

1. The World Wide Web Consortium creates standards for the Web. Visit its site at <http://www.w3c.org> and then answer the following questions:
 - a. How did the W3C get started?

Tim Berners-Lee wrote a proposal in 1989 for a system called the World Wide Web. He then wrote the first Web browser, server, and Web page. He wrote the first specifications for URLs, HTTP, and HTML. In October 1994, Tim founded the World Wide Web Consortium (W3C) at MIT Laboratory for Computer Science in Collaboration with CERN, where the Web originated along with the support from DARPA and the European Commission.

- b. Who can join the W3C? What does it cost to join?

Membership in W3C is open to all types of organizations (including commercial, educational and governmental entities) and individuals. Any entity that can sign the Membership Agreement can become a Member. Members may be either for-profit or not-for-profit organizations. Most Members invest significant resources into Web technologies. They may be developing Web-based products, using Web technologies as an enabling medium, conducting research on the Web, or developing specifications based on W3C work.

In order to promote a diverse Membership that represents the interests of organizations around the world, W3C fees vary depending on the annual revenues, type, and location of headquarters of an organization. For instance, as of 2019-06-01, a small company in India would pay 1,905 USD annually, a non-profit in the United States would pay 7,900 USD, and a large company in France would pay 59,500 EUR. Please note that comma (",") is used to separate thousands in the tables below. Note: Fees do not reflect any local taxes, for which the Member is responsible.

- c. The W3C home page lists a number of technologies. Choose one that interests you, click on its link, and read the associated pages. List three facts or issues you discover

Picking web security, I found three different technologies that interested me. Web authentication grouping, web application security, and Web payments are intriguing. Web authentication working group develops recommendation track specifications defining an applications program interface as well as signatures and attestations formats which provide an asymmetric cryptography-based foundation for authentication of users to Web Applications. Applications security is developing specifications including Content Security Policy (CSP); UI Security; Subresource; Integrity, Mixed Content, Secure Context and various other features that allow internet users to relax knowing their internet security through forms is protected. The web payments group provides a forum for technical discussions to identify use cases and requirements for existing and/or new specifications to ease payments on the Web for users (payers) and merchants (payees), and to establish a common ground for payment service providers on the web Platform. The process at which this will be done will be through API's.

2. The Internet Society takes an active leadership role in issues related to the Internet. Visit its site at <http://www.isoc.org> and then answer the following questions:
 - a. Why was the Internet Society created?

The Internet Society was founded in 1992 by a number of people involved with the Internet Engineering Task Force (IETF). From those early days, one of our principal rationales is to provide an organizational home for and financial support for the Internet standards process. The Internet Society was formed by a number of people with long-term involvement in the Internet Engineering Task Force (IETF). As a result, one of its principal rationales was to provide an institutional home for and financial support for the Internet Standards process. This rationale still exists today. In 1990, it appeared that long-term support for the standards-making activity of the IETF which had come primarily from research supporting agencies of the US Government (notably ARPA, NSF, NASA and DOE) might need to be supplemented in the future, either because such support would diminish or that requirements would exceed the limits of available support. Even at that time, attendance fees were used in part to offset on-site costs which otherwise would have had to be borne by US Federal funding.

- b. Determine which local chapter is closest to you. Visit its website. List the website's URL and an activity or service that the chapter provides.

The closest chapter to me is in San Francisco by the name of US San Francisco Bay Area Chapter.

<https://www.sfbayisoc.org/>

The SF Bay Area ISOC Chapter serves the San Francisco Bay Area including Silicon Valley by promoting the core values of the Internet Society. The SF Bay Area ISOC Chapter was officially recognized by the Internet Society (ISOC) on February 16, 2009. They are part of the Cyber Surveillance Conference.

- c. How can you join the Internet Society? What does it cost to join? Would you recommend that a beginning Web developer join the Internet Society? Why or why not?

The perks of joining or why you would want to join are stated clearly as the following on the website:

“1. Join the Internet Society (global) by filling out the application form.

2. You will be given a choice of joining a chapter: select San Francisco Bay Area.

3. You will receive an email with your membership info.

4. Get involved! “

Becoming a member of the Internet Society gives you a voice in the global effort for an Internet open to all. Membership is free and open to anyone, anywhere. Benefits of membership of the San Francisco Bay Area Chapter include access to various features. The cost isn't outright stated. You can sign up and register and then you can become a member. I would say do it if its free and not if they charge. You can find an abundant amount of information online regarding web technologies and innovations.

3. HTTP/2 is the first major update to HTTP, which was first developed in the late 1990s. As websites have become more image and media intensive, the number of requests needed to display a web page and its related files have increased. A major benefit of HTTP/2 will be quicker loading of web pages.
 - a. Who developed HTTP/2?

Once upon a time Google invented SPDY, its homegrown internet application-layer protocol primed for the Chrome browser. SPDY improved on HTTP and picked up some traction, but it was still an alternative to the norm, not the standard. SPDY became the basis for HTTP2, and Chrome developers have been

working with the IETF on the protocol ever since. Google has been working alongside with the IETF to complete HTTP2.

b. When was the HTTP/2 proposed standard published?

On March 2012, call for proposals for HTTP/2 were underway. On November 2012 the first draft of HTTP/2(based on SPDY) were created.

<https://developers.google.com/web/fundamentals/performance/http2/>

c. Describe three methods used by HTTP/2 intended to decrease latency and provide for quicker loading of web pages in browsers.

HTTP/2 improves speed mainly by creating one constant connection between the browser and the server, as opposed to a connection every time a piece of information is needed. A transfer of data in binary, a computer's native language, rather than in text will now be done. Multiplexing will also be possible which how a computer can send and receive multiple messages at the same time. As will with multiplexing, the use of prioritization will also occur. Compression and server push will also be possible with the new protocol. A server push is when a server makes an educated guess about what your next request will be and sends that data ahead of time.