Socket Programming in Python

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 the other socket reaches out to the other to form a connection. The server forms the listener socket while the client reaches out to the server.

They are the real backbones behind web browsing. In simpler terms, there is a server and a client. Socket programming is started by importing the socket library and making a simple socket.

```
import socket
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
```

Here we made a socket instance and passed it two parameters. The first parameter is **AF_INET** and the second one is **SOCK_STREAM**. AF_INET refers to the address-family ipv4. The SOCK_STREAM means connection-oriented TCP protocol. Now we can connect to a server using this socket.

Connecting to a server:

Note that if any error occurs during the creation of a socket then a socket error is thrown and we can only connect to a server by knowing its IP. You can find the IP of the server by using this :

```
$ ping www.google.com
```

You can also find the IP using python:

```
import socket
ip = socket.gethostbyname('www.google.com')
print ip
```

Connecting to Google Server Example.

Creating Simple Client/Server.