

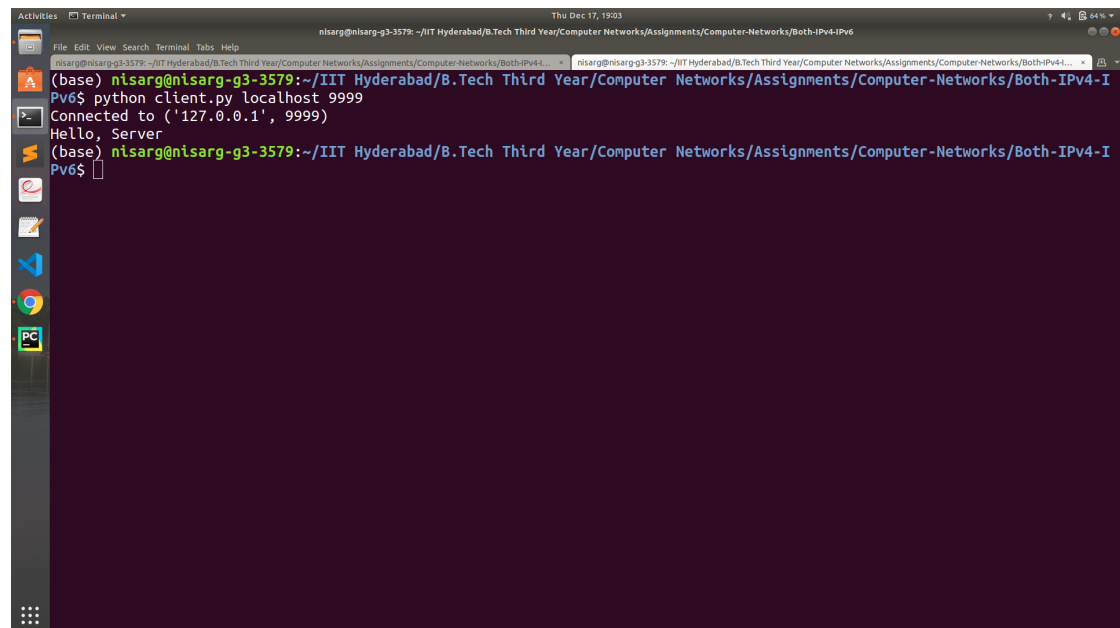
# Dynamic Socket Configuration

## Computer Networks

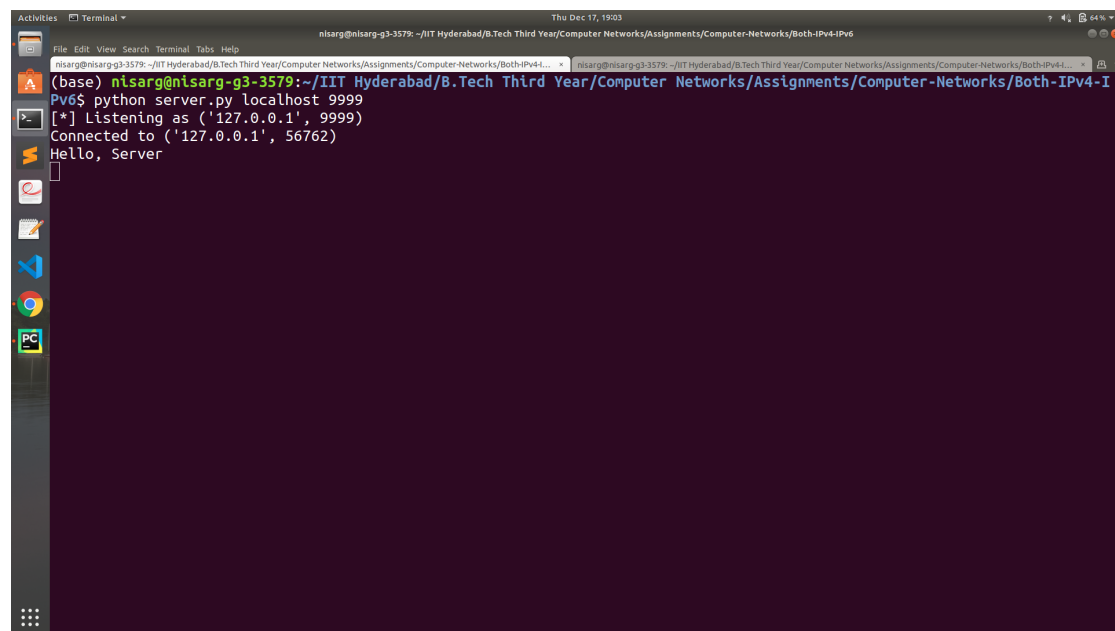
Dec 17 2020

We have created Echo server and Echo client. In general, we fixed server address and port number and create socket based on its Address family and bind IP address and Port number to it. Instead of that, we are taking server hostname and port number from command line. If address was form IPv4 family server creates socket based on that configuration and if address of IPv6 family server creates socket based on provided configuration. We are using `getaddrinfo()` for getting IP address and its address family.

