**How Web Works Exercise**

**Part One: Solidify Terminology**

* What is HTTP?

**Hypertext Transfer Protocol. HTTP is a set of rules that’s how the browsers and servers communicate with each other and transfer data between them.**

* What is a URL?

**Uniform Resource Locator. URL is an address (a reference) for a internet resource.**

* What is DNS?

**Domain Name System. DNS is a system that takes URLs(domain names) and turns them into IP addresses so browsers can load internet resources.**

* What is a query string?

**A query string is a part of a uniform resource locator (URL) that assigns values to specified parameters. (?key1=value1&key2=value2...)**

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

**GET:** requests without side effects (ie, don’t change server data). arguments are passed along in query string.

**POST:** requests with side effects (ie, change data on server). arguments sent as body of the request (not in query string).

* What is an HTTP request?

**An HTTP request is a request sent from a client to a server which follows the HTTP protocol (a request for HTML).**

* What is an HTTP response?

**An HTTP response is a response from a server to a client which follows the HTTP protocol (sending back HTML/CSS/JS/etc).**

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

**Headers provide additional information about the request or the response.**

**Examples:**

**Request headers: Hostname, 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?

**1. Browser converts the name into an IP address via DNS.**

**2. Browser makes a request to that IP address, including headers (info about browser, any previous cookies, and other things)**

**3. The server sends a response (typically, HTML, with a status code (200 if successful or 404 Not Found or etc)**

**4. The browser makes a DOM from that HTML, and finds any other resources needed (images, CSS, JavaScript, etc)**

**5. The browser makes separate HTTP requests for those resources and receives response from the server for each**