CS2910 Exercise: DNS

Names: _____

MSOE DNS Lookup

(You may find it helpful to consult the DNS specifications, RFC 1034 and RFC 1035; Google can help you find them.)

1. Open a web browser and navigate to an on-line DNS lookup tool: mxtoolbox.com
2. Click on **DNS Lookup** in the tool bar at the top of the page.
3. Enter www.msoe.edu in the Domain Name box and click on the DNS Lookup button. What domain name is reported for this host?

4. To explore how the lookup was done, click on **Transcript** in the lower-right corner of the results box. This should give you the sequence of lookups that were needed to resolve the domain name. What do you think this transcript is telling you?

5. What is the IP address that the domain name ultimately resolved to? What DNS servers participated in getting this information?

6. What is the value in the TTL field? What do you think it means? What units are associated with this value?

7. Next, click on the IP address to invoke a **PTR** (inverse IP) lookup. What was the result?

8. Next, click on **MX Lookup** in the mxtoolbox.com tool bar.
9. Enter msoe.edu and click on the **MX Lookup** button.
10. What are the host name and IP address(es) for the MX lookup?

11. Again, click on Transcript to get the details of the lookup. What does this tell you about the steps needed to satisfy this "MX" request?

12. Click on the IP address of the mail server, for the PTR lookup. What is the result this time? Be sure to check the transcript for lookup details.

Further experimentation

Using mxtoolbox.com or other DNS tools such as ultratools.com (e.g., "DNS Traversal", "DNS Root Server Speed", "DNS Hosting Speed"), experiment with lookups for other host names. Briefly report on what you tried, and the results you obtained. Include any remaining questions about DNS.