PYTHON PROJECT DOCUMENTATION

PySend

FILE SHARING TOOL

By:

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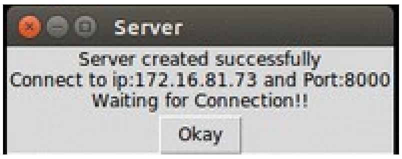
PROJECT AIM:

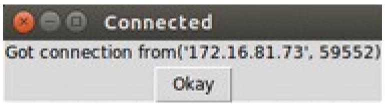
To easily share any type of file between one client and a server over WiFi with the primary condition that both should be connected to the same WiFi network.

PROJECT DESCRIPTION:

In the software there are two programs. One is the **Server** which hosts the sharing and sends the file and the other is **Client** , which accepts files from server. This whole thing will be executed with **GUI using Tkinter**. We will use Command Line Arguments to mention **IP** and **PORT** on which the server is hosted. Errors will be **Exception Handled** to have a better experience. The user has to enter the name of file along with the extension and the same file will recieved by the client. SOCKET Programming will be used extensively to establish connection and send/recieve files. File Handling will be used to read ,write and save files.



Server created successfully
Connect to ip:172.16.81.73 and Port:8000
Waiting for Connection!!



Got connection from('172.16.81.73', 59552)

(SERVER)

(CLIENT)

This is how it may look like

CONCEPTS USED:

-Socket Programming
-File Handling
-Command Line Arguments
-Tkinter GUI
-Exception Handling

MODULES USED:

-Socket
-Os
-Sys
-Tkinter
-Tkinter MessageBox

BASIC FEATURES:

-A Function called getip() determines local IP address by pinging (requires active internet connection) so that user doesn't have to worry about finding it and to avoid confusion between Local IP and Public IP. Here there will be an exception that if user is not connected to internet i.e if the user is on Hotspot type of network which doesn't have connection but still has an IP address so that an exception will be raised asking for user to enter IP address manually.

-Server.py file will take port as a command line argument and Client.py will take Host's IP and PORT as command line arguments.

-Can Send any type of file.

-User Friendly.

-Upto 1.5MBps transfer speed.

INBUILT FUNCTIONS IN SERVER AND CLIENT PROGRAM USED FOR IMPLEMENTATION:

-socket.scoket(socket_family,socket_type)
New socket object will be created of class socket.

-bind((hostname,port))
Binds the server data to socket of the server and hosting the server successfully.

-listen()
Starts listening for TCP connections from client.

-accept()
Aceepts a new connection when found(returns a new socket).

-getip() **[user defined function]**
Use to determine server’s private IP address to host the server for ease of user.

-send()
function used to send strings by the server.

-recv()
function used to receive strings by the host.

-close()
inbuilt function in file handling used to close a file.

-write()
used to write a data in a file.

BASIC LOGIC:

Our idea is to first find the size of the slected file in bytes using OS Module and then sending it to the client after converting that number into 10 charactered string using decimal places(for eg. 1----> 1.00000000). Now each byte should be sent to the client and it will recieve it byte by byte and store it.This will purely be done through file handling.