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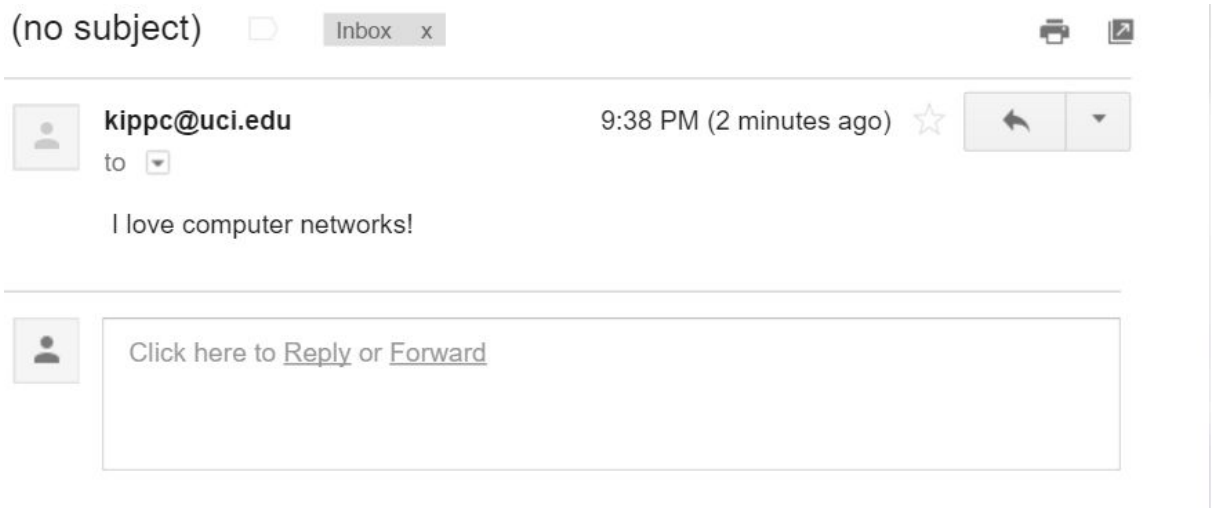
CS 132 Homework 2

Problem 1

1. 

Hello, World!

2. 

Problem 2: Wireshark Lab: HTTP.

Part 1)

1. HTTP v1.1
2. en-US (English)
3. IP: 192.168.0.116 SERVER: 128119.245.12

4. HTTP/1.1 200 OK

5. Last-Modified: Mon, 25 Apr 2016 06:50:41

6. 128

7. No. All can be found in raw data

Part 4)

16. 3

1) 128.119.245.12
2) 23.43.176.52
3) 128.119.240.90

17. Yes by checking TCP ports, we can see if they were downloaded serially.

Problem 3

a. Persistent HTTP without pipelining

RTTdns + (4 * RTTcs)

b. Non-persistent HTTP with 2 parallel connections

RTTdns + (2 * RTTcs) + 2 * RTTcs

Problem 4

a. What is the whois database?

Whois is a query and response protocol that is widely used for querying databases that store the registered users of an Internet resource, such as domain names and IP addresses.

b. Using various whois databases on the Internet, obtain the names of one authoritative DNS server for domains uci.edu and google.com. Indicate which whois databases you used.

Databases we used: ICANN, DOMAINTOOLS, GODADDY

uci.edu Name Servers:

NS4.SERVICE.UCI.EDU

NS5.SERVICE.UCI.EDU

google.com Name Servers:

