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EXP NO:10 a

Ping to test server connectivity using sockets

Installing Python Ping pip install pythonping in windows python get-pythonping.py [in run command prompt] **Python Ping (pythonping) is a public repository you can find on PyPI.** from pythonping import ping ping('8.8.8.8') simply ping Google. you won't see anything in your console if you just run this script. This is because our ping is **silent by default**, and does not print anything to screen.

If we want to see everything on-screen, we can simply use the verbose flag.

ping('8.8.8.8', verbose=**True**)

Ping to test server connectivity

How to ping a website in python

```
from os import system
print('1. Ping Google') print('2.
Ping Yahoo') print('3. Ping
custom URL') while True:
   key = int(input('Input your choice: '))
if key == 1:
        system("ping www.google.com")
elif key == 2:
        system("ping www.yahoo.com")
elif key == 3:
        url = input('Enter URL: ')
system("ping " + url)     else:
print("Invalid Option!")
```

output:

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```python
from os import system
print('1. Ping Google')
print('2. Ping Yahoo')
print('3. Ping custom URL')
while True:
    key = int(input('Input your choice: '))
    if key == 1:
        system("ping www.google.com")
    elif key == 2:
        system("ping www.yahoo.com")
    elif key == 3:
        url = input('Enter URL: ')
        system("ping " + url)
    else:
        print("Invalid Option!")

```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\Lenovo\Desktop\cn>  & 'c:\Users\Lenovo\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\Lenovo\.vscode\extensions\ms-python.deb
ugpy-2024.12.0-win32-x64\bundled\libs\debugpy\adapter/../..\debugpy\launcher' '51269' '--' 'c:\Users\Lenovo\Desktop\cn\Mohana.py'
1. Ping Google
2. Ping Yahoo
3. Ping custom URL
Input your choice:
```

```
PS C:\Users\Lenovo\Desktop\cn>  & 'c:\Users\Lenovo\AppData\Local\Programs\Python\Python310\pyth
ugpy-2024.12.0-win32-x64\bundled\libs\debugpy\adapter/../..\debugpy\launcher' '51321' '--' 'c:\
1. Ping Google
2. Ping Yahoo
3. Ping custom URL
Input your choice: 1

Pinging www.google.com [142.250.183.228] with 32 bytes of data:
Reply from 142.250.183.228: bytes=32 time=2ms TTL=120
Reply from 142.250.183.228: bytes=32 time=3ms TTL=120
Reply from 142.250.183.228: bytes=32 time=2ms TTL=120
Reply from 142.250.183.228: bytes=32 time=3ms TTL=120

Ping statistics for 142.250.183.228:
```

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```
Reply from 142.250.183.228: bytes=32 time=2ms TTL=120
Reply from 142.250.183.228: bytes=32 time=3ms TTL=120

Ping statistics for 142.250.183.228:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 3ms, Average = 2ms
Input your choice: 2

Pinging me-ycpi-cf-www.g06.yahoodns.net [27.123.42.205] with 32 byt
Reply from 27.123.42.205: bytes=32 time=23ms TTL=59
Reply from 27.123.42.205: bytes=32 time=23ms TTL=59
Reply from 27.123.42.205: bytes=32 time=23ms TTL=59
Reply from 27.123.42.205: bytes=32 time=24ms TTL=59
Ping statistics for 27.123.42.205:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 23ms, Maximum = 24ms, Average = 23ms
```

import os os.system("ping google.com")

import os

os.system('ping 127.0.0.1')

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EXP NO:10b

PING TO TEST SERVER CONNECTIVITY USING SOCKETS

AIM:

To develop ping program to test server connectivity using sockets.

ALGORITHM:

Server.py

1. Import the socket package
2. Initialize local IP address and local port.
3. Create a socket using socket() function
4. Bind the IP address and port number.
5. Accept client request for connection. 6.
   Print the received connection detail

7. Send reply message to the client.
8. Close the connection.

Client.py

1. Import the socket package 2. Initialize server IP address and local port.
3. Create a socket using socket() function.
4. Start the timer.
5. Send message to the server.
6. The reply message of the server is received.
7. The timer is stopped.
8. Print the round trip time statistics.

Ping to test server connectivity using sockets

Client code:

```
from socket import * from os import
system s = socket(AF_INET,
SOCK_STREAM)
s.connect(("127.0.0.1",8000)) # Connect
op='connect'
s.send(op.encode('utf-8')) # Send request
data = s.recv(100).decode()# Get response
print(data) system("ping "+
gethostname()) s.close()
```

#Server Code: from socket import * from os import system s = socket(AF_INET,SOCK_STREAM)

```
s.bind(("",8000))
s.listen(5) while True:
        c,a = s.accept()
```

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print("Received connection from", a)
data=c.recv(100).decode() print(data)
c.send(data.encode('utf-8'))
system("ping "+ a)

c.close()

output:

server:

```
C: > Users > Lenovo > Desktop > cn > server.py > ...
1   from socket import *
2   from os import system
3   s = socket(AF_INET,SOCK_STREAM)
4   s.bind(("",8000))
5   s.listen(5)
6   while True:
7       c,a = s.accept()
8       print("Received connection from", a)
9       data=c.recv(100).decode()
10      print(data)
11      c.send(data.encode("utf-8"))
12      system("ping "+ a)
13
14  c.close()
```

```
PS C:\Users\Lenovo\Desktop\cn> ^C
PS C:\Users\Lenovo\Desktop\cn>
PS C:\Users\Lenovo\Desktop\cn>  c:; cd 'c:\Users\Lenovo\Desktop\cn'; & 'c:\Users\Lenovo\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\Lenovo\.vscode\extensions\ms-python.debugpy-2024.12.0-win32-x64\bundled\libs\debugpy\adapter/../..\debugpy\launcher' '51215' '--' 'c:\Users\Lenovo\Desktop\cn\server.py'
```

Client:

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C: > Users > Lenovo > Desktop > cn > client.py > ...

```python
from socket import *
from os import system
s = socket(AF_INET, SOCK_STREAM)
s.connect(("127.0.0.1",8000)) # Connect
op="connect"
s.send(op.encode("utf-8&")) # Send request

data = s.recv(100).decode()# Get response
print(data)
system("ping "+ gethostname())
s.close()
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
\cn\client.py'
connect

Pinging HDC0422223 [fe80::e738:b6b0:eb5d:d298%8] with 32 bytes of data:
Reply from fe80::e738:b6b0:eb5d:d298%8: time<1ms
Reply from fe80::e738:b6b0:eb5d:d298%8: time<1ms
Reply from fe80::e738:b6b0:eb5d:d298%8: time<1ms
Reply from fe80::e738:b6b0:eb5d:d298%8: time<1ms

Ping statistics for fe80::e738:b6b0:eb5d:d298%8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Lenovo\Desktop\cn>
```

Result:

Server connectivity is tested using python program.