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III B.Tech.

Computer Science & Engineering

CSE304: PYTHON PROGRAMMING WITH WEB FRAMEWORKS

UNIT-III: Internet Client Programming

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Protocols

- Transferring Files
  - File Transfer Protocol (FTP)
- Network News
  - Network News Transfer Protocol (NNTP)
- E-Mail
  - Sending E-Mail
    - Simple Mail Transfer Protocol (SMTP)
    - SMTP with service extensions (ESMTP)
    - Local Mail Transfer Protocol (LMTP)
  - Receiving E-Mail
    - Post Office Protocol (POP3)
    - Internet Message Access Protocol (IMAP4)

File Transfer Protocol

- Steps in transferring files between client and Server
  - Connect to server
  - Log in
  - Make service request and get response
  - Quit
- Module to be imported: ftplib
  - from ftplib import FTP
- Connecting to server
  - f = FTP('host address')
- Log in
  - f.login(user='anonymous', passwd='', acct='')
- Quitting connection
  - f.quit()

ftplib.FTP class Methods

Method	Description
login(user='anonymous', passwd='', acct='')	Log in to FTP server, all arguments are optional
pwd()	Current working directory
cwd(path)	Change current working directory to path
dir([path[, … [cb]])	Displays directory listing pf path
nlst([path[,…]])	Like dir(), but returns a list of filenames instead of displaying
retrlines(cmd [, cb])	Download text file given FTP cmd RETR filename;
retrbinary(cmd, cb [, bs=8192, [, ra]])	Similar to retrlines() except ffor binary file; callback cb for processing each block downloaded required;

ftplib.FTP class Methods

Method	Description
storlines(cmd, f)	Upload text file given FTP cmd, STOR filename; open file object f required (in binary mode)
storbinary(cmd, f, [, bs=8192])	Similar to storlines() but for binary file; open file object f required
rename(old, new)	Rename remote file from old to new
delete (path)	Delete remote file located at path
mkd(directory)	Create remote directory
rmd(directory)	Remove remote directory
quit()	Close connection and quit

Network News

- Usenet and Newsgroups
  - Uses Network News Transfer Protocol
  - Public / Private news groups for any topic
  - Usenet postings are propagated from one usenet computer to its neighbors, then to neighbor's neighbors etc. until it is shared with all.
  - Postings will live on usenet for a finite period of time specified by admin or the posting itself
  - Usenet is superseded by online forums

Network News Transfer Protocol

- Steps in transferring files between client and Server
  - Connect to server
  - Log in (optional), but choose newsgroup of interest
  - Make service request(s)
  - Quit
- Module to be imported: nntplib
  - from nntplib import NNTP
- Connecting to server
  - n = NNTP('host address')
- Choosing newsgroup of interest
  - r, c, f, l, g = n.group('news group')
  - Returns server reply, count of number of articles, Id of the first and last articles, and group name
- Quitting connection
  - n.quit()

nntplib.NNTP class Methods

Method	Description
group(name)	Select newsgroup name and return a tuple (rsp, ct, fst, lst, group) all of which are strings
xhdr(hdr, artrg[, ofile])	Returns list of hdr headers for article range artrg("fst-lst" format) or outputs data to file ofile
body(id[, ofile])	Get article body given its id, which is either message id or article number; returns a tuple server response (rsp), article number as a string (anum), message ID (mid), and list of article lines or outputs data to file ofile.
head(id)	Similar to body(); same tuple returned but lines only contain article headers
article(id)	Similar to body(); same tuple returned but lines contain both headers and body

nntplib.NNTP class Methods

Method	Description
stat(id)	Set article “pointer” to id; returns the tuple (rsp, anum, mid)
next()	Used with stat; moves article pointer to next article and returns (rsp, anum, mid)
last()	Used with stat; moves article pointer to last article and returns (rsp, anum, mid)
post(ufile)	Upload data from ufile file object (using ufile.readline()) and post to current newsgroup
quit()	Close connection and quit