

UNDERSTANDING WEB3

LESSON 2: HOW THE INTERNET CHANGED: FROM THE EARLY WEB TO WEB2

A Prison Professors Self-Directed Course

Estimated time: 65–100 minutes

Educational Boundary:

This course provides general education about technology and preparation. It does not provide individualized financial, investment, legal, or tax advice. It does not recommend any network, company, platform, product, or digital asset. You do not need internet access, an account, a wallet, or a digital asset to complete this lesson.

OPENING GUIDANCE

Before we study Web3, I encourage participants to understand the changes that came before it. New technology rarely appears all at once. People build upon earlier systems, respond to limitations, and develop new ways to communicate or conduct business.

At the time authorities arrested me on August 11, 1987, the World Wide Web did not yet exist. The internet already existed in technical and research settings, but it had not yet become the public resource that most people recognize today. I learned about its development from inside prison by reading.

Readers of my book, *Earning Freedom: Conquering a 45-Year Prison Term*, will understand how strongly I believe in self-directed study. While serving my sentence, I could not use the internet or depend on direct access to computers and web platforms. Still, I could study how the world was changing. I read, defined unfamiliar terms, asked questions, and connected what I learned to the life I wanted to build after release.

That learning supported practical preparation. As the internet and the economy changed, I studied the opportunities those changes were creating. Self-directed learning helped me develop and follow a savings plan while I was in prison. The savings I accumulated became one of the resources that helped me establish myself after release.

Learning from a distance did not give me the same experience as using the technology. It did, however, allow me to develop a vocabulary, ask better questions, and prepare before access became available. Participants can use the same method. You do not need access to a computer or the internet to understand how the internet developed or to examine the tradeoffs that came with its growth.

This lesson uses the labels early web and Web2. Those labels are helpful, but they are not official software versions or exact periods on a calendar. They describe broad patterns. As you read, focus on the movement from a web centered mainly on publishing and reading pages toward a web where large numbers of people could create content, interact, and conduct activities through online platforms.

PURPOSE AND ESSENTIAL QUESTION

Lesson 2 explains how the internet developed from an environment centered largely on reading published information into one that supports widespread participation, sharing, collaboration, and commerce through online platforms. It also examines the opportunities and tradeoffs created when centralized services organize those activities.

Essential Question:

- » How did the movement from the early web to Web2 expand what people could do online, and how did it change who controlled the services, rules, and data?

LEARNING OBJECTIVES

After completing this lesson, you should be able to:

- » Describe important differences between the early web and Web2.
- » Explain how platforms and user-generated content changed online participation.
- » Identify benefits and tradeoffs associated with centralized online services.
- » Explain why labels such as early web and Web2 describe overlapping patterns rather than exact dates.

KEY TERMS

INTERNET

Definition: A worldwide system of connected computer networks that exchange information by following shared technical rules.

Sample sentence: The internet provides the underlying connections that allow many services, including the World Wide Web and email, to operate.

EARLY WEB

Definition: A broad label for the first period of the World Wide Web, when many websites primarily published linked pages for visitors to read.

Sample sentence: An early-web site might provide a fixed collection of articles that only the site owner could update.

WEB2

Definition: A broad label for the more participatory web, where people commonly create accounts, contribute content, interact with others, and use online services as platforms.

Sample sentence: Posting a review, sharing a video, or selling through an online marketplace reflects common Web2 patterns.

PLATFORM

Definition: A digital service that organizes interactions among different users, such as creators and viewers, buyers and sellers, or drivers and riders.

Sample sentence: The marketplace platform connects sellers with buyers and establishes rules for their interactions.

USER-GENERATED CONTENT

Definition: Material created and contributed by people who use an online service, including posts, comments, reviews, photographs, audio, and videos.

Sample sentence: Customer reviews are user-generated content that may help other people evaluate a product.

CENTRALIZED SERVICE

Definition: A service managed by one organization or governing authority that controls its main systems, policies, accounts, and access decisions.

