

61A Lecture 35

Friday, April 24

Announcements

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- Quiz 4 (SQL) released on Tuesday 4/28 is due Thursday 4/30 @ 11:59pm

Distributed Computing

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- Data sets can be partitioned across multiple machines (next lecture).

Network Messages

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- Protocols are designed to be implemented by many different programming languages on many different types of machines.

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0	0	<i>Version</i>				<i>IHL</i>				<i>DSCP</i>				<i>ECN</i>				<i>Total Length</i>															
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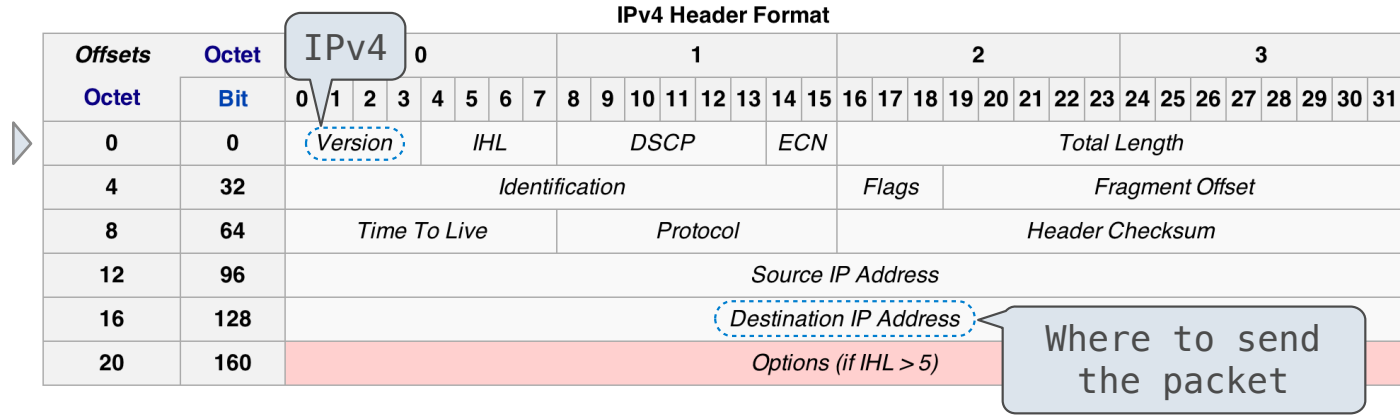
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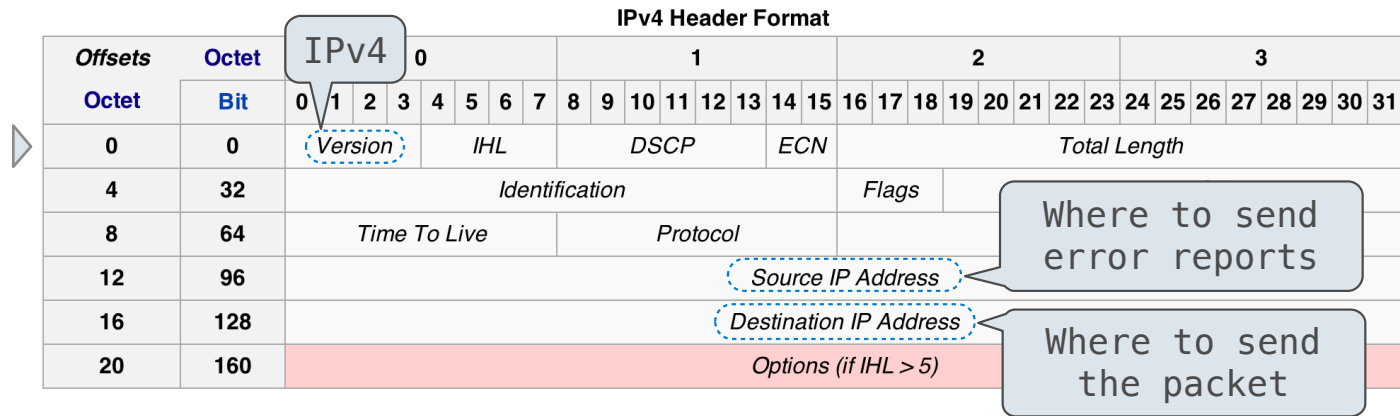


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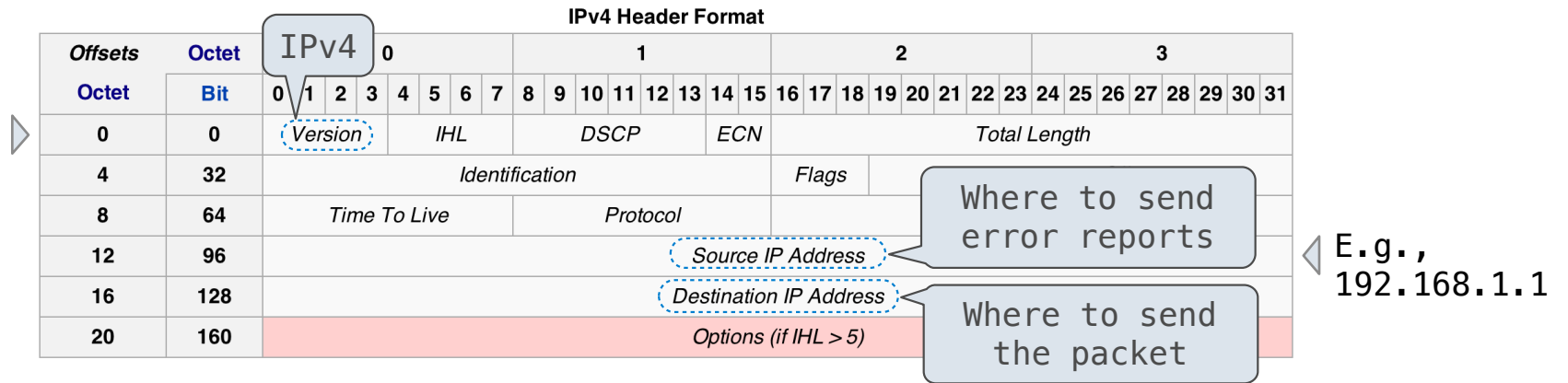


