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INTERNET

Search engines: the librarian trying to catalog the entire Internet

Agnieszka decided to check whether Greg and his colleague understood the difference between a search engine and a web browser. She was about to begin the longest library visit in Internet history. 🔎📚🤣

— Which search engine do you use? — asked Agnieszka.

— Google — Greg replied.

— I use Opera — said his colleague.

Silence. Agnieszka put down her mug.

— Opera is a BROWSER.

— What's the difference?

— The difference between a bus and the information desk that tells you which stop you need!

A browser is the vehicle; a search engine is the guide

Agnieszka unfolded a map of the city.

— A **web browser** is an application that opens and displays web pages. Chrome, Firefox, Opera, Edge and Safari are browsers.

— And Google?

— It depends which product you mean. **Google Search** is a search engine. **Google Chrome** is a browser. One company makes both.

— Microsoft?

— **Bing** is Microsoft's search engine. **Edge** is its browser.

— So I can use Google in Opera?

— Yes. Or Bing, DuckDuckGo or another supported search engine.

— Can I use Bing in Chrome?

— Of course, if I configure it that way.

A browser is the car you use to visit a web address. A search engine is the information desk that helps you find the address when you don't know it.

— So saying “I drive Google” answers the wrong question?

— If you mean Google Search, it's not even a car!

Why search if there's an address bar?

— Then why do I type “best dumpling recipe” into Opera and immediately get results? — asked Greg's colleague.

— Modern browsers combine address entry and search. When you enter a phrase instead of a known website address, the browser may send your query to the configured search provider.

— Opera isn't crawling the entire Internet for me?

— Typing a query into its address bar doesn't mean Opera itself runs an independent search engine. It can use a selected search service.

— And if I type `https://xo.pl/`?

— The browser tries to open that site directly; you don't need the search engine to locate it.

— I can know an address and never ask Google?

— Exactly.

— Then why search?

— When you don't know the address or need information spread across multiple sites.

— I've been asking the librarian questions while believing I was talking to the driver?

— Precisely.

The librarian doesn't read the whole Internet every second

Agnieszka took Greg into a huge library. Tiny robots rolled between the shelves carrying stamps.

— Oh! Robot vacuum cleaners! — Greg cheered.

— No. Those are **web crawlers**. They visit pages, discover links, retrieve information and pass it on for processing.

— Every time I ask something, they race around the whole planet?

— No. A search engine normally answers from an existing **index**, a massive catalogue of discovered resources. Crawlers keep updating it.

— The librarian doesn't read millions of books from scratch for every question?

— Exactly. There are records and a search system.

— What if a page appeared a second ago?

— It might not be discovered or indexed yet.

— And if somebody deleted a page?

— An old listing may remain for a while.

— So the librarian can lag behind?

— Yes. Please don't complain to the Clock Department.

A robot at the door and robots.txt

One crawler stopped outside a door marked “Do not enter”.

— What's that? — asked Greg.

— Site owners can publish instructions for crawlers, including a `robots.txt` file. Other mechanisms can also limit indexing.

— A sign on the door locks it completely?

— No. **robots.txt is not a security barrier for confidential data.** It gives rules to cooperative crawlers, not access control against every visitor.

— Where should secret documents go?

— Behind real authentication and authorization, not a polite note to a robot.

— Does every web page appear in search?

— No. Some are undiscovered, blocked, behind logins or simply excluded.

— So no result doesn't mean something doesn't exist?

— Right. Not finding your socks in the drawer doesn't prove you never bought them.

— Please don't start with the socks again.

Ranking: who gets the first shelf?

Greg asked for “the best pizza in town”. A thousand cards fell onto the desk.

— WHICH ONE SHOULD I READ?!

— A search engine tries to order results by predicted usefulness. Different systems consider many signals, such as content, relevance, quality and other factors.

— The first result must be the absolute truth?

— Definitely not. **A top position doesn't guarantee truth or neutrality.**

— Why does my neighbour get different results?

— Language, region, settings, history and other context can matter. Different engines may also have different indexes and ranking systems.

— There isn't one completely objective order for the whole Internet?

— No.

— What if I shout my query louder?

— You'll annoy everyone else in the library.

Advertising in a library?

Greg saw entries marked Sponsored at the top of the page.

