

## BÀI TẬP THỰC HÀNH TUẦN 13/2/2023

### Môn học: Kỹ thuật lập trình

#### Bài 1: Lập trình socket TCP

#### Bài 2: Kiểm tra các dịch vụ mở trên host

Yêu cầu: Sử dụng module socket

Tham khảo:

```
8 import socket
9 ip = '42.113.206.26' # IP dantri.com.vn
10 portlist = [21,22,23,80,443]
11 for port in portlist:
12     sock= socket.socket(socket.AF_INET,socket.SOCK_STREAM)
13     result = sock.connect_ex((ip,port))
14     print(port,":", result)
15     sock.close()
```

#### Bài 3: Thu thập các thông tin về hệ thống: OS, hostname, ip, ...

Yêu cầu: Sử dụng module socket

Tham khảo:

```
8 import socket
9 try:
10     print("gethostname:",socket.gethostname())
11     print("gethostbyname",socket.gethostbyname('www.actvn.edu.vn'))
12     print("gethostbyname_ex",socket.gethostbyname_ex('www.actvn.edu.vn'))
13     print("gethostbyaddr",socket.gethostbyaddr('103.21.148.154'))
14     print("getfqdn",socket.getfqdn('www.actvn.edu.vn'))
15     print("getaddrinfo",socket.getaddrinfo("www.actvn.edu.vn",None,0,socket.SOCK_STREAM))
16 except socket.error as error:
17     print (str(error))
18     print ("Connection error")
```

#### Bài 4: Thu thập thông tin http request, http response

Bài 4.1:

Tìm Requests module – phiên bản, giấy phép, thông tin bản quyền, tác giả, email tác giả, url tài liệu, tiêu đề và mô tả.

Bài 4.2:

Tìm Response module

Tham khảo:

```

8 import urllib.request
9 from urllib.request import Request
10 url="http://python.org"
11 USER_AGENT = 'Mozilla/5.0 (Linux; Android 10) AppleWebKit/537.36
12 def chrome_user_agent():
13     opener = urllib.request.build_opener()
14     opener.addheaders = [('User-agent', USER_AGENT)]
15     urllib.request.install_opener(opener)
16     response = urllib.request.urlopen(url)
17     print("Response headers")
18     print("-----")
19     for header,value in response.getheaders():
20         print(header + ":" + value)
21     request = Request(url)
22     request.add_header('User-agent', USER_AGENT)
23     print("\nRequest headers")
24     print("-----")
25     for header,value in request.header_items():
26         print(header + ":" + value)
27 if __name__ == '__main__':
28     chrome_user_agent()

```

In [49]: runfile('D:/Google Drive/ml\_waf/untitled2.py', wdir='D:/Google

Response headers

-----

Connection:close

Content-Length:50666

Server:nginx

Content-Type:text/html; charset=utf-8

X-Frame-Options:DENY

Via:1.1 vegur, 1.1 varnish, 1.1 varnish

Accept-Ranges:bytes

Date:Wed, 19 May 2021 03:02:30 GMT

Age:1803

X-Served-By:cache-bwi5166-BWI, cache-hkg17930-HKG

X-Cache:HIT, HIT

X-Cache-Hits:1, 4816

X-Timer:S1621393351.831488,VS0,VE0

Vary:Cookie

Strict-Transport-Security:max-age=63072000; includeSubDomains

Request headers

-----

User-agent:Mozilla/5.0 (Linux; Android 10) AppleWebKit/537.36 (KHTML, .

Bài 4.3: Kiểm tra mã trạng thái do máy chủ cấp để đáp ứng request của client đối với máy chủ. In tất cả các phương thức và thuộc tính có sẵn cho các đối tượng theo yêu cầu thành công.

Tham khảo:

```
8 import http.client
9 connection = http.client.HTTPConnection("www.google.com")
10 connection.request("GET", "/")
11 response = connection.getresponse()
12 print(type(response))
13 print(response.status, response.reason)
14 if response.status == 200:
15     data = response.read()
16     print(data)
```

```
In [48]: runfile('D:/Google Drive/ml_waf/untitled2.py', wdir='D:/Google Drive/ml_waf')
<class 'http.client.HTTPResponse'>
```

200 OK

```
b'<!doctype html><html itemscope="" itemtype="http://schema.org/WebPage" lang="vi"><head><meta content="text/html; charset=UTF-8" http-equiv="Content-Type" content="text/html; charset=UTF-8"><meta content="images/branding/googleg/1x/googleg_standard_color_128dp.png" itemprop="image"><title>Google</title><script nonce="ihF+Q+IVhp7jp5r8P7gQPg==">(function() {
  Tu6jYK79D8Gh-QbE07TYDw\', kEXPI:
  \\'0,772215,1,530320,56873,954,5105,206,4804,2316,383,246,5,1354,5251,1122515,1232,1196499,521,30,328985,51224,16114,28684,17572,4858,1362,9291,3026,
  2054,1793,4192,6430,14528,4517,2777,919,2370,4304,1279,2212,530,149,1103,840,517,5780,4120,2023,1777,520,14670,3227,2847,5,4773,7581,5096,7877,4928,
  468,3277,3,346,230,1835,2551,2074,148,5990,7985,4,1528,2304,1236,1,5802,1791,2892,2015,4067,12269,2039,2658,4761,912,1028,655,31,3853,24,7538,2213,
  4,665,2145,3682,2530,2048,2046,18,3120,6,613,295,3,3541,1,6555,3390,4765,316,1498,38,245,912,5992,1260,5494,432,5340,2,1394,2806,1715,2,488,1922,64,
  2,61,25,149,697,661,350,1,1,1,2117,1714,616,1275,3581,591,406,108,1943,40,450,805,351,564,487,122,104,2,174,15,864,412,907,108,284,647,352,673,2,2,
  81,2,200,1113,1,386,1138,647,336,302,1138,1211,3,46,434,345,195,534,311,2169,158,3,654,384,116,701,209,3,38,130,356,139,143,985,1292,5646704,189,3,
  50,882,444,1,2,80,1,1796,1,9,2,2551,1,748,141,795,563,1,4265,1,1,2,1331,3299,843,1,2608,155,17,13,72,139,4,2,20,2,169,13,19,46,5,39,96,73,4,47,126,
  6,29,2,2,1,2,1,2,2,7,4,1,2,4,2,280,80,130,81,2,26,4,28,23955601,149,4010125,268,27379,2,918,2,868,1509,3,757\\', kBL:\\'UAqi\\';google.sn=\\'webhp\\';gc
  (function(){\\nvar f,h=[];function k(a){for(var b;a&&!a.getAttribute||(b=a.getAttribute("eid")));a=a.parentNode;return b||f}function l(a){for(var
  a.getAttribute||(b=a.getAttribute("leid")));a=a.parentNode;return b}\\nfunction m(a,b,c,d,g){var e="";c||-1!=b.search("&ei=")||
  (e="&ei="+k(d),-1==b.search("&lei=")&&(d=l(d))&&(e="&lei="+d));d="";!c&&window._cschid&&-1==b.search("&cschid=")&&"slh"!="&cschid="+window._cs
  +"?atyp=i&ct="+a+"&cad="+b+e+"&zcx="+Date.now()+d;^http://i.test(c)&&"https:"==window.location.protocol&&(google.ml&&google.ml(Error("a"),!1,{src:c,
  c});f=google.kEI;google.getEI=k;google.getLEI=l;google.ml=function(){return null};google.log=function(a,b,c,d,g){if(c=m(a,b,c,d,g)){a=new Image;var
```