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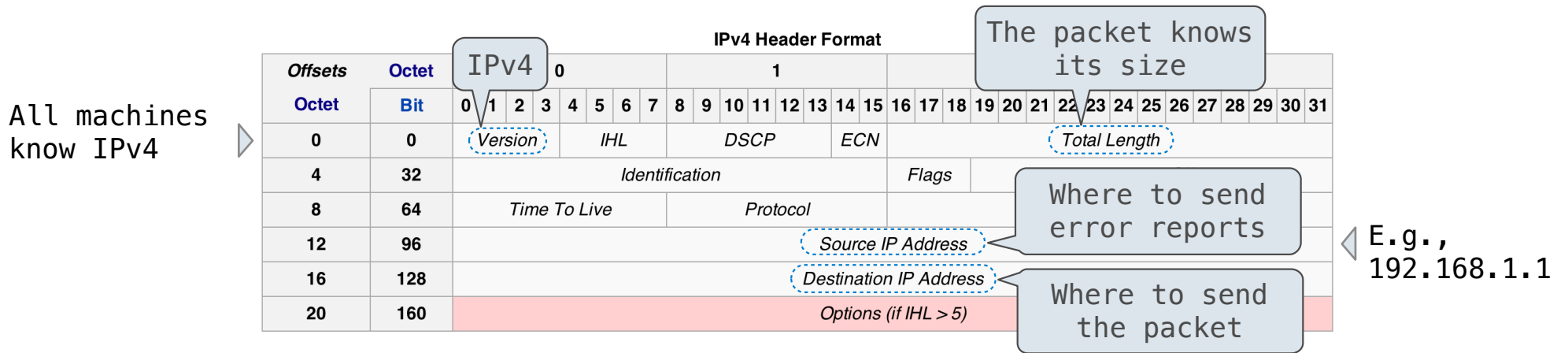
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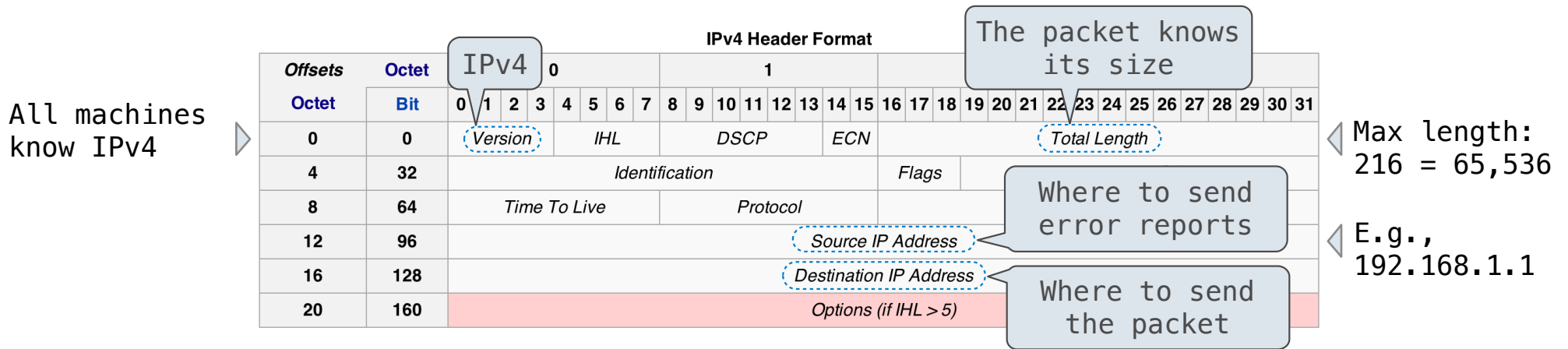
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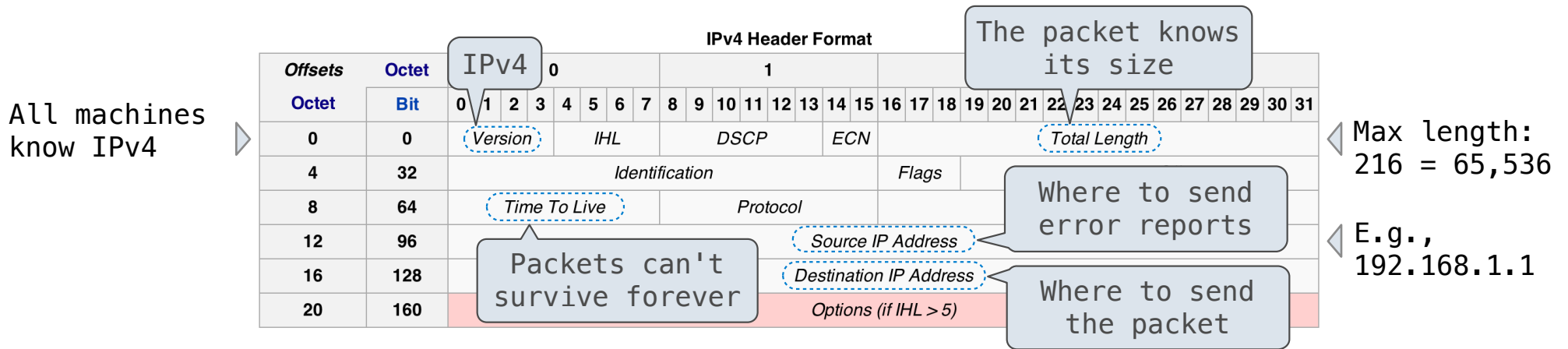
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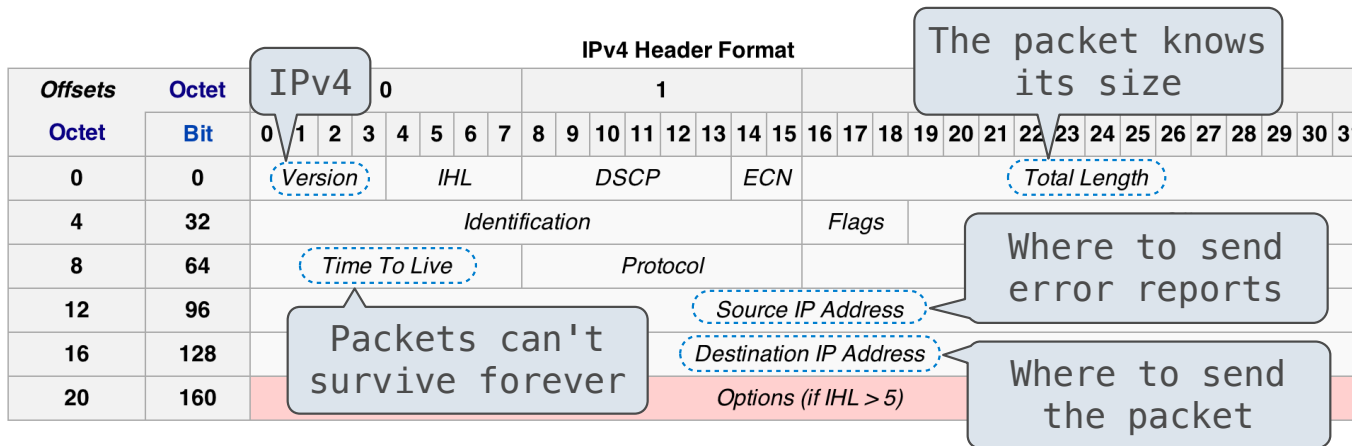
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Decremented on forwarding



The packet knows its size

Max length: 216 = 65,536

Where to send error reports

E.g., 192.168.1.1

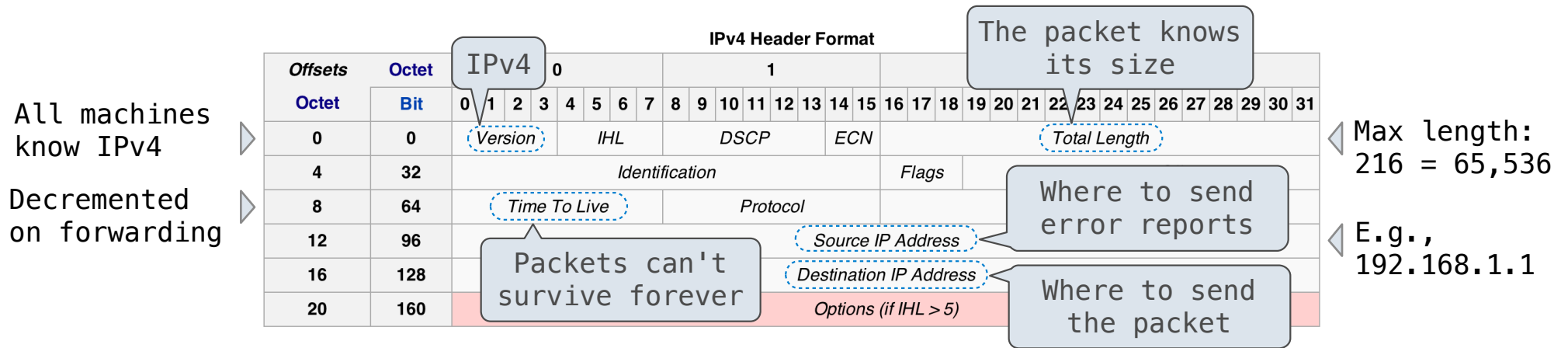
Packets can't survive forever

Where to send the packet

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Packets are forwarded toward their destination on a best effort basis. Programs that use IP typically need a policy for handling lost packets.

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The socket module in Python implements the TCP.

