

COL 334 – Computer Networks

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Assignment-2

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Execution Instructions:

To run the server, use: **python3 server.py**

We have optional arguments too for IP address and the Port number. Default value of Host = 127.0.0.1 and Port = 10000

```
prakank@prakank:~/IIT_Delhi/3rd_year/Sem5/COL334_
python3 server.py --help
usage: server.py [-h] [-n N] [-ip IP] [-p P]

optional arguments:
  -h, --help  show this help message and exit
  -n N        Maximum Number of Connections
  -ip IP      IP address
  -p P        PORT
```

To run the client, use: **python3 client.py**

Optional arguments: (default PORT = 10000, HOST = 127.0.0.1)

```
prakank@prakank:~/IIT_Delhi/3rd_year/Sem5/COL334_
python3 client.py --help
usage: client.py [-h] [-ip IP] [-p P]

optional arguments:
  -h, --help  show this help message and exit
  -ip IP      IP address
  -p P        PORT
```

Design:

- Clients can either send a direct message using @[recipient name] [message] format or can send a Broadcast message using @ALL [message] format.
- If the data sent between the sender and server is found to be invalid, the error would be on the connection between sender and server.
- Therefore, a ERROR103 message is sent to the sender and the sender server connection is closed.

- If the data forwarded between the server and receiver is found to be invalid, the error would be on the connection between receiver and server.
- Therefore, a ERROR103 message is received at the receiver end and the receiver and server connection is closed.
- NOTE that in the above scenario, as there was on the sender – server side, hence, the connection at the sender side is NOT closed.
- Malformed packets: Any packets with a mismatch in the mentioned content-length and the actual length of the text are considered as a malformed packet.
- Any packet which is not parsable on the basis of instructions given in the assignment also falls under this category.
- For malformed packets, depending on whether the error is at the sender side or at the receiver side, appropriate connection is closed.