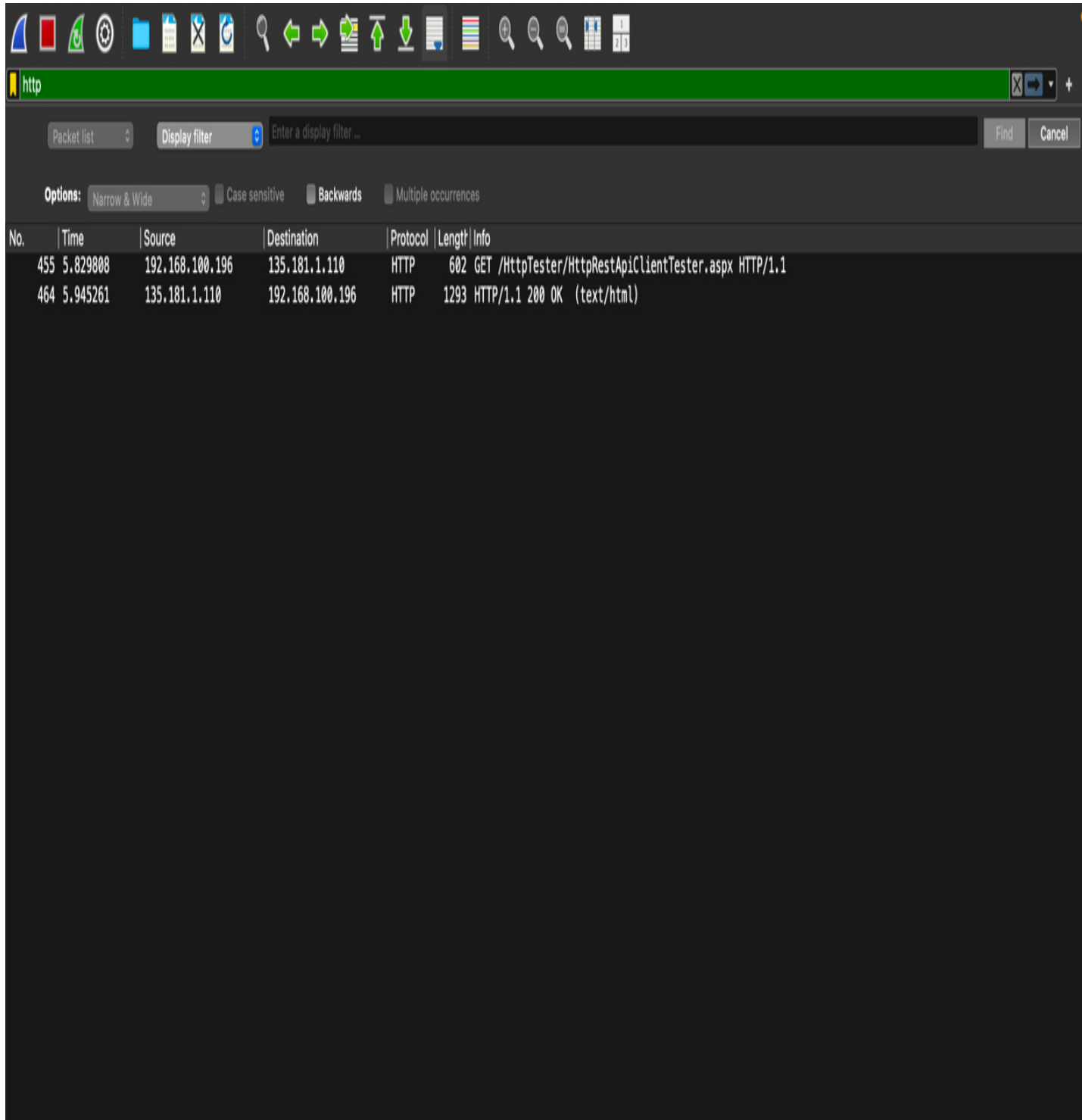


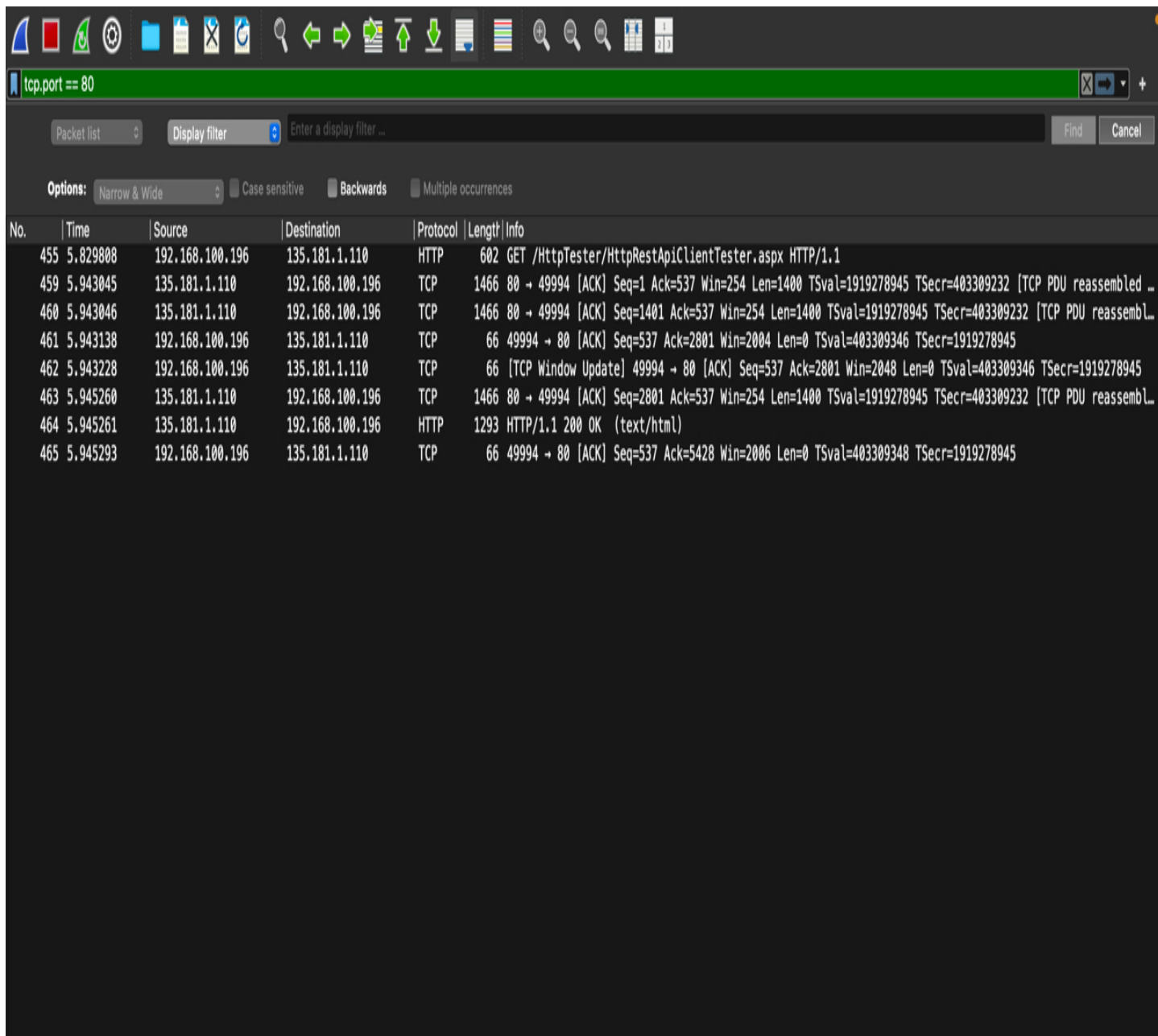
# HTTP Request



The image shows a screenshot of the Wireshark network traffic analysis tool. The top toolbar contains various icons for file operations, navigation, and analysis. Below the toolbar is a green address bar displaying 'http'. Underneath the address bar is a search filter section with a 'Display filter' input field and 'Find' and 'Cancel' buttons. Below the search filter is an 'Options' section with a 'Narrow & Wide' dropdown menu and checkboxes for 'Case sensitive', 'Backwards', and 'Multiple occurrences'. The main display area shows a table of network packets. The table has columns for 'No.', 'Time', 'Source', 'Destination', 'Protocol', 'Length', and 'Info'. Two