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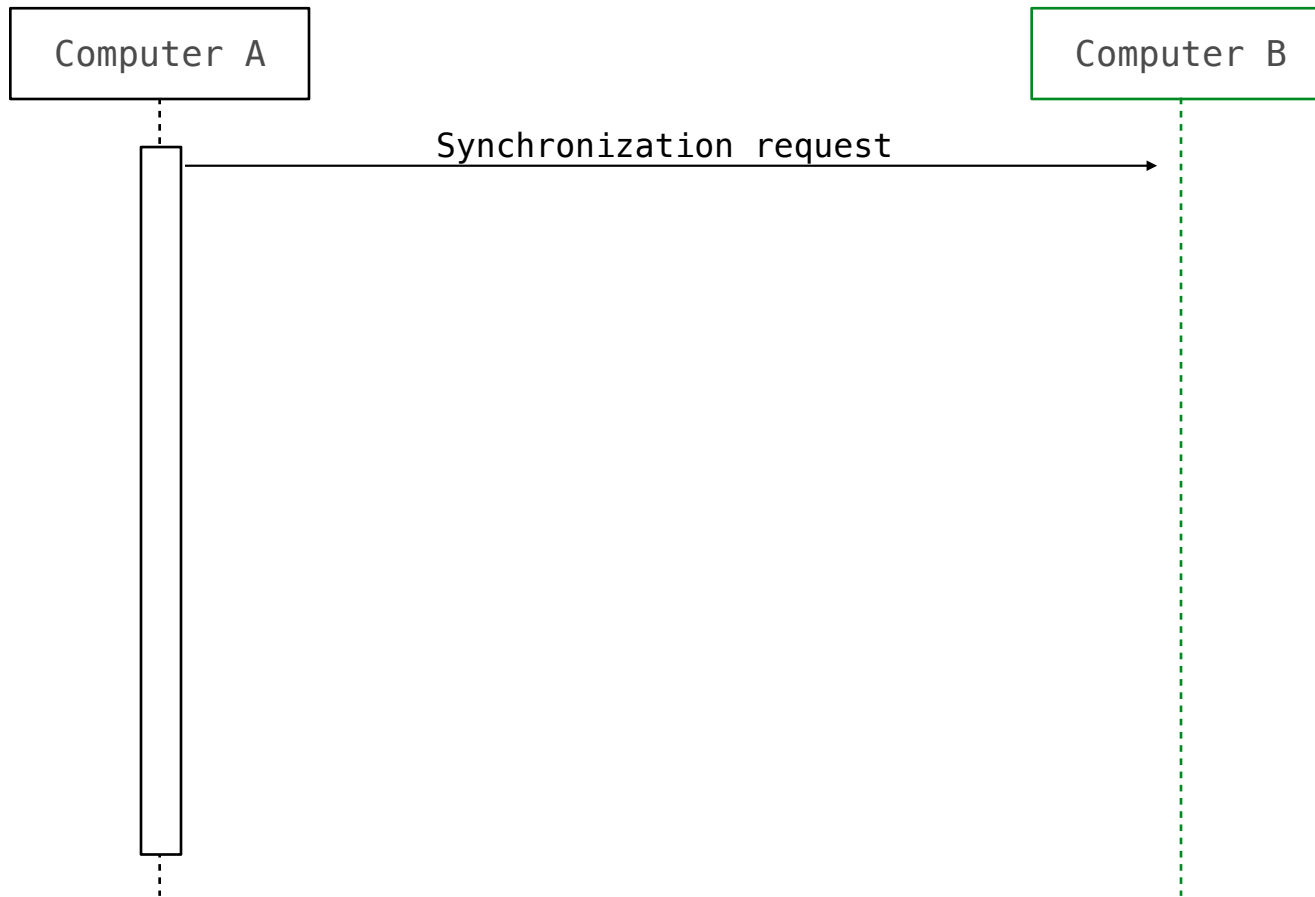
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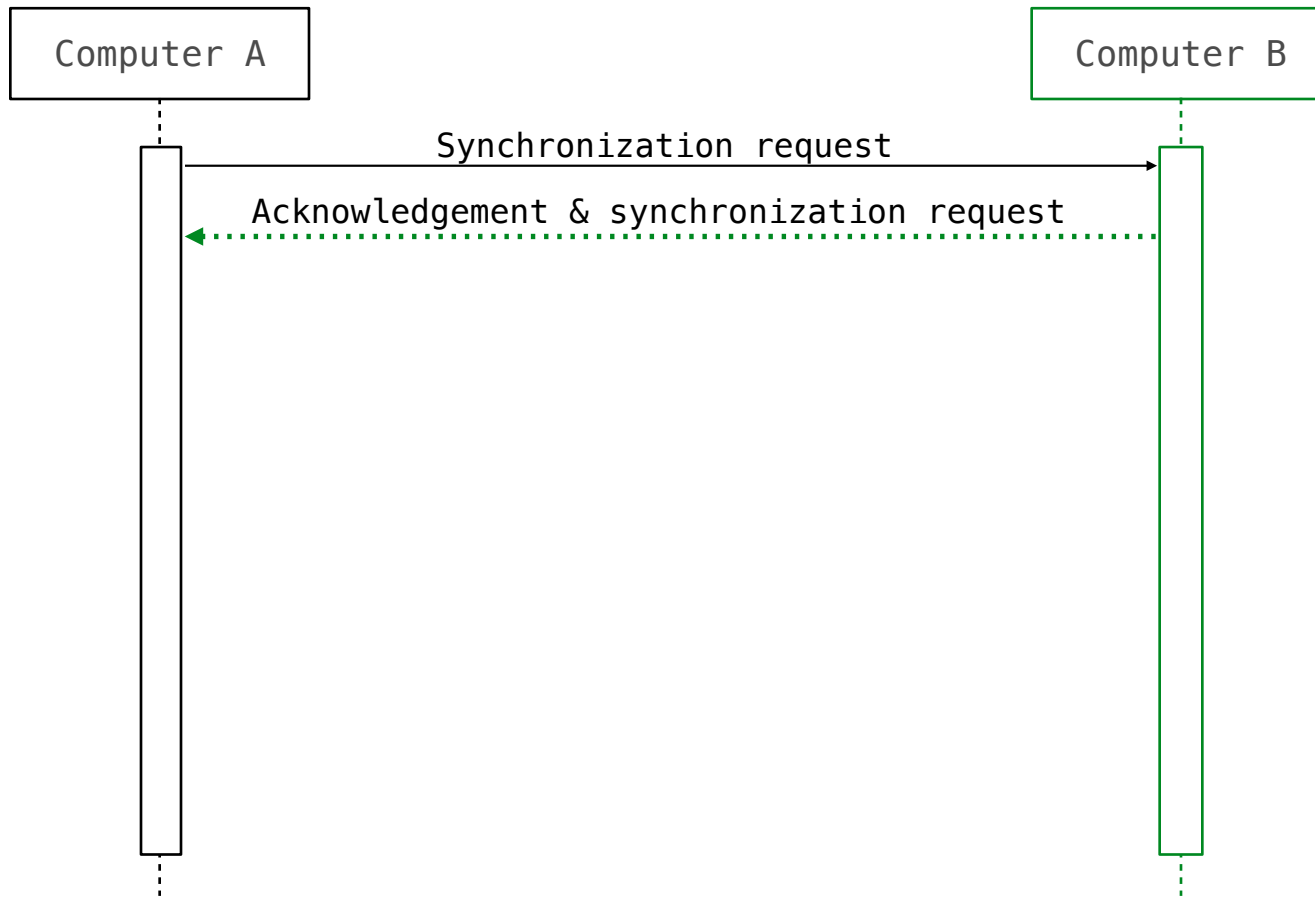
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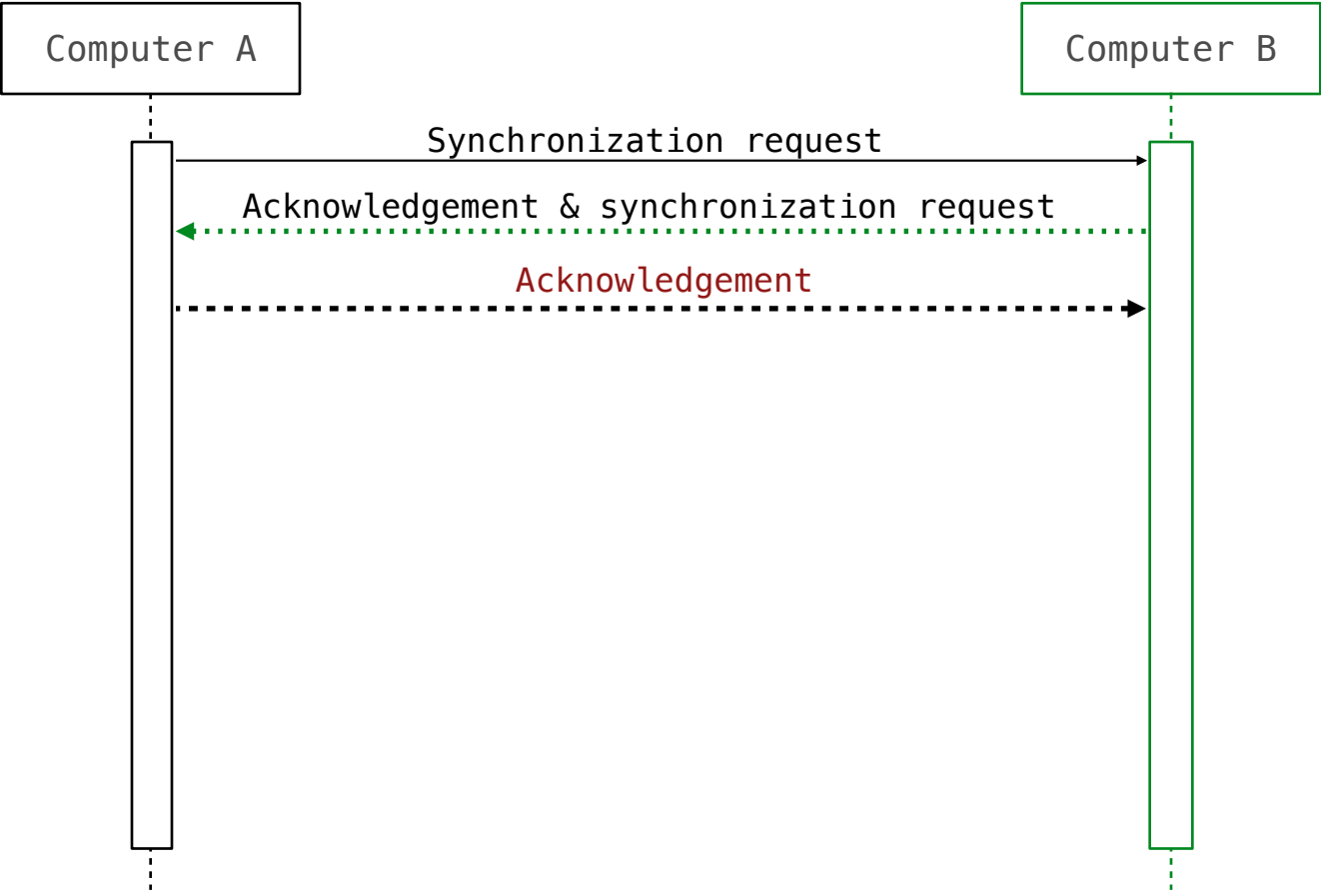
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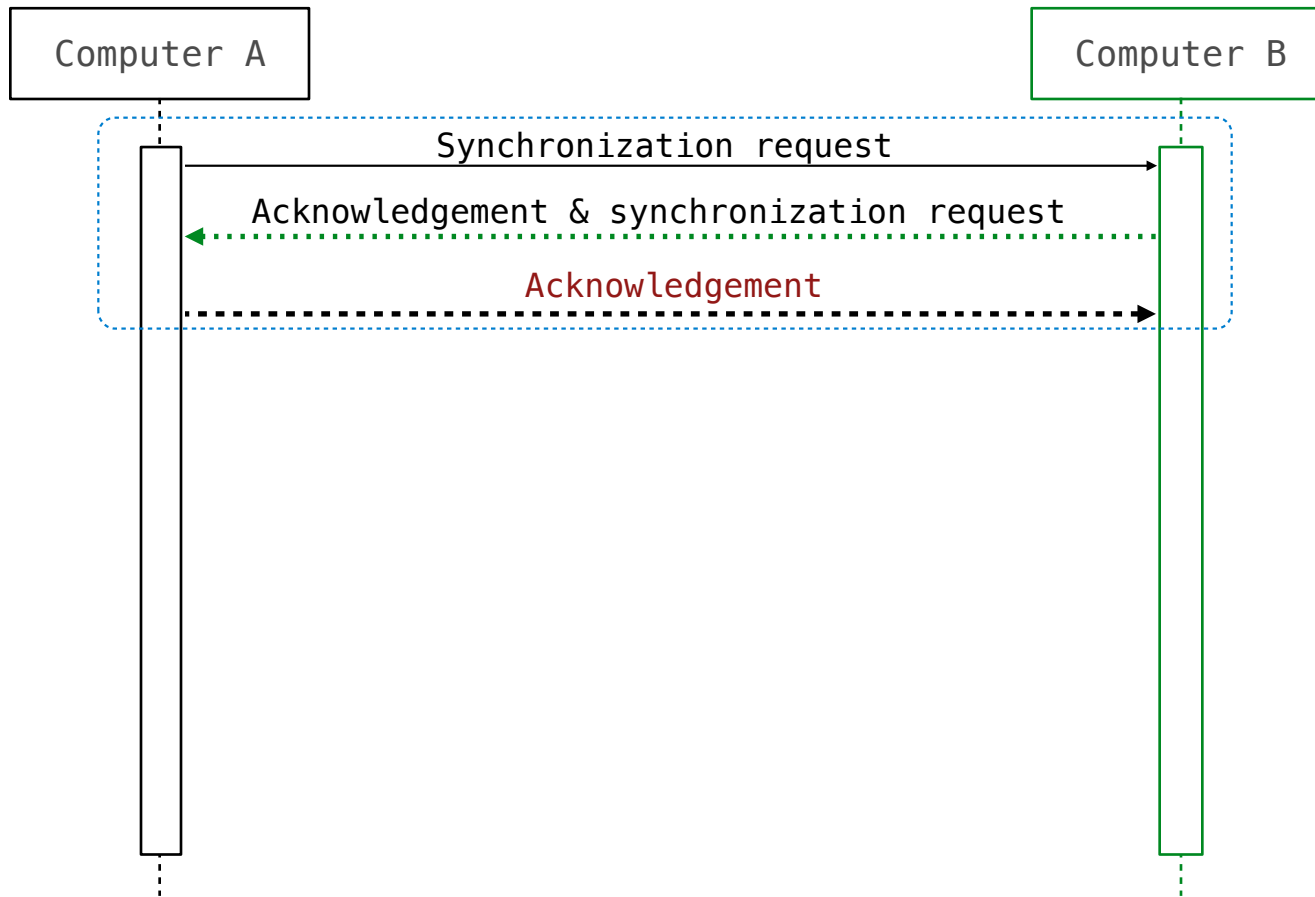
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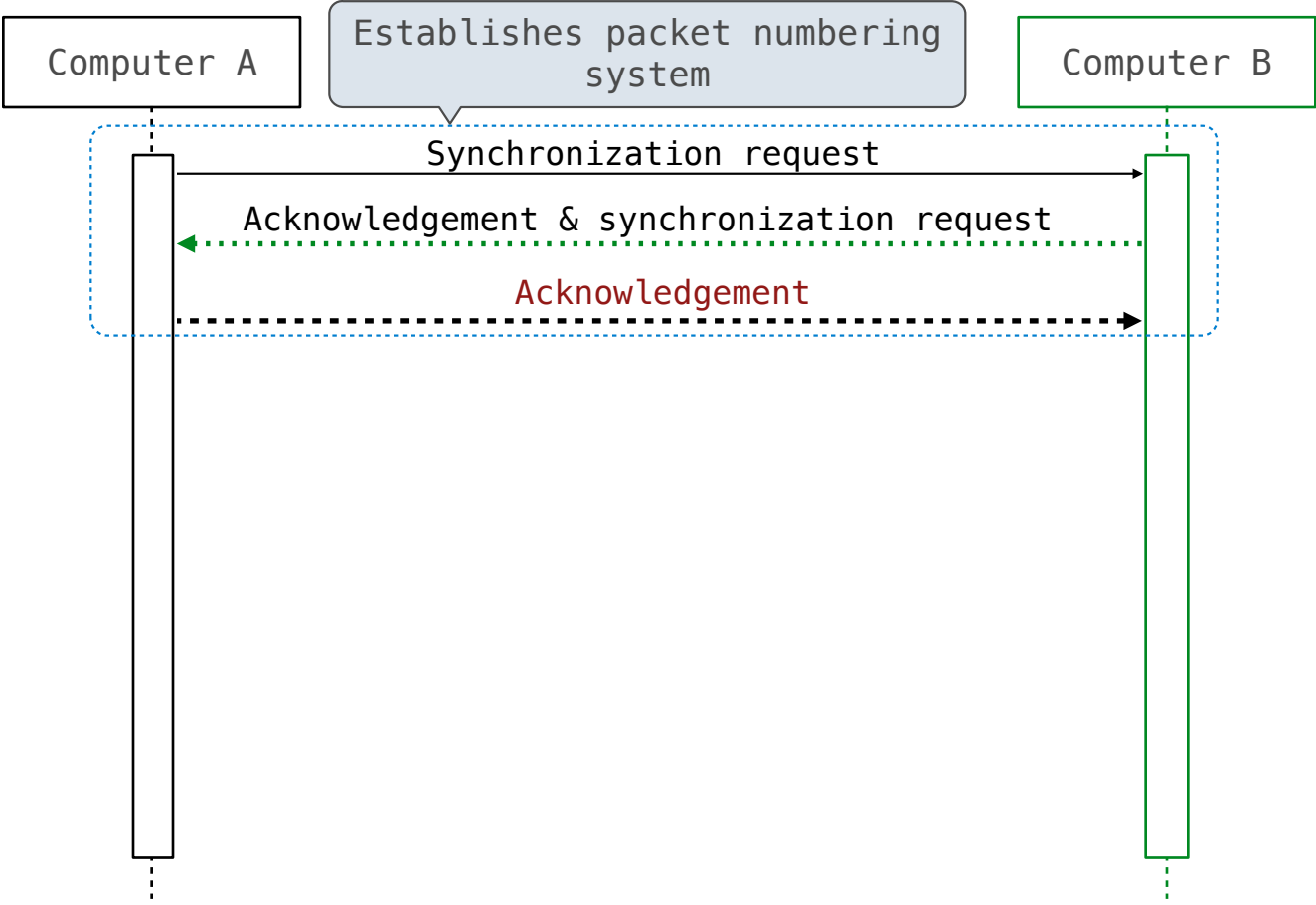
