

Homework Assignment 8

ECE 151 / CMPSC 171 - Spring 2014

Due Friday, June 6, 5pm

1. The **NFS** distributed file system supports **mounting** of remote file systems and directories into a client's local name space.
 - (a) Why do you think only directories, and not individual files, are copied?
 - (b) How then does a client gain access to individual files?
 - (c) What makes file sharing by clients difficult in NFS?
2. Consider the **Coda** distributed file system in which there are two clients C_1 and C_2 , and a single server S .
 - (a) Each of the clients C_1 and C_2 opens a session for caching and writing the (same) file f . Draw a diagram similar to that shown in Lecture 15, Slide 29, to show what happens when each client writes to its local copy of f , as well as the messages that are exchanged.
 - (b) Continuing the scenario in part (a), each of the clients C_1 and C_2 opens a second session for caching and writing the file f . Draw a diagram, that extends your diagram for part (a), to show what happens when they do so.
3.
 - (a) Discuss the differences between a **Web Server** and a **Web Service**.
 - (b) Explain the relationships between **HTTP** and **SOAP** and **TCP**. Draw a diagram to illustrate your explanation.
4.
 - (a) Explain how **Web Services** address the problems of **portability** and **interoperability** between different companies over the Web. Hint: Consider the standards on which Web Services are based.
 - (b) Discuss the differences between a **SOAP** Web Service and a **REST** Web Service.