1. How did the W3C get started?

A: W3C all started with Tim Berners-Lee. He invented the World Wide Web, created the first Web Server and the original client program. He was also the original author of HTML. In 1994, at the Massachusetts Institute of Technology he created the World Wide Web Consortium, also known as W3C. It is now hosted in 4 different locations: INRIA, Keio University, ECRIM and Beihang University.

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

A: It is my understanding that any entity, be it an organization or an individual, who possess the ability to agree to and sign the membership agreement presented by W3C are allowed to join the W3C. According to their website the fees to join W3C vary based on what entity is joining, their annual revenue and their respective location in the world. The examples they listed on their website were a small company in India paying 1,905 USD annually and a non-profit in the United States paying 7,900 USD per year. They offer a fee calculator under their Membership Fees tab that allows an organization or individual to estimate what their fees would be.

3. 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.

Automotive and Transportation at W3C

A: W3C is involved in creating interoperability in the world of transportation to push the technology forward. I've gone down the rabbit hole on this topic many times and I find it fascinating how automated driving systems operate and function in the context of real world traffic. It's exciting to know that an organization such as this is involved in progressing this area of technology into new areas. This is one of the areas of technology that I'm excited to watch grow as I age and by allowing the connection of data between systems it will only see exponential increase in development.

A: Vehicles are evolving away from their archaic past of being a machine utilized by man and becoming computers expertly designed to accomplish tasks. They list quite a few areas of technology such as Predictive Maintenance measures, Route and Trip Planning and Safety Measures that I find to be a fascinating subject. As vehicles literally become computers themselves I personally believe we will not only see a superb increase in their functionality resulting in more efficient travel with extremely reduced rates of congested traffic, but also across the board in every way vehicles will become increasingly more safe. The latter is what I look forward to the most. Driving an automobile can be quite dangerous and I'm very optimistic about the change from vehicle to computer lessening that danger.

A: W3C has launched the Automotive Working Group in order to specify a common data model for vehicle signals that will allow for a common description of the data that will be shared between these automobile systems. This is fascinating as it's very similar to the beginnings of the internet. A unified way of classifying and sharing information that allows for ease of access from many different systems.

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:

1. Why was the Internet Society created?

A: As quoted from their "Our Mission" tab: "The Internet Society supports and promotes the development of the Internet as a global technical infrastructure, a resource to enrich people's lives, and a force for good in society."

They essentially view the Internet as the next great frontier and aim to make it a safe and ethical environment where the world can come together and explore all of the unique possibilities and opportunities in a safe, orderly and ethical manner. They believe that each individual who uses the Internet should be able to do so in a trustworthy way from those who host it.

2. 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.

A: For me, the closest chapter is located in the San Francisco Bay Area and their URL is: https://www.sfbayisoc.org/

On their website they advertise what they call Chapter Events that would appear to me to be conferences hosted on specific topics. It looks to be that they either only show upcoming events to members or its possible they have not had any in person events since the Covid Pandemic. The last conference that I can see on their website that they hosted was on March 8th 2021 that they titled "The 26 Words that Built the Internet: Section 230." I'll make a note to do some more digging later and see if it would be possible for me to visit and event sometime in the future, it seems very interesting.

3. 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?

A: According to their website membership is free and open to anyone no matter location. To be honest I do not see an argument not to join. The very first bullet point was enough to convince me: "Benefits of membership include exclusive access to Internet Society webinars and e-learning courses." As someone who has completely dedicated the last 3 months to exclusively studying Web Design and Development and has aspirations of working in the field in the next 6-10 months I am super glad to have found this resource. I would say the pros outweigh the cons by the simple fact that there are no cons!

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.