Sample sentence: A centralized service may operate computers in many locations while one company still controls the rules and user accounts.

MAIN LESSON

BEGIN BY SEPARATING THE INTERNET FROM THE WEB

People often use the words internet and web as if they mean the same thing. They are connected, but they are not identical.

The internet is the broader network infrastructure. It allows connected computers and networks to exchange information through shared technical rules. Many services can operate through that infrastructure. Email is one example. File transfers, messaging, online games, video calls, and the World Wide Web are others.

The web is a system of linked resources that people reach through web addresses and browsers. A web page may contain text, images, sound, video, forms, or interactive tools. When you select a link, the browser requests another resource and displays it.

A transportation comparison may help. Roads provide infrastructure that many vehicles can use. A delivery service is one activity that operates on those roads. In a similar way, the internet provides connections, and the web is one major system that uses them. The comparison is limited because digital networks do not function exactly like roads, but it helps separate the foundation from one service built upon it.

HOW THE WORLD WIDE WEB BEGAN

The internet existed before the web. In 1989, Tim Berners-Lee proposed the World Wide Web while working at CERN, a scientific research organization. The project was designed to help researchers share and connect information. He developed core elements that included web addresses, a transfer method, a page-formatting language, a server, and a browser-editor. CERN states that the first website described the Web project itself.

In 1993, CERN placed the Web software in the public domain and later made an open-licence release available. That decision allowed other people and organizations to use and build upon the technology. Open standards also helped different computers, browsers, and websites work together rather than requiring every visitor to use one company's private system.

Many early websites resembled digital documents, directories, or brochures. A university might publish research information. A news organization might post articles. A business might provide its address, hours, and product descriptions. A person with the necessary knowledge might create a personal page. Visitors generally followed links and read what the publisher made available.

This description is a pattern, not an absolute rule. Early internet users communicated through email, discussion groups, and other interactive systems. Some early websites also accepted forms or visitor contributions. The phrase early web helps us describe what was common; it does not mean every person could only read or that all sites worked in the same way.

FROM PUBLISHING PAGES TO PARTICIPATING THROUGH SERVICES

Over time, creating and using online services became easier. Faster connections, improved browsers, databases, mobile devices, and simpler publishing tools supported richer interaction. A person no longer needed to build an entire website to contribute something publicly. A service could provide the forms, storage, search tools, audience, and rules.

People began creating profiles, publishing blogs, posting comments, sharing photographs and videos, rating products, editing shared pages, and communicating through social networks. Businesses could offer online shopping, payment tools, advertising, customer reviews, and services that matched one group of users with another.

User-generated content became a central part of this environment. The service operator supplied the platform, but participants supplied much of the material and activity. A video-sharing service became more useful when people uploaded videos. A marketplace became more useful when sellers offered goods and buyers provided ratings. A social network became more useful when friends, families, organizations, and creators joined and contributed.

This growth can reinforce itself. When more people use a service, the service may become more valuable to other users. Economists call this a network effect. Network effects can help a useful platform expand quickly, but they can also make it difficult for a smaller alternative to attract enough participants.

WHAT THE LABEL WEB2 DESCRIBES

The term Web2 became widely used during the early 2000s. In a 2005 explanation, technology publisher Tim O'Reilly described Web2 through patterns such as the web functioning as a platform and a movement from publishing toward participation. He also warned that the term did not have a hard boundary and could become an unclear marketing label.

Web2 was not a single invention, official upgrade, or date when every website changed. No central authority replaced “Web1” with “Web2.” Older and newer patterns existed together. They still do. A modern website may publish fixed pages with no account or comment feature. An older online community may have allowed participation long before people commonly used the label Web2.

For this course, Web2 is a useful shorthand for several related developments:

- » More people could create and share content without building a website.
- » Online services became interactive and responsive.
- » Platforms organized communication, commerce, entertainment, and work.
- » Accounts allowed services to remember activity and personalize experiences.
- » Large service providers stored data and established rules for participation.
- » Advertising, subscriptions, fees, and data-supported business models financed many services.