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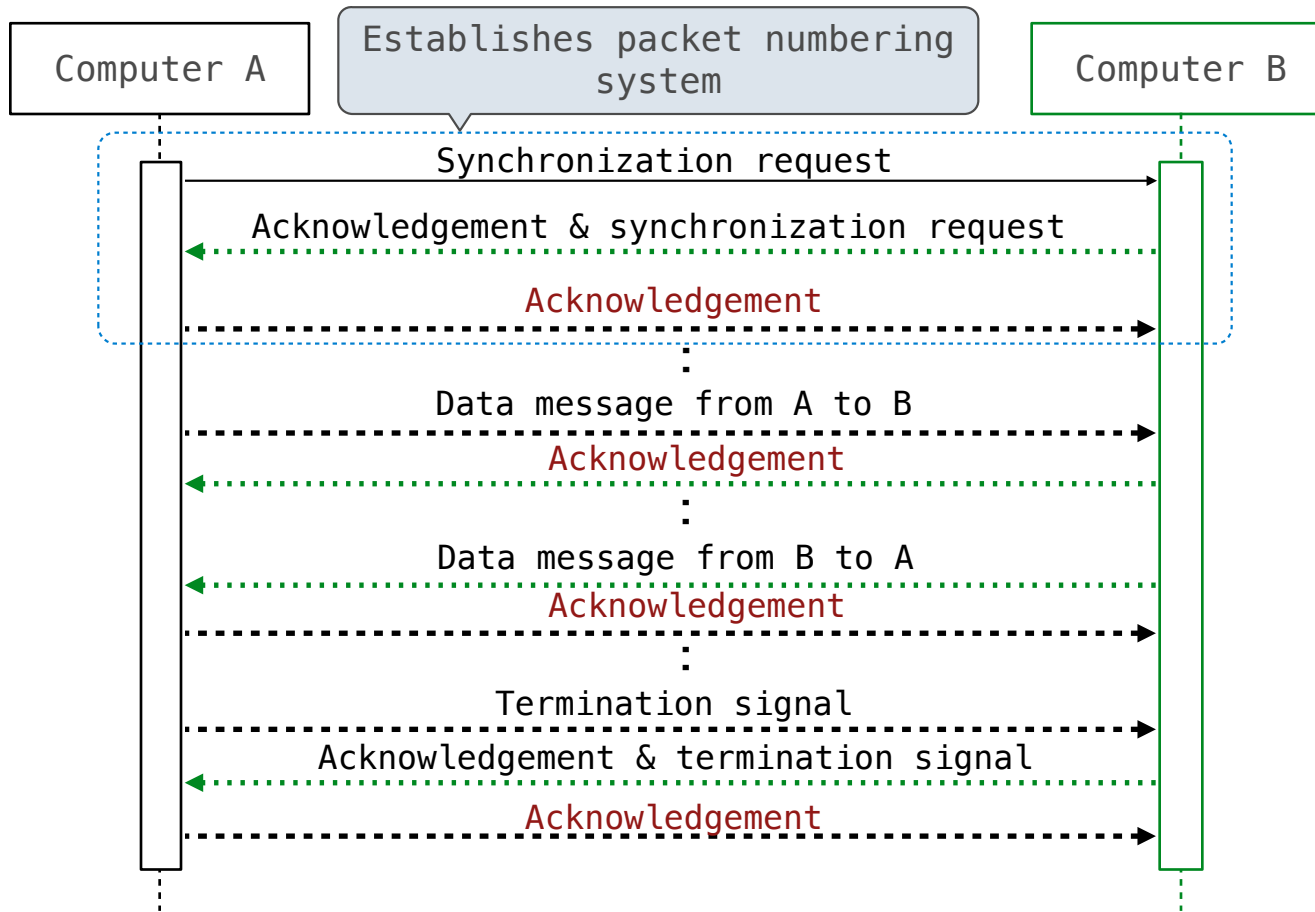
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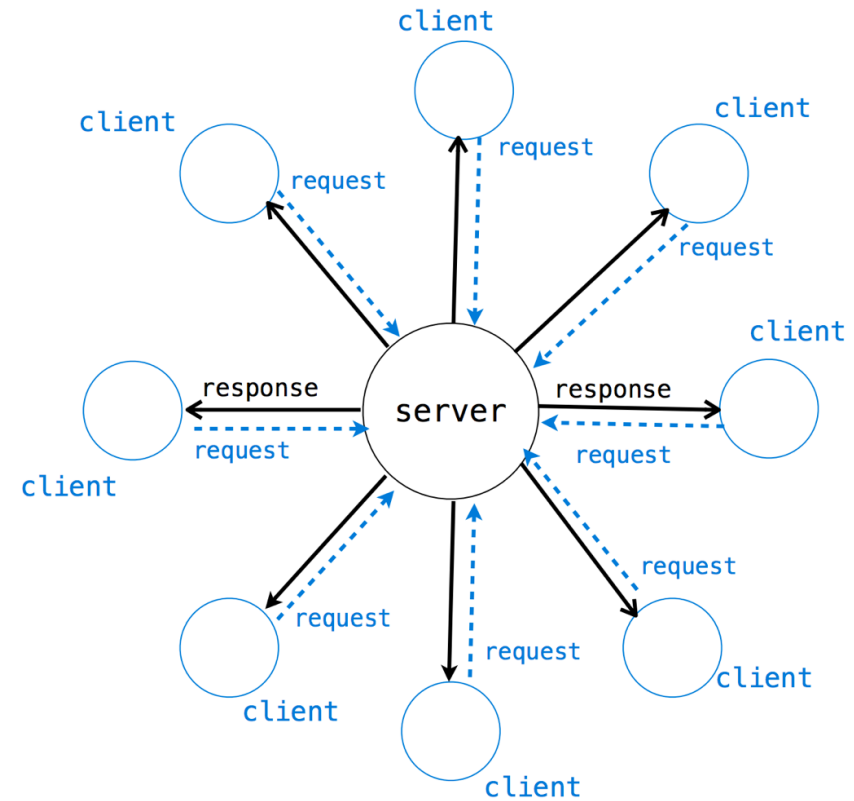
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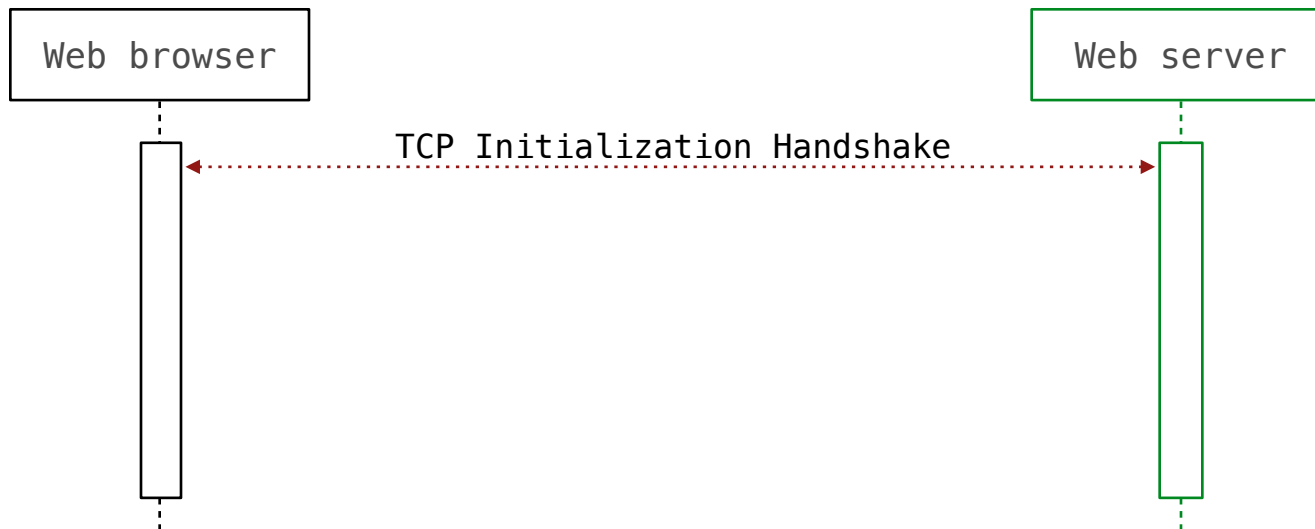
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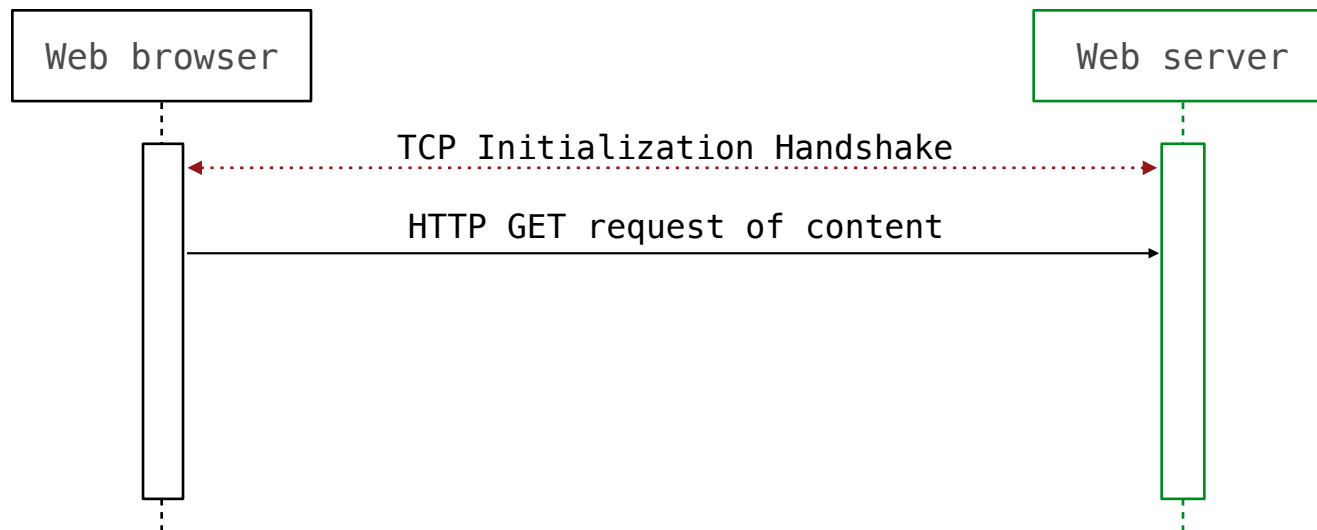
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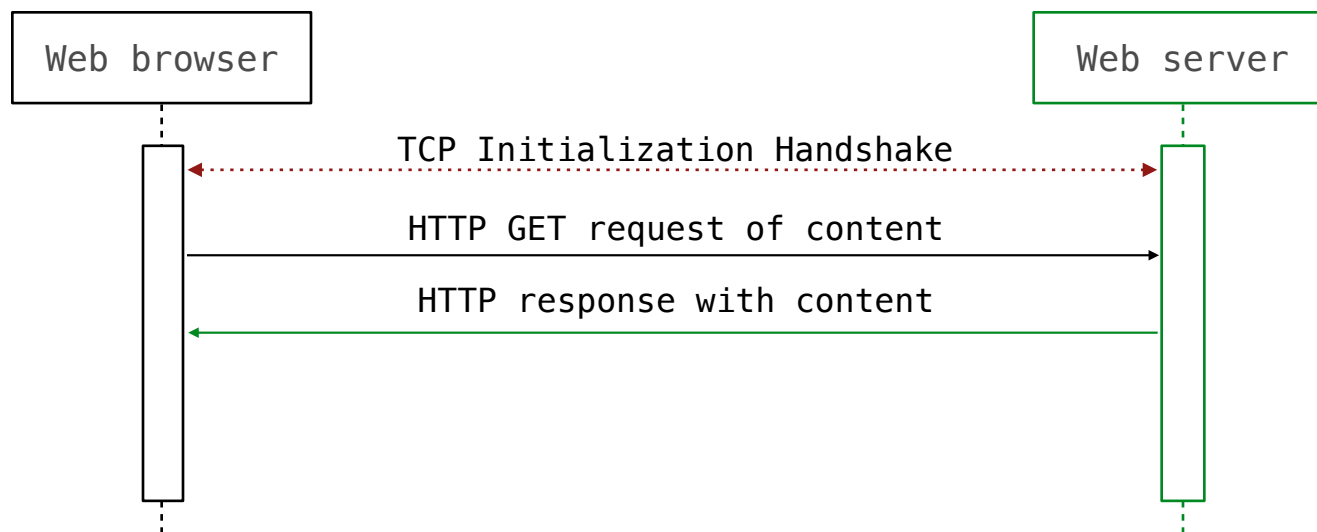
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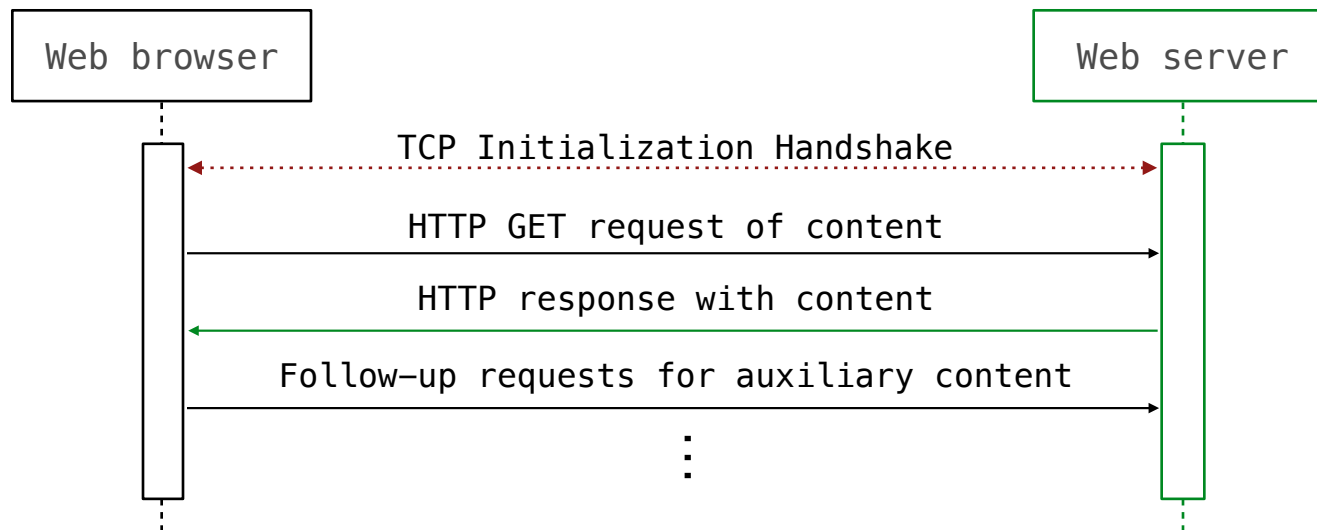
