

Python Programming

소켓



권기웅



1. 기본 통신

1.1 서버쪽

```
socketServer.py - D:/workspacePython/socketServer.py (3.6.3)
File Edit Format Run Options Window Help

import socket

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind(('', 3221))
s.listen(1)
con, addr = s.accept() # 연결 될때까지 여기서 대기
print("연결됨")
while True:
    data = con.recv(1024) # 데이터를 받을때까지 여기서 대기
    print(data.decode())
```



1.2 클라이언트쪽

```
socketClient.py - D:/workspacePython/socketClient.py (3.6.3)
File Edit Format Run Options Window Help

import socket

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.connect(("127.0.0.1", 3221))

while True:
    txt = input("보낼 메시지 : ")
    s.send(txt.encode())
```



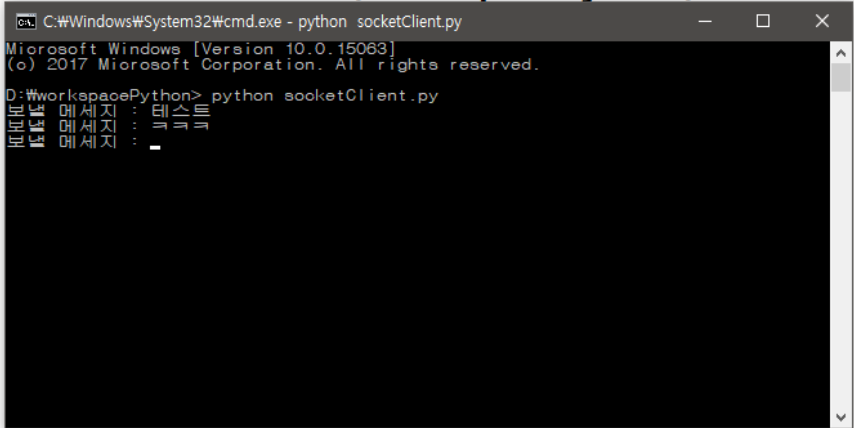
1.3 결과

```
*Python 3.6.3 Shell*
File Edit Shell Debug Options Window Help

Python 3.6.3 (v3.6.3:2c5fed8, Oct  3 2017, 18:11:49) [
Type "copyright", "credits" or "license()" for more in
>>>

===== RESTART: D:/workspacePython/socketSer

연결됨
테스트
ㅋㅋㅋ
```



```
C:\Windows\System32\cmd.exe - python socketClient.py
Microsoft Windows [Version 10.0.15063]
(c) 2017 Microsoft Corporation. All rights reserved.

D:\workspacePython> python socketClient.py
보낸 메시지 : 테스트
보낸 메시지 : ㅋㅋㅋ
보낸 메시지 :
```



2. 1:1 채팅

2.1 GUI 디자인 추가

2.1.1 서버쪽

```
socketServer.py - D:/workspacePython/socketServer.py (3.6.3)
File Edit Format Run Options Window Help

import tkinter as tk
import tkinter.scrolledtext as tst
import socket

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind(('', 3221))
s.listen(1)
con, addr = s.accept()

window = tk.Tk()
st = tst.ScrolledText(window, width=40, height=50, state="disabled")
st.grid(row=0, column=0, padx=5, pady=5)

def send(event=None):
    st.configure(state="normal")
    st.insert(tk.INSERT, "나] " + msg.get() + "\n")
    st.configure(state="disabled")
    msgEntry.delete(0, tk.END)

msg = tk.StringVar()
msgEntry = tk.Entry(window, width=40, textvariable=msg)
msgEntry.grid(row=1, column=0, padx=5, pady=5)
msgEntry.focus_set()
msgEntry.bind("<Return>", send)

window.title("채팅")
window.minsize(300, 500)
window.resizable(False, False)
window.mainloop()
```



2.1.2 클라이언트쪽

```
socketClient.py - D:/workspacePython/socketClient.py (3.6.3)
File Edit Format Run Options Window Help

import tkinter as tk
import tkinter.scrolledtext as tst
import socket

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msgEntry.focus_set()
msgEntry.bind("<Return>", send)

window.title("채팅")
window.minsize(300, 500)
window.resizable(False, False)
window.mainloop()
```



2.2 완성

2.2.1 서버쪽

```
socketServer.py - D:/workspacePython/socketServer.py (3.6.3)
File Edit Format Run Options Window Help

import socket
import threading

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind('', 3221)
s.listen(1)
con, addr = s.accept()

window = tk.Tk()

st = tst.ScrolledText(window, width=40, height=50, state="disabled")
st.grid(row=0, column=0, padx=5, pady=5)

def send(event=None):
    con.send(msg.get().encode())
    st.configure(state="normal")
    st.insert(tk.INSERT, "나] " + msg.get() + "\n")
    st.configure(state="disabled")
    msgEntry.delete(0, tk.END)

def receive():
    while True:
        data = con.recv(1024)
        st.configure(state="normal")
        st.insert(tk.INSERT, "재] " + data.decode() + "\n")
        st.configure(state="disabled")

threading._start_new_thread(receive,())
```



2.2.2 클라이언트쪽

```
socketClient.py - D:/workspacePython/socketClient.py (3.6.3)
File Edit Format Run Options Window Help

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import threading

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
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def receive():
    while True:
        data = s.recv(1024)
        st.configure(state="normal")
        st.insert(tk.INSERT, "재] " + data.decode() + "\n")
        st.configure(state="disabled")

threading._start_new_thread(receive,())

msg = tk.StringVar()
```



2.3 결과