These features do not appear in every Web2 service, and they do not make a service automatically beneficial or harmful. They give us criteria for comparison.

HOW A PLATFORM ORGANIZES PARTICIPATION

A platform does more than display information. It creates an environment where different people or groups can interact. An online marketplace may connect buyers and sellers. A social service may connect creators, viewers, and advertisers. A work platform may connect clients and service providers.

The platform operator usually provides important benefits. It may maintain the technology, search and organize information, reduce some transaction costs, enforce safety rules, remove harmful material, update security, process disputes, and help participants find one another. A well-run centralized service can make a complicated activity easier and more reliable.

Centralized does not mean that one physical computer performs every task. A large service may use thousands of machines and facilities in many locations. The service is centralized in the governance sense: one organization has primary authority over the accounts, software, policies, and stored information.

That authority creates responsibility and power. The operator may decide who can create an account, what content is permitted, how search results or recommendations are ordered, what fees apply, which data are collected, and whether an account or post will be restricted. Some control is necessary to operate a service. The important question is how that control is used, explained, and reviewed.

BENEFITS THAT EXPANDED OPPORTUNITY

Web2 services lowered barriers to participation for many people. A creator could reach an audience without owning printing equipment or a broadcast station. A small business could display products, accept orders, and communicate with customers. Families could share updates across long distances. Learners could find communities, publish questions, and collaborate on documents. Employers and workers could discover one another through online listings and professional networks.

Centralized platforms can also provide convenience. One account may allow a person to store information, return to earlier work, communicate with many users, and use consistent tools. A central operator can correct software, respond to attacks, back up information, and apply common policies across the service.

These benefits are real, but access is not equal. A person may lack a reliable connection, a suitable device, permission to create an account, a payment method, digital skills, or confidence that personal information will be protected. A service that expands opportunity for one participant may remain unavailable to another.



TRADEOFFS INVOLVING DATA, RULES, AND DEPENDENCE

Participation through a platform often requires accepting the platform's structure. The operator may store posts, contacts, purchases, searches, location information, or other activity. Some services use data to improve functions, detect abuse, personalize content, or support advertising. Those uses can create value, but they can also create privacy and security risks.

A platform may change its rules, prices, recommendations, or available features. It may remove content or close an account correctly, incorrectly, or without an explanation the participant considers adequate. If a person has built an audience, reputation, collection of work, or source of income inside one service, leaving may be difficult. Contacts may not move easily, and another service may not have the same users.

The Federal Trade Commission reported in 2024 that major social media and video-streaming companies collected and used extensive personal information, including for advertising and automated systems, while providing users limited control in important areas. That finding concerns particular services and practices; it does not mean every centralized platform handles data in the same way. It does show why participants should examine what information a service collects, how the business earns revenue, and what choices users actually have.

Critical thinking requires us to hold two ideas together. A platform can create genuine opportunity and convenience. The same platform can also concentrate authority, collect sensitive information, and create dependence. Responsible evaluation considers both sides and asks whether alternatives exist.

HOW THIS HISTORY PREPARES US TO STUDY WEB3

Web3 developed partly in response to questions raised during the Web2 era. Could people interact online without depending as heavily on one platform operator? Could they control certain digital assets or credentials more directly? Could shared rules be enforced through a distributed network?

Those questions do not prove that a Web3 approach is better. Decentralized systems introduce their own costs, risks, complexity, governance problems, and forms of concentration. Web2 services will also continue to evolve. The purpose of learning this history is to understand the problem before evaluating a proposed solution.

In Lesson 3, we will examine what people mean by Web3. I encourage participants to carry forward three questions: Who provides the service? Who makes the rules? Who controls the data or digital record?



