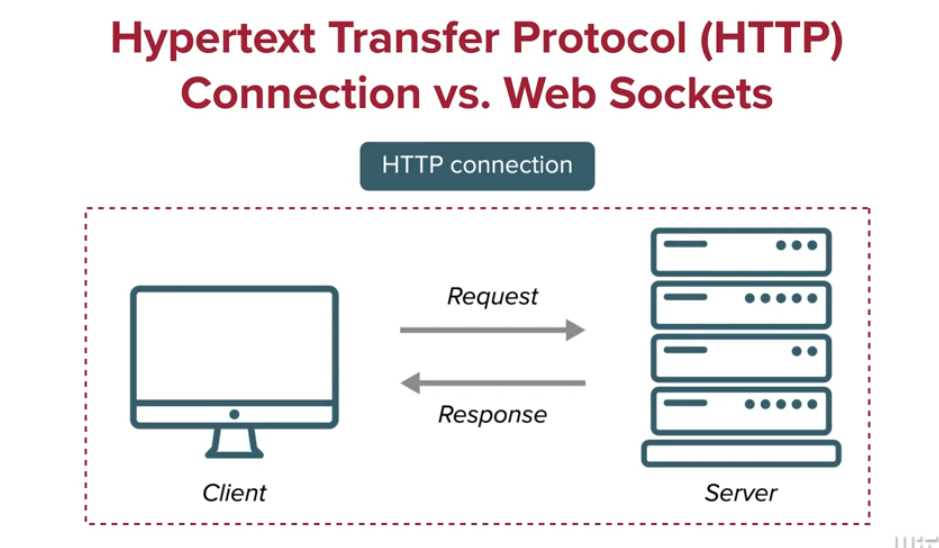
**MIT xPRO Data Engineering Certificate**

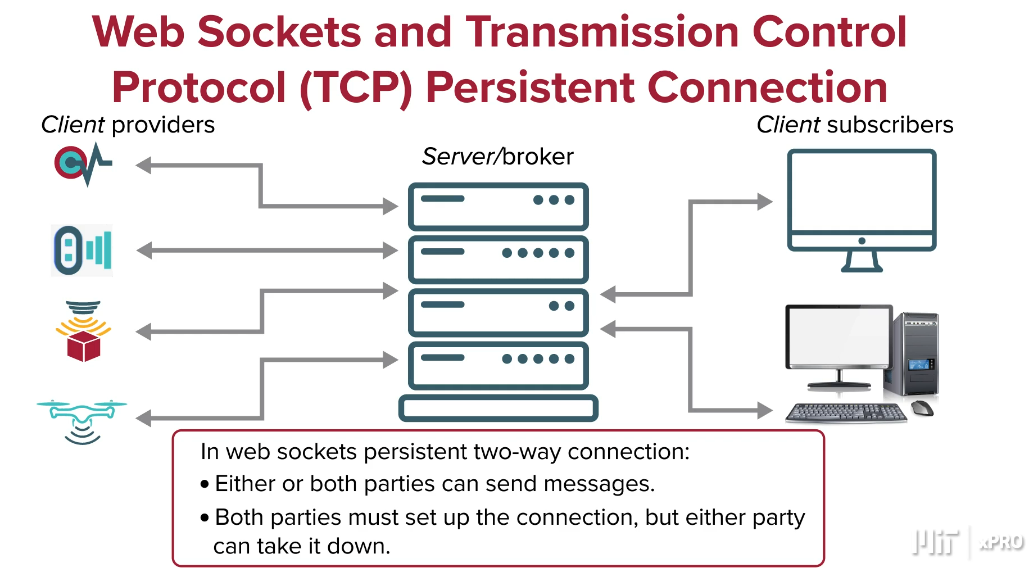
**WebSockets**

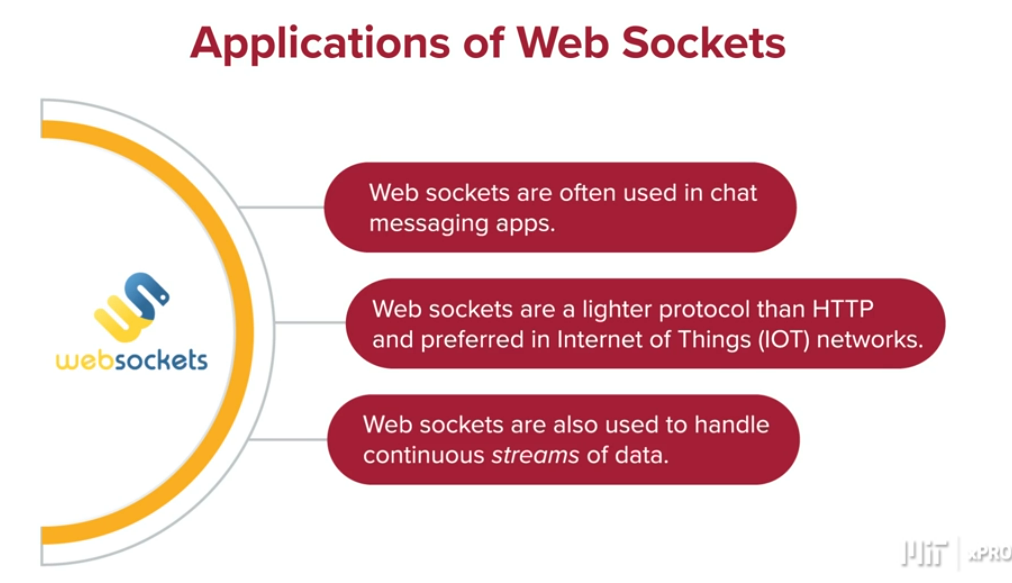
Web sockets are a two-way computer communication protocol over TCP networks. Web sockets can be used to handle large *streams* of data. Both HTTP and web sockets run over TCP networks, and web sockets offer a persistent connection, whereas HTTP is a request - response protocol. Web sockets are often used with streaming data such as with IoT sensors. (Another communication protocol for streaming is MQQT).

