Name:

ID:

M1 Assignment 04

Submit completed assignment here: <https://docs.google.com/forms/d/e/1FAIpQLSdygGxiCKScAhWm1V_aNsRY_QEbW3pntClfQuXZrryX9zDdqg/viewform>

**Part 1:** [Boolean Algebra](https://medium.com/i-math/intro-to-truth-tables-boolean-algebra-73b331dd9b94)

1. Evaluate the following logical expression:

**P = True, X = False**

* What is **P and X**?

1. Evaluate the following logical expression:

**P = True, X = False**

* What is **P or X**?

1. Evaluate the following logical expression:

**P = True, X = False, Z = True**

* What is **P and X or not z**?

1. Complete the following truth table:

|  |  |  |
| --- | --- | --- |
| P | Q | P and Q |
|  |  |  |
|  |  |  |
|  |  |  |

1. Complete the following truth table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| X | Y | X or Y | X and (X or Y) | not (x and (X or Y)) |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Part 2: [The Internet](https://runestone.academy/runestone/books/published/webfundamentals/WWW/toctree.html)

1. What protocol is used when the browser and web server talk?

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |

1. Give an example of a web browser:

|  |  |
| --- | --- |
| apple | google |
| maps | opera |
| iphone | windows |

1. What does the “TP” in HTTP stand for? What does it mean?

|  |  |
| --- | --- |
| Tee pee | To protocol |
| Traffic protocol | Total pressure |
| Transfer protocol | Tipping point |

1. What 3 technologies do modern web pages rely on?

|  |  |
| --- | --- |
| Browser,server,bluetooth | Chrome,google,apple |
| Jquery,html,sas | Javascript,html,css |
| Javascript,c++, ruby | Python,html,css |

1. Match the following:
2. Fonts and styles
3. User clicks and interactions
4. Headings and sections and structural components

JavaScript:

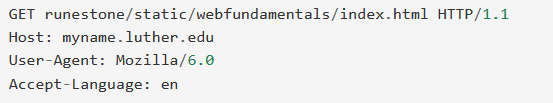
CSS:

HTML:

1. Who invented the internet? Where was it invented?
2. Why was the establishment of the W3C important?
3. Are all locators are also identifies? Explain:
4. Identify and explain the purpose of the 3 components of a URL in the following :

https://lichess.org/@/nick

1. What is returned from the Domain Name Service Server (DNS)?
2. The mechanism in which a browser connects to a server is known as what?
3. Consider the following http request:



* What command is used and what is its purpose?
* What type of web browser is being used?
* How many headers are used?

1. What does the server send back to the browser through the socket?
2. Give the appropriate HTTP response codes for the following:

* Resource location changed:
* Mistyped URL:
* Server crashed:
* Everything is fine:

Part 3: **Information Gathering**

* 1. [Cognitive Biases](https://en.wikipedia.org/wiki/List_of_cognitive_biases)
     1. What is a cognitive bias?
     2. What is the confirmation bias?
     3. What is the survivorship bias?
     4. Discuss a time in your life when you have experienced a cognitive bias:
     5. Why do we need to be aware of cognitive biases when collecting information or building computer programs?
  2. [Chrome Shortcuts](https://support.google.com/chrome/answer/157179?hl=en)
     1. What is the keyboard shortcut to create a new tab?
     2. What is the keyboard shortcut to make everything on the page bigger?
     3. What is the keyboard shortcut to go to the bottom of the page?
     4. What is the keyboard shortcut to add *www.* And *.com* to a website?
  3. [Credible Sources](https://sites.umgc.edu/library/libhow/credibility.cfm)
     1. What checklist should be used to determine if a source is credible?
     2. Name a reliable web domain:
     3. Name two things you should beware of when evaluating a source:
     4. What is a filter bubble?

Part 4: Computer Speed

Read the following article on “Speed and Latency”: <https://hpbn.co/primer-on-latency-and-bandwidth/>

* 1. Define latency:
  2. Define bandwidth:
  3. Describe the features of latency and bandwidth:
  4. What is the speed limit of the universe? What does this mean in regards to latency and all physical processes?
  5. Describe methodologies for reducing latency and increasing bandwidth.

Go to <https://www.speedtest.net/> , what is the purpose of this site. Run a speed test.

* 1. What is the download speed?
  2. What is the upload speed?
  3. Can you identify a potential issue with running a speed test from the company that provides your internet?