### IPv4 Address:



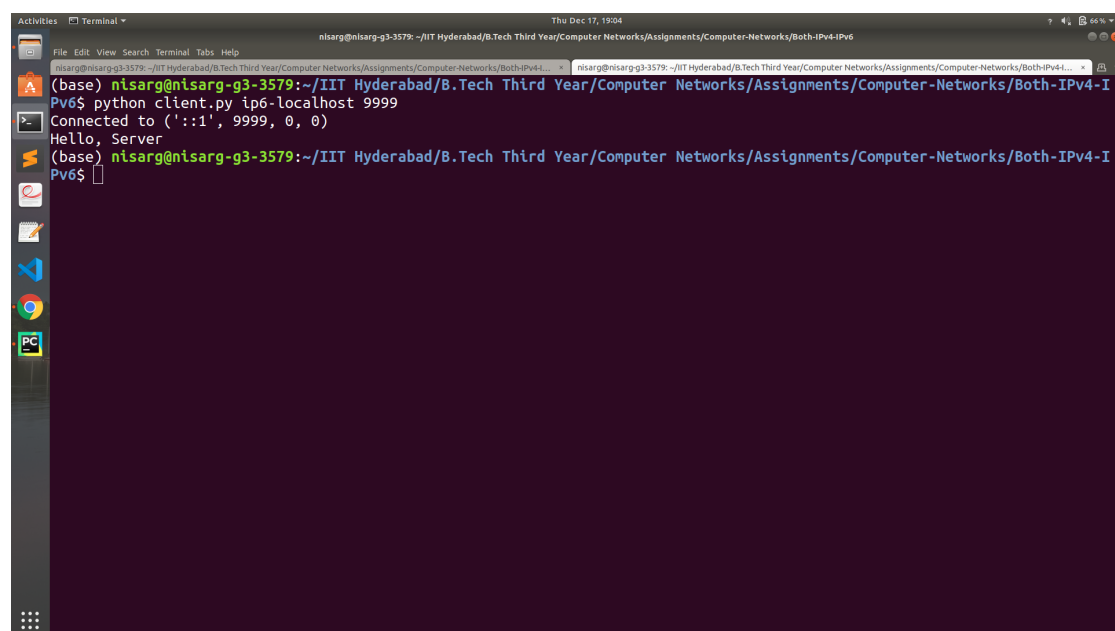
```
nsarg@nsarg-g3-3579: ~/IIT Hyderabad/B.Tech Third Year/Computer Networks/Assignments/Computer-Networks/Both-IPv4-IPv6
(base) nsarg@nsarg-g3-3579:~/IIT Hyderabad/B.Tech Third Year/Computer Networks/Assignments/Computer-Networks/Both-IPv4-I
Pv6$ python client.py localhost 9999
Connected to ('127.0.0.1', 9999)
Hello, Server
(base) nsarg@nsarg-g3-3579:~/IIT Hyderabad/B.Tech Third Year/Computer Networks/Assignments/Computer-Networks/Both-IPv4-I
Pv6$
```



A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Tabs, Help) and a status bar (Thu Dec 17, 19:03). The terminal shows the following commands and output:

```
(base) nlsarg@nlsarg-g3-3579:~/IIT Hyderabad/B.Tech Third Year/Computer Networks/Assignments/Computer-Networks/Both-IPv4-I
Pv6$ python server.py localhost 9999
[*] Listening as ('127.0.0.1', 9999)
Connected to ('127.0.0.1', 56762)
Hello, Server
```

IPv6 Address:



A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Tabs, Help) and a status bar (Thu Dec 17, 19:04). The terminal shows the following commands and output:

```
(base) nlsarg@nlsarg-g3-3579:~/IIT Hyderabad/B.Tech Third Year/Computer Networks/Assignments/Computer-Networks/Both-IPv4-I
Pv6$ python client.py ip6-localhost 9999
Connected to ('::1', 9999, 0, 0)
Hello, Server
(base) nlsarg@nlsarg-g3-3579:~/IIT Hyderabad/B.Tech Third Year/Computer Networks/Assignments/Computer-Networks/Both-IPv4-I
Pv6$
```

```
Activities Terminal Thu Dec 17, 19:04
nlsarg@nlsarg-g3-3579: ~/IIT Hyderabad/B.Tech Third Year/Computer Networks/Assignments/Computer-Networks/Both-IPv4-IPv6

(base) nlsarg@nlsarg-g3-3579:~/IIT Hyderabad/B.Tech Third Year/Computer Networks/Assignments/Computer-Networks/Both-IPv4-I
Pv6$ python server.py ip6-localhost 9999
[*] Listening as (:::1, 9999, 0, 0)
Connected to (:::1, 44284, 0, 0)
Hello, Server
```