

## How the Web Works Exercise - Part One: Solidify Terminology

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### 1. What is HTTP?

- (Hypertext Transfer Protocol) Protocol used for transferring web pages on internet. Defines how messages are formatted and transmitted.

### 2. What is a URL?

- (Uniform Resource Locator) address used to access resources on the internet. Consists of protocols (like HTTP or HTTPS), a domain ([www.example.com](http://www.example.com)), and a path (like some/website.html)

### 3. What is DNS?

- (Domain Name System) a system that translates human-readable domain names ([www.example.com](http://www.example.com)) into IP addresses (like 123.456.7.8) that computers use to identify each other on the network

### 4. What is a query string?

- Part of a URL that contains data to be passed to web applications. Usually found at the end of the URL

### 5. What are two HTTP verbs and how are they different?

- **‘GET’** and **‘POST’**
- **‘GET’** is used to request data from a server and does not change the state of the server
- **‘POST’** is used to send data to a server to create/update resources and change the state of the server

6. What is an HTTP request?

- Message sent by a client (web browser) to a server to request a resource, such as a web page or an API endpoint. Includes methods like **GET** and **POST**, headers, and sometimes a body

7. What is an HTTP response?

- Message sent by a server back to a client in response to an HTTP request. Includes a status code (like 200 OK), headers, and sometimes a body containing the requested resource or data.

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

- HTTP headers are key-value pairs sent in HTTP requests and responses to provide additional information.
- Examples:
  - Request Headers: '**User-Agent**', which identifies the client software, and '**Accept**', which specifies the types of content the client can process
  - Response Headers: '**Content-Type**', which indicates the media type of the response, and '**Set-Cookie**', which sets cookies from the server.

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

- DNS Resolution
- TCP Connection
- HTTP Request
- Server Processing

- HTTP Response
- Rendering