**ESCOM**

Practica 1

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3CM#

Introducción

Sockets

Desarrollo

Esta es una aplicación que permite al cliente guardar archivos en el servidor y se envían a través de un socket

**Servidor**

#!/usr/bin/env python3

import socket

import os

import pickle #serialize the list to send it tru socket

import zipfile

HOST = '127.0.0.1' # Standard loopback interface address (localhost)

PORT = 65432 # Port to listen on (non-privileged ports are > 1023)

f = 0

dataSend = 0

ServerDirectory = './ServerDummy/'

option = -1

fileList = 0

def folderContent():

fileList = os.listdir(ServerDirectory)

conn.sendall(pickle.dumps(fileList))

def UploadAFile():

flnm = 0

while True:

data = conn.recv(1024)

if flnm == 0:

f = open(ServerDirectory + data.decode(), 'wb')

flnm = flnm + 1

else:

f.write(data)

if len(data) < 1024:

flnm = 0

break

f.close()

conn.sendall(b'Send was succesful\n')

print("Done Receiving")

fantasy\_zip = zipfile.ZipFile(ServerDirectory + '/archive.zip')

fantasy\_zip.extractall(ServerDirectory)

fantasy\_zip.close()

os.remove( ServerDirectory + '/archive.zip')

def DownloadFile():

folderContent()

filesname = pickle.loads(conn.recv(1024))

for item in filesname:

file2D = conn.recv(1024).decode()

#print('Se enviara el archvio:', fileList[file2D])

f = open(ServerDirectory + os.path.basename(file2D), 'rb')

chonk = f.read(1024)

while chonk:

conn.sendall(chonk)

chonk = f.read(1024)

with socket.socket(socket.AF\_INET, socket.SOCK\_STREAM) as s:

if not os.path.exists(ServerDirectory):

os.mkdir(ServerDirectory)

s.setsockopt(socket.SOL\_SOCKET, socket.SO\_REUSEADDR, 1)

s.bind((HOST, PORT))

s.listen()

fileList = os.listdir(ServerDirectory)

switcher = {

0: folderContent,

1: UploadAFile,

2: DownloadFile

}

print('Welcome to the DropPle')

while True:

conn, addr = s.accept()

with conn:

print('Direccion', addr)

while True:

if option < 0:

option = int(conn.recv(1024).decode())

elif option >= 3:

option = -1

break

else:

switcher[option]()

option = -1

#while True:

s.close()

#

**Cliente**

#!/usr/bin/env python3

from tkinter import Tk

from tkinter.filedialog import askopenfilenames

from tkinter.filedialog import askdirectory

import zipfile

import pickle

import socket

import sys

import os

import shutil

HOST = '127.0.0.1' # The server's hostname or IP address

PORT = 65432 # The port used by the server

option = -1

fileList = 0

ServerDirectory = './.TempServerDummy/'

def folderContent():

fileList = pickle.loads(s.recv(1024))

print('\nEl directorio contiene:')

for i in range(len(fileList)):

print('\t ', i, ')', fileList[i])

print()

return fileList

def UploadAFile():

Tk().withdraw() # we don't want a full GUI, so keep the root window from appearing

filename = askopenfilenames(title='Select the files') # show an "Open" dialog box and return the path to the selected file

fantasy\_zip = zipfile.ZipFile('./archive.zip', 'w')

for \_file in list(filename):

fantasy\_zip.write(\_file, os.path.basename(\_file))

fantasy\_zip.close()

#print('Se enviara el archvio:', os.path.basename(filename))

f = open('./archive.zip', 'rb')

s.sendall('archive.zip'.encode())

chonk = f.read(1024)

while chonk:

s.sendall(chonk)

chonk = f.read(1024)

print(s.recv(1024).decode())

f.close()

#while True:

# try:

os.remove('./archive.zip')

# break

# except:

# print('Elimiando')

def DownloadFile():

fileList = folderContent()

if not os.path.exists(ServerDirectory):

os.mkdir(ServerDirectory)

for elem in fileList:

f = open(ServerDirectory + elem, 'wb')

f.close()

Tk().withdraw() # we don't want a full GUI, so keep the root window from appearing

filename = askopenfilenames(initialdir = ServerDirectory,title='Select the files')

s.sendall(pickle.dumps(filename))

#file2D = input('Choose the file >')

dirname = askdirectory(title='Open the folder to save')

for target\_list in filename:

s.sendall(target\_list.encode())

f = open(dirname + '/' + os.path.basename(target\_list), 'wb')

while True:

data = s.recv(1024)

f.write(data)

if len(data) < 1024:

break

f.close()

print("Done Receiving", end='\n\n')

shutil.rmtree(ServerDirectory, ignore\_errors=True)

with socket.socket(socket.AF\_INET, socket.SOCK\_STREAM) as s:

switcher = {

0: folderContent,

1: UploadAFile,

2: DownloadFile

}

s.connect((HOST, PORT))

print('Welcome to the DropPle')

while True:

if option < 0:

option = input('Select 0 to see what is in the folder\nSelect 1 to upload a file\nSelect 2 to dowload a file\n> ')

s.sendall(option.encode())

option = int(option)

elif option == 3:

break

else:

switcher[option]()

option = -1

#

s.close()

Conclusiones