APPLIED SCENARIO: A COMMUNITY EDUCATOR CHOOSES AN ONLINE APPROACH

A community educator wants to share short employment-readiness lessons and allow participants to discuss them.

Under an early-web pattern, the educator creates a website with a page for each lesson. Visitors can read the material by following links. The educator controls what is published and updates the pages. This approach can be simple and predictable, but participants have no built-in way to post responses. Adding interactive features may require additional technical work.

Under a Web2 pattern, the educator opens a group on a large platform. The platform provides accounts, posting tools, comments, notifications, search, and an existing audience. Participants can contribute questions and examples. The educator can begin without building the full technical system.

The convenience comes with tradeoffs. The platform establishes the account rules, stores participant activity, decides how posts are displayed, and may change features or restrict access. Some learners may not be permitted or able to create accounts. The educator may also have difficulty preserving the complete learning record outside the service.

Reasoned conclusion: Neither approach is automatically correct. The educator should compare audience access, participation needs, privacy, recordkeeping, cost, technical skill, and dependence on the service provider. A combined approach might publish the lessons on an accessible website while offering optional discussion through a separate service. The choice should follow the learning goal rather than a technology label.

BENEFITS, LIMITATIONS, RISKS, AND MISCONCEPTIONS

POSSIBLE BENEFITS OF WEB2 PATTERNS

- » People can publish, communicate, and collaborate without building an entire technical system.
- » Platforms can connect participants who would otherwise have difficulty finding one another.
- » Reviews, comments, and shared knowledge can help communities solve problems.
- » Central operators can maintain infrastructure, apply policies, and respond to security problems.
- » Online marketplaces and work platforms can create new ways to reach customers or opportunities.

IMPORTANT LIMITATIONS AND RISKS

- » An account, compatible device, reliable connection, or payment method may be required.
- » The service operator may collect significant data and control how it is used.
- » A change in rules, fees, rankings, or access can affect participants who depend on the service.
- » Popularity and engagement systems may reward attention rather than accuracy or public value.
- » Network effects can concentrate users and influence in a small number of services.
- » User-generated content may include errors, manipulation, harassment, fraud, or unlawful material.

COMMON MISCONCEPTIONS

- » “The early web had no interaction.” Interactive services existed, but publishing and reading fixed pages were more prominent web patterns.
- » “Web2 began on one exact date.” The label describes overlapping changes that developed over time.
- » “Centralized means one computer.” A centralized service can use many distributed machines while one organization controls the service.
- » “User-generated content belongs to the user in every sense.” A participant may create the content while platform terms and applicable law affect storage, use, removal, and rights.
- » “A free service has no cost.” A service may be funded through advertising, fees charged to another group, data-supported business models, or other sources.
- » “Web2 is obsolete because Web3 exists.” Web2 patterns remain widespread, and newer systems often depend on ordinary web technologies and centralized services.

ETHICAL PARTICIPATION

Participation does not remove personal responsibility. A person should communicate honestly, respect privacy and intellectual property, evaluate sources, follow lawful rules, and avoid spreading material merely because it attracts attention. Never post another person’s private information or sensitive credentials. When a service makes participation easy, slow down long enough to consider who may be affected by what you share.

OFFLINE EXERCISE: SORT THE INTERNET ACTIVITIES

Estimated time: 15–20 minutes

Materials: Separate paper and a pen or pencil.

Draw three columns and label them Early-web pattern, Web2 pattern, and Could fit both. Place each activity below into one column. Then write one sentence explaining each item you placed in Could fit both.

1. Reading a university page that only the university can update.
2. Posting a product review through a personal account.
3. Viewing a fixed page containing a business's address and hours.
4. Uploading a video and receiving comments from viewers.
5. Following links through an online collection of public documents.
6. Buying an item through a marketplace that connects many sellers and buyers.
7. Reading a news article on a website.
8. Adding information to a shared community page.
9. Sending a message through an online service.
10. Publishing a personal page that visitors can read.
11. Searching a directory of websites.
12. Joining a work platform that matches clients with service providers.

