What is a web server?

* A web server is a program (that runs on a physical server – i.e. a computer) designed to accept and process incoming web requests
* For example, when you access <http://www.google.com/> in your browser, it sends a request to a web server. The server then processes this request, and usually sends a response (but not always)

What do we send?

* When you access the Google web address (http://www.google.com) in your browser, this is what is sees:
  + GET / HTTP/1.1
    - “GET” – verb
    - “/” – path
    - “HTTP/1.1” - protocol
  + Host: [www.google.com](http://www.google.com)
* Going to any page in your browser will do the same. E.g. accessing http://www.twitter.com/login will send GET /login HTTP/1.1, host: https://www.twitter.com.
* This is all the server receives. The web server program then generates a response based on this request. But different servers will interpret this request in different ways and, naturally, send different responses. For example, a server may:
  + Give an error, if the path “/” is not found
  + Or given an error if HTTP is not supported (e.g. it may only support FTP or SMTP)
  + It may give an error if the server is unavailable
  + It may give you HTML code back (which is usually the case for HTTP)
  + It may respond with text
  + It may respond with nothing (if it is not configured)

Other verbs

* Going to a web page will always send a GET request
* But there are also many more verbs: POST, DELETE, PUT, OPTIONS, HEAD, and many more
* These verbs usually have the same kind of meaning when they a received by a server: but each server application will respond differently
* GET – Client wants to retrieve something, i.e. get something from the server
* POST – Sending something to the server, to be used and processed by the server
* PUT – add a new resource to the server
* DELETE – remove something from the server