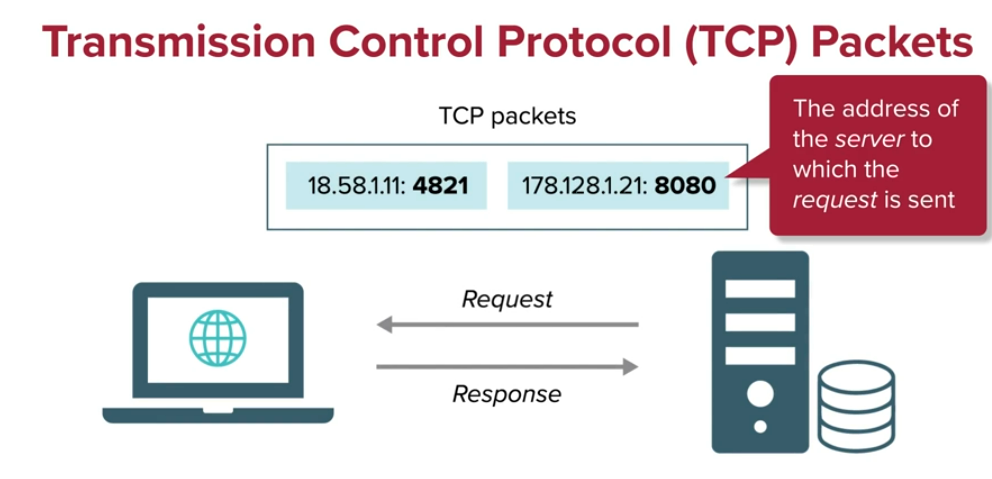


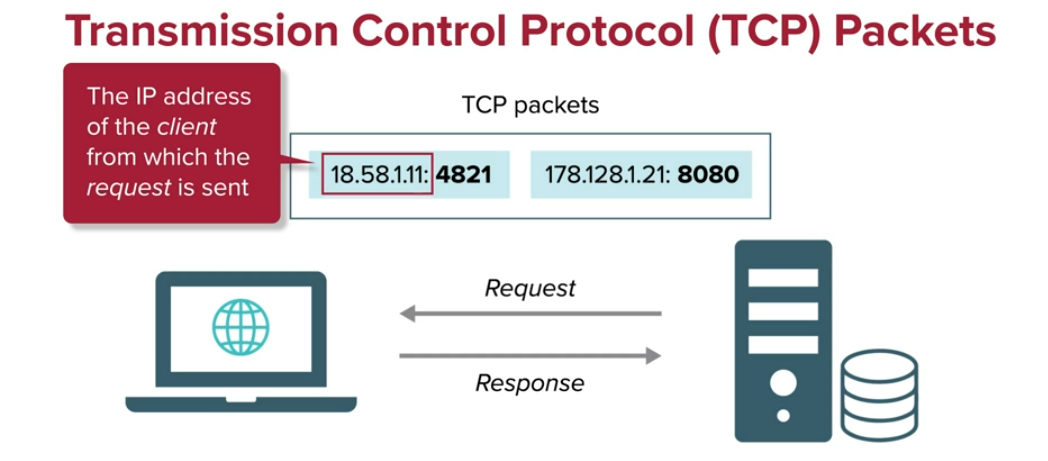


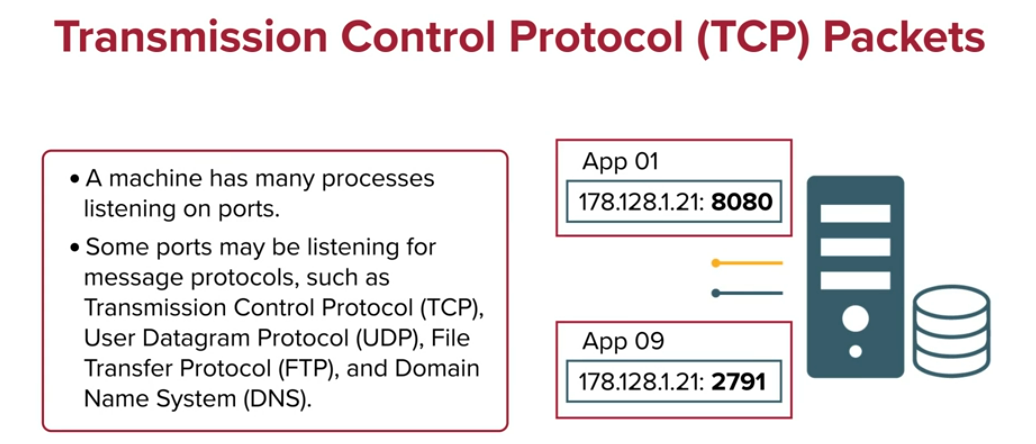


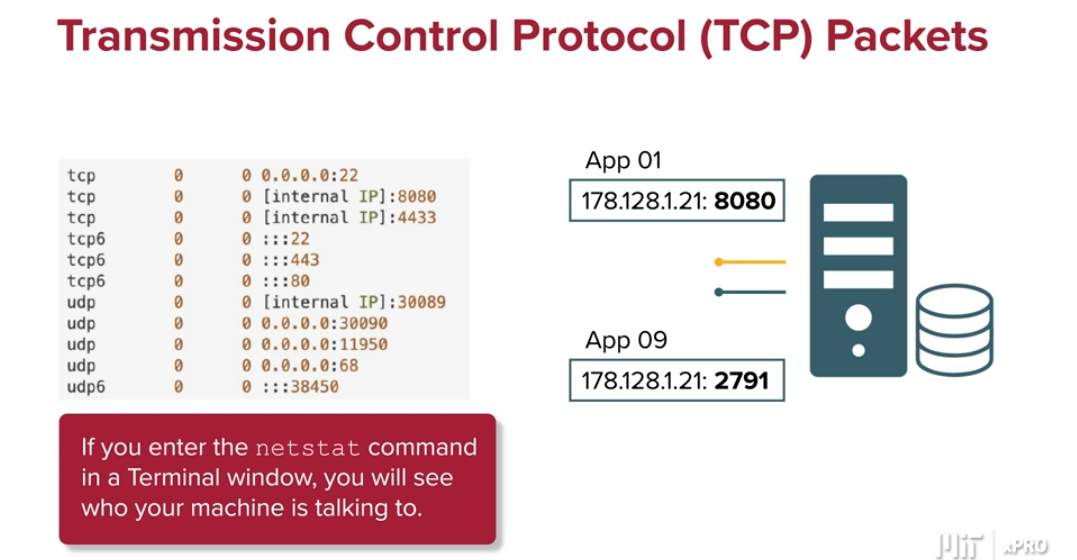


