

Course Announcement

- 確認iLMS上期末專案組別
- Office Hour: Wed. 19:00~21:00
 - 綜合二館 7F 705室

Lab3-2

Socket Programming

File Transfer

- You will need to write file transfer client and server in language C.
- Please modify the sample code to achieve the goals.

TODO

- Fill in your own code by following the TODO Hint in the code.

```
/**
 * TODO:
 *   preparing sockaddr_in
 */
bzero(&svr_addr, sizeof(svr_addr));
svr_addr.sin_family = /* Protocol stack */;
svr_addr.sin_addr.s_addr = htonl(INADDR_ANY);
svr_addr.sin_port = /* Bind port */;

/**
 * TODO:
 *   bind the socket to port, with prepared sockaddr_in structure
 */

/**
 * TODO:
 *   listen on socket
 */
```

Requirement

- Server

- User can assign **port** to server
- Returns files list to client when the client connects
- immediately to the server
- Returns files which client wants to download.

- Client

- User can assign **IP address** and **port** to connect the server with command line argument.
- Support user inputs the file name to download file from server, per file per input.
- Input “.exit” to disconnect from server.

Server端指定Port

```
2017-ITCN-file-transfer [master] ⚡ ./server 8888
```

Client端指定IP、Port

```
2017-ITCN-file-transfer [master] ⚡ ./client 127.0.0.1 8888
```

完整流程(Server端)

```
2017-ITCN-file-transfer [master] ⚡ ./server 8888
File transfer server started
Maximum connections set to 5
Listening on 0.0.0.0:8888
Waiting for client...

[INFO] Connection accepted (id: 4)
[INFO] Client is from 127.0.0.1:8888
[INFO] Send hello msg to client
[INFO] List file to client
[INFO] Client send `test.txt` request
[INFO] Client send `test.png` request
[INFO] Client send `lab3_2_spec.pdf` request
```

完整流程(Client端)

```
2017-ITCN-file-transfer [master] ⚡ ./client 127.0.0.1 8888
[✓] Connect to server.
[✓] Server reply!
-----
Files on server:
test.png
test.txt
lab3_2_spec.pdf
-----
Enter the filename: test.txt
[-] Downloading `test.txt` ...
[✓] Download successfully!
-----
Enter the filename: test.png
[-] Downloading `test.png` ...
[✓] Download successfully!
-----
Enter the filename: lab3_2_spec.pdf
[-] Downloading `lab3_2_spec.pdf` ...
[✓] Download successfully!
-----
Enter the filename: .exit
[x] Socket closed
```


Deadline

- Please also upload your code of your result to iLms system.
 - Deadline: **12/01 23:59 (Fri.)**
 - 檔案名稱: Lab3-2_學號.zip()
- **Copy will get 0 point**
- Wrong name **-10** point
- After 2017/12/01, your submission is not accepted.