HTTP/2 Resources:

http://readwrite.com/2015/02/18/http-update-http2-what-you-need-to-know

https://http2.github.io

http://www.engadget.com/2015/02/24/what-you-need-to-know-about-http-2

https://tools.ietf.org/html/rfc7540
Use the resources listed above as a starting point as you research HTTP/2 and answer the following questions.
1. Who developed HTTP/2?2. When was the HTTP/2 proposed standard published?
A: HTTP/2 was developed by the HTTP Working Group of the Internet Engineering Task Force. Google invented SPDY which is an Internet Application-layer Protocol used in their Chrome Browser that improved upon HTTP. SPDY would go on to become the foundation that led to HTTP/2.
The HTTP/2 Proposed Standard was published in May of 2015.
3. Describe three methods used by HTTP/2 intended to decrease latency and provide for quicker loading of web pages in browsers.
A: HTTP/2 has enhanced prioritization of which pieces of a web page are loaded in what order. It is programmed to prioritize loading content that is most important to the user first and then loading what is of lesser importance.
A: HTTP/2 uses a process called Multiplexing which only requires a single Transmission Control Protocol connection to send multiple packets of information in a single stream at once to eliminate the possibility of one packet blocking another. HTTP's method only allowed for one at a time whereas HTTP/2 sends them all at once.
A: HTTP/2 uses HPACK which eliminates redundant information in HTTP header packets. This means that less time is spent loading files that are more or less the same as others allowing for a speedier transfer of information.

Note
The Focus on Web Design Portion of the Web Research Project is on a separate page below ↓↓↓↓↓↓↓↓

I could not think of a webpage off the top of my head so I did a google search for “Interesting Websites” and came across one that piqued my interest. Its url is: https://riverstyx.com/

The purpose of this website is to educate the user on Greek Gods, Goddesses and Mythology. It’s honestly what I would describe as a modern version of an online Text Based Roleplaying game. The homepage is where you meet Charon, the boatman who transports all souls of the dead across The River Styx. Today, however, he will be the users guide down this river as he shares with us his readings that he has spent thousands of years writing on the Greek Gods and their mythologies. There are interactive buttons that allow the user to hear Charon speak as well as a navigation bar on the top of the page. As you click the “Next” button you travel further along the river and learn more and more about the different Greek Gods and Goddesses that Charon has chosen to present to the user.

The intended audience of this website is anyone with an interest in learning about Greek Mythology. The material is suitable for anyone with a desire to know more about the many Greek Gods and their tales of love and loss. I think the creators of this site have actually done a beautiful job in catering to their audience. I myself started reading Greek Mythology in the 5th grade and was genuinely captivated by the design of this website. It was very easy to sink multiple hours into reading Charon's tales of the Gods that led me to travel down subsequent rabbit holes.

While the contents and idea of this website were spot on, I do believe it could use an update and some modernization. The first glaring problem that I noticed was that the color scheme made it a bit difficult to actually see some of the linked buttons and functions of the site. Being that it uses light brown on top of light brown and black with a slight emerald tone to a few of the logos, it was actually kind of aggravating to my OCD to not be able to satisfy my desire for well organized and clearly visible content. The styling of the letters is that of Greek lettering, which is a fantastic idea, it’s just not well executed. The best way I can describe it is that the website “feels” old and could do with some visual updates. If it were me I would find a different color scheme that was easier on the eye. It’s not so much that the buttons are hard to find, it’s just that certain aspects overlap one another and similar colors overlap one another.

Along with this, some of the animated pictures and audio are a bit dated as well. The animations could easily be redone in a way that was more interactive. Currently there is only one function: press the button to turn on audio and listen to a short line from the character in the moving picture. The animations are also limited in functionality and I would personally re-code them to be interactive in such a way that you could click on the images and spark interaction with them. Such as clicking on an item in the photo and the God in the photo would give a description or some sort of quip about what was clicked. I think there would be a ton of cool new functions that could be added to this site. Honestly, visiting this site has only inspired me in my journey to continue learning web development as it excites me to know that I will one day be able to add functions such as the ones I’m suggesting to sites like these.

I would encourage anyone who is interested in Greek Mythology and has free time to spare to visit this website and interact with it. Although I did mention above that the website feels a bit dated, its functionality and purpose are still very much intact. It's obvious to the user that the creators of this website are not only passionate about the subject but were also passionate in creating the website that delivers the information to the user.