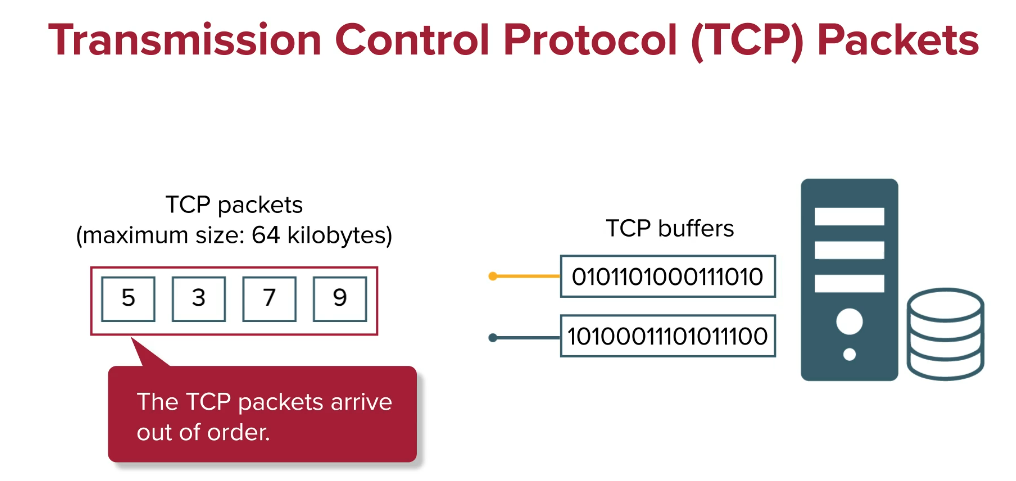


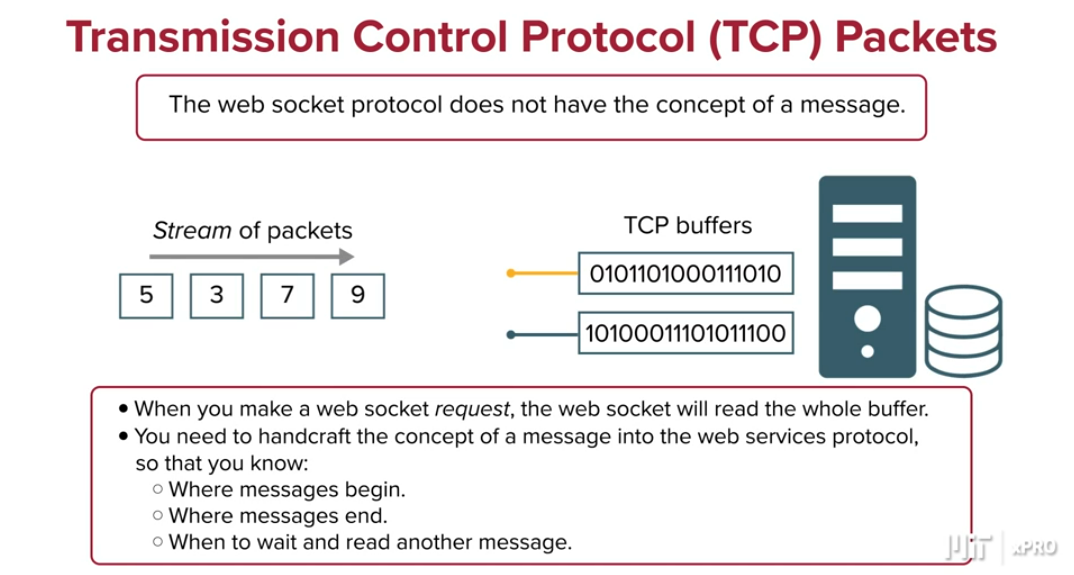


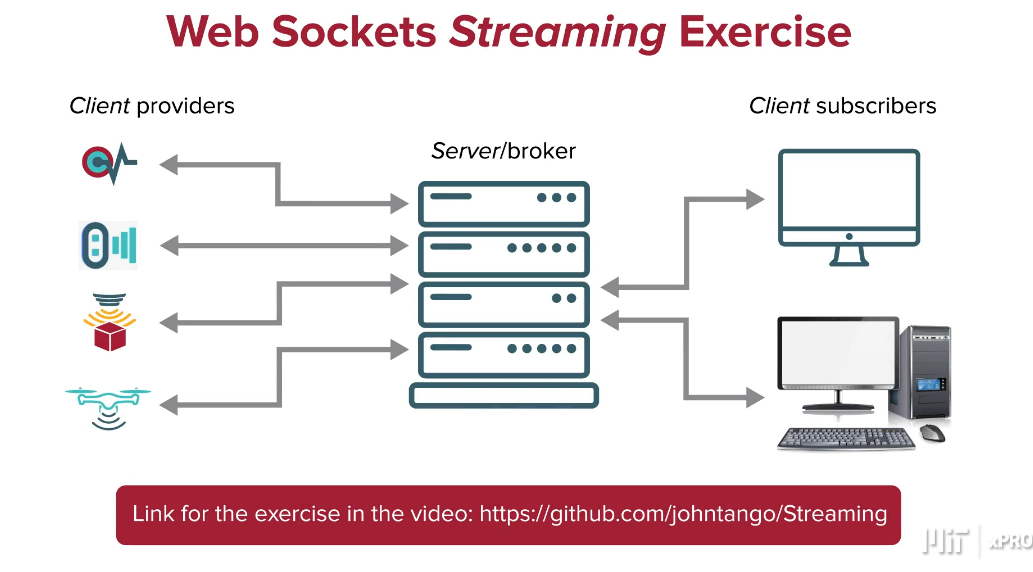


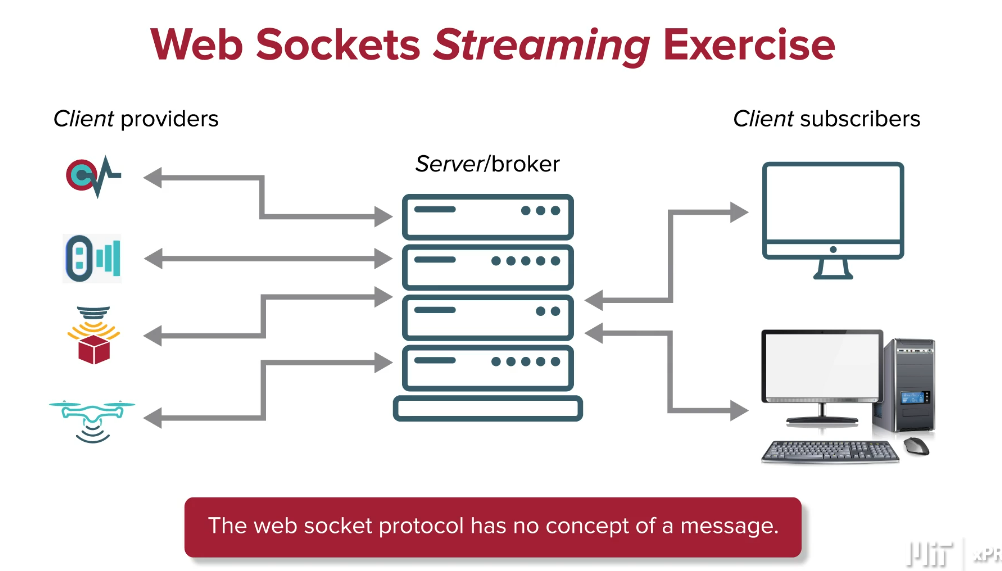


