

# Solution

- What is HTTP?

Hyper Text Transfer Protocol is governs how clients get data from, or send data to, a server.

- What is a URL?

Short for Uniform Resource Locator, a URL is an address for some internet resource.

- What is DNS?

Short for Domain Name System, this is a system that takes human-readable URLs and converts them into IP addresses.

- What is a query string?

The query string allows you to pass key-value pairs into the URL, in the format ?

key1=value1&key2=value2...

- List two HTTP Verbs and their use cases.

- GET - get some data from the server (most pages, search forms)
- POST - send some data to the server (pages that change data on server)

- What is an HTTP request?

An HTTP request is a request from a client to a server which follows the HTTP protocol (eg a request for HTML from news.google.com)

- What is an HTTP response?

An HTTP response is a response from a server to a client which follows the HTTP protocol (eg 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.

Here are some examples:

- Request headers: Host, User-Agent, Accept, Cookie, Cache-Control
- Response headers: Content-Type, Last-Modified, Set-Cookie, Cache-Control

- What happens when you type a URL in a browser?
  1. Your browser "resolves" the name into an IP address using DNS
  2. Your 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 it was successful))
  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