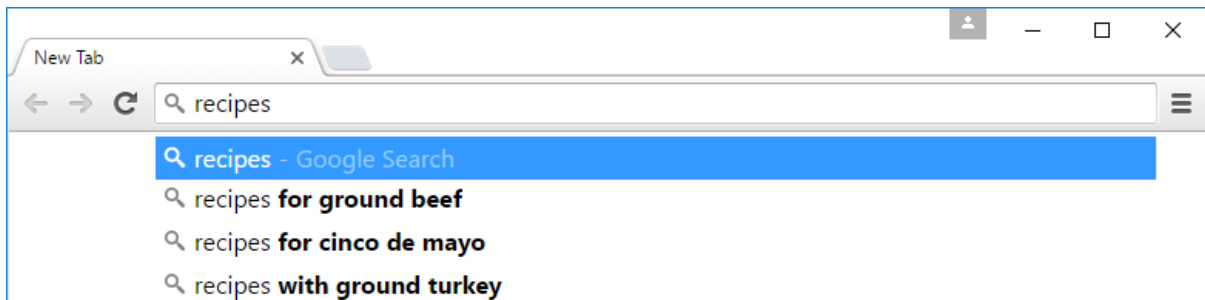
Searching Information:

How to search the web

There are many different search engines you can use, but some of the most popular include **Google**, **Yahoo!**, and **Bing**. To perform a search, you'll need to navigate to a search engine in your web browser, type one or more **keywords**—also known as **search terms**—then press **Enter** on your keyboard. In this example, we'll search for **recipes**.

After you run a search, you'll see a list of **relevant websites** that match your search terms. These are commonly known as **search results**. If you see a site that looks interesting, you can click a link to open it. If the site doesn't have what you need, you can simply return to the results page to look for more options.
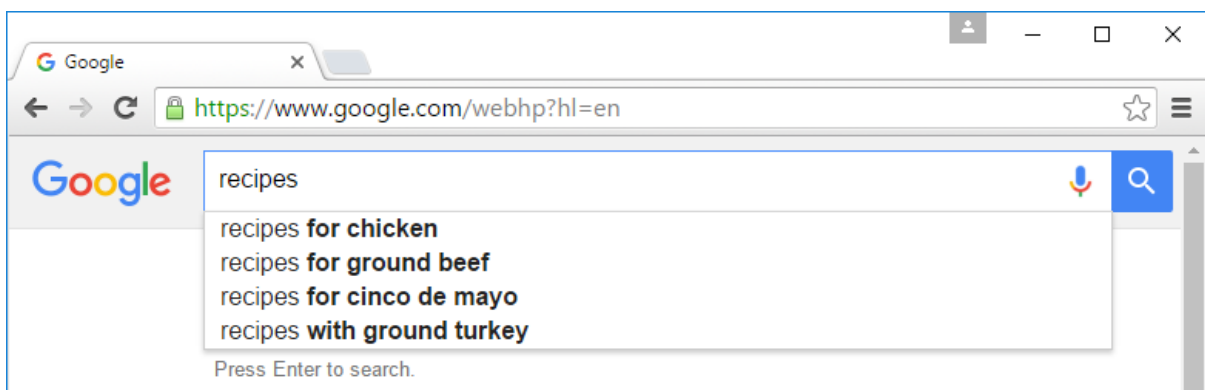

Most browsers also allow you to perform a web search directly from your **address bar,** although some have a separate **search bar** next to the address bar. Simply type your search terms and press **Enter** to run the search.

Search suggestions

If you don't find what you're looking for on the first try, don't worry! Search engines are good at finding things online, but they're not perfect. You'll often need to **try different search terms** to find what you're looking for.

