

Readme

Basic operation

- Host server

```
python3 ./testserver.py
```

- Server is host on 127.0.0.1 with port 12345

- `python3 ./testserver.py --port 12345`

- Server is continuing handling input after turning on, use ctrl-z to stop. Make sure to kill the process after closing server.

```
ps | grep python3 | awk '{print $1}' | xargs kill -s SIGKILL
```

- Client

```
python3 ./test.py
```

- Is assigned with 127.0.0.1 with random port

- Optional server address and port

- `python3 ./test --ip 127.0.0.1 --port 12345`

Function

- File transfer

- Client

- `python3 ./test --file (data_path)`

- Result is stored in `./received`

- DNS Query

- Client

- `python3 ./test --dns (domain)`

- Calculation

- Client

- `python3 ./test --cal (calculations)`

- Basic operation in python

- `sqrt = number**0.5`

Testing

- You can found the following in `Connection` constructor

1. Delay ack control
2. Constant cwnd (keep cwnd = 1)
3. Fast retransmit (duplicate handle and fast recovery)
4. Turn on loss (10^{-6} or near 8192byte)

```
self.delay_ack_function = False
self.constant_cwnd = False
```

```
self.fast_retransmit_function = True  
self.design_loss = False
```

- sha256 sum

- `python3 ./sha.py -f filename`
- Compare file in `./received` and `./files`