

- **Technology (description) (15 points): Web Development**
  - **Based on the discussions in class, what is the dollar sign (\$) used for? How could we accomplish the same functionality without it?**

The \$-sign is used to define jQuery (it is basically shorthand for standard function). You can get around using the '\$' symbol in jQuery by simply replacing it with 'jQuery'. For example, '\$(document).ready' becomes 'jQuery(document).ready'.

- **What is the difference between an application layer protocol, a Transport layer protocol and a Link layer protocol? Give 3 examples of each.**

An application layer protocol provides the rules for communication between applications. Three examples of an application layer protocol would be HTTP, FTP, and SMTP.

Transport layer protocols differ from application layer protocols in that transport layer protocols are responsible for communications between specific network devices (ie. point to point) rather than applications as a whole. Three examples of this would be TCP, UDP, and WDP.

Link layer protocols differ from the previous two in that it is even more specialized. Where transport layer protocols focus on point to point communication, link layer protocols focus on singular data transfers between two adjacent network nodes. Link layer protocols examples include Ethernet, FDDI, and PPP.

- **HCI - Website mockups (20 points) (deck and video are online on LMS in week 9)**
  - **Explain, in your own words, per the in class lecture, what is a paper prototype**

A paper prototype is a very rough draft of how you want a certain product to look, with the goal of mapping information architecture and UI.

- **Using Balsamiq, create a prototype of your personal website. Include the files in a subfolder of your quiz2 folder named quiz2HCI. Make sure it gets added to your repo.**
- **In your prototype, add the current functionality and add future planned next steps. Make sure they phases are indicates clearly in your mockups**
- **As described in the HCI lecture what is the magic 7 seconds? Why is it important?**

The magic 7 seconds is the seven seconds beginning right when somebody sees something for the first time. It is within that time window that that person forms a first impression, so it is crucial for that first impression to be a good one. If you are able to 'wow' a person in the first seven seconds of seeing your product, for example, they will be more inclined to think positively of it in the future.

- **Web Science (20 points)**

- **Explain, in your own words: What is a URI? How does it relate to a URL? How do they help make 'the Web'? Name 3 examples from class in your answer. (use complete sentences and your own words)**

To put it simply, a URI is an identifier that is connected to some type of specific resource. A URL is a type of URI, in that a URL is mainly used as a locator for a specific resource such as a website. There are also URNs, another type of URI, which are used to name resources. They make up 'the Web' in that they are used to so that users of 'the Web' can navigate to a specific resource they want to access. Without identifiers for all of the resources, users would not be able to accurately and effectively navigate to the resources they want to browse, effectively making the internet useless. Examples of URIs are <https://google.com>, ISBN 9783863524586, and urn:isbn:0-486-27557-4.

- **Social Problem**

- **Using references from the in-class lecture, identify a social problem and propose an engineered solution. What could you do to offer a solution?**

**(In your response, identify how to measure, analyze evaluate and iterate. In other words, How might you analyze and visualize information to help make your case? )**

A social problem that is currently plaguing society is climate change. It affects every society and person in the world, yet it goes largely ignored thanks to its unperceivable direct effects currently. Many people across the world are hesitant to work on reducing humanity's carbon footprint because it will be time-consuming and unpopular with many who cannot easily see the danger.

A potential solution to this problem would be to educate people on climate change so that it becomes a much more popular movement. Firstly, you would provide the statistical analysis of weather patterns from the last decade and compare them to the last century, and continually go back in this regard to show just how different it is from the norm.

The propagators of the solution would continually measure and analyze feedback from across society and see where the most negative reaction to an increased focus on

climate change reduction is apparent, and target such areas with more education-based campaigns to raise awareness.

They would then evaluate the results of such work, and continue to iterate their methods in hopes of building a more climate-conscious society.

As for myself, (or for any individual) I would make sure that the people closest to me understand the importance of combating this issue in order to preserve a future for our world that doesn't involve horrific weather and unlivable conditions.