If you're having trouble thinking of new search terms, you can use **search suggestions** instead. These will usually appear as you're typing, and they're a great way to find new keywords you might not have tried otherwise. To use a search suggestion, you can click it with your mouse, or select it with the arrow keys on your keyboard.
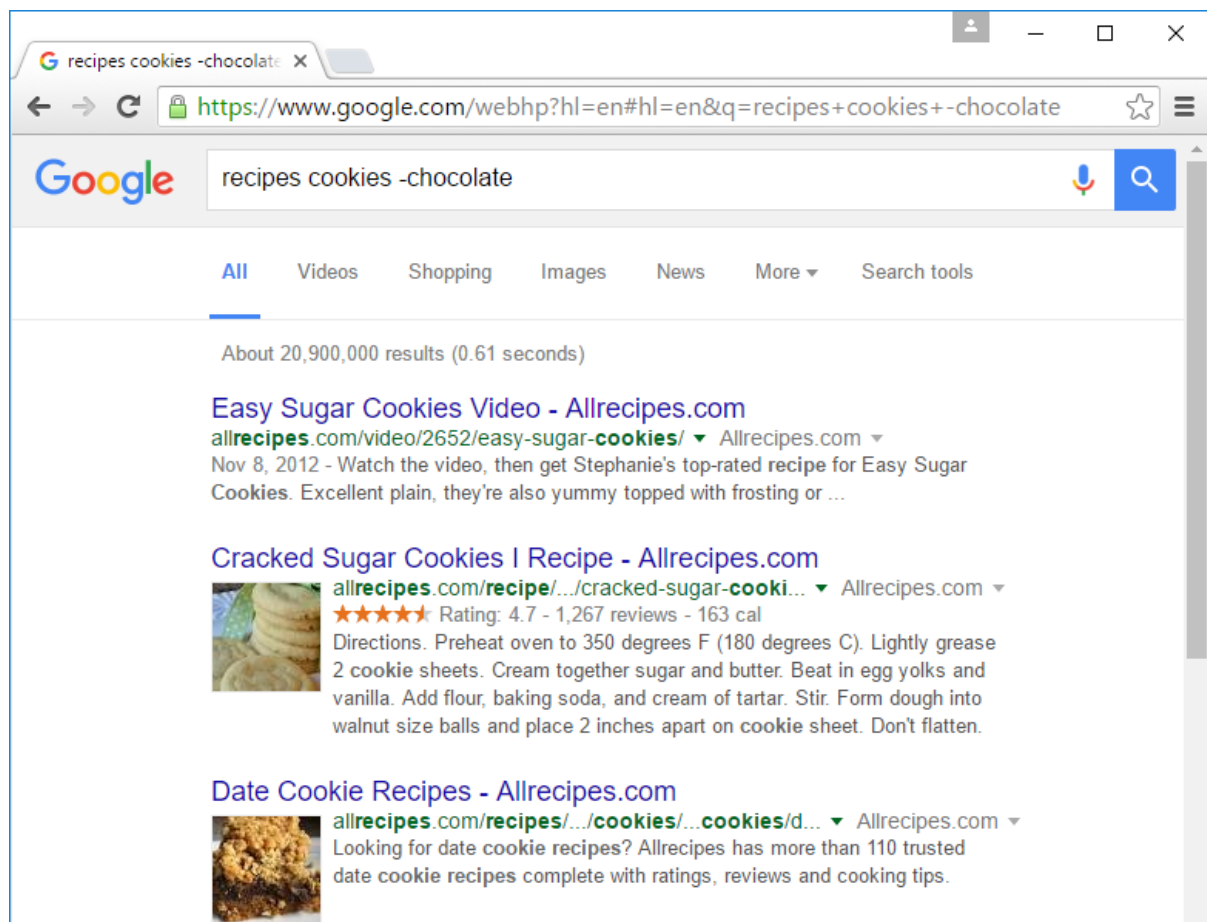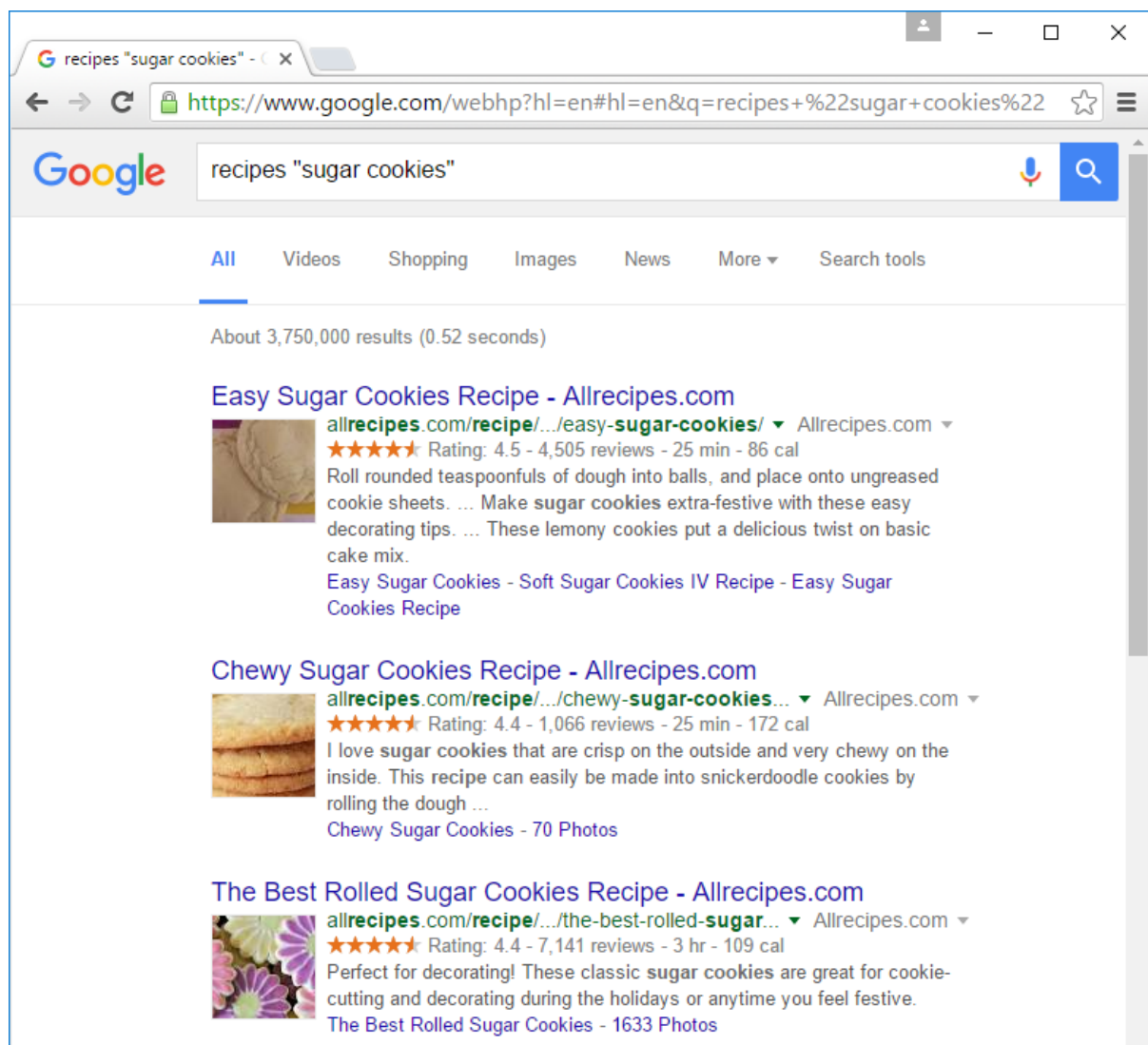

