**Part One: Solidify Terminology**

In your own terms, define the following terms:

* What is HTTP?

HTTP (htpertext tranfer protocol) is a set of rules used when transferring files across the internet. It provides a defined layout for exchanging information from one device to another.

* What is a URL?

URL (uniform resource locator) is a reference to where a file is located that can be accessed by people on the internet.

* What is DNS?

DNS (Domain name system) is a system that helps to translate IP addresses into more recognisable and easy to remember names such as website names.

* What is a query string?

A query string is added to the end of a URL when the user of a site requests some information from a site. This query is then handled and a response sent back.

* What are two HTTP verbs and how are they different?

GET – Retrieves information from a server – used universally on most websites to load a page

POST – Sends information to a server, generally to make changes to a page

* What is an HTTP request?

Request is when a client asks the server something

* What is an HTTP response?

Response is the servers reply to a clients request

* What is an HTTP header? Give a couple examples of request and response headers you have seen.

Headers help give additional information to what is being requested/responded

- Request headers: Host, User-Agent, Accept, Cookie, Cache-Control

- Response headers: Content-Type, Last-Modified, Set-Cookie, Cache-Control

* What are the processes that happen when you type “[http://somesite.com/some/page.html”](http://somesite.com/some/page.html%E2%80%9D) into a browser?
* The browser reads the url and uses the DNS to find the IP address
* Sends a request using headers to the server
* Gets a response from the server
* Browser turns response into a web page
* Makes any additional requests it needs for links on the page

**Part Two: Practise tools**

1. Using ***curl***, make a ***GET*** request to the [*icanhazdadjoke.com*](http://icanhazdadjoke.com) API to find all jokes involving the word “pirate”

curl <https://icanhazdadjoke.com/search?term=pirate>

What did the pirate say on his 80th birthday? Aye Matey!

What does a pirate pay for his corn? A buccaneer!

Why couldn't the kid see the pirate movie? Because it was rated arrr!

Why do pirates not know the alphabet? They always get stuck at "C".

Why are pirates called pirates? Because they arrr!Tobias:~ user$ dig icanhazdadjoke.com

1. Use ***dig*** to find what the IP address is for [*icanhazdadjoke.com*](http://icanhazdadjoke.com)

dig icanhazdadjoke.com

; <<>> DiG 9.10.6 <<>> icanhazdadjoke.com

;; global options: +cmd

;; Got answer:

;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 26202

;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:

; EDNS: version: 0, flags:; udp: 512

;; QUESTION SECTION:

;icanhazdadjoke.com. IN A

;; ANSWER SECTION:

icanhazdadjoke.com. 300 IN A 172.67.198.173

icanhazdadjoke.com. 300 IN A 104.21.66.15

;; Query time: 178 msec

;; SERVER: 192.168.1.1#53(192.168.1.1)

;; WHEN: Tue Jul 11 07:49:31 BST 2023

;; MSG SIZE rcvd: 79

1. Make a simple web page and serve it using ***python3 -m http.server***. Visit the page in a browser.

Complete