# HTTP2 Server proposal

## Objectives:

The primary objective of this project is to design and implement an HTTP/2 server that adheres to the specifications outlined in RFC 7540 (HTTP/2 protocol) and RFC 7541 (HPACK header compression). The server will focus exclusively on the HTTP layer, and aim to demonstrate:

* Multiplexing: Efficient handling of multiple streams over a single TCP connection.
* Header Compression: Implementation of HPACK to optimize transmission efficiency.
* Flow Control: Ensuring proper data flow management between server and client.
* Protocol Compliance: Full adherence to the HTTP/2 standard, including frame handling and stream prioritization.

## Scope:

1. Implementation of core HTTP/2 server features:

* Connection preface and initial SETTINGS exchange.
* Frame parsing and validation.
* Stream management and multiplexing.
* Flow control at the connection and stream levels.
* Support for HTTP/2 frames such as HEADERS, DATA, SETTINGS, PING, and GOAWAY.

1. Header compression and decompression using HPACK (RFC 7541).
2. Error handling for protocol errors.