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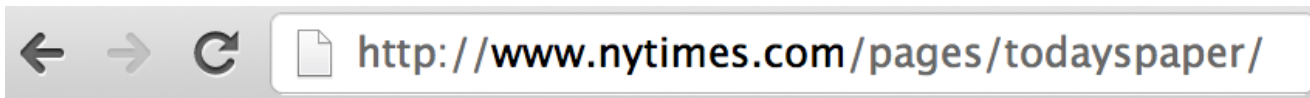
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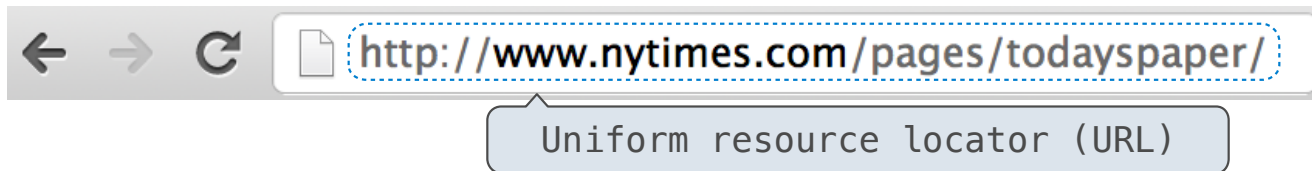
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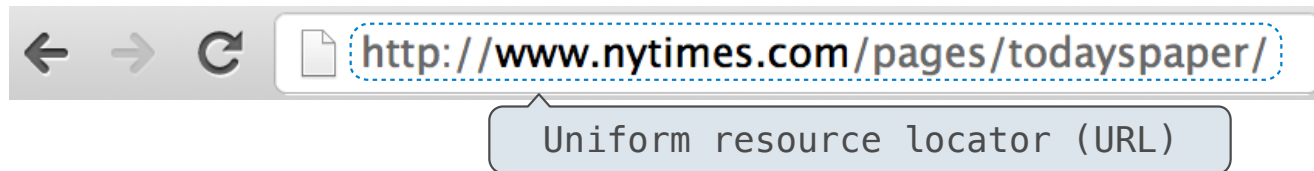
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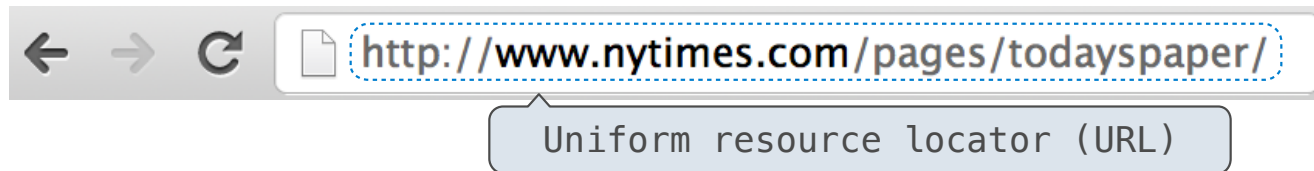
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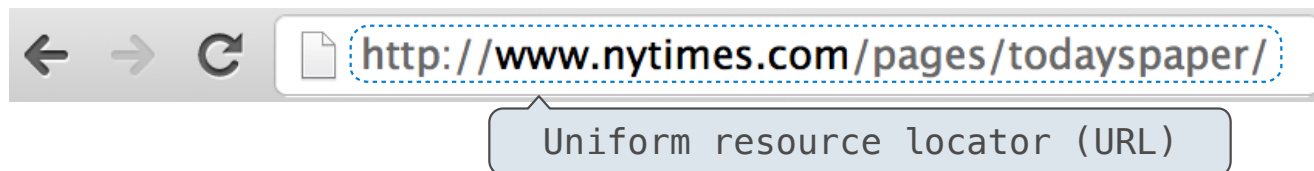