packets are visible: packet 455 is an HTTP GET request to /HttpTester/HttpRestApiClientTester.aspx, and packet 464 is the corresponding HTTP 200 OK response.

No.	Time	Source	Destination	Protocol	Length	Info
455	5.829808	192.168.100.196	135.181.1.110	HTTP	602	GET /HttpTester/HttpRestApiClientTester.aspx HTTP/1.1
464	5.945261	135.181.1.110	192.168.100.196	HTTP	1293	HTTP/1.1 200 OK (text/html)

# TCP



No.	Time	Source	Destination	Protocol	Length	Info
455	5.829808	192.168.100.196	135.181.1.110	HTTP	602	GET /HttpTester/HttpRestApiClientTester.aspx HTTP/1.1
459	5.943045	135.181.1.110	192.168.100.196	TCP	1466	80 → 49994 [ACK] Seq=1 Ack=537 Win=254 Len=1400 TSval=1919278945 TSecr=403309232 [TCP PDU reassembled ...]
460	5.943046	135.181.1.110	192.168.100.196	TCP	1466	80 → 49994 [ACK] Seq=1401 Ack=537 Win=254 Len=1400 TSval=1919278945 TSecr=403309232 [TCP PDU reassembled ...]
461	5.943138	192.168.100.196	135.181.1.110	TCP	66	49994 → 80 [ACK] Seq=537 Ack=2801 Win=2004 Len=0 TSval=403309346 TSecr=1919278945
462	5.943228	192.168.100.196	135.181.1.110	TCP	66	[TCP Window Update] 49994 → 80 [ACK] Seq=537 Ack=2801 Win=2048 Len=0 TSval=403309346 TSecr=1919278945
463	5.945260	135.181.1.110	192.168.100.196	TCP	1466	80 → 49994 [ACK] Seq=2801 Ack=537 Win=254 Len=1400 TSval=1919278945 TSecr=403309232 [TCP PDU reassembled ...]
464	5.945261	135.181.1.110	192.168.100.196	HTTP	1293	HTTP/1.1 200 OK (text/html)
465	5.945293	192.168.100.196	135.181.1.110	TCP	66	49994 → 80 [ACK] Seq=537 Ack=5428 Win=2006 Len=0 TSval=403309348 TSecr=1919278945

