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1. Can a machine with a single DNS name have multiple IP addresses? How could this occur?

yes, a machine with a single DNS name value can have multiple IP addresses, because a machine can have multiple network interfaces. An IP address consists of a network number and a host number. If a machine hass two Ethernet cards, it can be on two separate networks and it has two IP addresses.

2. A binary file is 4560 bytes long. How long will it be if encoded using base64 encoding , with a CR+LF pair inserted after every 110 bytes sent and at the end?

Base64 encoding requires that three 8-bit bytes (3 * 8 = 24) be converted into four 6-bit bytes (4 * 6 = 24), and then two zeros are added in front of the 6-bit to form the form of one 8-bit byte. 4560 bytes will be divided into 1520 units, so the file will be added 1520 bytes. So there are 1520+4560 = 6080bytes. If these are then broken up into lines of 110 bytes, 56 such lines will be needed, adding 56 CRs and 56 LFs. The total length will then be 6192 bytes.

3. When Web pages are sent out, they are prefixed by MIME headers. Why?

The browser has to be able to know whether the page is text, audio, video, or something else. The MIME headers provide this information.

4. How do you make an image clickable in HTML? Give an example.

a hyperlink is consisted of and

put an image between them.

for example,

```
<a href="javascript:showMsgBoard()"><img src="/images/logo.png"/></a>
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