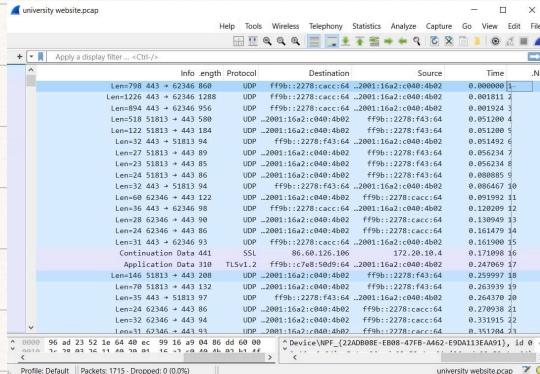


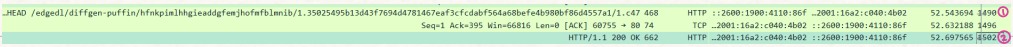
Part 1: Capturing HTTP Traffic

task 1:



No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	...	...	UDP	808	Len=298 443 → 62346 808
2	0.001811	...	...	UDP	1208	Len=1226 443 → 62346 1208
3	0.001924	...	...	UDP	956	Len=894 443 → 62346 956
4	0.051200	...	...	UDP	580	Len=518 51813 → 443 580
5	0.051200	...	...	UDP	184	Len=122 51813 → 443 184
6	0.051402	...	...	UDP	94	Len=32 443 → 51813 94
7	0.056234	...	...	UDP	89	Len=27 51813 → 443 89
8	0.056234	...	...	UDP	85	Len=23 51813 → 443 85
9	0.080880	...	...	UDP	86	Len=24 51813 → 443 86
10	0.086667	...	...	UDP	94	Len=32 443 → 51813 94
11	0.091992	...	...	UDP	122	Len=60 62346 → 443 122
12	0.130709	...	...	UDP	90	Len=30 443 → 62346 90
13	0.130949	...	...	UDP	90	Len=28 62346 → 443 90
14	0.161479	...	...	UDP	86	Len=24 62346 → 443 86
15	0.161900	...	...	UDP	93	Len=31 443 → 62346 93
16	0.171098	...	...	SSL	441	Continuation Data 441
17	0.247069	...	...	TLSv1.2	310	Application Data 310
18	0.259997	...	...	UDP	208	Len=146 51813 → 443 208
19	0.263939	...	...	UDP	132	Len=70 51813 → 443 132
20	0.264370	...	...	UDP	97	Len=35 443 → 51813 97
21	0.270938	...	...	UDP	86	Len=24 62346 → 443 86
22	0.319193	...	...	UDP	94	Len=32 62346 → 443 94
23	0.351284	...	...	UDP	93	Len=31 62346 → 443 93

task 2:



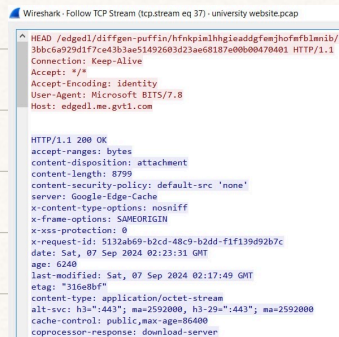
No.	Time	Source	Destination	Protocol	Length	Info
1	52.543694	...	...	HTTP	460	HEAD /edged1/diffgen-puffin/hfnpkmlhkgaddgfewjhoefblanib/3b0c6a929d1f7ced4b3ae51492603d2ae68187e00b00478401 HTTP/1.1
2	52.632188	...	...	TCP	74	Seq=1 Ack=395 Win=66816 Len=0 [ACK] 60755 → 80 74
3	52.697565	...	...	HTTP	662	HTTP/1.1 200 OK 662