Refining your search

If you're still having trouble finding exactly what you need, you can use some special characters to help refine your search. For example, if you want to **exclude a word** from a search, you can type a **hyphen (-)** at the beginning of

a word. So if you wanted to find cookie recipes that don't include chocolate, you could search for **recipes cookies -chocolate**.
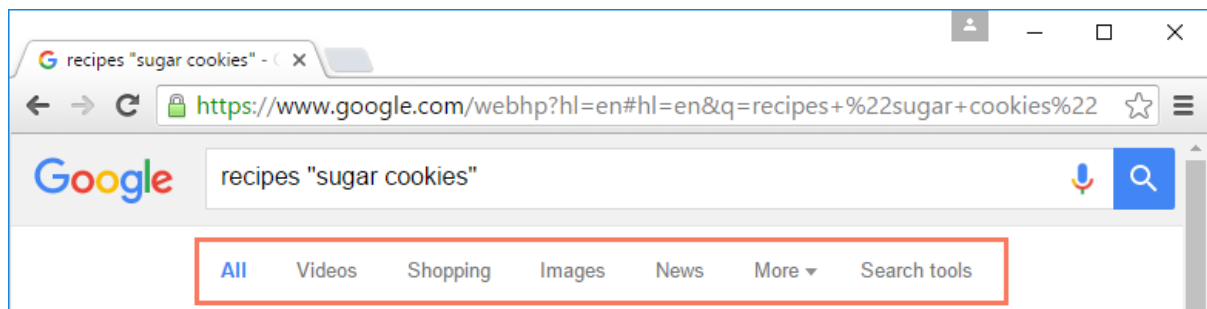

