*TASK-01*

1. **Write A Blog on Difference Between HTTP 1.1 VS HTTP 2 :-**

**HTTP 1.1 HTTP 2**

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| * The version 1.1 was released in 1997 and became the Internet Standard. | * It Was released in February 2015 by the Internet Engineering Task Force (IETF) focussed on improving HTTP performance. |
| * This version added many performance enhancements, including, * Keepalive connections * Caching mechanisms * Request pipelining * Transfer encodings and byte-range requests. | * This article focuses on the significant changes of this version in more detail. |
| * It was developed by timothy berners lee in 1989 as a communication standard for the world wide web. | * HTTP/2 (originally named HTTP/2.0) is a major revision of the HTTP network protocol used by the World Wide Web |
| * Its secure variant named [HTTPS](https://en.wikipedia.org/wiki/HTTPS" \o "HTTPS) is used by more than 85% of websites | * published in 2015, provides a more efficient expression of HTTP's semantics "on the wire". * As of January 2024, it is used by 36% of websites and supported by almost all web browsers (over 98% of users) |

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| * communications therefore experience less [latency](https://en.wikipedia.org/wiki/Network_latency" \o "Network latency) as the establishment of TCP connections presents considerable overhead, especially under high traffic conditions | * To maintain the same client–server model and the same protocol methods but with these differences in order: * To use a compressed binary representation of metadata (HTTP headers) instead of a textual one, so that headers require much less space |
| * New headers to better manage the conditional retrieval of cached resources. | * New headers to better manage the conditional retrieval of cached resources. |
| * [chunked transfer encoding](https://en.wikipedia.org/wiki/Chunked_transfer_encoding" \o "Chunked transfer encoding) to allow content to be streamed in chunks in order to reliably send it even when the server does not know in advance its length (i.e. because it is dynamically generated, etc.). | * [chunked transfer encoding](https://en.wikipedia.org/wiki/Chunked_transfer_encoding" \o "Chunked transfer encoding) to allow content to be streamed in chunks in order to reliably send it even when the server does not know in advance its length (i.e. because it is dynamically generated, etc.). |
| * [byte range serving](https://en.wikipedia.org/wiki/Byte_serving" \o "Byte serving), where a client can request only one or more portions (ranges of bytes) of a resource | * [byte range serving](https://en.wikipedia.org/wiki/Byte_serving" \o "Byte serving), where a client can request only one or more portions (ranges of bytes) of a resource |
| * This optimization was never considered really safe because a few web servers and many [proxy servers](https://en.wikipedia.org/wiki/Proxy_server" \o "Proxy server), specially transparent proxy servers placed in Internet * / [Intranets](https://en.wikipedia.org/wiki/Intranet" \o "Intranet) between clients and servers, did not handle pipelined requests properly (they served only the first request discarding the others, they closed the connection because they saw more data after the first request or some proxies even returned responses out of order etc.). | * It extended the usage of persistent connections by multiplexing many concurrent requests/responses through a single TCP/IP connection. |
| * A client sends *request messages* to the server, which consist of, * a **request line**, consisting of the case-sensitive request method, a [space](https://en.wikipedia.org/wiki/Space_(punctuation)" \o "Space (punctuation)), the requested URL, another space, the protocol version, a [carriage return](https://en.wikipedia.org/wiki/Carriage_return" \o "Carriage return), and a [line feed](https://en.wikipedia.org/wiki/Line_feed" \o "Line feed), * e.g.:   GET **/images/logo.png** **HTTP**/1.1 | * It also makes provision for servers to suggest alternative services. * For example, by sending the [Alt-Svc](https://http.dev/alt-svc" \o "Alt-Svc) header, the server can tell the client about another route to the same resource that may be using an alternative server, host, and/or port number. |