① : HTTP request, HEAD method and URL Path

② : HTTP response, status code 200 OK

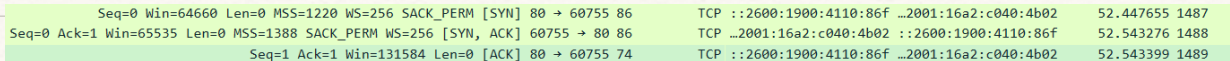
Part 2: Analyzing TCP/IP Traffic

task 1:



```
HTTP/1.1 200 OK
accept-ranges: bytes
content-disposition: attachment
content-length: 8799
content-security-policy: default-src 'none'
server: Google-Edge-Cache
x-content-type-options: nosniff
x-frame-options: SAMEORIGIN
x-ssr-protection: 0
x-request-id: 5132ab69-b2cd-48c9-b2dd-f1f139d92b7c
date: Sat, 07 Sep 2024 02:23:31 GMT
age: 6240
last-modified: Sat, 07 Sep 2024 02:17:49 GMT
etag: "316e8bf"
content-type: application/octet-stream
alt-svc: h3="443"; max=2592000, h3-29=""; max=2592000
cache-control: public, max-age=86400
coprocessor-response: download-server
```

task 2:



No.	Time	Source	Destination	Protocol	Length	Info
1	52.447655	...	...	TCP	48	Seq=0 Win=64660 Len=0 MSS=1220 WS=256 SACK_PERM [SYN] 80 → 60755 86
2	52.543276	...	...	TCP	48	Seq=0 Ack=1 Win=65535 Len=0 MSS=1388 SACK_PERM WS=256 [SYN, ACK] 60755 → 80 86
3	52.543399	...	...	TCP	48	Seq=1 Ack=1 Win=131584 Len=0 [ACK] 80 → 60755 74

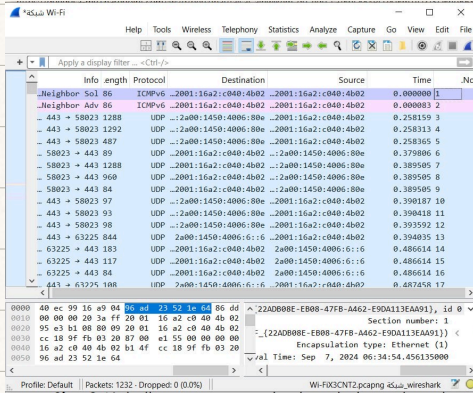
SYN : Seq → 0 Ack → No information

SYN-ACK : Seq → 0 Ack → 1

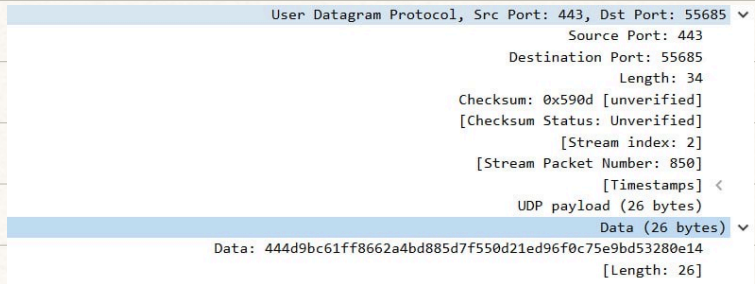
ACK : Seq → 1 Ack → 1

Part 3 : CaPturing and analyzing UDP traffic

task 1 :



task 2 :



Part 4 : Comparing TCP & UDP

	TCP or UDP	Reasons
Reliability and Connection Establishment	TCP	TCP ensures that data is delivered accurately and in order, also it uses three way hand-shake process
Data Integrity and Ordering	TCP	Provide error recovery and in-sequence delivery

	TCP	UDP
Use cases	<ul style="list-style-type: none"> web browsing deliver Email accurately file transfer 	<ul style="list-style-type: none"> Streaming media Online gaming
Performance	<ul style="list-style-type: none"> high reliability correct order error checking and recovery 	<ul style="list-style-type: none"> low latency out of order Fast