

Problem 1

Compile the `hostinfo` program from Figure 11.12. Then run `hostinfo google.com` three times in a row on your system.

- A. What do you notice about the ordering of the IP addresses in the three host entries?
- B. How might this ordering be useful?

Problem 2

Modify `Tiny` so that it reaps CGI children inside a `SIGCHLD` handler instead of explicitly waiting for them to terminate.

Problem 3

Modify `Tiny` so that when it serves static content, it copies the requested file to the connected descriptor using `malloc`, `rio_readn`, and `rio_writen`, instead of `mmap` and `rio_writen`.

Problem 4

This problem is about HTTP protocol and it. Assume the situation is as follows: Microsoft's Hotmail server does not allow Google chrome to use its service. However chrome uses a trick to go through the Hazard – like other browsers not supported. Now, please tell me how Microsoft distinguishes different browsers and how chrome makes the hit.

(hint: learn the fields of HTTP request header)