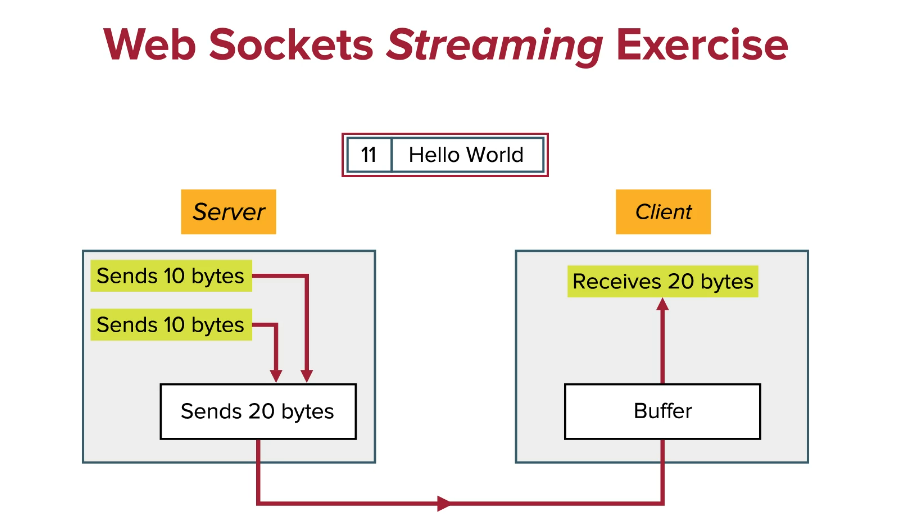




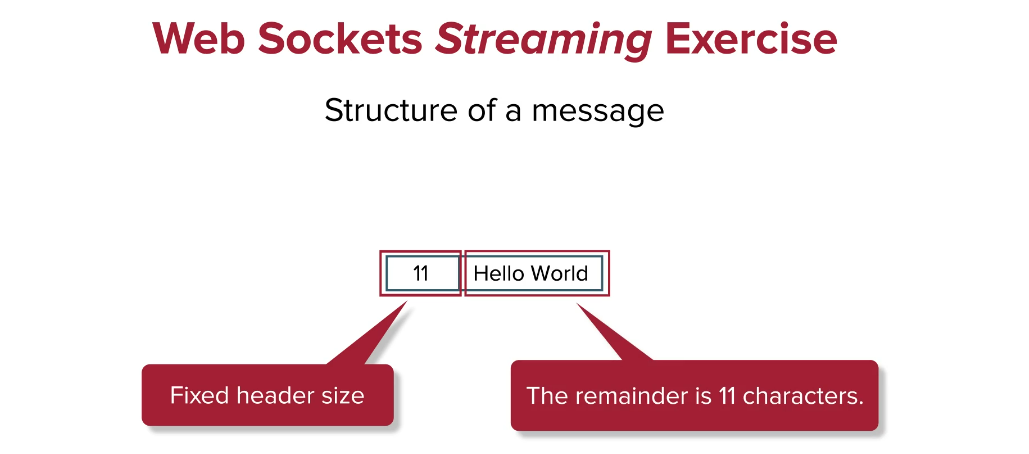


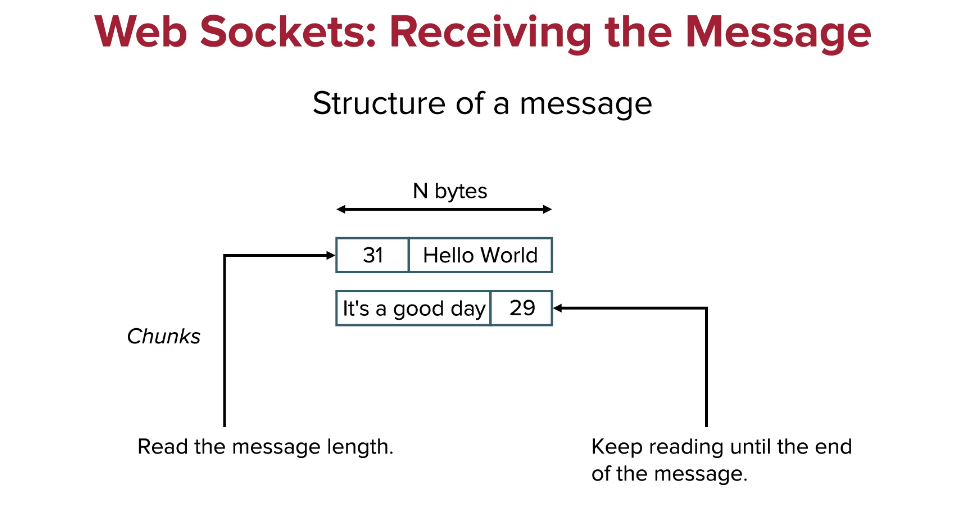


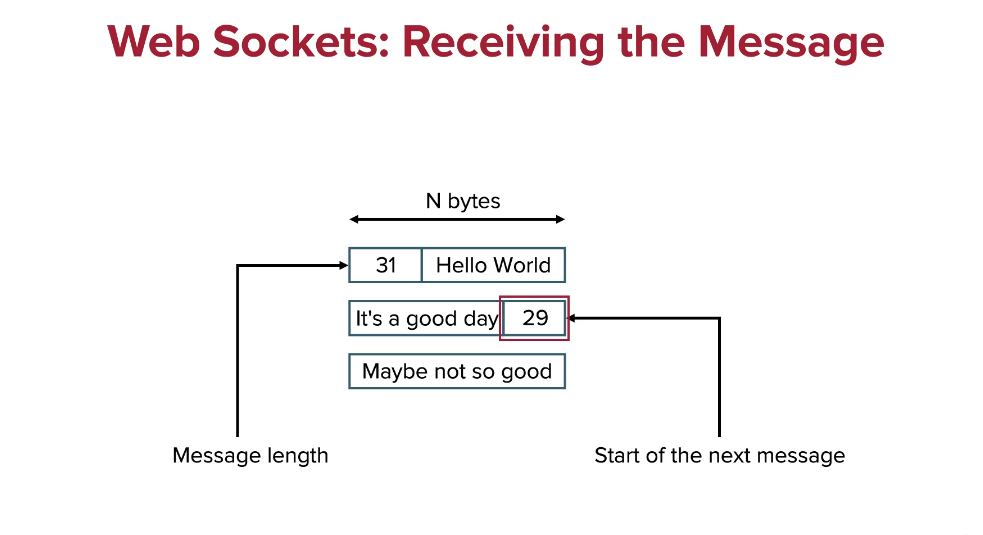




In the example above we need instructions about how to treat the bytes and what is the intended message. The problem is the end of a message may not be at the end of a chunk.