— The librarian recommends those?

— Some entries are **advertisements**, placed under the search provider's advertising rules. They should be distinguished from regular search results.

— Someone paid to appear in the advertising area?

— Yes. That's not the same as organic ranking.

— And SEO?

— **SEO**, search engine optimization, includes creating useful, technically accessible content that crawlers can understand. It doesn't mean automatically buying the number-one position.

— If I repeat PIZZA a thousand times, will I become the pizza king?

— You'll become the king of irritating text.

— If an ad promotes a miracle cure, is that proof it works?

— No. Evaluate search results and ads critically, especially for health, money and safety.

— Search finds information, but it doesn't think for me?

— Finally, we're making progress.

Google, Bing, Yahoo and the other libraries

Several signs hung above the entrance.

— **Google Search**, **Microsoft Bing**, **Yahoo Search**, **DuckDuckGo**, **Brave Search**, **Ecosia**… — Greg read aloud.

— That many libraries?

— Different search services. They may present results differently, have different privacy practices, and use their own indexes or results from partners.

— Yahoo is still around?

— Yes, as a search service. Not everything you remember from the early Internet has disappeared.

— Is DuckDuckGo a browser or a search engine?

— The company offers a search engine and also a browser. A company name doesn't always describe just one type of product.

— Brave?

— Same idea: Brave Browser is a browser, Brave Search is a search engine.

— Ecosia?

— A search service that can use results from various providers. Not everyone has to index the whole Internet independently.

— So I need the PRODUCT name, not just the company?

— Exactly. Google isn't synonymous with Chrome, and Bing isn't Edge.

— Shame. I liked keeping everything in one drawer.

Privacy: who sees my questions?

Greg leaned towards the librarian and whispered, “Why does my cat look at me like my manager?”

— Remember that search queries you submit reach the search provider. What gets stored and personalized depends on the service and your settings.

— What if I turn on incognito mode?

— **Private browsing isn't the same as being anonymous online.** It generally limits local history saved for the session, but it doesn't make your searches invisible to the search engine, the sites you visit or your network.

— A tiny hat icon won't make me disappear?

— Not like that.

— Can I change the default search engine?

— In most mainstream browsers, yes. Check the settings and your preferred provider's privacy policy.

— Does the cat really run my life?

— The search engine can't settle that. Ask the cat.

AI and answers that aren't always right

The librarian opened a new counter labeled “Instant Answers”.

— Now I don't have to open websites at all! — Greg cheered.

— Some search providers show short answers, excerpts or AI-generated summaries — explained Agnieszka.

— So I don't have to check sources?

— Quite the opposite. **A summary may omit context or contain mistakes.** Verify important claims against trustworthy sources.

— Are a search engine and an AI assistant the same thing?

— No. Their capabilities can overlap, but finding documents and generating answers are different tasks. A service may combine them.

— The librarian sometimes tells a story about the books?

— Yes, but make sure it's about the correct books.

— I'm starting to think reading is an important skill in a library.

— Beautiful conclusion.

Greg's final exam: Opera versus Google

Agnieszka closed the catalogue and handed Greg a quiz sheet.

— What's the difference between a browser and a search engine?

— A browser opens web pages. A search engine helps me find them.

— Examples?

— Browsers: Opera, Firefox, Chrome, Edge, Safari. Search engines: Google Search, Bing, Yahoo Search, DuckDuckGo.

— Can Firefox use Google Search?

— Yes!

— Can Chrome use Bing?

— Yes!

— And if I know the address?

— I can enter it directly without asking the search engine for directions.

— Very good.

— So Opera is the car, Google Search the signpost, and the Internet the roads?

— In our simplified model, exactly.

— I'll tell my friend he mustn't search with Opera anymore.

— He can *use a search engine inside Opera*. Please don't start another argument about words.

— Too late. I sent him a forty-slide presentation.

Management of the Entire Internet Library reports: the crawlers have returned, the index is still incomplete, and the Advertising Department is not the Department of Absolute Truth. Greg passed the browser-versus-search-engine test. Unfortunately, five minutes later he asked Agnieszka which Internet she uses: “The Chrome one or the Google one?” The librarian closed the building for emergency maintenance. 🔎📚🤣❤️