**TASK 1**

**HTTP1.1 vs HTTP2**

KEY features HTTP1.1 :

1. It was no longer required for each connection to be terminated immediately after every request was served with a response; instead, with the keep-alive header, it was possible to have persistent connections. It allowed multiple requests/responses per TCP connection.
2. HTTP/1.1 provided support for chunk transfers that allowed streaming of content dynamically as chunks and for additional headers to be sent after the message body.

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## Key Features of HTTP/2:

1. It introduces the concept of a **server push** where the server anticipates the resources that will be required by the client and pushes them prior to the client making requests.
2. Introduces the concept of multiplexing that interleaves the requests and responses without **head-of-line blocking** and does so over a single TCP connection.

#### **Multiplexed, instead of ordered**

Allows using same TCP connection for multiple parallel requests

#### **Header compression using HPACK**

Compressed headers, reduced data redundancy

#### **Server Push**

Instead of waiting for the client to request for assets like JS and CSS, the server can “push” the resources it believes would be required by the client. Avoids the round trip.

### **HTTP/2 In Action**

While the basic advantages are mentioned above, let’s get a real-world example of the difference between HTTP/1.1 and HTTP/2 performance.

Reference:

1. <https://cheapsslsecurity.com/p/http2-vs-http1/#:~:text=HTTP2%20is%20much%20faster%20and,then%20the%20page%20loads%20faster>.

2. <https://imagekit.io/blog/http2-vs-http1-performance/>