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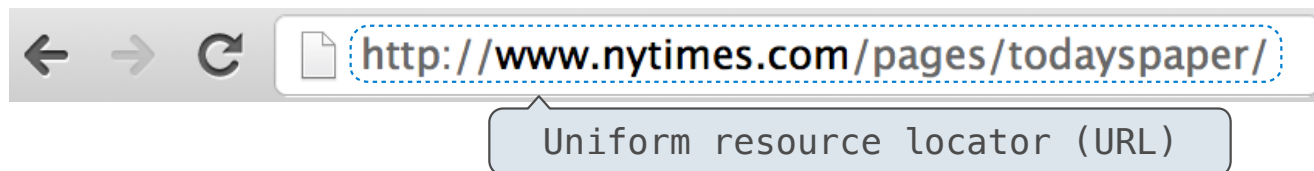
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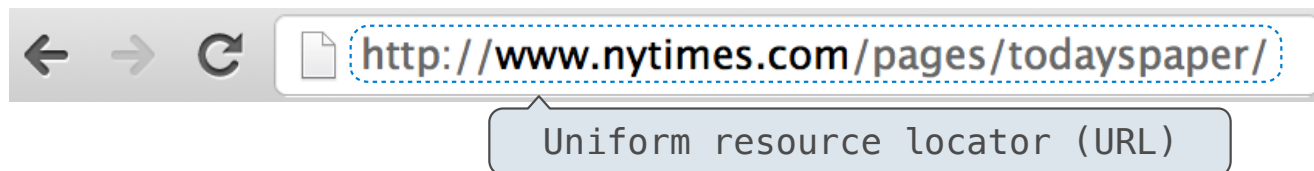
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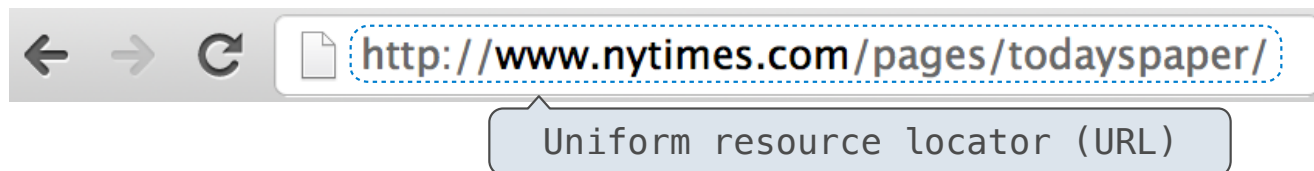
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- Internet file and resource transfer: HTTP, FTP, email, etc.