You can also search for **exact words** or **phrases** to narrow down your results even more. All you need to do is place **quotation marks** (" ") around the desired search terms. For example, if you search for **recipes "sugar cookies"**, your search results will only include recipes for sugar cookies, instead of any cookies that happen to use sugar as an ingredient.
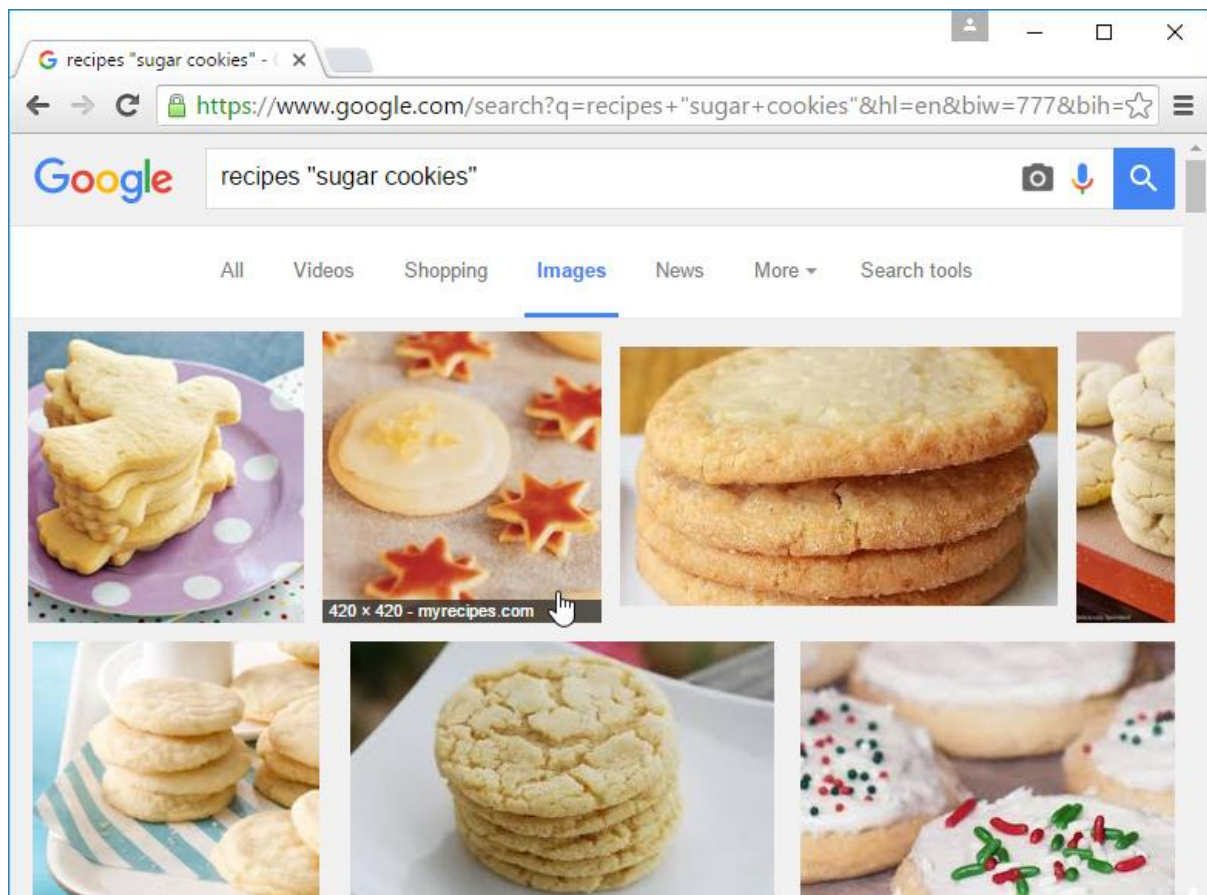
These techniques may come in handy in certain cases, but you probably won't need to use them with most searches. Search engines can usually figure out what you're looking for without these extra characters. We recommend trying a few different **search suggestions** before using this method.
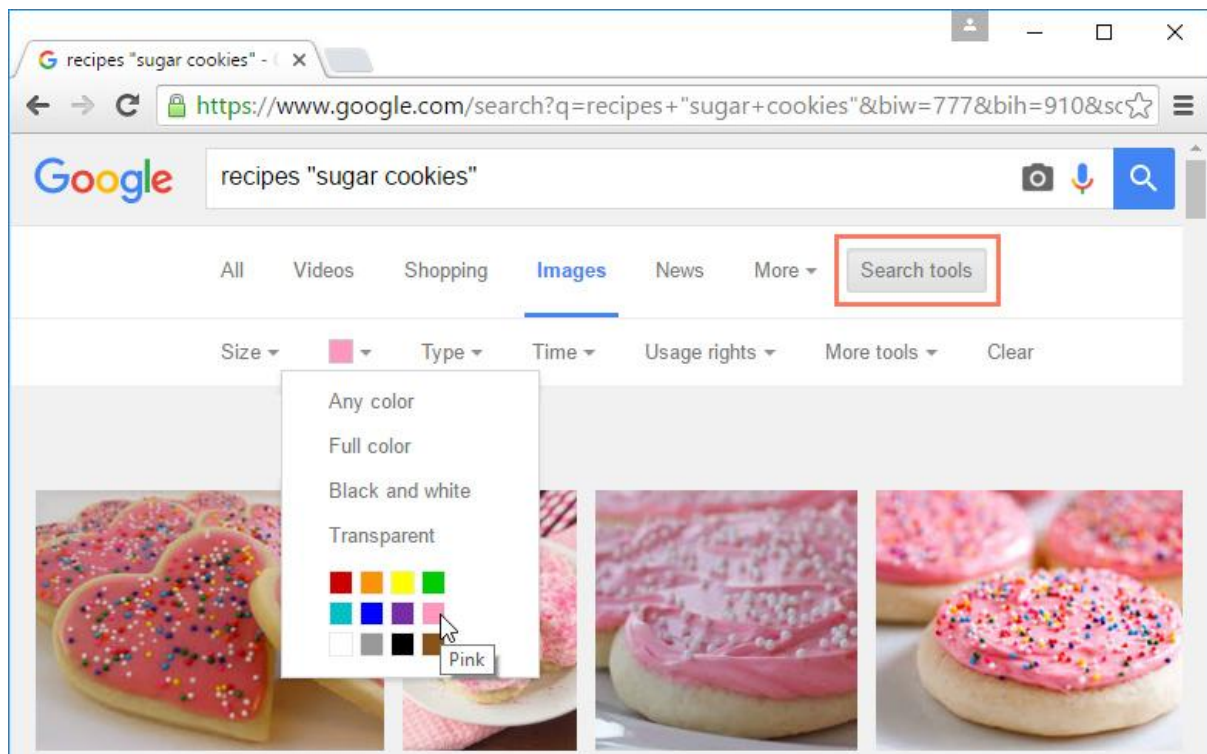
Content-specific searches

