

# Announcements

- Project #1 and in-class discussion grades are now available through [grades.cs.umd.edu](http://grades.cs.umd.edu). Make sure they are correct.
- Location of dispatch window in AVW so you can pick up printouts.
- In-Class discussion #3 articles are now available online. Next discussion will be next Wednesday.
- Remember: you are responsible for verifying what you submit through the submit server. You can download the zip file you submitted.
- Fugu – “F-Secure” for Mac OS X  
<http://rsug.itd.umich.edu/software/fugu/>

# Project #3

- Relies on ftp
- Start working on it immediately

# Transfer Modes in FTP

- Files can be transferred either as ASCII text or as binary data.
  - you must indicate choice
  - wrong choice may cause the new file to be bad
- ASCII mode:
  - for transferring ASCII text
  - the actual character is transferred, rather than the binary value of it; translation takes place if needed
- Binary mode:
  - when you don't want the character based translation
  - data files of an application for example

# ftp in Windows

- Start → command prompt
- Type ftp <Host>
- Commands
  - help – list of available commands
  - help <commandName> - information about commands
  - dir – contents of directory
  - cd <directoryName> - changes to directory
  - quit - exit

# FTP File Systems

- There are two file systems which you are working with during a file transfer, the local one and the remote one.
  - local file system’s “current working directory”
    - Use `lcd` to find the local current working directory
  - remote system’s “current working directory”
    - Use `pwd` to find the current remote working directory
  - changing remote directory: `cd`
  - changing local directory: `lcd`
  - listing remote directory: `dir`
  - listing local directory: `!dir`

# FTP Server

- Listening at port 21
- Can reach that daemon by using telnet
  - if you specify the port number
- Transfer Speed Factors
  - Internet traffic
  - Size of file
  - Speed of network connections
    - Your connection - you to your local net, local net to Internet
    - Their connection - them to their local net, local net to Internet
  - Machine speed
    - Both yours and theirs
  - Server load
    - How many users are trying to download file “now”

# Transferring Files Using F-Secure

- The local and remote directories represented by the upper and lower windows.
- You can drag and drop your files/folders
- Notice how you can specify the local/remote directories.
- As in the previous ftp discussion, you have to specify the appropriate transfer mode (you will see icons at the top representing each transfer mode).

# ssh (command line)

- ssh can be used in linux and other systems (e.g., Unix, Mac OS) to establish a remote connection to a computer
- Data is encrypted
- Usage
  - ssh -l <YourDirectoryID> <hostName>
- Let's do a demo of this command

# scp (command line)

- scp allow us to transfer files.
- It is available in grace and other systems (e.g., Unix, Mac OS) to establish a remote connection to a computer in order to transfer a file.

- Data is encrypted

- Usage

```
scp <fileName> <directoryID>@<host>:<targetDirectory>
```

- Example

```
scp messageTwo fearTheTurtle@wam.umd.edu:
```

- Let's do a demo of this command