

FTP (Storage) Covert Channel

Write a Python program that can extract a covert message from the file permissions of an FTP server. This is a group programming assignment (i.e., **only one submission per team is needed**).

Notes and Requirements:

- Submit your source code only;
- Your program should first connect to an FTP site, fetch the file listing (including permissions) from the FTP server, and immediately disconnect;
- The FTP site specifics (i.e., IP address/domain, port, and directory to initially browse to) should be specified as variables at the top of your program (i.e., so that they can easily be changed);
- Your program should isolate and decode the file permissions **after** disconnecting from the FTP server;
- Your program should support both (1) using only the 7 right-most “bits” of the file permissions, filtering out any file with any of the first three “bits” set; and (2) utilizing all ten “bits” (select between the two options through a variable called **METHOD** that is declared at the top of your program); and
- Your program should generate and output the covert message (and nothing else).

Please, no GUIs. Make this a command line application without frills that I can execute at the command line as illustrated below:

```
# 7-bit
```

```
prof@latech:~/ftp$ python fetch.py
```

```
Your reputation is made by others.  Your character is made by you.
```

```
# 10-bit
```

```
prof@latech:~/ftp$ python fetch.py
```

```
Motivation is what gets you started.  Habit is what keeps you going. -- Jim Rohn
```