There may be times when you're looking for something more specific, like a **news article**, **picture**, or **video**. Most search engines have **links** at the top of the page that allow you to perform these unique searches.

In the example below, we've used the same search terms to look for **images** instead of websites. If you see an image you like, you can click to visit the website it originally came from.

You can use the extra **search tools** to narrow down your results even more. These tools will change based on the type of content you're looking for, but in this example we can filter our images by **size**, **colour**, **image type**, and more. So if you wanted to find cookies with pink frosting, you could search for images that are mostly pink**.**

Saving web pages

Saving web page from Chrome to read offline

You must be online to save a page.

1. On your computer, open Chrome.
2. Go to a page you want to save.
3. At the top right, select More ⋮ › **Save and share** › **Save page as...**.
4. Choose where you want to save the page.
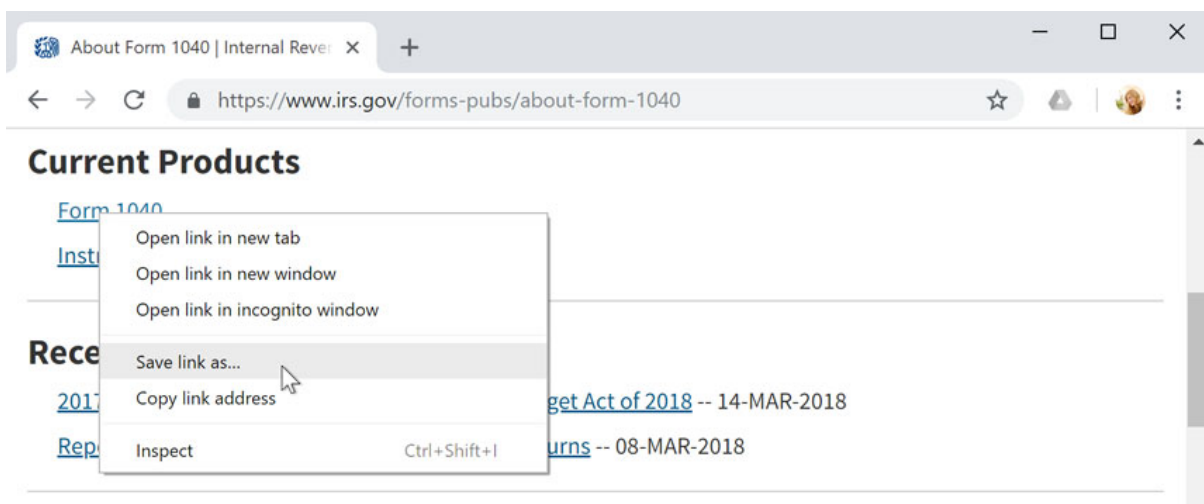5. Select **Save**.

To read a saved page, open the file on your computer. It will open in your default browser, like Chrome or Safari.

To delete a saved page, delete the file from your computer.

Downloading files

Links don't always go to another website. In some cases, they point to a **file** that can be **downloaded**, or saved, to your computer.

If you click a link to a file, it may download automatically, but sometimes it just **opens within your browser** instead of downloading. To prevent it from opening in the browser, you can **right-click** the link and select **Save link as** (different browsers may use slightly different wording, like **Save target as**).

Open Learning sites – Wikipedia, Wiki spaces, Wiki educator

Open Learning wesites is **an online learning platform that goes beyond content delivery to focus on community, connectedness, and learner engagement.**

Wikipedia

A definition is a statement of the meaning of a term (a word, phrase, or other set of symbols).

Wikipedia is a free, open content online encyclopaedia created through the collaborative effort of a community of users known as *Wikipedia's*. Anyone registered on the site can create an article for publication; registration is not required to edit articles. The site's name comes from wiki, a server program that enables anyone to edit Web site content through their Web browser.

Wiki space

Wiki space was an educational wiki platform for educators to create online classrooms to collaborate with their students. It was operating for over 13 years and had over 10 million registered teachers and students. It created a revolution in modern education.

Wikispaces Classrooms could be found at www.Wikispaces.com and it would give you a separate login for students and teachers. They can sign in to Wikispaces and join the online classroom.

These educational wikis are also called as online virtual classrooms and these classrooms have become very popular during the pandemic that caused schools to move online.

Wiki educator

Educators can use Wiki as an online resource platform where they can share numerous links relevant to the current lesson topic. Students can also suggest their researches here. Educators can provide students with docs, media, and PDF files on their classroom Wiki.

- Wiktionary, a dictionary and thesaurus

- Wikibooks, a collection of free texts and other books

- Wikiquote, a collection of quotations

- Wikisource, a collection of free source documents

- Wikiversity, a collection of free learning materials

- Wikispecies, a directory of species

- Meta-Wiki, which coordinates all the other projects.

Freeware

Freeware is [software](#) which the users can use free of cost. Moreover, there are no restrictions on the use limit, the number of times one can download the software, etc. Besides, it depends on the owner of the software to pose the restrictions. Some organizations keep restrictions on distribution or modification while others may not.

Furthermore, it does not mean that the source code is also available along with the software. We can say that these are **closed source software**.

Advantages of freeware are as follows:

- Available to users free of cost.

- Distribution is free of cost.

Examples of Freeware

Examples are as follows:

- Adobe PDF

- Yahoo Messenger

- Google Talk

- MSN messenger

- Skype

- VLC Player

- LibreOffice

- Microsoft Edge etc.

Open Source Software

Open source software is [software](#) in which the source code is also available along with the software. Moreover, the users have the right to view, modify, and enhance this code. Furthermore, no license is required for the software. The software can be cost-free or chargeable. besides, the user can also share the software without any license violation. Examples are Android, Linux, Apache Server, Ionic, MySQL, etc. People buy this software due to certain reasons. These reasons are as follows:

- The results are of quite high quality.

- Users can easily change the software according to requirements.

- It is more secure.

- Long term use.