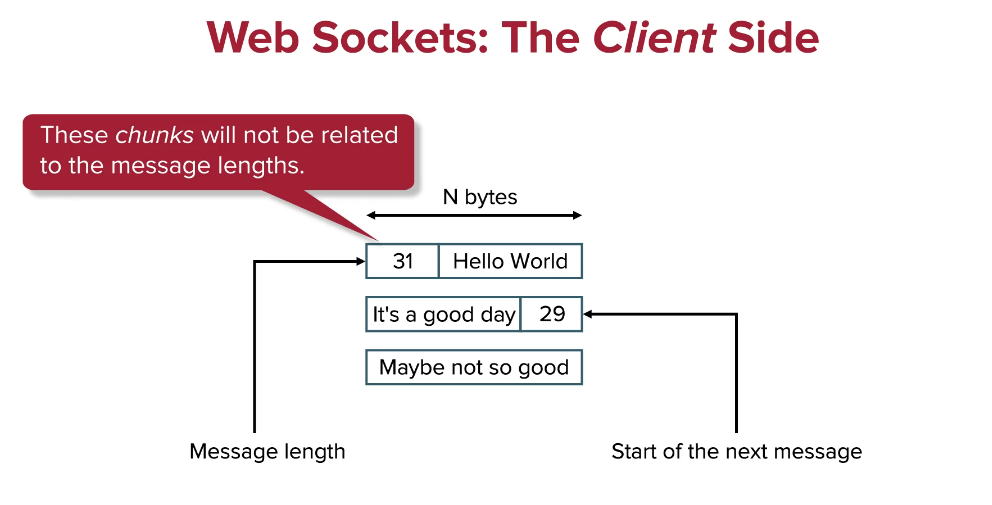


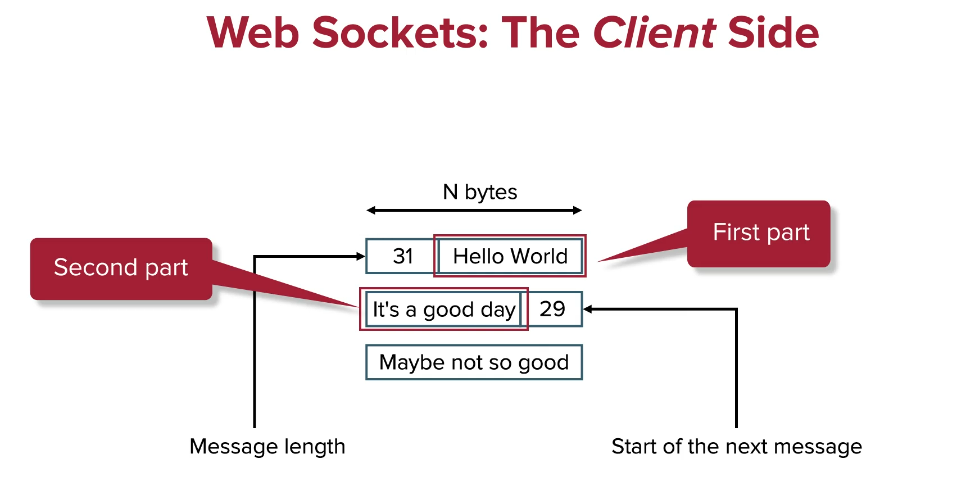


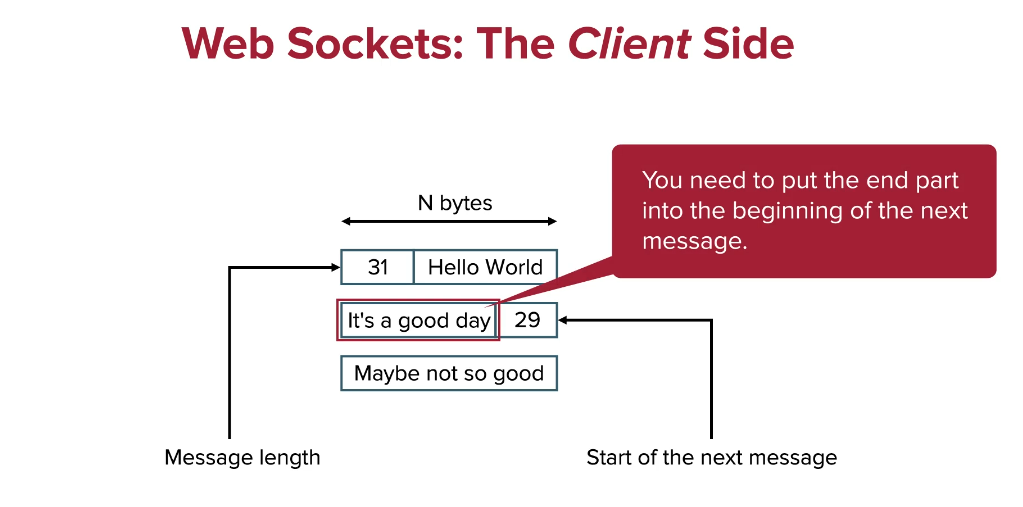


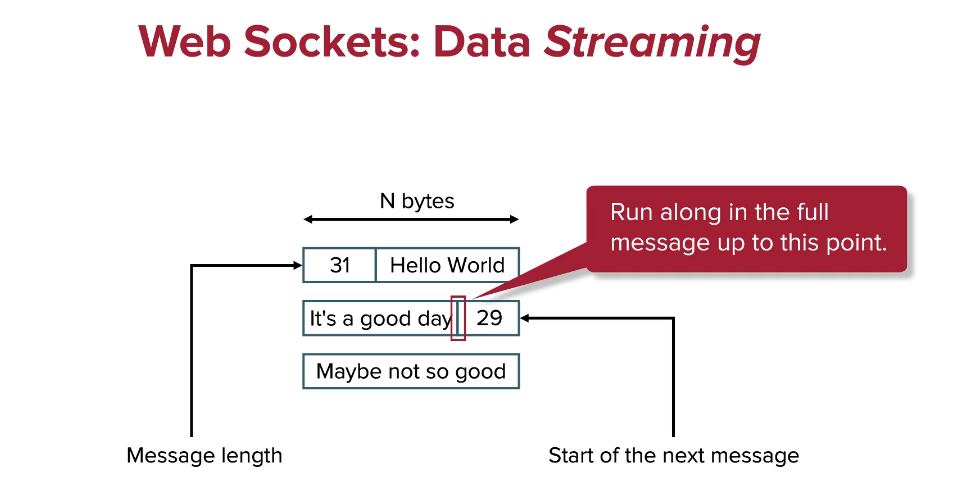
<https://github.com/johntango/Streaming/blob/master/streamServer.py>







