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## **CEL 51, DCCN, Monsoon 2020**

### **Lab 8: Socket Programming**

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**AIM:** To implement Socket Programming and establish a connection between client and server.

#### **THEORY:**

Socket programming is a way of connecting two nodes on a network to communicate with each other. One socket(node) listens on a particular port at an IP, while other socket reaches out to the other to form a connection. Server forms the listener socket while client reaches out to the server. They are the real backbones behind web browsing. In simpler terms there is a server and a client.

#### **CODE:**

- **server.py**

```
import socket

s = socket.socket()
print("Socket successfully created")
port = 12345

s.bind(("", port))
print ("socket binded to %s" %(port))

s.listen(5)
print ("socket is listening")

while True:

    c, addr = s.accept()
    print('Got connection from', addr)
    c.sendall(b'Thank you for connecting')
    c.close()
```

- **client.py**

```
import socket

s = socket.socket()
port = 12345

s.connect(('127.0.0.1', port))
print(s.recv(1024))
s.close()
```

## OUTPUT:

- **server.py**

```
Socket successfully created
socket binded to 12345
socket is listening
Got connection from ('127.0.0.1', 55294)
█
```

- **client.py**

```
b'Thank you for connecting'
```

## CONCLUSION:

I understood how to successfully establish a connection between client and server using socket programming.

## REFEERENCES:

1. [geeksforgeeks.org/socket-programming-python/](https://www.geeksforgeeks.org/socket-programming-python/)