When you finish, review your choices. Items 7, 9, 10, and 11 may reasonably fit more than one column depending on how the service works. For each ambiguous item, identify the feature that influenced your decision. Ask whether participants merely receive information or can also create content, maintain accounts, interact, and rely on a platform to organize the activity.

KNOWLEDGE CHECK

MULTIPLE CHOICE

1. Which statement best describes the relationship between the internet and the World Wide Web?
 - a. They are two names for exactly the same system.
 - b. The web is one major service that operates through the broader internet.
 - c. The internet was created after Web2.
 - d. The web only includes social-media platforms.
2. Which activity most clearly reflects a Web2 pattern?



- a. Reading a fixed page that only its publisher can update
 - b. Following a link from one document to another
 - c. Creating an account, uploading a video, and responding to comments
 - d. Printing an online article for later study
3. Which statement accurately describes a centralized online service?
- a. It must operate from one physical computer.
 - b. It cannot contain user-generated content.
 - c. One organization has primary authority over the service's accounts, rules, and systems.
 - d. It gives every user equal power to change the service's policies.

TRUE OR FALSE

- » Web2 began on one official date when every website received the same technical upgrade.

SHORT EXPLANATION

- » In two or three sentences, identify one benefit and one tradeoff of using a centralized platform for communication, learning, or business.

SUMMARY AND PRACTICAL TAKEAWAYS

- » The internet is the broader network infrastructure; the web is one major system that uses it.
- » The early web commonly emphasized publishing linked pages for visitors to read.
- » Web2 describes a more participatory environment built around accounts, platforms, interaction, and user-generated content.
- » Early-web and Web2 patterns overlap. They are not separated by one exact date.
- » Platforms can lower barriers, connect participants, organize information, and support commerce or collaboration.
- » Centralized service operators also control important rules, accounts, systems, and data practices.
- » User participation can create value while also introducing privacy, accuracy, safety, and dependence concerns.
- » Understanding Web2 helps us evaluate why people proposed Web3 approaches and what problems those approaches claim to address.



The practical goal is to compare systems without reducing history to slogans. Ask what people can do, what the service provider contributes, what the participant gives up, and what alternatives remain available.

PROFILE JOURNAL ASSIGNMENT

Write one coherent journal entry of approximately 300–400 words. Do not submit a disconnected list of answers. Use the prompts below to organize a beginning, middle, and conclusion:

- » Describe one way internet services changed communication, learning, work, or business.
- » Explain how user-generated content can create value for a community or platform.
- » Identify one benefit of a centralized online service and one tradeoff involving control, privacy, access, or dependence.
- » Explain why the labels early web and Web2 should not be treated as exact dates or rigid categories.
- » Connect this history to one skill you want to strengthen, such as evaluating sources, protecting privacy, communicating responsibly, or comparing alternatives.
- » End with one question about control or ownership that you want Lesson 3 to help you answer.

Your response should be honest and specific, but you do not need to disclose private account, financial, legal, medical, family, or facility information. You are not being asked to create an account, use an online platform, purchase anything, or support one model of the internet over another.

SUBMISSION REMINDER

Write your response on separate paper or in an approved institutional messaging system. Include your name or approved Profile identifier, Lesson 2: How the Internet Changed: From the Early Web to Web2, and the date you completed the entry.

Use one of the established Prison Professors Profile methods, subject to your facility's rules:

1. Send it by institutional email to Playbook@PrisonProfessors.org. Suggested subject: Web3 Lesson 2 — [date completed].



2. Send it by postal mail to: Prison Professors, 1205 BMC Drive, Suite 706, Cedar Park, TX 78613.
3. Send it to an approved family member or supporter who can enter it in your Profile at PrisonProfessors.org.

Keep a copy when circumstances permit. Never include passwords, private keys, seed phrases, authentication codes, account numbers, or other sensitive credentials.