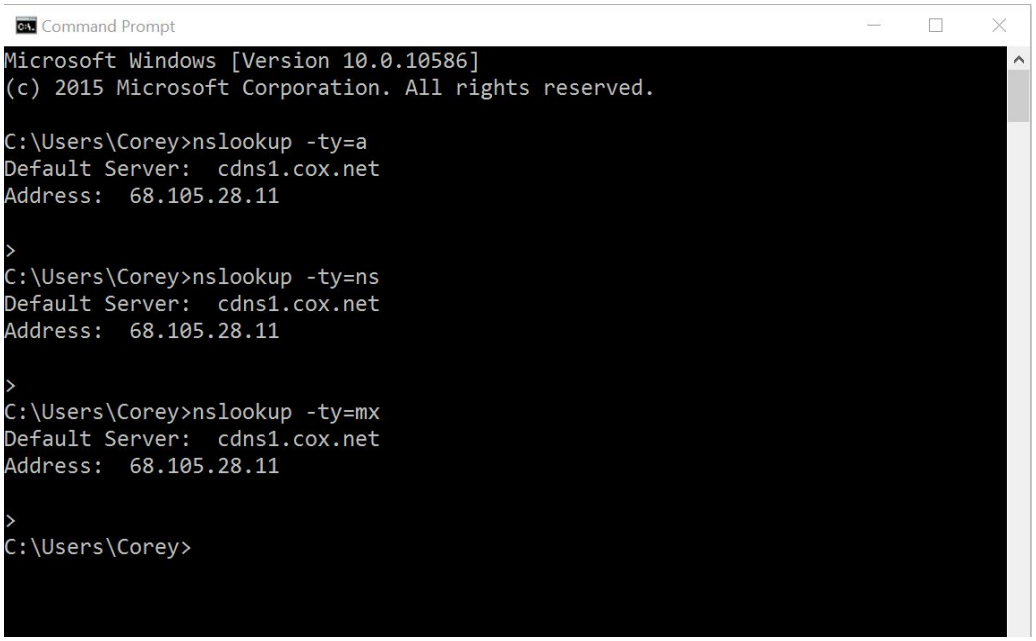
ns4.google.com

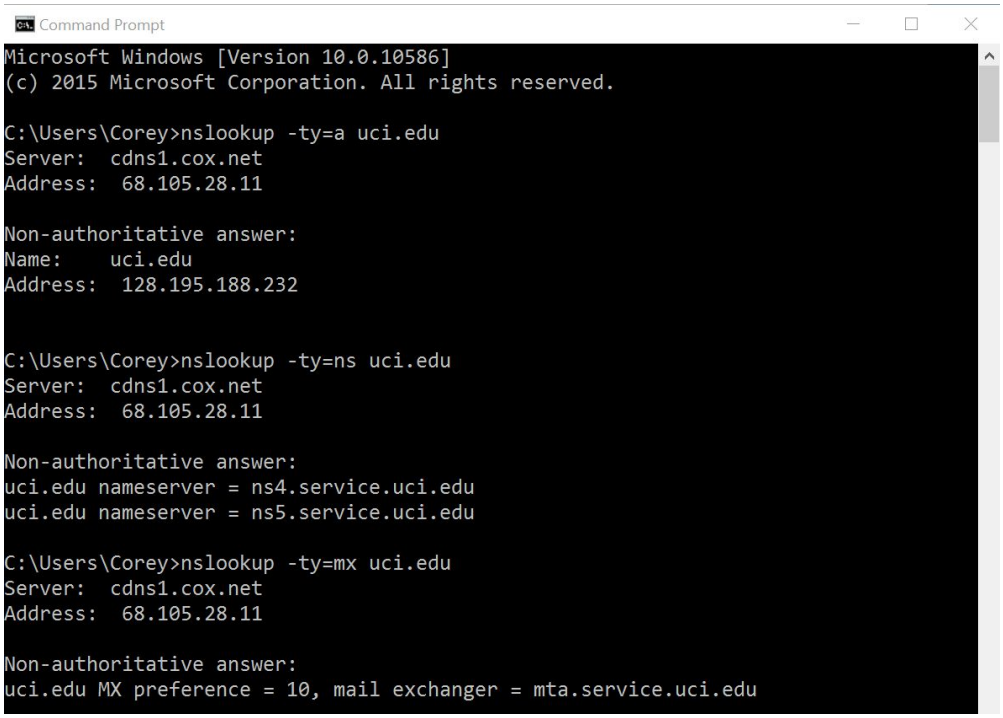
ns3.google.com

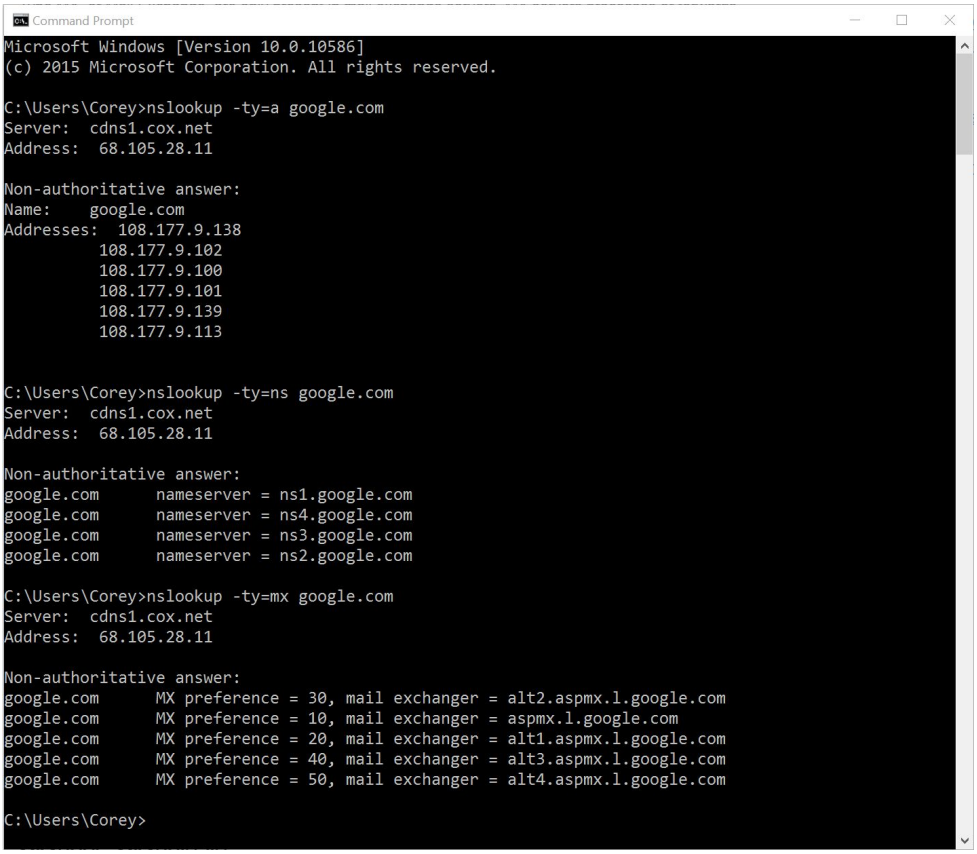
ns1.google.com

ns2.google.com

c. Use nslookup on your local host to send DNS queries to three DNS servers: your local DNS server and the two you found in part (b). Try querying for Type A, NS and MX records, summarize your findings.


Command Prompt
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. All rights reserved.
C:\Users\Corey>nslookup -ty=a
Default Server: cdns1.cox.net
Address: 68.105.28.11
>
C:\Users\Corey>nslookup -ty=ns
Default Server: cdns1.cox.net
Address: 68.105.28.11
>
C:\Users\Corey>nslookup -ty=mx
Default Server: cdns1.cox.net
Address: 68.105.28.11
>
C:\Users\Corey>


Command Prompt
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. All rights reserved.
C:\Users\Corey>nslookup -ty=a uci.edu
Server: cdns1.cox.net
Address: 68.105.28.11
Non-authoritative answer:
Name: uci.edu
Address: 128.195.188.232
C:\Users\Corey>nslookup -ty=ns uci.edu
Server: cdns1.cox.net
Address: 68.105.28.11
Non-authoritative answer:
uci.edu nameserver = ns4.service.uci.edu
uci.edu nameserver = ns5.service.uci.edu
C:\Users\Corey>nslookup -ty=mx uci.edu
Server: cdns1.cox.net
Address: 68.105.28.11
Non-authoritative answer:
uci.edu MX preference = 10, mail exchanger = mta.service.uci.edu



Type A returns the authoritative servers, Type NS returns the name servers, and Type MX returns the mail servers.

d. Use nslookup to find a Web Server that has multiple IP addresses. Does the Web server of UCI have multiple IP addresses?

Google has multiple IP addresses. UCI only has one IP address.

e. Use the ARIN whois database to determine the IP address range used by UCI.

128.195.0.0 - 128.195.255.255