At the beginning...

- Any questions about this course and lab?
- Any questions about the materials?
- Your quiz
- We have an email list: cit383@cs.uoregon.edu
  - Did you receive our emails?
- Homework:
  http://www.cs.uoregon.edu/classes/08S/cit383/cit383.assignments.html

HTTP - HyperText Transfer Protocol

- URL: host name, path name
  www.uoregon.edu/departmentA/file.txt
- Non-persistent vs. Persistent
  - Multiple objects can be sent over one connection in persistent connection
- Request and Response
- Get and Post

HTTP – specifics of GET

- GET /somadir/page.html HTTP/1.1
  Connection: close
  User-agent: Mozilla/4.0
  Accept-language: en
- Practice: try to telnet an HTTP connection
  - telnet uoregon.edu 80
    • GET /index.html (double-enter)

HTTP - cookie

- Why: keeping users’ information
- How:
  - Server issues a unique ID for the first-time user (cookie) and storing information for this user in some place on server
  - User keeps his ID in his machine
  - After that, every time the user visits this website, the server will try to find user’s cookie and retrieving his information
  - Server restore the previous session for user
- Security issues
- Practice: find the cookies used by Firefox
  - Tools->options->Privacy->cookies
  - C:\Documents and Settings\[username]\Application Data\Mozilla\Firefox\Profiles\[profile_name]\cookies.txt

Web caching

- What is caching?
  - Imagine: looking up words in dictionary
- Why caching?

Web caching diagrams:
- Without caching
- With caching
**Tasks**

- Using telnet, try to get a webpage named 'try_to_get_me.html' from the server leopard.cs.uoregon.edu
- Then try to use your browser to do the same thing. Which one is better?
- Find the cookies location in your machine
- Extra: Find the cookies used by IE
  - Need a help? Google it.

**Queuing Delay**

- $R$: link bandwidth (bps)
- $L$: packet length (bits)
- $\lambda$: average packet arrival rate
- $\rho$: traffic intensity = $\lambda / R$

- $\rho < 1$: average queuing delay small
- $\rho = 1$: delays become large
- $\rho > 1$: more "work" arriving than can be serviced, average delay infinite

![Queuing Delay Diagram](image)