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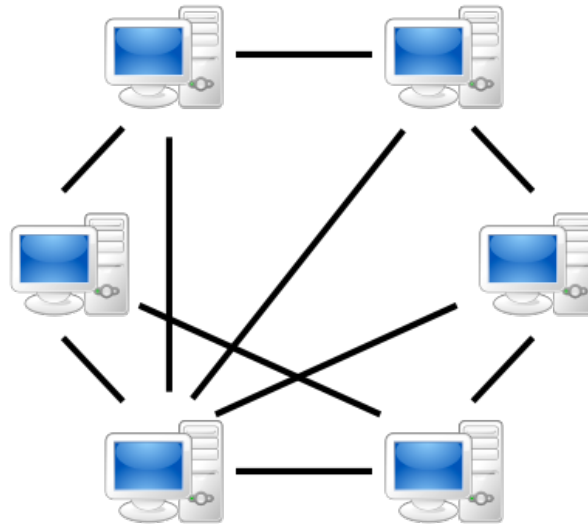
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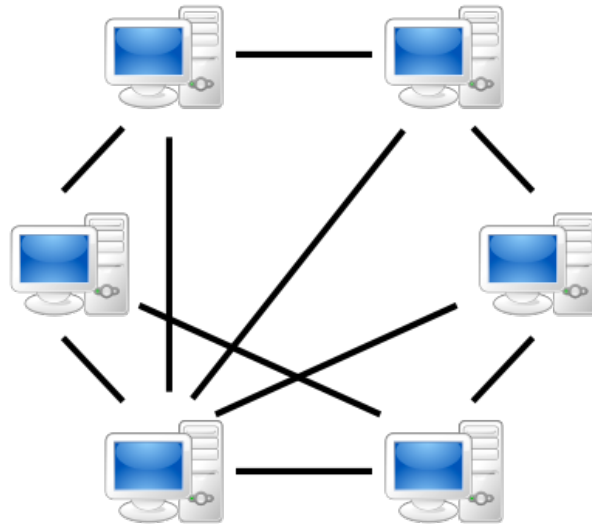
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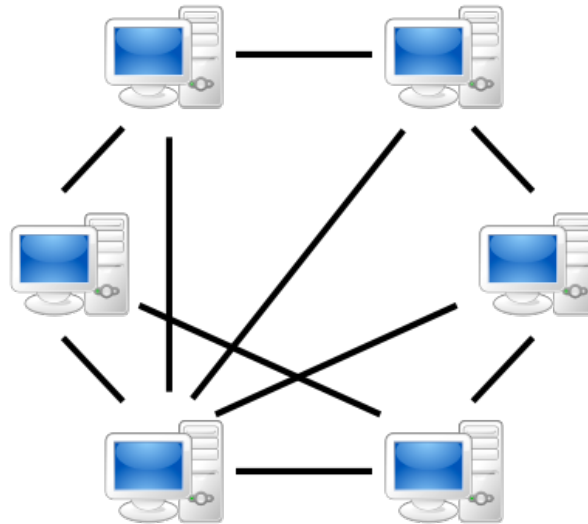