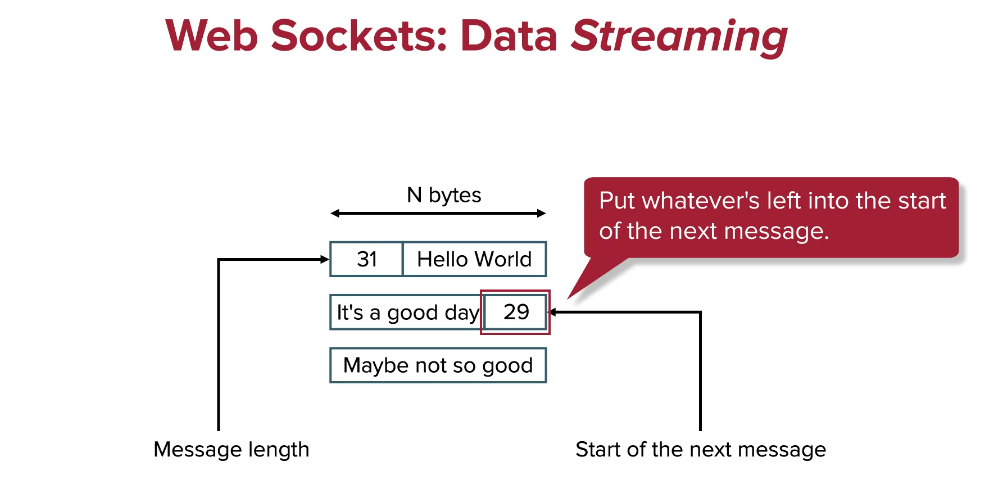


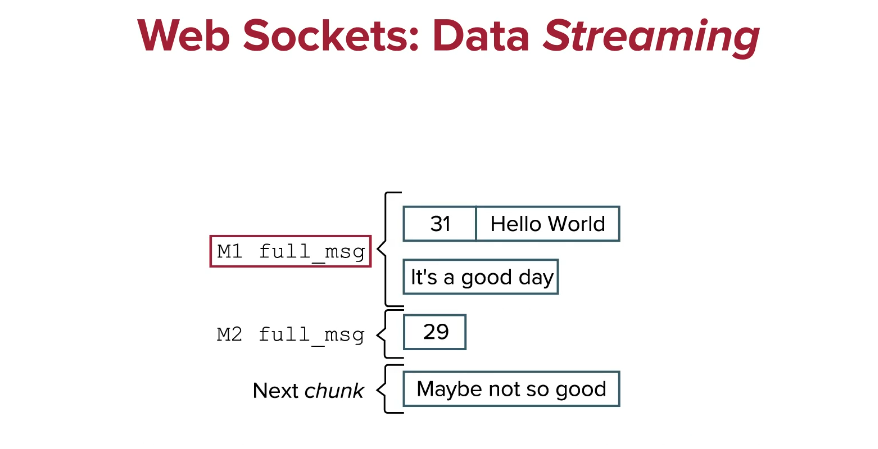


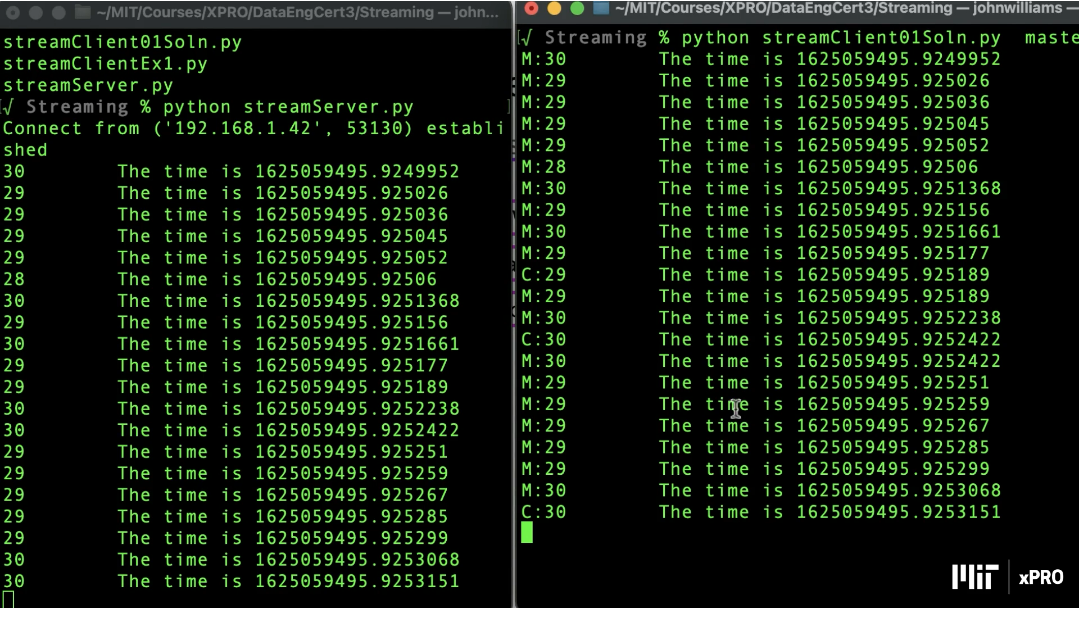
<https://github.com/johntango/Streaming/blob/master/streamClientEx1.py>

