

Extra Credit: Subnetting Quiz

Class: CECS 303 – Networks and Network Security

Instructor: Chris Samayoa

Quiz Date: April 14, 2022 during lab session (6pm)

As discussed in class, I will be giving an ***optional*** quiz for those of you who would like an extra credit opportunity. Given that I already curved the midterm grades, the maximum number of points you will be able to add to your score is 5. For those of you who take the quiz, I will provide an area where you can indicate what grade category you would like your points added to:

- Midterm Exam
- Semester Project or Final Exam

This past Tuesday April 5th, 2022 we spent a fair amount of time during lecture discussing the process of identifying and creating network subnets. This included understanding CIDR notation, the usage of binary in subnetting and identifying the following:

- CIDR / Subnet mask
- Subnet range (block size)
 - How many IP addresses does this subnet “block” consist of
- Useable IP addresses within the range
- Network address
- First useable IP
- Last useable IP
- Broadcast address
- Next Subnet

For the quiz, I will be giving you 5 IP addresses in CIDR notation (e.g. 192.168.1.43/27) and will be asking you to provide me with the highlighted items above for the subnet the IP exists within. See below for an example:

- 192.168.1.43/27
 - Subnet mask: 255.255.255.224
 - Subnet block size: 32
 - Network address: 192.168.1.32
 - First useable IP: 192.168.1.33
 - Last useable IP: 192.168.1.62
 - Broadcast address: 192.168.1.63

In order to receive full credit for a question, you must answer all of the fields correctly. No electronic devices will be allowed for this quiz other than a simple calculator (bring one if you want/need it).

Don't worry if you missed the lecture, the videos below should catch you up to speed.

Links

- I highly recommend watching all of the following videos prior to the quiz:
 - Video 1: <https://www.youtube.com/watch?v=BWZ-MHlhqjM>
 - Video 2: <https://www.youtube.com/watch?v=ljS07YTEJ2I>
 - Video 3: <https://www.youtube.com/watch?v=5-wlfAdcmFQ>
 - Video 4: <https://www.youtube.com/watch?v=SM0kdVfhxZ0>
 - Video 5: https://www.youtube.com/watch?v=Pj_ubhpi0WQ
 - Video 6: <https://www.youtube.com/watch?v=p-6BVEbb9q0>
 - Video 7: https://www.youtube.com/watch?v=OQ-r_lfeB8c
- Practice: <https://subnetipv4.com/>