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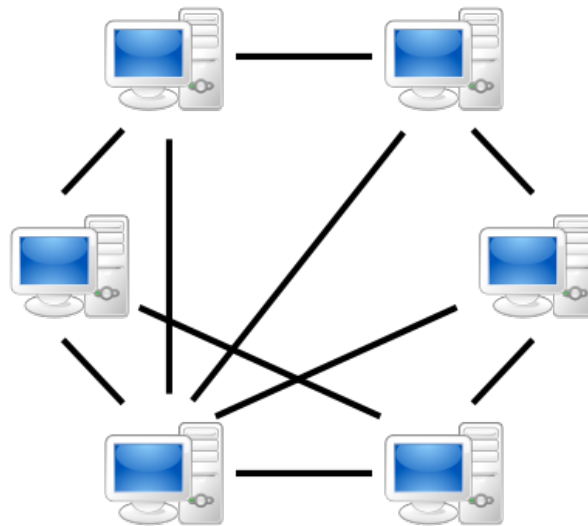
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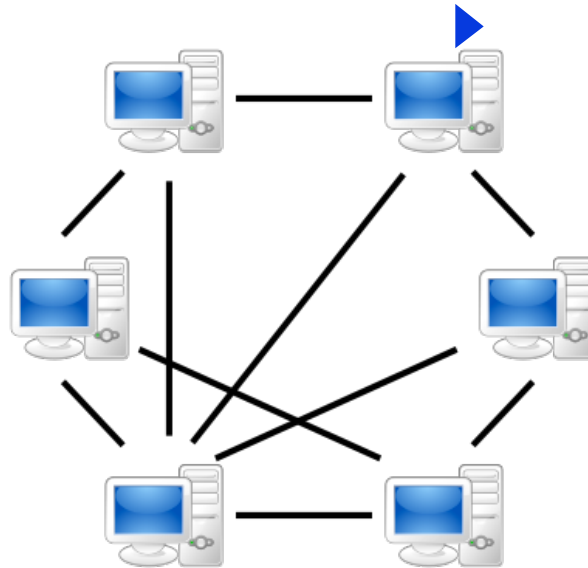
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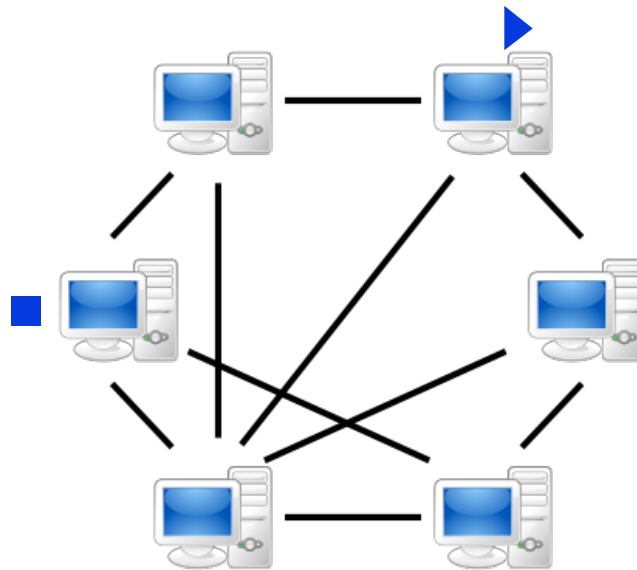
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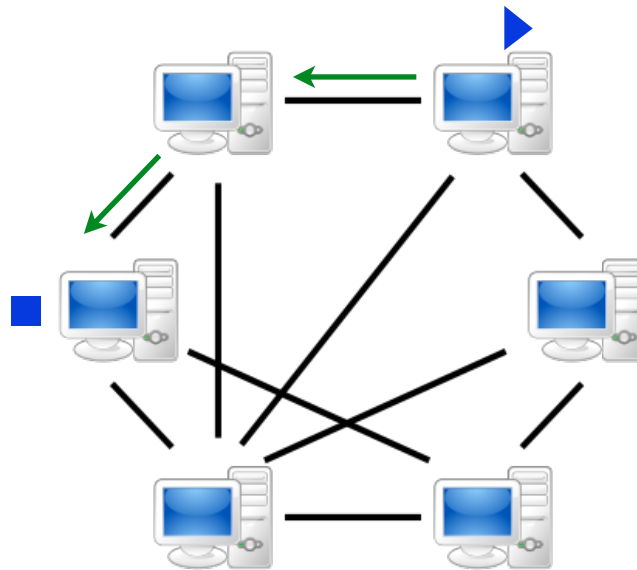
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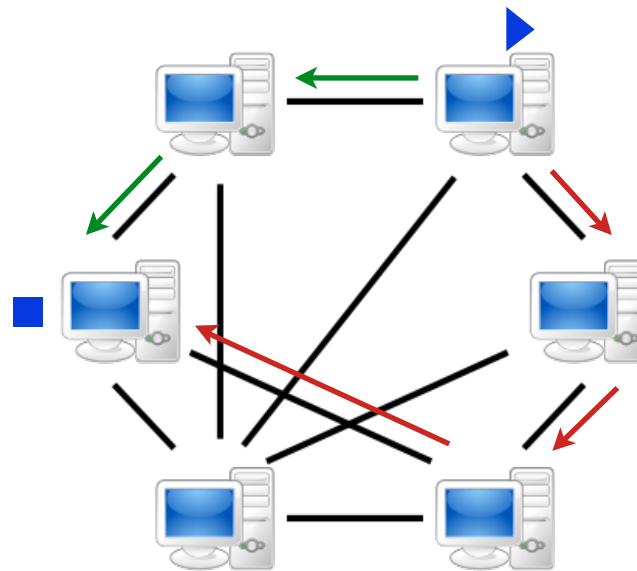
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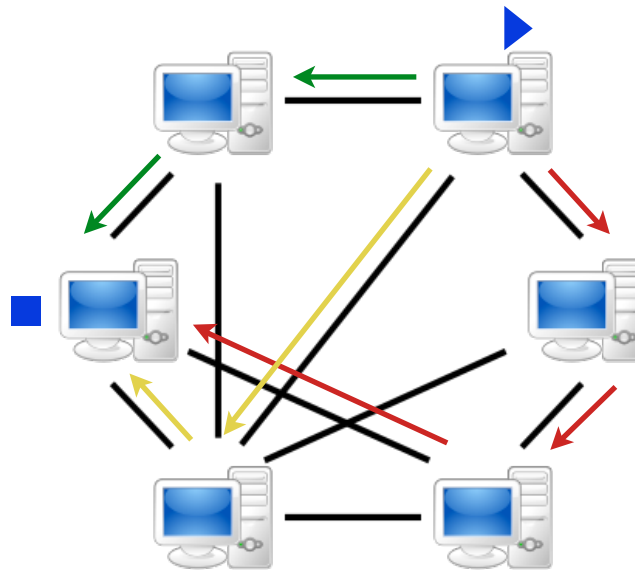
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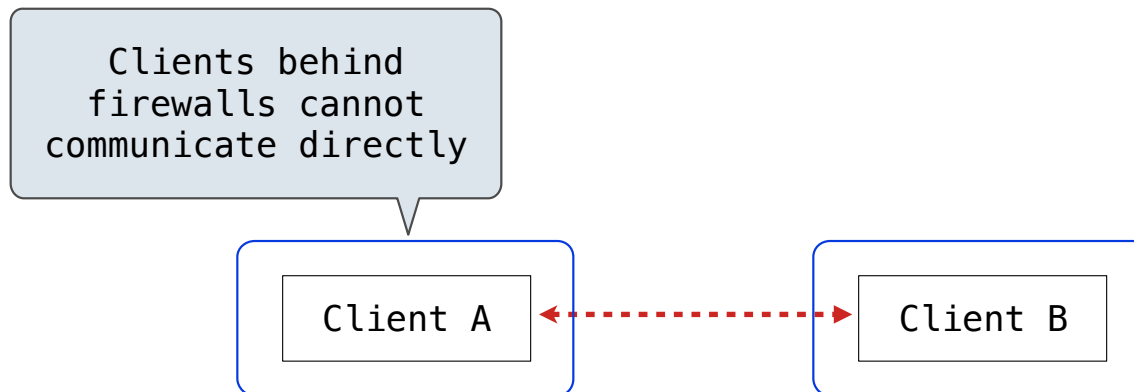
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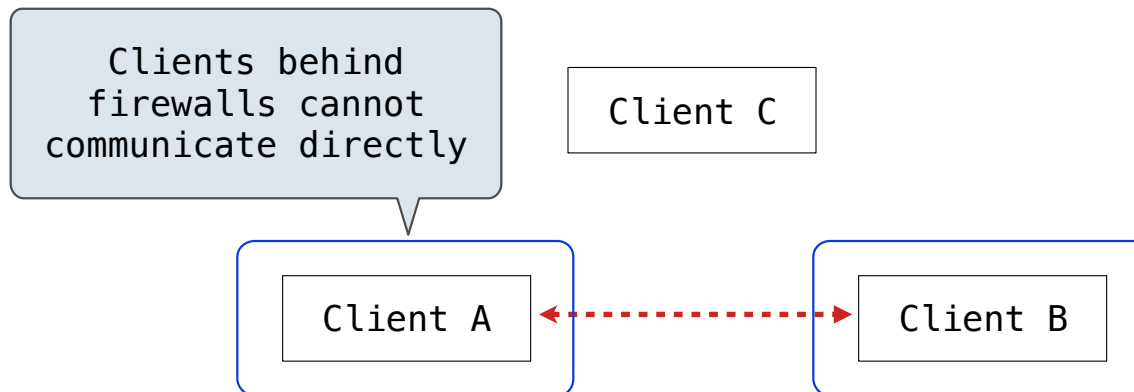
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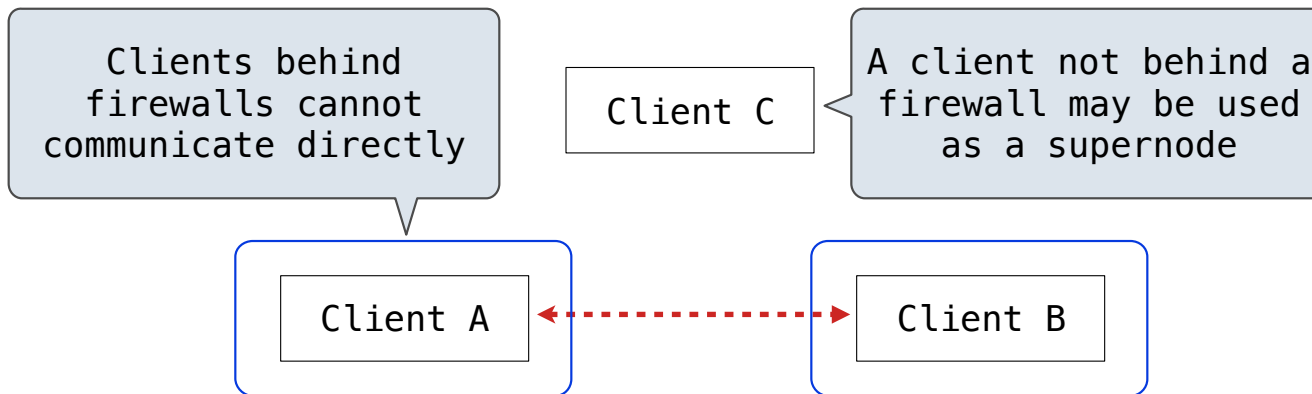
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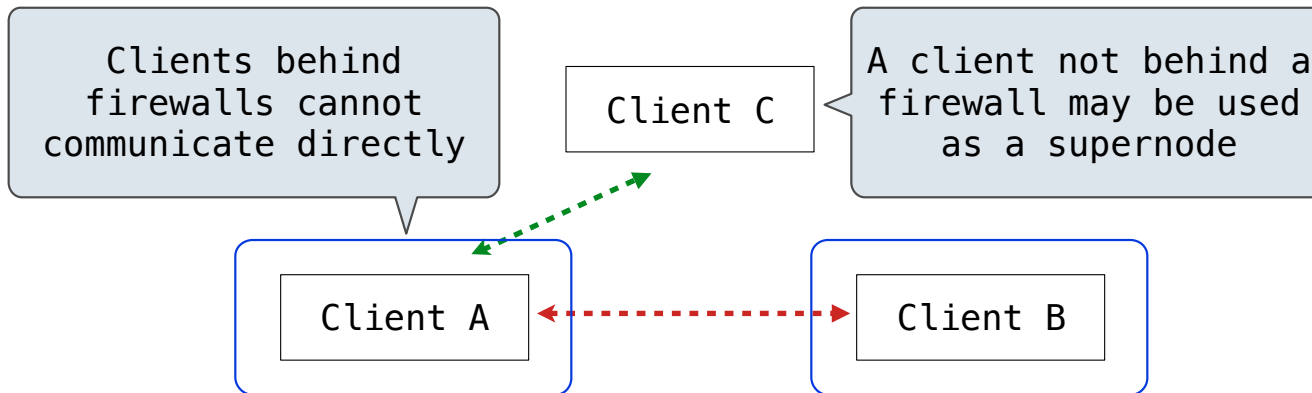
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