Lecture 19 (3/31) Self Test

Due Apr 14 at 5pm **Points** 1 **Questions** 4
Available Mar 31 at 5pm - Jun 1 at 11:59pm 2 months **Time Limit** None

Instructions

Today's Self Test has only four questions... two are much harder than usual, though!

Score for this survey: **1** out of 1
Submitted Apr 3 at 6:27pm
This attempt took 7 minutes.

Question 1

Consider hosts A, B, C, and D, and caches W, X, Y, and Z, and server S. The hosts *do not* have local caches, and use HTTP to request objects.

All the hosts request object O residing on server S. The network topology is quite unusual. All hosts connect to S through two intermediate hops. A's path to S goes through W then X. B's path to S goes through Z then W. C's path to S goes through Y then Z. D's path to S goes through X then Y.

Assume object O has a TTL of 5 minutes, and consider the following steps. For each, list the cache/server that provides the object O, and which version of O (version 1 or version 2) that it receives.

Time (Min)	Action	Source of Content	Which Version
0	A requests O	S	1

1	B requests O	S	1
2	A requests O	W	1
2.5	S updates O to Version 2	-	-
3	C requests O	[Select]	[Select]
4	D requests O	[Select]	[Select]
6	A requests O	[Select]	[Select]
7	D requests O	[Select]	[Select]
8	C requests O	[Select]	[Select]

Answer 1:

ou Answered

S

Answer 2:

ou Answered 1

Answer 3:

ou Answered S

Answer 4:

ou Answered 1

Answer 5:

ou Answered W

Answer 6:

ou Answered 1

Answer 7:

ou Answered S

Answer 8:

ou Answered 2

Answer 9:

ou Answered X

Answer 10:

ou Answered 2

Answer 11:

ou Answered W

Answer 12:

ou Answered 1

Answer 13:

ou Answered X

Answer 14:

ou Answered 2

Answer 15:

ou Answered Y

Answer 16:

ou Answered 2

S	1
W	1
W	1
Z	1
X	1
S	2
X	2
S	2

Question 2

You have just launched a new web startup with some of your fellow students. You're running the servers out of a forgotten closet on Soda's bottom floor. Amazingly, your service becomes a gigantic overnight success in Brazil with many, many users. Unfortunately, they all complain about how slow it is.

You are considering installing a forward proxy in Brazil to serve users there. You can just barely afford the server, but you spent so much

money of snacks for "the office" (Soda 283H) that you can't afford any disk space for it, so it won't be able to do any caching.

Most of your users use HTTP/1.1. Is there any point to buying the proxy server?

(Think hard about this exam-like question before answering!)

- Yes
- ou Answered
- No

There just might be!

The proxy will use persistent connections with your server in Berkeley. Since there are many users, it's likely that these connections between the proxy and your server will always be open. When a user in Brazil connects to the proxy in Brazil, the RTT is low, so this is fast. They can then send their request, which the proxy can forward *immediately* without waiting an RTT to establish a TCP connection to Berkeley. This might shave off something like 250ms off their initial requests!

Question 3

Were you aware of the meaning of "404" in the context of the web before lecture?

- ou Answered
- Yes
- No
- Kind of

Here's a list of some kind of interesting 404 pages:

https://blog.hubspot.com/blog/tabid/6307/bid/33766/10-clever-website-error-messages-from-creative-companies.aspx (https://blog.hubspot.com/blog/tabid/6307/bid/33766/10-clever-website-error-messages-from-creative-companies.aspx)

And here's a list of some 404 pages with games on them:

https://www.lifehacker.com.au/2015/03/here-are-the-webs-best-error-screen-games/ (https://www.lifehacker.com.au/2015/03/here-are-the-webs-best-error-screen-games/)

Ironically, the cute 404 page crazy is kind of over, so a lot of the links on these go to... boring old regular 404 pages.

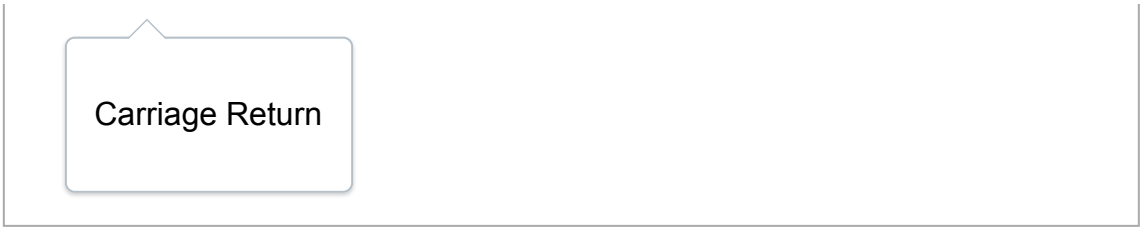
Question 4

In the context of control characters, CR stands for:

- Cursor Return
- Control Register
- Control Return
- Carriage Return

ɔu Answered

- Clear Register
- Clean Return



Survey Score: **1** out of 1