# UDP

udp						
No.	Time	Source	Destination	Protocol	Length	Info
6287	45.299721	2001:16a2:6d34:710...	2600:1900:4250:2::...	QUIC	1292	Initial, DCID=84c9de1ca75e0ef8, PKN: 8, CRYPTO
6288	45.322486	192.168.100.196	3.251.59.93	UDP	191	58601 → 59985 Len=149
6289	45.362683	192.168.100.196	3.251.59.93	UDP	193	58601 → 59985 Len=151
6291	45.402998	192.168.100.196	3.251.59.93	UDP	178	58601 → 59985 Len=136
6292	45.418277	108.159.236.77	192.168.100.196	UDP	1063	443 → 58077 Len=1021
6293	45.418278	108.159.236.77	192.168.100.196	UDP	748	443 → 58077 Len=706
6294	45.418278	3.251.59.93	192.168.100.196	UDP	207	59985 → 58601 Len=165
6298	45.419147	2001:16a2:6d34:710...	2a00:1450:4006:80e...	QUIC	1292	Initial, DCID=4697b231b22e4e70, PKN: 5, CRYPTO
6300	45.427594	192.168.100.196	108.159.236.77	UDP	89	58077 → 443 Len=47
6302	45.440008	199.232.82.214	192.168.100.196	UDP	73	443 → 62427 Len=31
6303	45.440008	108.129.37.18	192.168.100.196	STUN	138	Binding Success Response XOR-MAPPED-ADDRESS: 94.98.255.232:58601 MAPPED-ADDRESS: 94.98.255.232:58601...
6304	45.440008	3.251.59.93	192.168.100.196	UDP	215	59985 → 58601 Len=173
6305	45.440009	3.251.59.93	192.168.100.196	STUN	106	Binding Success Response XOR-MAPPED-ADDRESS: 94.98.255.232:58601
6306	45.440009	3.251.59.93	192.168.100.196	STUN	106	Binding Success Response XOR-MAPPED-ADDRESS: 94.98.255.232:58601
6307	45.440009	3.251.59.93	192.168.100.196	STUN	106	Binding Success Response XOR-MAPPED-ADDRESS: 94.98.255.232:58601
6308	45.440392	192.168.100.196	199.232.82.214	UDP	202	62427 → 443 Len=160
6309	45.441423	3.251.59.93	192.168.100.196	STUN	106	Binding Success Response XOR-MAPPED-ADDRESS: 94.98.255.232:58601
6314	45.441755	2001:16a2:6d34:710...	2001:4860:4802:32::...	QUIC	1292	Initial, DCID=723d696446fbf0b9, PKN: 4, CRYPTO
6315	45.442099	3.251.59.93	192.168.100.196	STUN	106	Binding Success Response XOR-MAPPED-ADDRESS: 94.98.255.232:58601
6316	45.442099	3.251.59.93	192.168.100.196	STUN	106	Binding Success Response XOR-MAPPED-ADDRESS: 94.98.255.232:58601
6317	45.442099	3.251.59.93	192.168.100.196	UDP	208	59985 → 58601 Len=166
6318	45.442099	3.251.59.93	192.168.100.196	STUN	106	Binding Success Response XOR-MAPPED-ADDRESS: 94.98.255.232:58601
6319	45.442625	192.168.100.196	3.251.59.93	UDP	187	58601 → 59985 Len=145
6320	45.483235	192.168.100.196	3.251.59.93	UDP	187	58601 → 59985 Len=145
6323	45.483761	199.232.82.214	192.168.100.196	UDP	73	443 → 62427 Len=31
6326	45.523256	192.168.100.196	3.251.59.93	UDP	188	58601 → 59985 Len=146
6327	45.563258	192.168.100.196	3.251.59.93	UDP	196	58601 → 59985 Len=154
6331	45.564890	3.251.59.93	192.168.100.196	UDP	205	59985 → 58601 Len=163
6351	45.603314	192.168.100.196	3.251.59.93	UDP	189	58601 → 59985 Len=147
6357	45.643181	192.168.100.196	3.251.59.93	UDP	184	58601 → 59985 Len=142
6390	45.682671	192.168.100.196	3.251.59.93	UDP	179	58601 → 59985 Len=137
6396	45.692416	3.251.59.93	192.168.100.196	UDP	205	59985 → 58601 Len=163
6397	45.692416	192.168.100.1	192.168.100.196	DNS	86	Standard query response 0xf735 A google.com A 172.217.18.46

	TCP or UDP	Reasons
Reliability and Connection Establishment	TCP	Ensures reliable communication by establishing a connection and acknowledging received data.
Data Integrity and Ordering	TCP	Guarantees data arrives in order and without loss due to error-checking and retransmissions.

## Task 2: Identify the use Cases and Performance of TCP and UDP.

	TCP	UDP
Use cases	File transfer (e.g., FTP), emails (SMTP), web browsing (HTTP/HTTPS).	Real-time video/audio streaming, online gaming, DNS queries.
Performance	Slower due to connection setup, error correction, and data acknowledgment.	Faster because it is connectionless and doesn't check