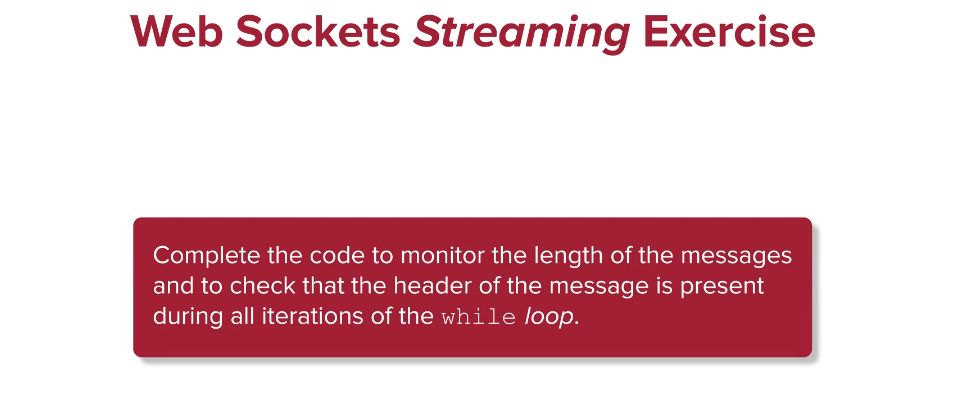


To avoid port problems, break the program first in the client, then in the server.









<https://github.com/johntango/Streaming/blob/master/streamClient01Soln.py>



