1. Command dig is used to find the ip address of a hostname such as www.yahoo.com. To do this, you can simply run dig www.google.com. You might see the following result. This is the result returned by your local DNS server when you run dig command to request it to find out the ip address of [www.google.com](http://www.google.com).

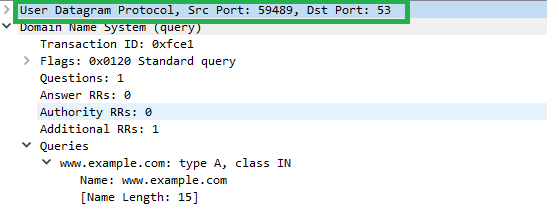
www.google.com. 300 IN A 172.217.13.4

1. a.

Text

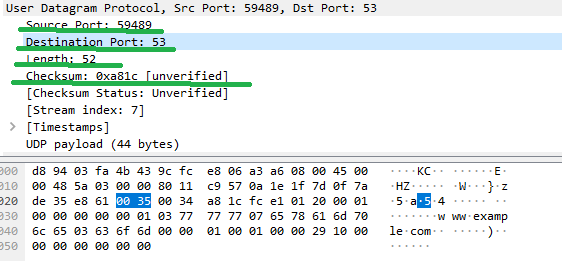
Description automatically generated

b.



The UDP headers are as learned from the wireshark screenshot:

1. Source port
2. Destination port
3. Length of the package
4. Checksum



c. my local DNS server’s IP is 15.122.222.53