**How Web Works Exercise**

**Part One: Solidify Terminology**

In your own terms, define the following terms:

* What is HTTP?

Hyper Text Transfer Protocol; how a browser gets data sent to and from a server.

* What is a URL?

Uniform Resource Locator; is an address for a website.

* What is DNS?

Domain Name System; converts host name to IP address.

* What is a query string?

It is optional, takes key value pairs with ?key=value, can pair using &.

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

GET – requests data from a server, without changing the server data

POST – sends data to a server, changing the data in the server

* What is an HTTP request?

A request using HTTP from a client to a server.

* What is an HTTP response?

A response using HTTP from a server to a client.

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

Headers provide information about your request or response;

Request Headers – method, accept-language cookie

Response Headers – date, content-language, status

* What are the processes that happen when you type “<http://somesite.com/some/page.html>” into a browser?

Using DNS, the browser converts the name into an IP address and connects to the address. Using HTTP, the browser requests data from the IP address. The server responds with the information, typically with HTML. The browser loads the HTML page and requests resources as needed, i.e. css and javascript. The server then provides a response for each as needed.

**Part Two: Practice Tools**

1. Using ***curl***, make a ***GET*** request to the *icanhazdadjoke.com* API to find all jokes involving the word “pirate”

295

1. Use ***dig*** to find what the IP address is for *icanhazdadjoke.com*

*104.21.37.176 and 173.67.211.64*

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

**Part Three: Explore Dev Tools**

Build a very simple HTML form that uses the GET method (it can use the same page URL for the action) when the form is submitted.

Add a field or two to the form and, after submitting it, explore in Chrome Developer tools how you can view the request and response headers.

Edit the page to change the form type to POST, refresh in the browser and re-submit. Do you still see the field in the query string? Explore in Chrome how you can view the request and response headers, as well as the form data.