- Transparency.

- Affordable.

- Help in developing skills.

Examples of Open Source Software

1. Operating System

Examples of open source operating system are as follows:

- Linux

- Android

- ReactOS

2. Web Servers

Examples of open source web servers are as follows:

- Apache HTTP Server
- Apache Tomcat
- Lighttpd
- Node.js

3. Database Systems

Examples of open source [database](#) systems are as follows:

- MySQL
- SQLite
- Apache Hive
- Maria DB

4. Mobile Development Frameworks

Examples of open source mobile development frameworks are as follows:

- Ionic
- React Native
- Flutter
- Xamarian

5. QA Automation Tools

Examples of open source QA automation tools are as follows:

- Selenium
- Watir

6. Office Software Suites

Examples of open source office software suites are as follows:

- Apache Open Office
- Libre Office

7. Content Management Systems

Examples of open source content management systems are as follows:

- Word Press
- Django

Advanced social Networking

Social networking is an online platform that people uses to develop a social relationship with others with similar thoughts and personal interest, backgrounds, real-time connections or career activities. There are several social media networking sites for instant messaging, sharing or posting views, and much more. Trillions of people over the world connect through social networking to share

views on a personal level. But most people use social networking to interact with their family and friends to gain knowledge or for entertainment purposes. Business people use social media to plan the target audience and execute it via attractive advertisements that pop out when related to a search. It also helps them trace the audience's ideas by throwing multiple options to the customer, getting feedback from the client ends, and promoting it in a reachable way by elevating their business to the next level. The specialist also uses social media to enhance the knowledge in the related fields and develop a network with like-mind people in a similar industry and support each other in their career growth. It is termed as group-centered, which is described as websites that simplify the building of complex systems to share the various types of content webspace. It offers an interaction space to persist out the interaction of the person. The interactions via computer networks support and build new social tie-ups. It is popularly emerging as an online community.

Some unique features in social networking are that they share a mutual connection with people and help us to contact our old missed friends. The social network includes online shopping where people do not even connect toa person sitting at home; he can get his things without stepping out. The product will be delivered to his doorstep. It can be noticed that the product you search for in Google, will be popped out in your Facebook newsfeed, Instagram and Twitter advertisement. Other than this, it will throw a notification that this product has some special offer codes. Everything you search on

goggle or discuss with your friends in some chatting app is tracked and traced by social networking, which allows all the businesses and corporate to develop their enterprise by fooling the people around.

Why Social Networking is Popular?

It is so popular because it is widely applied in all sites and domains such as government, business, medical, education, finance, political and crowd sourcing, and entertainment.

Many government agencies use it to promote any scheme such as vaccination date, examination result, and application methods, etc. People nowadays feel it easy to apply for any government exam because of the government site, file any government-related issues and ask any queries related to any chaos or policy in force. NASA has grabbed the merits of Facebook and developed tools to check the country is in sustainable growth and achieved a strong foundation in space where other countries failed to do that.

It is valuable for small-scale industries to expand the contact for the growth of the company. The network serves as a CRM tool for many companies to sell products and get feedback. Application-based social networking has extended to brands, and businesses are executing their functioning sites, which are popularly called brand networking. It relies on the idea of a brand that establishes the customer relationship to the brand picture on a platform that offers related context, participation elements, and score system. It is a trending way to get benefits from social media as a marketing tool. This is the strength of social networking to infuse the organization's internal culture where the user finds for collaboration, sharing files and transfer of knowledge.

Importance and Usefulness

It is a significant platform for professional success, and it is an expansive network that offers a job opening. If the people are looking for a job shift, and someone in your connection knows about the opening, he can help you to any higher official in his concern. A

successful system is balanced, as per the input and output of the individual. It necessitates trust among both parties, so connect with reputations and believe epics. So the trust cycle is built around the people, which gives a glimpse of hope.

It is the initial step adopted by medical care experts to handle institutional knowledge and publicize peer-to-peer intelligence to highlight doctors and surgeons' experience. The advantage of this is to help various physicians and any ailment. The people suffering from life-altering illness or any severe health conditions connected with similar people to share and alert for medication time via the hospital's social networking medical sites. It also focuses on encouraging fit lifestyles in the users. It is also focused on the user to encourage cycling and exercise to live a healthy lifestyle. This is a powerful tool that aids society to enhance physical and professional life with their related ones.